

Netcool/OMNIbus
Version 7 Release 4

*Web GUI Administration and User's
Guide*



Netcool/OMNIbus
Version 7 Release 4

*Web GUI Administration and User's
Guide*



Note

Before using this information and the product it supports, read the information in "Notices" on page 423.

This edition applies to version 7, release 4 of IBM Tivoli Netcool/OMNIBus (product number 5724-S44) and to all subsequent releases and modifications until otherwise indicated in new editions.

© **Copyright IBM Corporation 2001, 2012.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

About this publication vii

Intended audience	vii
What this publication contains	vii
Publications	viii
Accessibility	x
Tivoli technical training.	x
Support information.	x
Conventions used in this publication	xi

Chapter 1. Administering the Web GUI server 1

Restarting the server.	1
Viewing the application server profile	2
Port assignments	3
Changing the timeout setting.	3
Switching off the session timeout	5
Launching the administrative console	5
Changing the password for the connection to the ObjectServer	6
Administering timed tasks.	7
Controlling the use of timed tasks	7
Setting the refresh properties	8
Overview of timed tasks	8
Querying the event database	9
Copying data between Web GUI servers.	10
Overview	10
Exporting data from a Web GUI server	11
Importing data to a Web GUI server	15
Cloning data between servers	18
Setting the logging level for the utility	22
Backing up and restoring data	22
Backing up and restoring the Web GUI	22
Backing up and restoring the Tivoli Integrated Portal	23
Backing up and restoring the Deployment Engine	23

Chapter 2. Administering the GUI framework 25

Tivoli Integrated Portal layout	25
How to customize a Tivoli Integrated Portal setup	27
How to customize a Tivoli Integrated Portal setup	29
Administering pages	30
Creating pages	31
Selecting items for display on a page.	32
Configuring communications between portlets using wires	33
Editing page content	35
Creating folders	37
Editing the properties of a page, folder, or external URL	38
Deleting custom pages and folders	38
Restoring system pages, folders, and external URLs	39
Creating startup pages.	39
Administering views	42

Creating views	44
Editing views.	45
Deleting custom views	46
Administering portlets.	46
Creating portlets.	48
Editing portlets	49
Editing portlet shared settings	51
Deleting portlets.	52
Configuring a web portlet in the Portlet Wizard	52
Administering console preference profiles	54
Creating preference profiles	55
Editing console preference profiles.	56
Deleting console preference profiles	57
Developing wires	57
Creating system wires in the events descriptor	58
Defining custom wires in the wire descriptor	59
Defining transformations for custom wires	62
Changing wire definitions after deployment	63
Deploying custom wires	63
Passing properties to other portlets	63
Developing transformations	66
Transformation types	66
Developing Java transformations	67
Developing JavaScript transformations	68
Developing URL servlet transformations.	68
Defining transformations in the transformation descriptor	68
Deploying transformations	69
Exporting and importing Tivoli Integrated Portal data	70
Basic export commands	71
Advanced export commands	74
Import commands	79
tipcli command reference.	82
Resource types	84
Manage Global Refresh	85

Chapter 3. Developing dashboards for event visualization. 87

Wiring Event Viewers and Active Event Lists	88
Wiring an event list to display related events from a gauge	90
Wiring gauges to an Event Viewer for display on mobile devices	92

Chapter 4. Administering users, roles, and groups 95

Web GUI users, roles, and groups	95
Web GUI users	95
Web GUI roles	96
User groups in the Web GUI	97
Supplied users and groups	97
Web GUI user administration	98
Changing passwords	99
Creating the Web GUI administrative user.	100

Modifying the preferences of a Web GUI user	101
Administering users	104
Searching for users	105
Creating users	107
Changing group membership for a user	109
Viewing information about a user	109
Changing information about a user	110
Viewing the groups the user is a member of	111
Adding a user to groups.	111
Removing a user from groups	112
Adding users as members of a group	113
Duplicating group assignments for a user	113
Deleting users	114
Administering roles	115
Managing roles for users	116
Managing roles for groups	117
Creating roles	118
Editing roles.	119
Deleting custom roles	120
Administering groups	121
Searching for groups	122
Creating groups	124
Viewing information about a group	125
Changing information about a group	125
Viewing the groups the group is a member of	126
Adding a group to other groups	126
Viewing a list of members of a group	127
Removing a user from groups.	128
Adding groups as members of a group.	128
Removing members from a group	129
Duplicating group assignments for a group	129
Deleting groups	130
Assigning roles to users and groups.	131

Chapter 5. Administering a load balancing cluster. 133

The Web GUI in a load balancing environment	133
Structure of a cluster	134
Configuration data	134
Updating configuration data	135
Conditions necessary for changing configuration data	136
Administering a load balancing cluster	136
Using a load-balanced cluster	137
Maintaining the list of files to monitor	137
Cluster administration tools	138
Monitoring a load balancing cluster	138
Load balancing best practices	139
Troubleshooting	140
Resynchronizing a node with the cluster	141
Recovering from a database corruption.	141
disjoin command fails with DB2 SQL errors	141

Chapter 6. Troubleshooting 143

Establishing the cause of problems	143
Checking system information	143
Setting the log level	143
Generating performance logs	145
Setting a trace	145
Auditing the usage of objects	146

Web GUI log files	147
Viewing TIPProfile logs for login errors	148
Editing a properties file	148
Applying fix packs for the Web GUI.	149
Stand-alone system	149
Load balancing environment	149
MustGather information for opening Problem Management Reports.	150
Troubleshooting user authentication	150
Harmless authentication messages	150
Troubleshooting LDAP user repositories	150
Cannot log in as the tipadmin user, or start or stop the Tivoli Integrated Portal server	160
Tivoli Integrated Portal cannot use the ObjectServer for user authentication.	160
No user role assigned	161
Troubleshooting security problems	161
Problems loading applets after TLS is enabled	161
Cannot log into Tivoli Integrated Portal on Internet Explorer 9 with TLS support	161
stopServer command fails after change to SSL configuration	161
Troubleshooting problems with SP800-131a encryption	162
Troubleshooting connections to the ObjectServer	163
Slow network response	164
Unresponsive Active Event List	164
AEL fails to start and displays message W0025	164
Event Dashboard unable to get data from server	165
The connection to the ObjectServer is lost or the AEL issues a timeout.	165
Troubleshooting event displays on maps	166
Maps are slow to display severity colors	166
Changing the height setting of a Map portlet has no effect.	167
The Event Viewer portlet page is blank.	167

Chapter 7. Performance tuning tips for the Web GUI. 169

Increasing JVM memory on the Web GUI server	169
Increasing memory on Web GUI client Java Virtual Machines.	169
Performance tuning	170

Chapter 8. Setting portlet preferences 173

Setting AEL portlet preferences	173
Setting Chart portlet preferences	175
Setting Event Dashboard portlet preferences and defaults	176
Setting Event Viewer portlet preferences	180
Setting Gauge portlet preferences.	182
Changing the General settings for all gauges	184
Selecting the data sources and ObjectServers	185
Generating HTML for mobile devices	185
Changing the properties of gauges	185
Adding gauges.	187
Removing gauges	187
Rearranging gauges	187
Changing the bi-directional text settings	188
Setting Inline Frame portlet preferences	188

Setting LEL portlet preferences	189
Setting preferences for the Map portlet	190
Setting Relationship Definitions portlet preferences	192
Setting Table View portlet preferences	192
Setting Web widget portlet preferences	193

Chapter 9. Customizing Active Event

Lists 195

Setting the appearance and behavior of the Active Event List	195
Changing the AEL refresh rate.	195
Turning data row caching on or off	196
Changing event severity icons.	196
Restricting the number of rows displayed in the Active Event List	197
Enabling notifications and setting notification criteria	198
Enabling flashing and setting flash speed and brightness	199
Modifying the AEL font and window settings	200
Modifying the AEL date and time format	200
Changing how event severity is depicted in the AEL	203
Changing which areas of the AEL are displayed	204
Changing the font color for an event after it has been acknowledged	205
Adding sounds to use for notifications	205
Creating event management tools	205
Event management tools overview	206
Prompt types	209
Setting up CGI and URL tools.	210
Creating SQL tools	218
Creating command-line tools	221
Creating script tools	224
Modifying tools	227
Renaming tools.	230
Copying tools	231
Deleting tools	234
Tool runtime parameters	234
Customizing AEL Menus	237
The Alerts and Tools menus	237
Adding tools to a menu	238
Modifying existing tools.	239
Creating submenus	239
Adding submenus to a menu	240
Deleting submenus	241
Removing items from a menu	241
Changing the order of items in a menu.	242
Renaming menu items	242

Chapter 10. Customizing Event

Viewers 245

Setting the appearance and behavior of the Event Viewer	245
Defining event relationships	246

Chapter 11. Filtering event information 249

Filters	249
Views	251
Setting up filters for event data	252

Filter Builder overview	252
Creating and editing filters	254
Copying filters	263
Deleting filters	264
Setting up views for event lists	265
Creating views	265
Adding and removing columns	266
Configuring column titles and width	267
Changing the column order	268
Locking columns	269
Changing the sorting precedence	270
Changing the sort order in a column	271
Copying global views	271

Chapter 12. Monitoring events in the

Web GUI 273

Monitoring events on mobile devices	273
Monitoring events in the AEL	274
Event management in Active Event Lists	274
Accessing Active Event Lists	275
Acknowledging and deacknowledging events	275
Assigning ownership to events	276
Changing the event information displayed	277
Copying data from the event list	277
Deleting events.	278
Displaying event information in full.	278
Freezing the event data	279
Maintaining a journal for an event	280
Prioritizing events.	281
Refreshing the event data	281
Running predictive eventing tools in the Web GUI	282
Monitoring TADDM events in the Web GUI	283
Searching for event list data	284
Selecting and deselecting events	286
Sorting columns	286
Using tools to manage events	287
Managing events in the Event Viewer	288
Accessing the Event Viewer	288
Displaying full event information in the Event Viewer	288
Changing the event information displayed	289
Copying data	289
Refreshing the event data	289
Freezing the event data	290
Searching for event list data	290
Sorting columns	290
Event groupings	291
Event relationships	292
Monitoring events in the LEL	293
Viewing events in the Lightweight Event List	294
Displaying full event information in the Lightweight Event List	295
Monitoring events in the Table View	295
Visualizing high-level event information	296
Displaying event data on mobile devices	296
Visualizing event information on gauges	298
Visualizing event information on Event Dashboards	306
Visualizing event information on maps.	317

Visualizing high-level event information on charts	343
--	-----

Appendix A. Accessibility features for the Web GUI. 369

Appendix B. ncwDataSourceDefinitions.xml reference 371

**** MISSING FILE ****	371
**** MISSING FILE ****	371
Elements of the Web GUI configuration DTD	371
Attributes of the Web GUI configuration DTD	374

Appendix C. Invalid characters in filters, views, and tools 377

Appendix D. SmartPage commands and templates 379

SmartPage commands overview	379
SmartPage code example	379
SmartPage command reference	380
enable:Smartpage command	380
Validate command	380
insert:AEL command	380
insert:AELMAPVIEW command	383
insert:MAPLET command	384
insert:FILTERPAGE command	385
insert:USERMAPLIST command	386
insert:TABLEVIEW command	387
insert:USERNAME command	387
insert:USERSHOMEURL command	388
Template overview	388
Template example	388
Guidelines for using SmartPage templates	389
Creating SmartPage templates	390

Appendix E. tipcli command reference 391

Working with roles	391
ListRoles	393
AddRole	393

UpdateRole	394
DelRole	395
ListRolesFromGroup	395
MapRolesToGroup	396
RemoveRolesFromGroup	397
ListRolesForPage	397
MapRolesToPage	398
RemoveRolesFromPage	399
ListRolesForPortletEntity	399
MapRolesToPortletEntity	400
RemoveRolesFromPortletEntity	401
ListRolesFromUser	401
MapRolesToUser	402
RemoveRolesFromUser	403
ListRolesForView	403
MapRolesToView	404
RemoveRolesFromView	405
Working with views	405
Working with users	406
Working with preference profiles	406
Working with pages	407
Working with portlets	408
Working with user groups	408
Tivoli Integrated Portal Export commands	409
tipcli - Export plugins	409
tipcli - Advanced Export options	410
Import tipcli commands	412
Additional commands	413

Appendix F. Web GUI database tables 415

OMNIBUS_WEB_GUI.CONFIG_ITEMS table	415
OMNIBUS_WEB_GUI.NODES	415
OMNIBUS_WEB_GUI.NODES_CONFIG_ITEMS	415

Appendix G. URLs for opening Web GUI pages. 417

Notices 423

Trademarks	426
----------------------	-----

Index 427

About this publication

The IBM Tivoli Netcool/OMNIBus Web GUI is a Web-based application that processes network events from one or more data sources and presents the event data to users in various graphical formats.

The *IBM Tivoli Netcool/OMNIBus Web GUI Administration and User's Guide* describes how to administer, customize, and use the Tivoli Netcool/OMNIBus Web GUI.

For information on how to use the Web GUI Administration API (WA-API) to administer the Web GUI remotely, refer to the *IBM Tivoli Netcool/OMNIBus Web GUI Administration API (WA-API) User's Guide*.

Intended audience

This publication is intended for administrators and operators who use the Tivoli Netcool/OMNIBus Web GUI. This publication provides information on how to administer the Web GUI, how to create customized event displays, and how to monitor and manage event data.

What this publication contains

This publication contains the following sections:

- Chapter 1, "Administering the Web GUI server," on page 1
Describes the administration tasks that need to be performed as part of system maintenance and to ensure the correct operation of the Web GUI.
- Chapter 2, "Administering the GUI framework," on page 25
Describes how to use the Tivoli Integrated Portal functions to administer the setup of your Web GUI installation.
- Chapter 3, "Developing dashboards for event visualization," on page 87
Describes how to create pages that act as dashboards for visualizing events.
- Chapter 4, "Administering users, roles, and groups," on page 95
Describes how to create different kinds of Web GUI users, assign them roles and add them to groups to determine their ability to perform tasks.
- Chapter 5, "Administering a load balancing cluster," on page 133
Describes the administration tasks specific to a load balancing cluster.
- Chapter 6, "Troubleshooting," on page 143
Provides help to determine the cause of the problem and what to do about it.
- Chapter 7, "Performance tuning tips for the Web GUI," on page 169
Provides information to help troubleshoot any Web GUI performance issues.
- Chapter 8, "Setting portlet preferences," on page 173
Describes how to customize the appearance and behavior of the Web GUI portlets.
- Chapter 9, "Customizing Active Event Lists," on page 195
Describes how to change the appearance and behavior of the Active Event List (AEL), how to create tools that operators can run against events in the AEL, and how to add tools to AEL menus.

- Chapter 10, “Customizing Event Viewers,” on page 245
Describes how to change the appearance and behavior of the Event Viewer, and how to define relationships for use in organizing the event list.
- Chapter 11, “Filtering event information,” on page 249
Describes how to use filters to apply SQL conditions to ObjectServer data, and how to use views to control which columns are displayed in the AEL, and the appearance of the columns.
- Chapter 12, “Monitoring events in the Web GUI,” on page 273
Describes how to use the event management functions of Active Event List, Lightweight Event List and the Table View.
- Appendix A, “Accessibility features for the Web GUI,” on page 369
Lists the accessibility features of the Web GUI that help users with a disability, restricted mobility, or limited vision.
- Appendix B, “ncwDataSourceDefinitions.xml reference,” on page 371
Describes the structure of the `ncwDataSourceDefinitions.xml` data source definitions file.
- Appendix C, “Invalid characters in filters, views, and tools,” on page 377
Describes the characters that cannot be used in the name of filters, views, and tools.
- Appendix D, “SmartPage commands and templates,” on page 379
Describes how to use SmartPage commands to populate Web pages that are served by the Web GUI.
- Appendix F, “Web GUI database tables,” on page 415
Defines the structure of the Web GUI tables in the database of a load balancing cluster.
- Appendix G, “URLs for opening Web GUI pages,” on page 417
Describes how to build URLs that launch the Web GUI.

Publications

This section lists publications in the Tivoli Netcool/OMNIBus library and related documents. The section also describes how to access Tivoli publications online and how to order Tivoli publications.

Your Tivoli Netcool/OMNIBus library

The following documents are available in the Tivoli Netcool/OMNIBus library:

- *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide, SC14-7526*
Includes installation and upgrade procedures for Tivoli Netcool/OMNIBus, and describes how to configure security and component communications. The publication also includes examples of Tivoli Netcool/OMNIBus architectures and describes how to implement them.
- *IBM Tivoli Netcool/OMNIBus Administration Guide, SC14-7527*
Describes how to perform administrative tasks using the Tivoli Netcool/OMNIBus Administrator GUI, command-line tools, and process control. The publication also contains descriptions and examples of ObjectServer SQL syntax and automations.
- *IBM Tivoli Netcool/OMNIBus Web GUI Administration and User's Guide, SC14-7528*
Describes how to perform administrative and event visualization tasks using the Tivoli Netcool/OMNIBus Web GUI.

- *IBM Tivoli Netcool/OMNIBus User's Guide, SC14-7529*
Provides an overview of the desktop tools and describes the operator tasks related to event management using these tools.
- *IBM Tivoli Netcool/OMNIBus Probe and Gateway Guide, SC14-7530*
Contains introductory and reference information about probes and gateways, including probe rules file syntax and gateway commands.
- *IBM Tivoli Monitoring for Tivoli Netcool/OMNIBus Agent User's Guide, SC14-7532*
Describes how to install the health monitoring agent for Tivoli Netcool/OMNIBus and contains reference information about the agent.
- *IBM Tivoli Netcool/OMNIBus Event Integration Facility Reference, SC14-7533*
Describes how to develop event adapters that are tailored to your network environment and the specific needs of your enterprise. This publication also describes how to filter events at the source.
- *IBM Tivoli Netcool/OMNIBus Error Messages Guide, SC14-7534*
Describes system messages in Tivoli Netcool/OMNIBus and how to respond to those messages.
- *IBM Tivoli Netcool/OMNIBus Web GUI Administration API (WAAPI) User's Guide, SC22-7535*
Shows how to administer the Tivoli Netcool/OMNIBus Web GUI using the XML application programming interface named WAAPI
- *IBM Tivoli Netcool/OMNIBus ObjectServer HTTP Interface Reference Guide, SC27-5613* Describes the URIs and common behaviors of the Application Programming Interface (API) that is called the ObjectServer HTTP Interface. Describes how to enable the API and provides examples of JSON payloads, and HTTP requests and responses.
- *IBM Tivoli Netcool/OMNIBus ObjectServer OSLC Interface Reference Guide, SC27-5613* Describes the services, resources, and common behaviors of the Open Services for Lifecycle Collaboration (OSLC) Application Programming Interface (API) that is called the ObjectServer OSLC Interface. Describes how to enable the API and provides examples of service provider definitions, RDF/XML payloads, and HTTP requests and responses.

Accessing terminology online

The IBM Terminology Web site consolidates the terminology from IBM product libraries in one convenient location. You can access the Terminology Web site at the following Web address:

<http://www.ibm.com/software/globalization/terminology>

Accessing publications online

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to the Tivoli Information Center Web site at:

<http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp>

Note: If you print PDF documents on other than letter-sized paper, set the option in the **File > Print** window that allows Adobe Reader to print letter-sized pages on your local paper.

Ordering publications

You can order many Tivoli publications online at the following Web site:

<http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss>

You can also order by telephone by calling one of these numbers:

- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, contact your software account representative to order Tivoli publications. To locate the telephone number of your local representative, perform the following steps:

1. Go to the following Web site:
<http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss>
2. Select your country from the list and click **Go**. The Welcome to the IBM Publications Center page is displayed for your country.
3. On the left side of the page, click **About this site** to see an information page that includes the telephone number of your local representative.

Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully.

With this product, you can use assistive technologies to hear and navigate the interface. You can also use the keyboard instead of the mouse to operate most features of the graphical user interface.

For additional information, see the Accessibility Appendix in Appendix A, "Accessibility features for the Web GUI," on page 369.

Tivoli technical training

For Tivoli technical training information, refer to the following IBM Tivoli Education Web site:

<http://www.ibm.com/software/tivoli/education>

Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

Online

Go to the IBM Software Support site at <http://www.ibm.com/software/support/probsub.html> and follow the instructions.

IBM Support Assistant

The IBM Support Assistant (ISA) is a free local software serviceability workbench that helps you resolve questions and problems with IBM software products. The ISA provides quick access to support-related information and serviceability tools for problem determination. To install the ISA software, go to <http://www.ibm.com/software/support/isa>

Documentation

If you have a suggestion for improving the content or organization of this guide, send it to the Tivoli Netcool/OMNIBUS Information Development team at:

mailto://L3MMDOCS@uk.ibm.com

Conventions used in this publication

This publication uses several conventions for special terms and actions and operating system-dependent commands and paths.

Typeface conventions

This publication uses the following typeface conventions:

Bold

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as **Tip:** and **Operating system considerations:**)
- Keywords and parameters in text

Italic

- Citations (examples: titles of publications, diskettes, and CDs)
- Words defined in text (example: a nonswitched line is called a *point-to-point* line)
- Emphasis of words and letters (words as words example: "Use the word *that* to introduce a restrictive clause."; letters as letters example: "The LUN address must start with the letter *L*.")
- New terms in text (except in a definition list): a *view* is a frame in a workspace that contains data
- Variables and values you must provide: ... where *myname* represents....

Monospace

- Examples and code examples
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text
- Message text and prompts addressed to the user
- Text that the user must type
- Values for arguments or command options

Operating system-dependent variables and paths

This publication uses the UNIX convention for specifying environment variables and for directory notation.

When using the Windows command line, replace *\$variable* with *%variable%* for environment variables, and replace each forward slash (/) with a backslash (\) in directory paths. For example, on UNIX systems, the \$NCHOME environment variable specifies the path of the Netcool® home directory. On Windows systems, the %NCHOME% environment variable specifies the path of the Netcool home directory. The names of environment variables are not always the same in the

Windows and UNIX environments. For example, %TEMP% in Windows environments is equivalent to \$TMPDIR in UNIX environments.

If you are using the bash shell on a Windows system, you can use the UNIX conventions.

Fix pack information

Information that is applicable only to the fix pack versions of Tivoli Netcool/OMNIbus are prefaced with a graphic. For example, if a set of instructions is preceded by the graphic , it means that the instructions can only be performed if you installed fix pack 1 of your installed version of Tivoli Netcool/OMNIbus. In the release notes, descriptions of known problems that are prefaced with  are solved in fix pack 1, and so on.

Note: Fix packs are distributed separately for the server components and the Web GUI component.

Home directories for the Web GUI and Tivoli Integrated Portal

The Web GUI and the Tivoli Integrated Portal use separate directory structures within the main installation directory. References to those directories use the following conventions:

install_dir

Refers to the directory where the Web GUI and the Tivoli Integrated Portal are installed.

Examples:

/opt/IBM/tivoli on UNIX environments.

C:\IBM\tivoli\ on Windows systems.

webgui-home

Refers to the directory where the Web GUI is installed. This directory is known as the Web GUI home directory.

Examples:

/opt/IBM/tivoli/netcool/omnibus_webgui on UNIX environments.

C:\IBM\tivoli\netcool\omnibus_webgui on Windows systems.

tip_home_dir

Refers to the directory where the Tivoli Integrated Portal is installed. This directory is known as the Tivoli Integrated Portal home directory.

Examples:

/opt/IBM/tivoli/tipv2 on UNIX environments.

C:\IBM\tivoli\tipv2 on Windows systems.

Chapter 1. Administering the Web GUI server

Perform these tasks to administer the Web GUI server.

Restarting the server

After customization and configuration activities you might need to restart the Web GUI server.

About this task

Restart the server after or while carrying out any of the following actions on your Web GUI server:

- Modifications to any of the following files:
 - `server.init`
 - `ncwDataSourceDefinitions.xml`
 - `virtualhosts.xml`
 - `deployment.xml`
 - `security.xml`
 - `winconfig.xml`
 - Any properties file in the `tip_home_dir/tip/properties` directory
- Setting up a load balancing cluster
- Adding a node to a load balancing cluster
- Adding or changing user registries
- Backing up and restoring the Web GUI
- Copying configurations from another Web GUI server
- Configuring encryption
- Configuring single sign-on
- Configuring LDAP or Active Directory and their connections

If you do not use the timed tasks facility in the `server.init` file, you also need to restart the server after changing any files in the following directories in `webgui-home/etc`:

- `configstore`
- `cgi-bin`
- `charts`
- `charts/definitions`
- `templates` and all the directories it holds

Procedure

To restart the server:

1. On the command-line interface, change to the `tip_home_dir/profiles/TIPProfile/bin`.
2. Stop the server:
 - `Linux` `UNIX` `stopServer.sh server1`

Attention: Linux and Unix systems prompt you to supply the user name and password of the administrative user.

- `Windows` stopServer.bat server1

Wait a moment for the server to completely shut down. The following messages confirm the server has shut down:

```
ADMU3201I: Server stop request issued. Waiting for stop status.  
ADMU4000I: Server server1 stop completed.
```

Additionally, confirm that all Java process have stopped running. This is particularly important when installing a fix pack.

Note: You must specify the correct operating system user name when stopping and starting the Tivoli Integrated Portal.

3. Start the server:

- `Linux` `UNIX` startServer.sh server1
- `Windows` startServer.bat server1

Related tasks:

“Administering timed tasks” on page 7

Timed tasks are the key part to a Web GUI server automatically loading changes in configuration data, without the need to restart the server. You manage timed tasks through properties in the Web GUI initialization file (server.init).

Viewing the application server profile

Open the application server profile to review the port number assignments and other information.

About this task

The profile of the application server is available as a text file on the computer where it is installed.

Procedure

1. Locate the `tip_home_dir/profiles/TIPProfile/logs` directory.
2. Open `AboutThisProfile.txt` in a text editor.

Example

This is the profile for an installation on in a Windows environment as it appears in `tip_home_dir/profiles/TIPProfile/logs/AboutThisProfile.txt`:

```
Application server environment to create: Application server  
Location: C:\IBM\tivoli\tip\profiles\TIPProfile  
Disk space required: 200 MB  
Profile name: TIPProfile  
Make this profile the default: True  
Node name: TIPNode Host name: tivoliadmin.usca.ibm.com  
Enable administrative security (recommended): True  
Administrative consoleport: 16315  
Administrative console secure port: 16316  
HTTP transport port: 16310  
HTTPS transport port: 16311  
Bootstrap port: 16312  
SOAP connector port: 16313  
Run application server as a service: False  
Create a Web server definition: False
```

Performance tuning setting: StandardC:\IBM\tivoli\tipv2\profiles\TIPProfile
Disk space required: 200 MB
Profile name: TIPProfile
Make this profile the default: True
Node name: TIPNode Host name: tivoliadmin.usca.ibm.com
Enable administrative security (recommended): True
Administrative consoleport: 16315
Administrative console secure port: 16316
HTTP transport port: 16310
HTTPS transport port: 16311
Bootstrap port: 16312
SOAP connector port: 16313
Run application server as a service: False
Create a Web server definition: False
Performance tuning setting: Standard

What to do next

If you want to see the complete list of defined ports on the application server, you can open *tip_home_dir/properties/TIPPortDef.properties* in a text editor:

```
#Create the required WAS port properties for TIP
#Mon Oct 06 09:26:30 PDT 2008
CSIV2_SSL_SERVERAUTH_LISTENER_ADDRESS=16323
WC_adminhost=16315
DCS_UNICAST_ADDRESS=16318
BOOTSTRAP_ADDRESS=16312
SAS_SSL_SERVERAUTH_LISTENER_ADDRESS=16321
SOAP_CONNECTOR_ADDRESS=16313
ORB_LISTENER_ADDRESS=16320
WC_defaulthost_secure=16311
CSIV2_SSL_MUTUALAUTH_LISTENER_ADDRESS=16322
WC_defaulthost=16310
WC_adminhost_secure=16316
IPC_CONNECTOR_ADDRESS=16314
REST_NOTIFICATION_PORT=16324
```

Related tasks:

“Viewing TIPProfile logs for login errors” on page 148

In the event of a login error, review the system outage and system error logs to help determine the cause.

Port assignments

The application server requires a set of sequentially numbered ports.

The sequence of ports is supplied during installation in the response file. The installer checks that the number of required ports (starting with the initial port value) are available before assigning them. If one of the ports in the sequence is already in use, the installer automatically terminates the installation process and you must specify a different range of ports in the response file.

Changing the timeout setting

You can change the period of time after which users are automatically logged out of the Web GUI.

About this task

The default timeout period is 30 minutes. After you have changed the timeout setting, you must restart the server. In a load balancing cluster, carry out this task on all nodes.

To change the timeout setting:

Procedure

1. Open the following file: *tip_home_dir/profiles/TIPProfile/config/cells/TIPCell/applications/isc.ear/deployments/isc/deployment.xml*
2. In this file, locate the following section:

```
<tuningParams xmi:id="TuningParams_1226438889945"
usingMultiRowSchema="false"
maxInMemorySessionCount="1000" allowOverflow="true" schedule
Invalidation="false" writeFrequency="TIME_BASED_WRITE" writeInterval="10"
writeContents="ONLY_UPDATED_ATTRIBUTES" invalidationTimeout="30">
<invalidationSchedule xmi:id="InvalidationSchedule_1226438889946"
firstHour="14" secondHour="2"/>
```
3. Change the value of the **invalidationTimeout** attribute to the required timeout period, in minutes. For example, to change the period to 15 minutes, set the value as follows:

```
invalidationTimeout="15"
```
4. Save and close the file.
5. Open the following file: *tip_home_dir/profiles/TIPProfile/config/cells/TIPCell/security.xml*.
6. In this file locate the following section:

```
<authMechanisms xmi:type="security:LTPA" xmi:id="LTPA_1"
OID="oid:1.3.18.0.2.30.2"
authContextImplClass="com.ibm.ISecurityLocalObjectTokenBaseImpl.
WSSecurityContextLTPAImpl" authConfig="system.LTPA"
simpleAuthConfig="system.LTPA"
authValidationConfig="system.LTPA" timeout="1440"
keySetGroup="KeySetGroup_TIPNode_1">
```
7. Change the value of the **timeout** attribute to the required timeout period, in minutes.
8. Save and close the file.
9. Open the following file: *tip_home_dir/profiles/TIPProfile/config/cells/TIPCell/nodes/TIPNode/servers/server1/server.xml*.
10. In this file, locate the following section:

```
<tuningParams xmi:id="TuningParams_1183077764084"
usingMultiRowSchema="false"
maxInMemorySessionCount="1000" allowOverflow="true"
scheduleInvalidation="false"
writeFrequency="TIME_BASED_WRITE" writeInterval="10"
writeContents="ONLY_UPDATED_ATTRIBUTES"
invalidationTimeout="30">
```
11. Change the value of the **invalidationTimeout** attribute to the required timeout period, in minutes.
12. Save and close the file.
13. Restart the server.

Related concepts:

"The Web GUI in a load balancing environment" on page 133
Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

"Restarting the server" on page 1
After customization and configuration activities you might need to restart the Web GUI server.

Switching off the session timeout

You can set the session timeout to a large value to prevent sessions from timing out. This is useful where you have facilities such as wall displays that need to be available all the time.

About this task

You cannot switch off the timeout setting completely. Instead, you can set it to a large value that effectively means it is switched off. However, take note of the following:

- There are security implications if unattended sessions do not timeout. Consider these implications carefully before implementing this procedure.
- There may be a build up of resource usage should users close their browsers without logging off beforehand. Restarting the server reclaims those resources.

In a load balancing cluster, carry out this task on all nodes.

Procedure

To set the timeout so that sessions do not time out:

Use the procedure in [<xref href="#web_adm_settimeout"></xref >](#) to set the timeout values to the following values:

Table 1. Attribute values to switch off the session timeout

File	Attribute	Value
deployment.xml	invalidationTimeout	-1
security.xml	timeout	2147483647
server.xml	invalidationTimeout	-1

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Launching the administrative console

Certain configuration or administration tasks in the Web GUI or the underlying instance of Tivoli Integrated Portal can be performed only from the administrative console.

Procedure

1. Log in to Tivoli Integrated Portal as the tipadmin user, or another user that has the iscadmins role.
2. Click **Settings > Websphere Administrative Console**. Then click **Launch Websphere administrative console**.

Changing the password for the connection to the ObjectServer

If the password of the user specified for the connection between the ObjectServer and the Web GUI is changed, the new password must be set on the Web GUI server.

About this task

The password of the ObjectServer user must be maintained in the Web GUI for the event data feed from the ObjectServer, and if the ObjectServer is configured as a user registry through the Virtual Member Manager (VMM) adapter.

The ObjectServer connection details for VMM are stored in the following file: *tip_home_dir/profiles/TIPProfile/config/cells/TIPCell/wim/config/wimconfig.xml*. The connection details for the ObjectServer event data feed are stored in the following file: *ncwDataSourceDefinitions.xml*

After you have updated the password on the Web GUI server, you must restart the server.

To change the password:

Procedure

1. To change the ObjectServer password for VMM, enter the following command:

```
tip_home_dir/bin/confvmm4ncos.sh user newpassword host port  
configfile=../profiles/TIPProfile/config/cells/TIPCell/wim/config/  
wimconfig.xml
```

Where the parameters are as follows:

user

The ObjectServer user that is used for the connection.

newpassword

The new password for the ObjectServer user.

host

The fully-qualified host name on which the ObjectServer is installed.

port

The port on which the ObjectServer is installed.

2. To change the ObjectServer password for the event data feed:
 - a. Edit the *ncwDataSourceDefinitions.xml* file.
 - b. In the `<ncwDataSourceCredentials>` element, change the value of the **password** attribute to the new password.
 - c. Save and close the file.
3. Restart the server.

Related tasks:

"Restarting the server" on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Administering timed tasks

Timed tasks are the key part to a Web GUI server automatically loading changes in configuration data, without the need to restart the server. You manage timed tasks through properties in the Web GUI initialization file (`server.init`).

About this task

To administer the timed tasks facility:

Procedure

1. Open `webgui-home/etc/server.init` in a text editor.
2. Carry out any combination of the following tasks, as required:
 - Control the use of timed tasks
 - Set the refresh properties
3. Save the file.
4. If you enabled timed tasks in step 2, restart the Tivoli Integrated Portal server.

Related concepts:

“Overview of timed tasks” on page 8

Timed tasks simplify the administration of a Web GUI server or of a cluster of Web GUI servers.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Related reference:

“Load balancing best practices” on page 139

When administering the Web GUI in a load balancing environment, there are a number of practices you can use to avoid problems occurring in the cluster.

Controlling the use of timed tasks

Procedure

1. Locate the `timedtasks.enabled` property.
2. Set the value of the property as required:

Value	Meaning
false	Switches off the timed tasks facility.
true	Enables the timed tasks facility. This is the setting required for automatic processing of changes to configuration data.

Setting the refresh properties

About this task

In most cases, the supplied values are adequate, however you can use this procedure to change them if necessary.

Procedure

1. Decide on values (in seconds) for:
 - The start delay
 - The run period
2. Locate the `timedtasks.default.startdelay` property and change its value to the start delay you require.
3. Locate the `timedtasks.default.runperiod` property and change its value to the run period you require.

Overview of timed tasks

Timed tasks simplify the administration of a Web GUI server or of a cluster of Web GUI servers.

Timed tasks enable a Web GUI server to detect and load changes in the configuration data. The tasks implement changes in the configuration without having to restart the server. This is especially important in a load-balancing cluster where maintenance of service to users must continue uninterrupted.

What are timed tasks?

Timed tasks are a set of batch processes that periodically look for changes in the configuration files. If any of those files has changed since the previous run, the processes load the new configuration data into the Web GUI server.

Characteristics of a timed task

A timed task has the following characteristics:

- A start delay
The start delay determines how long (in seconds) after the server starts that the task first looks for changes in the associated configuration data.
- A run period
The run period determines the length of time (in seconds) between each subsequent run of the task.

The start delay and run period together make up the timed task's schedule. In a load-balanced cluster, you are recommended to use the same schedule on all cluster members.

The definition of timed tasks

The Web GUI's configuration file holds the definition of timed tasks. This path of this file is `webgui-home/etc/server.init`.

The definition of the timed tasks looks like this:

```
timedtasks.default.startdelay: 120
timedtasks.default.runperiod: 60
```

This defines a start delay of two minutes and a run period, also of two minutes.

Querying the event database

You can run the full range of ObjectServer SQL commands and perform queries against ObjectServer data.

Before you begin

To perform this task, the following prerequisites must be met:

- The `ncw_admin` role must be assigned to your Web GUI user profile.
- You need to be a user in the ObjectServer; your user must be a member of the following groups: ISQL and ISQLWrite.

Note: If LDAP is used for authentication, and the `users.credentials.sync` property of the `server.init` file is enabled, LDAP users are automatically synchronized with the ObjectServer. If not, a user must be created in the ObjectServer and assigned to the groups.

- In the ObjectServer, the `webtop_compatibility` automation, which is a temporal trigger, and must have run. By default, this trigger is enabled

Tip: You can reduce the frequency with which the trigger runs from the default of 60 minutes. For more information about configuring temporal triggers, see the *IBM Tivoli Netcool/OMNIBus Administration Guide*.

- The Web GUI configuration cache must be synchronized with the ObjectServer. The cache can be synchronized by running the `webgui-home/bin/webtop_osresync` script.

About this task

The Web GUI event database query is analogous in behavior to the Tivoli Netcool/OMNIBus SQL Interactive Interface, and can be used to perform tasks such as creating a new database table or stopping the ObjectServer. You can connect to ObjectServers and use SQL commands to interact with and control the ObjectServer.

Attention: Use the Event Database Query with care. Any command entered is run against the ObjectServer. Incorrect use of SQL commands can result in the irreparable corruption of your database.

To send SQL instructions to the ObjectServer:

Procedure

1. Click **Administration > Event Management Tools > Event Database Query**.
2. From the **Select data source** list, select a data source against which you want to run the command.
3. Type an SQL query in the text editor provided and click **Submit**.

The result of the SQL query is displayed in the **Results displayed below** area.

Sample SQL query

The following example result shows an excerpt of the data returned after submitting the following query:

```
select Node, Summary from alerts.status where Severity=4;
```

```

-----
select Node, Summary from alerts.status where Severity=4
-----
>Executed 'select Node, Summary from alerts.status where Severity=4;'
Tokyo Diskspace alert
s1-server2.ibm.com A process running on s1-server2.ibm.com has connected as
username berthath
s1-server2.ibm.com A process running on s1-server2.ibm.com has connected as
username berthath
London Machine has gone offline
s1-server2.ibm.com A process running on s1-server2.ibm.com has connected as
username herbert
s1-server2.ibm.com A process running on s1-server2.ibm.com has connected as
username berthath
s1-server2.ibm.com A process running on s1-server2.ibm.com has connected as
username filter
s1-server2.ibm.com A process running on s1-server2.ibm.com has connected as
username root
Shanghai Link Down on port
s1-server2.ibm.com A process running on s1-server2.ibm.com has connected as
username berthath

```

See the information about ObjectServer SQL syntax in the chapter that explains ObjectServer SQL in the *IBM Tivoli Netcool/OMNIBus Administration Guide*.

For more information about ObjectServer SQL syntax, go to the IBM® Tivoli® Network Management Information Center at <http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp>, and search for *ObjectServer SQL*.

Copying data between Web GUI servers

The Web GUI has a utility to copy selected data from one server to another.

Overview

Occasionally you need to copy data from one Web GUI V7.4.0 server to another. One example is when copying data from a test server to a production server. The Web GUI contains a utility for such situations.

The server you are copying data from is the *source server*; the server you are copying data to is the *target server*. Either server can be a stand-alone system or part of a load balancing cluster.

The copying process

The process for copying data between servers is:

1. Define the data to export from the source server.
2. Export the data from the source server.
The utility writes the selected data to a .zip file.
3. Copy the file to the target server.
4. Set up the utility to import data from the .zip file.
In this step you can define whether to import all the data from the file or selected items.
5. Import the data from the .zip file.
6. Restart the target server, if necessary.

Tip: In many cases, you do not need to restart the server if your system uses timed tasks.

Items that you can copy between servers

The items that you can copy between servers are:

- Filters
- Maps
- Menus
- Prompts
- Relationships
- Tools
- Views
- Any customized file or directory in *webgui-home* or in *tip_home_dir/profiles/TIPProfile/installedApps/TIPCell/isc.ear/OMNIBusWebGUI.war*

Note: Any non-customized files or directories must not be copied between servers. Always back up your files and directories before copying between servers.

You can also specify files and directories not to copy between servers. For example the Web GUI configuration file (*server.init*).

Some items, such as maps, often have dependent items that define their behavior. When exporting such an item the utility includes all the dependent items. This makes it easier to move complex items from one Web GUI server to another.

Cloning data between servers

On occasions you may need to copy all Web GUI and Tivoli Integrated Portal data from one server to another. This process is known as *cloning* and is useful when transferring a set up from a test to a production environment. The process for cloning is similar to the main copying procedure except that you do not have to define the items to export and import. Instead, the utility provides a file that defines all the items required. You specify this file when exporting and importing data. This simplifies the process of cloning and reduces the possibility of any key data not being copied.

Note: The cloning process excludes the *ncwDataSourceDefinitions.xml* file.

Exporting data from a Web GUI server

First export the required data from the source server.

Defining the items to export

Define the items to export and the location for the *.zip* file.

Procedure

1. Make sure you are logged in as an administrative user.
2. Navigate to the directory containing the utility's properties file:
`cd webgui-home/integration/importexport_tool/etc`
3. Edit the file *OMNIBusWebGUI_settings.properties* to define the items you want to export from the source server:

Many of the property definitions are a list of items. In these lists, put a comma between each item. In addition for properties that define file paths, use two

backslash characters as the path separator on Windows systems; for example: C:\\IBM\\tivoli\\netcool\\omnibus_webgui.

Set the following properties as required. To set the property, remove the comment marker at the beginning of its line and the modify the value as required. To omit a particular item from the export, leave the property commented out. In some cases the utility uses a default value for omitted properties.

Table 2. Setting properties to define the data to export

Property	Value
product.home	The installation directory of the Web GUI. Set this property if you did not install the product into the default location. The default installation location is one of the following: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">UNIX</div> <div style="border: 1px solid black; padding: 2px;">Linux</div> <div>ibm/tivoli/netcool/ omnibus_webgui</div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px;">Windows</div> <div>C:\\IBM\\tivoli\\netcool\\ omnibus_webgui</div> </div>
output.dir	The full path of the directory to receive the exported data. The default value is <i>tip_home_dir/profiles/TIPProfile/output</i> .
ExportWebGUIPlugin.input	To export data from the OMNIBusWebGUI.war file remove the comment marker from the beginning of the definition of the ExportWebGUIPlugin.input property and add a comment marker to the element for the Web GUI folder. Add any further files and directories to export to the definition of the remaining property. Specify each directory and file path as relative to <i>webgui-home</i> .
ExportWebGUIPlugin.ignore	Specify the files and directories to exclude from the exported data. Put a comma between each file or directory path. Specify each directory and file path as relative to <i>webgui-home</i> .
ExportPromptPlugin.input	A list of the names for prompts (without their extensions) to export.
ExportToolPlugin.input	A list of names for tools (without their extensions) to export.
ExportMenuPlugin.input	A list of names for menus (without their extensions) to export.
ExportMenuConfigPlugin.input	A list of names for menu configurations (without their extensions) to export.
ExportViewPlugin.global	A list of names for global views (without their extensions) to export. To export all global views use the forward slash (/) character as the value for this property.
ExportViewPlugin.system	A list of names for system views (without their extensions) to export. To export all system views use the forward slash character (/) as the value for this property.

Table 2. Setting properties to define the data to export (continued)

Property	Value
ExportViewPlugin.user	<p>A list of names for user-defined views (without their extensions) to export. For each view, specify the user ID and view name separated by a comma.</p> <p>For example, to specify View1 and View2 for user ID User1 and View3 for User ID User 2, use a definition like this:</p> <pre>ExportViewPlugin.user=User1,View1, User1,View2, User2,View3</pre> <p>To export all user views, use the forward slash character (/) as the value for this property.</p>
ExportFilterPlugin.global	<p>A list of names for global filters (without their extensions) to export. To export all global filters, use the forward slash character (/) as the value for this property.</p>
ExportFilterPlugin.system	<p>A list of names for system filters (without their extensions) to export. To export all system filters, use the forward slash character (/) as the value for this property.</p>
ExportFilterPlugin.groups	<p>A list of names of group filters (without their extensions) to export. For each filter, specify the Group ID and filter name separated by a comma.</p> <p>For example, to specify GroupFilter1 for Group ID Group1 and GroupFilter2 and GroupFilter3 for Group ID Group2, use a definition like this:</p> <pre>ExportFilterPlugin.groups=Group1,GroupFilter1, Group2,GroupFilter2, Group2,GroupFilter3</pre> <p>To export all group filters, use a forward slash character (/) as the value for this property.</p>
ExportFilterPlugin.user	<p>A list of names for user-defined filters (without their extensions) to export. For each filter, specify the User ID and filter name separated by a comma.</p> <p>For example, to specify Filter1 and Filter2 for user ID User1 and filter3 for User ID User 2, use a definition like this:</p> <pre>ExportFilterPlugin.user=User1,Filter1, User1,Filter2, User2,Filter3</pre> <p>To export all user filters, use the forward slash character (/) as the value for this property.</p>
ExportFilterCollectionPlugin.input	<p>A list of names for filter collections (without their extensions) to export. The utility includes all the related objects for each collection such as: filters, dependency filters, and views.</p>
ExportMapPlugin.input	<p>A list of names for maps (without their extensions) to export. The utility includes all the related objects for each map such as: map resources, filters, dependency filters, and views.</p>

Table 2. Setting properties to define the data to export (continued)

Property	Value
ExportRelationshipPlugin.input	A list of names for relationships (without their extensions) to export.

Exporting the data

Export the defined data to a .zip file on the source server.

Procedure

1. Make sure you are logged in to the source server as an administrative user and that the Tivoli Integrated Portal is running.
2. As supplied, the utility writes information, warning, and error messages to the log file. Change the level of logging, if required.

Note: Recommended values are FINE, FINER, and FINEST. Each of these produces increasing numbers of messages. They can be helpful when diagnosing a problem in the export utility. After using one of these values, however, be sure to return to the original value before recommencing normal operations on the server.

3. Navigate to the directory containing the utility, *tip_home_dir/profiles/TIPProfile/bin*.
4. Enter one of the following commands to export the data:

```

UNIX      Linux      ./tipcli.sh Export --username tipadmin --password
tippass --excludePlugins ExportPagePlugin,ChartExportPlugin
--settingFile webgui-home/integration/importexport_tool/etc/
OMNIBusWebGUI_settings.properties
  
```

```

Windows   tipcli.bat Export --username tipadmin --password tippass
--excludePlugins ExportPagePlugin,ChartExportPlugin --settingFile
webgui-home\integration\importexport_tool\etc\
OMNIBusWebGUI_settings.properties
  
```

Replace:

tipadmin

with the name of the Tivoli Integrated Portal administrative user.

tippass

with the password for the Tivoli Integrated Portal administrative user.

To exclude any plug-ins from the export operation, add their names to the **--excludePlugins** qualifier, putting a comma between each plug in name. For example, to exclude the prompt plug-in, use:

```

--excludePlugins ExportPagePlugin,ChartExportPlugin,ExportPromptPlugin
  
```

Always include ExportPagePlugin and ChartExportPlugin in the list.

Note: To obtain a list of plug-in names that can be excluded from the export operation, enter the following command: `./tipcli.sh ListExportPlugins`

Results

The utility creates:

- The file of data in *data.zip* within the directory specified by the **output.dir** property of *OMNIBusWebGUI_settings.properties*. If that property is not set, the file is in *tip_home_dir/profiles/TIPProfile/output*.

- A log file in `tip_home_dir/profiles/TIPProfile/logs/tipcli.log`.

Related tasks:

“Setting the logging level for the utility” on page 22

As supplied, the export/import utility writes information messages to the log file in addition to warnings and errors. Use this procedure to customize the level of logging during export and import operations.

Verifying the export is complete

Before copying the .zip file to the target server, make sure that it contains all required directories, files, and Web GUI objects.

Procedure

1. Open the log file in `tip_home_dir/profiles/TIPProfile/logs/tipcli.log` and check that all stages of the export operation completed successfully.
Resolve any errors and repeat the export activity before continuing. For example, correct any misspelled names and paths in the `OMNIBusWebGUI_settings.properties` file, repeat the export operation, and then verify that the errors are resolved.
2. Navigate to the output directory and open the `data.zip` file using a suitable file compression tool.
3. Check that the file contains all the files, directories, and Web GUI objects that you wanted to export.
If any items are missing, edit `OMNIBusWebGUI_settings.properties` and add the missing items. Then repeat the export operation and verify that the items are now present.
4. Close the `data.zip` file.

Importing data to a Web GUI server

Secondly import the data to the target server.

Defining the items to import

Copy the exported file to the target server, install the utility (if necessary), and define the items to import from the file.

Procedure

1. Copy the `data.zip` file from the source server to the `tip_home_dir/profiles/TIPProfile/input` directory on the target server.
2. Make sure you are logged in to the target server as an administrative user and that the Tivoli Integrated Portal server is running.
3. Navigate to the directory containing the utility's properties file:
`cd webgui-home/integration/importexport_tool/etc`
4. Edit the file `OMNIBusWebGUI_settings.properties` to define the items you want to import from the `data.zip` file.

Many of the property definitions are a list of items. In these lists, put a comma between each item. In addition for properties that define file paths, use two backslash characters as the path separator on Windows systems; for example:
`C:\\IBM\\tivoli\\netcool\\omnibus_webgui`.

Set the following properties as required. To set a property, remove the leading comment marker and then provide a suitable value.

Table 3. Setting properties to define the data to import

Property	Value
product.home	The installation directory of the Web GUI. Set this property if did not install the product into the default location. The default installation location is one of the following: <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px 5px;">UNIX</div> <div style="border: 1px solid black; padding: 2px 5px;">Linux</div> </div> ibm/tivoli/netcool/ omnibus_webgui <div style="margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px 5px; display: inline-block;">Windows</div> C:\IBM\tivoli\netcool\ omnibus_webgui </div>
output.dir	The full path of the directory where you placed data.zip. If you do not define this property, the utility expects to find the file in <i>tip_home_dir/profiles/TIPProfile/output</i>
import.backupDir	The full path of the directory the utility uses to store backup copies of files it imports. Specify a directory other than output.dir , although you can specify a subdirectory in output.dir . If you do not define this property, the utility uses <i>tip_home_dir/profiles/TIPProfile/backups</i> .

Related tasks:

“Administering timed tasks” on page 7

Timed tasks are the key part to a Web GUI server automatically loading changes in configuration data, without the need to restart the server. You manage timed tasks through properties in the Web GUI initialization file (*server.init*).

Importing the data

Import the data from the .zip file to the target server.

Before you begin

Copy the data.zip file from the source server to the directory *tip_home_dir/profiles/TIPProfile/output* on the target server.

Procedure

To import the data from the .zip file to the target server:

1. As supplied, the utility writes information, warning, and error messages to the log file. Change the level of logging, if required.

Note: Recommended values are FINE, FINER, and FINEST. Each of these produces increasing numbers of messages. They can be helpful when diagnosing a problem in the import utility. After using one of these values, however, be sure to return to the original value before recommencing normal operations on the server.

2. Navigate to the directory containing the utility, *tip_home_dir/profiles/TIPProfile/bin*.
3. Enter one of the following commands to import the data:

```
UNIX Linux ./tipcli.sh Import --username tipadmin --password tippass --excludePlugins ImportPagePlugin,ChartImportPlugin --settingFile webgui-home/integration/importexport_tool/etc/OMNIBusWebGUI_settings.properties
```

```
Windows tipcli.bat Import --username tipadmin --password tippass --excludePlugins ImportPagePlugin,ChartImportPlugin --settingFile webgui-home\integration\importexport_tool\etc\OMNIBusWebGUI_settings.properties
```

Replace:

tipadmin

with the name of the Tivoli Integrated Portal administrative user.

tippass

with the password for the Tivoli Integrated Portal administrative user.

To exclude any plug-ins from the import operation, add their names to the **--excludePlugins** qualifier, putting a comma between each plug-in name. For example, to exclude the prompt plug-in, use:

```
--excludePlugins ImportPagePlugin,ChartImportPlugin,ImportPromptPlugin
```

Always include the **ImportPagePlugin** and **ChartImportPlugin** in the list.

Note: To obtain a list of plug-in names that can be excluded from the import operation, enter the following command: `./tipcli.sh ListImportPlugins`

4. Restart the Tivoli Integrated Portal server.

You need to restart the server if your site does not use timed tasks or you have imported a key system file such as `server.init` or `ncwDataSourceDefinitions.xml`.

Related tasks:

“Setting the logging level for the utility” on page 22

As supplied, the export/import utility writes information messages to the log file in addition to warnings and errors. Use this procedure to customize the level of logging during export and import operations.

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Verifying the import is complete

Check the log file to make sure the import completed successfully, that all the required files and directories are present, and that the imported facilities are available in the Web GUI.

Procedure

1. Open the log file in `tip_home_dir/profiles/TIPProfile/logs/tipcli.log` and check that all stages of the import operation completed successfully.

Resolve any errors and repeat the import activity before continuing. For example, correct any misspelled names and paths in the `OMNIBusWebGUI_settings.properties` file, repeat the import operation, and then verify that the errors are resolved.

2. Verify that the all required files, directories, and Web GUI objects are present on the target server.
3. Verify that all the facilities are available in the Web GUI.

For example, verify that all the imported filters are available.

4. In a load balancing cluster, verify that all the files, directories, and Web GUI objects have propagated to all nodes in the cluster.
5. If the system is not part of a cluster and does not use timed tasks, restart the server.

Cloning data between servers

You can clone data between servers that are running the Web GUI, including or excluding Tivoli Integrated Portal data. All servers must run the same version of the Web GUI and the Tivoli Integrated Portal: you cannot clone data between servers that run different versions of the Web GUI and Tivoli Integrated Portal.

Restriction: The `ncwDataSourceDefinitions.xml` file cannot be cloned. Adjust this file manually after you imported cloned data to a server.

Before you begin

Ensure that you have applied all the available fix packs to the Web GUI and Tivoli Integrated Portal.

Exporting the data

Export all the Web GUI data, with or without Tivoli Integrated Portal data, to a .zip file on the source server.

Related tasks:

“Setting the logging level for the utility” on page 22

As supplied, the export/import utility writes information messages to the log file in addition to warnings and errors. Use this procedure to customize the level of logging during export and import operations.

Export Web GUI and Tivoli Integrated Portal data:

Procedure

1. Make sure you are logged in to the source server as an administrative user and that the Tivoli Integrated Portal server is running.
2. As supplied, the utility writes information, warning, and error messages to the log file. Change the logging level, if required.
3. If your installation of the Web GUI does not use the default location:
 - a. Navigate to the directory `webgui-home/integration/plugins`.
 - b. Edit the file `OMNIBusWebGUI_clone_settings.properties`.
 - c. Locate the following line
`TIP.Cellname=TIPCell`
 - d. Immediately after this line, add the following line:
`product.home=webgui-home`
Replace `webgui-home` with the actual installation directory of the Web GUI.

Note: The default installation directory of the Web GUI is one of the following:

UNIX **Linux** `ibm/tivoli/netcool/omnibus_webgui`

Windows `C:\IBM\tivoli\netcool\omnibus_webgui`

4. Navigate to the directory containing the utility, `tip_home_dir/profiles/TIPProfile/bin`.
5. Enter one of the following commands to export the data:

```
UNIX Linux ./tipcli.sh Export --username tipadmin --password tippass --settingFile webgui-home/integration/plugins/OMNIBusWebGUI_TIP_clone.properties
```

```
Windows tipcli.bat Export --username tipadmin --password tippass --settingFile webgui-home\integration\plugins\OMNIBusWebGUI_TIP_clone.properties
```

Replace *tipadmin* and *tippass* with the user name and password of the Tivoli Integrated Portal administrative user.

Results

The utility creates the following files:

- The file of data in *data.zip* within the directory *tip_home_dir/profiles/TIPProfile/output*.
- A log file in *tip_home_dir/profiles/TIPProfile/logs/tipcli.log*.

Exporting Web GUI data only:

Procedure

1. Make sure you are logged in to the source server as an administrative user and that the Tivoli Integrated Portal server is running.
2. As supplied, the utility writes information, warning, and error messages to the log file. Change the logging level, if required.
3. If your installation of the Web GUI does not use the default location:
 - a. Navigate to the directory *webgui-home/integration/plugins*.
 - b. Edit the file *OMNIBusWebGUI_clone_settings.properties*.
 - c. Locate the following line
`TIP.Cellname=TIPCell`
 - d. Immediately after this line, add the following line:
`product.home=webgui-home`
Replace *webgui-home* with the actual installation directory of the Web GUI.

Note: The default installation directory of the Web GUI is one of the following:

```
UNIX Linux ibm/tivoli/netcool/omnibus_webgui
```

```
Windows C:\IBM\tivoli\netcool\omnibus_webgui
```

4. Navigate to the directory containing the utility, *tip_home_dir/profiles/TIPProfile/bin*.
5. Enter one of the following commands to export the data:

```
UNIX Linux ./tipcli.sh Export --username tipadmin --password tippass --excludePlugins ExportPagePlugin,ChartExportPlugin --settingFile webgui-home/integration/plugins/OMNIBusWebGUI_clone_settings
```

```
Windows tipcli.bat Export --username tipadmin --password tippass --excludePlugins ExportpagePlugin,ChartExportPlugin --settingFile webgui-home\integration\plugins\OMNIBusWebGUI_clone_settings
```

Replace *tipadmin* and *tippass* with the user name and password of the Tivoli Integrated Portal administrative user.

Results

The utility creates the following files:

- The file of data in `data.zip` within the directory `tip_home_dir/profiles/TIPProfile/output`.
- A log file in `tip_home_dir/profiles/TIPProfile/logs/tipcli.log`.

Importing the data

Import the data from the `.zip` file to the target server.

Related tasks:

“Setting the logging level for the utility” on page 22

As supplied, the export/import utility writes information messages to the log file in addition to warnings and errors. Use this procedure to customize the level of logging during export and import operations.

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Import Web GUI and Tivoli Integrated Portal data: Procedure

1. Copy `data.zip` from the source server to the directory `tip_home_dir/profiles/TIPProfile/input` on the target server.
2. On the target server make sure that you are logged in as an administrative user and that the Tivoli Integrated Portal server is running.
3. As supplied, the utility writes information, warning, and error messages to the log file. Change the level of logging, if required.
4. If your installation of the Web GUI does not use the default location:
 - a. Navigate to the directory `webgui-home/integration/plugins`.
 - b. Edit the file `OMNIBusWebGUI_clone_settings.properties`.
 - c. Locate the following line
`TIP.Cellname=TIPCell`
 - d. Immediately after this line, add the following line:
`product.home=webgui-home`
Replace `webgui-home` with the actual installation directory of the Web GUI.

Note: The default installation directory of the Web GUI is one of the following:

`UNIX` `Linux` `ibm/tivoli/netcool/omnibus_webgui`

`Windows` `C:\IBM\tivoli\netcool\omnibus_webgui`

5. Navigate to the directory containing the utility, `tip_home_dir/profiles/TIPProfile/bin`.
6. Enter one of the following commands to import the data:

`UNIX` `Linux` `./tipcli.sh Import --username tipadmin --password tippass --settingFile webgui-home/integration/plugins/OMNIBusWebGUI_TIP_clone.properties`

`Windows` `tipcli.bat Import --username tipadmin --password tippass --settingFile webgui-home\integration\plugins\OMNIBusWebGUI_TIP_clone.properties`

Replace `tipadmin` and `tippass` with the user name and password of the Tivoli Integrated Portal administrative user.

7. Verify that the utility has added or updated files as required:
 - a. Check the log file, *tip_home_dir/profiles/TIPProfile/logs/tipcli.log*, and ensure there were no errors.
 - b. Verify that backup copies of the original files on the target server are in a *.zip* file in *tip_home_dir/profiles/TIPProfile/backups*.
8. Optional: Edit the *ncwDataSourceDefinitions.xml* file and apply any settings you want to copy over from the existing source server.
9. Restart the Tivoli Integrated Portal server.

Note: If target server is part of a load balancing cluster, wait until the next timed task schedule completes before restarting the server. This ensures that the imported data is replicated to other nodes in the cluster and the data base.

Import Web GUI data only:

Procedure

1. Copy *data.zip* from the source server to the directory *tip_home_dir/profiles/TIPProfile/input* on the target server.
2. On the target server make sure that you are logged in as an administrative user and that the Tivoli Integrated Portal server is running.
3. As supplied, the utility writes information, warning, and error messages to the log file. Change the level of logging, if required.
4. If your installation of the Web GUI does not use the default location:
 - a. Navigate to the directory *webgui-home/integration/plugins*.
 - b. Edit the file *OMNIBusWebGUI_clone_settings.properties*.
 - c. Locate the following line
`TIP.Cellname=TIPCell`
 - d. Immediately after this line, add the following line:
`product.home=webgui-home`
Replace *webgui-home* with the actual installation directory of the Web GUI.

Note: The default installation directory of the Web GUI is one of the following:

UNIX **Linux** `ibm/tivoli/netcool/omnibus_webgui`

Windows `C:\IBM\tivoli\netcool\omnibus_webgui`

5. Navigate to the directory containing the utility, *tip_home_dir/profiles/TIPProfile/bin*.
6. Enter one of the following commands to import the data:

UNIX **Linux** `./tipcli.sh Import --username tipadmin --password tippass --settingFile webgui-home/integration/plugins/OMNIBusWebGUI_clone_settings.properties`

Windows `tipcli.bat Import --username tipadmin --password tippass --settingFile webgui-home\integration\plugins\OMNIBusWebGUI_clone_settings.properties`

Replace *tipadmin* and *tippass* with the user name and password of the Tivoli Integrated Portal administrative user.

7. Verify that the utility has added or updated files as required:
 - a. Check the log file, *tip_home_dir/profiles/TIPProfile/logs/tipcli.log*, and ensure there were no errors.
 - b. Verify that backup copies of the original files on the target server are in a *.zip* file in *tip_home_dir/profiles/TIPProfile/backups*.

- Optional: Edit the `ncwDataSourceDefinitions.xml` file and apply any settings you want to copy over from the existing source server.
- Restart the Tivoli Integrated Portal server.

Note: If target server is part of a load balancing cluster, wait until the next timed task schedule completes before restarting the server. This ensures that the imported data is replicated to other nodes in the cluster and the data base.

Setting the logging level for the utility

As supplied, the export/import utility writes information messages to the log file in addition to warnings and errors. Use this procedure to customize the level of logging during export and import operations.

Procedure

- Navigate to the directory containing the logging properties file:
`cd tip_home_dir/profiles/TIPProfile/etc/`
- Open the file `logging.properties` in a text editor.
- Locate the property `java.util.logging.FileHandler.level` and set its value to the required level. Commonly used values, in increasing severity, are:
 - INFO: This value returns INFO, WARNING, and SEVERE messages.
 - WARNING: This value returns WARNING, and SEVERE messages.
 - SEVERE: This value returns SEVERE messages.

Other available values are FINE, FINER, and FINEST. Each of these produces increasing numbers of messages. They can be helpful when diagnosing a problem in an import or export utility. After using one of these values, however, be sure to return to the original value before recommencing normal operations on the server.

For example, setting the property to WARNING, excludes INFO messages from the log file.

- Save the file and exit from the text editor.

Backing up and restoring data

To prevent the loss of information in the event of a disaster, and for disaster recovery, back up your installation of the Web GUI and the Tivoli Integrated Portal.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Backing up and restoring the Web GUI

Use the Web GUI export/import utility to back up and restore Web GUI configuration data.

Procedure

- To back up the Web GUI configuration data, use the export facility of the Web GUI export/import utility. This creates a `.zip` file that you can copy to a secure place.

- To restore previously backed up Web GUI data, use the import facility of the Web GUI export/import utility. Edit the properties file to specify the files you want to restore and then import the data.

Related tasks:

“Copying data between Web GUI servers” on page 10

The Web GUI has a utility to copy selected data from one server to another.

Backing up and restoring the Tivoli Integrated Portal

Use the Tivoli Integrated Portal export/import facilities to back up and restore the Tivoli Integrated Portal configuration data.

Procedure

- To back up the Tivoli Integrated Portal configuration data, use the Tivoli Integrated Portal export facility. This creates a .zip file that you can copy to a secure place.
- To restore previously backed up Tivoli Integrated Portal data, use the Tivoli Integrated Portal import facility.

Related concepts:

“Exporting and importing Tivoli Integrated Portal data” on page 70

You can export customized configuration data from an existing *Tivoli Integrated Portal* Web GUI installation to another by exporting the data and subsequently importing the exported data.

Backing up and restoring the Deployment Engine

Use the Deployment Engine (DE) backup script before installing additional components or other products that are based on the Tivoli Integrated Portal platform. If you need to recover the original configuration after a failure, you can then run the Deployment Engine restore script.

About this task

The Deployment Engine performs the installation of new and upgraded products. It keeps track of the installed components and skips installing a given component if it is already present on the system. Perform the following steps to back up or restore the DE database.

Procedure

1. From the command line, change to the `acsi` directory:

- **Windows** `cd C:\Program Files\IBM\Common\acsi`
- **Linux** **UNIX** For Linux and UNIX-based systems, the path to the `acsi` directory varies depending on whether you are installing as root or as a non-root user, as follows:
 - Installing as a non-root user, the path is relative to the user's home directory:
`<non-root user home directory>/.acsi_<user_name>`
 - Installing as root, the path is as follows:
`/var/ibm/common/acsi`

2. Initialize the Deployment Engine environment from the command line:

- **Windows** `setenv.bat`
- **Linux** **UNIX** `. setenv.sh`

3. Change to the bin directory:
 - **Windows** Change to the bin child directory, that is:
C:\Program Files\IBM\Common\asci\bin
 - **Linux** **UNIX** For Linux and UNIX-based systems, the path to the bin directory varies depending on whether you are installing as root or as a non-root user, as follows:
 - For a non-root user, change to the bin child directory, that is:
<non-root user home directory>/.asci_<user_name>/bin
 - For root, the path is as follows:
/usr/ibm/common/asci/bin
4. Run the backup script to back up the Deployment Engine database, as follows:
 - **Windows** de_backupdb.cmd
 - **Linux** **UNIX** de_backupdb
5. If you need to restore the Deployment Engine database, from the bin directory run the restore script:
 - **Windows** de_restoredb.cmd
 - **Linux** **UNIX** de_restoredb

What to do next

If you backed up the Deployment Engine database, you can run the installer now to add additional components or products. If you restored the Deployment Engine database, you can resume using the original installed environment.

Chapter 2. Administering the GUI framework

You can use the functions of Tivoli Integrated Portal to administer the setup of your Web GUI installation.

About this task

Tip: If you do not find the information that you require in the *IBM Tivoli Netcool/OMNIBus* information center, see the *IBM Websphere Application Server* information center at the following Web address:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.zseries.doc/info/welcome_nd.html

Tip: If you do not find the information that you require in this publication, see the *IBM Websphere Application Server* information center at the following Web address:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.zseries.doc/info/welcome_nd.html

Tivoli Integrated Portal layout

The layout of the portal user interface has these major elements.

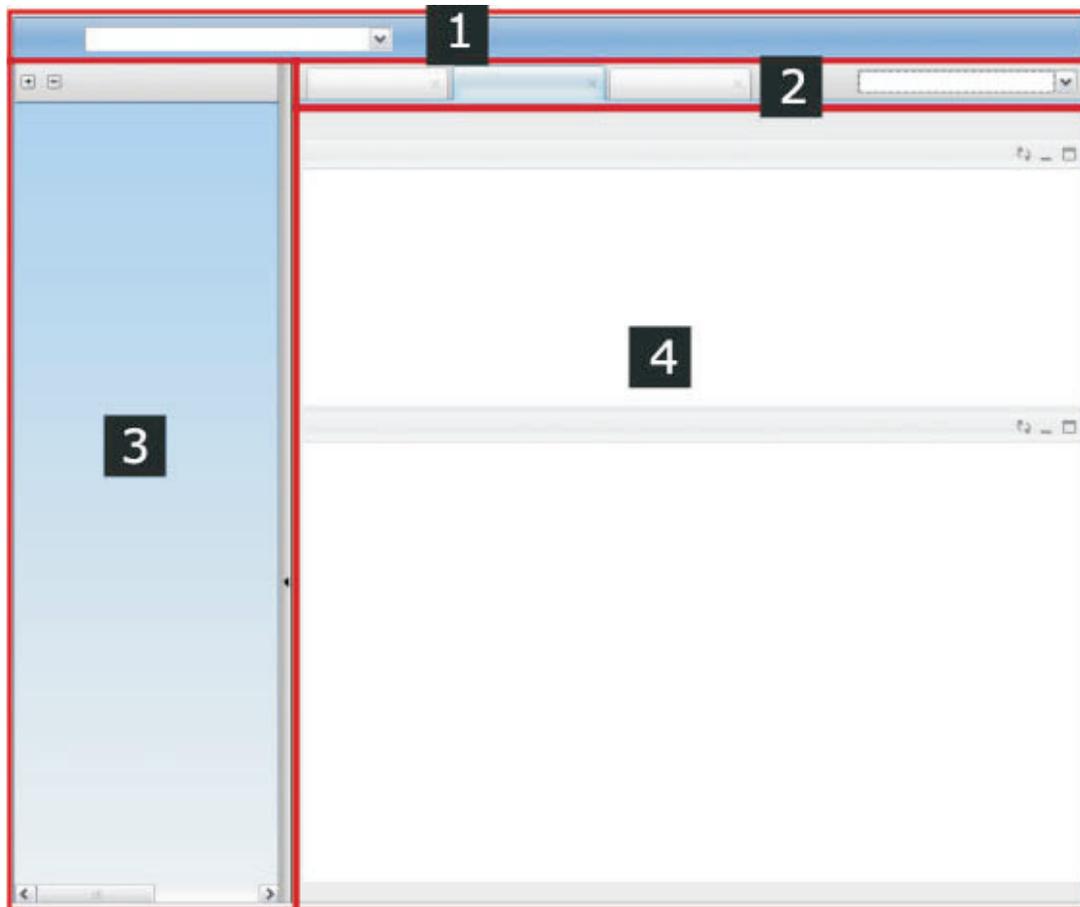


Figure 1. Portal layout

1 Banner

Displays a common image across all portal installations. The banner includes a greeting to the user as well as links to log out of the portal and to open online help. The **View** selection list in the banner controls which nodes are displayed in the navigation as well as pages that are opened when the view is selected.

2 Page bar

Displays tabs to select between open pages. The page bar allows you to work on different pages without closing the page or losing unsaved data. For example, if you are working on an application on Page A, you can open an application on another page to gather information about a resource that you need to finish the form on Page A without losing any unsaved data you have already entered. Multiple pages can be opened at one time, but only one of the open pages is in focus (*current page*). The page bar also contains a **Select Action** drop-down list for performing actions on the current page.

3 Navigation pane

Displays a set of navigation nodes used for accessing content. The nodes shown in the navigation pane are only those to which you have access.

4 Work area

Displays the current page that you are working on. The page contains one or more Web applications or *portlets*, each in its own portlet window with a title bar.

How to customize a Tivoli Integrated Portal setup

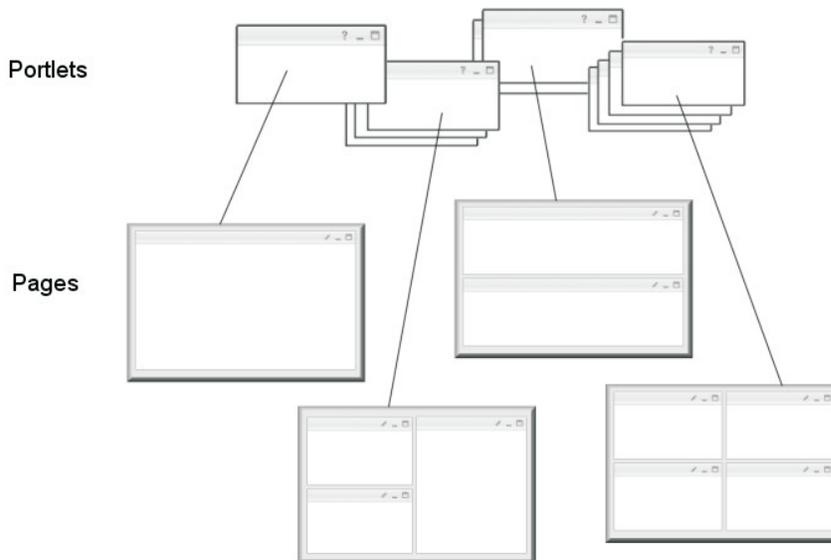
Use this information to learn about the resources provided in Tivoli Integrated Portal, so that you can administer your installation in line with your requirements.

To get started setting up the portal, you should already be familiar with the concepts and characteristics of the layout. You should take time navigating through the portal to become familiar with the portlets, pages, views, roles, and preference profiles that are provided. As you work with the portal, you will create some of these resources to suit your organization's needs.

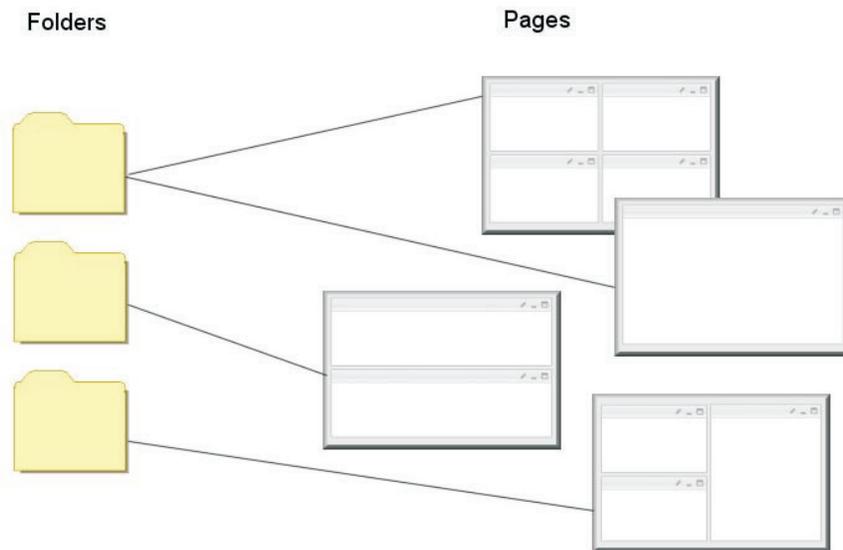
Understanding the structure of the portal

Access to each level in the portal organization is assigned based on the users' roles. Keep each role in mind when planning how to structure the portal content.

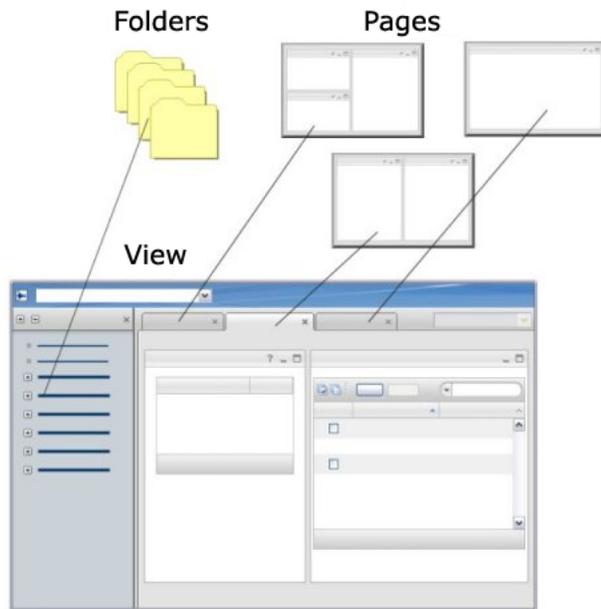
Content in the portal is composed of portlets. The following figure shows how portlets are arranged on a page using a row and column layout. Access to each page, and to each portlet on each page, is assigned to users based on their defined role.



Each page is accessed from the navigation pane, either from the portal root or they can be grouped into folders. The hierarchical structure of the navigation affects how quickly users can find a page and work with the portlets on that page.



Folders and pages can be assembled into views that the user can select from the **View** drop down list in the banner. Each view can include pages that are initially launched when the view is selected.



Finally, you can define a set of preferences, called a *preference profile*, that determines what views are available to each role, and whether the navigation pane should be displayed.

Related information:

“Administering roles” on page 115

Portal users are granted access to resources based on the role to which they have been assigned. In the navigation pane, click **Settings > Roles** to add and remove roles and to assign access to portlets, pages, and views.

“Administering pages” on page 30

Portal content is composed of pages, folders, and external URLs. Each of these resources is represented in the navigation pane as a node. Click **Settings > Pages** to create, edit, and delete pages and folders for the portal navigation. You can also edit external URLs that are launched from the navigation pane. You cannot create URLs in the portal. Instead, URLs are created when an application is deployed to the portal that includes the URL node in its descriptors.

“Administering views” on page 42

Views Views are a defined set of tasks that are displayed in the navigation pane. Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal are a defined set of tasks that are displayed in the console navigation pane. Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal view differ from the view that you can configure in the Web GUI. Web GUI views are a means of constraining the columns that are displayed in event lists.

“Administering portlets” on page 46

Portlets are web applications that display information or provide a service in a portal page. You can only work with portlets that have been deployed to the portal. Use Portlets to create, edit, and delete a portlet from a page.

“Administering console preference profiles” on page 54

Preference profiles are a collection of portal behavior preferences for using the portal that are created by the portal administrator. These preferences include the visibility of the navigation tree, contents of the view selection list, and the default view. Assign preference profiles to roles to manage how the navigation area and view selections are displayed to the users in the role.

How to customize a Tivoli Integrated Portal setup

Use this information to learn about the resources provided in Tivoli Integrated Portal, so that you can administer your installation in line with your requirements.

Procedure

1. Define your portal users and what tasks they perform. Portal users are assigned to roles, which are used to determine what tasks they can perform. As you assess the users' tasks, think about how these roles will be defined. Consider how the community of users will be assigned to different roles and whether there are any existing roles that you can use, or if you need to create new roles. Roles can be created without assigning access to any resources. This step can be performed later.
2. Review the content. Users' tasks are performed using portlets on portal pages. You need to understand what portlets are available and how they will be used to perform these tasks. For each portlet, determine which roles should have access and which roles should be restricted.
3. Create a navigation structure of pages and folders. Determine which pages are currently used to access the portlets. Are these pages sufficient for the roles that you have defined, or do you need to create new pages? For existing pages, do you need to add or remove any portlets or change the way they are arranged on the page? Consider that multiple roles can access a page with different access to the portlets on that page.

Review the folders in the navigation and the pages that are contained in these folders. Do these folders help the users find their content? Do you need to edit existing folders or create new folders? Should you move any pages between folders? What folders or pages should be hidden for each role?

4. Organize the content and navigation into views. Determine which navigation folders and pages have a related purpose for each role. You can define one or more views for each role, and even make a single view appear differently between roles based on access control. Each view can also include one or more pages that are launched when the view is selected. Each of these options is provided to help remove other content and pages that can distract users.
5. Define the presentation for each role. Determine which views should be available to users in a role. For some roles, you can remove the navigation pane and just provide a set of startup pages. You can assign exactly one preference profile per role.
6. Test the portal for each role. Create a test user for each role. Log into the portal as each user and verify the use cases.
 - The navigation is shown or not, depending on the setting in the preference profile.
 - The view selection list shows only the views to which the role has access and as defined by the preference profile.
 - Each view shows only the navigation nodes and startup pages allowed for that role.
 - Each folder shows only the pages allowed for that role.
 - Each page launched in the navigation pane shows only the portlets allowed for that role.
 - If the role has Editor access to a page, the **Edit Page** option is available in the **Page Actions** selection list. This option is not showing if the user's role does not have Editor access.
 - Each page shows only the portlets allowed for that role.
 - The portlet title bar provides an **Edit options** icon that provides access to two options, a **Personalize** option, and an **Edit Shared Settings** option. The **Personalize** option is available, if the user's role has Privileged User access. The **Edit Shared Settings** option is available if the user's role has Editor access. Otherwise, neither of these options are available.

Go back and make corrections as indicated by the results of your testing.
7. Move the portal to production use. Assign roles to actual users and notify the user community that the portal server is ready for use.

Administering pages

Portal content is composed of pages, folders, and external URLs. Each of these resources is represented in the navigation pane as a node. Click **Settings > Pages** to create, edit, and delete pages and folders for the portal navigation. You can also edit external URLs that are launched from the navigation pane. You cannot create URLs in the portal. Instead, URLs are created when an application is deployed to the portal that includes the URL node in its descriptors.

Field descriptions

This section describes the fields and controls in the main panel of Pages.

Select all icon

Selects all items displayed in the table for deletion. If you are displaying

only a filtered set of items, only those items are selected. You can deselect specific items before actually deleting.

Deselect all icon

Deselects all items displayed in the table.

New Page

Opens a panel for creating a new page.

New Folder

Opens a panel for creating a new folder.

Delete Immediately deletes all selected items in the list. Only Custom resource types can be deleted.

Filter Type in this field to quickly find an item in the table. This field is useful when there are a large number of items to look through.

Select Selects or deselects a single item in the table.

Name Displays the title of the page as it is shown in the navigation.

Type Displays the type of page.

Unique Name

Displays the string used by the system to uniquely identify the page or folder.

Related tasks:

“Creating startup pages” on page 39

You can create startup pages, which are displayed after a user logs in, and assign them to users or user groups based on their role. You can also hide the links to other portlets and pages from the navigation.

Related information:

“Administering portlets” on page 46

Portlets are web applications that display information or provide a service in a portal page. You can only work with portlets that have been deployed to the portal. Use Portlets to create, edit, and delete a portlet from a page.

“Administering roles” on page 115

Portal users are granted access to resources based on the role to which they have been assigned. In the navigation pane, click **Settings > Roles** to add and remove roles and to assign access to portlets, pages, and views.

Creating pages

The first step of creating a page is to set the properties of the page. This properties include the page name, the location of the page in the navigation pane, and the page layout. All pages that are created in the console have a resource type of “Custom”.

Procedure

To create a page:

1. Log in as a user with the iscadmins role and click **Settings > Pages**. Then, in the Pages portlet, click **New Page**.
2. In the **Page name** field, type a descriptive name for the page and in the **Page location** field indicate where you want the page to be displayed in the navigation pane. Consider the content on the page and how users will find that content by looking for the page name in the navigation pane.
3. Select the page layout.

4. Click the **Optional Setting** label and associate one or more roles with the new page and set the level of access for each role.
5. Click **OK**. The taskbar tab is updated with the name of the new page and a Choose a Portlet window is displayed.

Results

The new page is displayed. Depending on the page layout that you specified, the page is opened in freeform mode or classic mode, for you to select the portlets for the page.

What to do next

Select the portlets that you want to be displayed on the page.

Related tasks:

“Selecting items for display on a page”

After you created a page, or while you are editing a page, select or change the portlets that are displayed on the page. If the page layout is in classic mode, you split the page into sections and then select the item that is displayed in each section from a list. If the page layout is in freeform mode, you drag the items from a content palette onto the page, and then position and size each item. Items can be portlets, widgets, or iWidgets. The items for selection depend on the products that are in your Tivoli Integrated Portal installation.

“Configuring communications between portlets using wires” on page 33

You can create connections, or *wires*, between portlets so that they can exchange messages with each other. When an action occurs in a source portlet, it creates an event, which contains information that can be sent to other portlets. To work with wires on a page, the page must be in edit mode.

Selecting items for display on a page

After you created a page, or while you are editing a page, select or change the portlets that are displayed on the page. If the page layout is in classic mode, you split the page into sections and then select the item that is displayed in each section from a list. If the page layout is in freeform mode, you drag the items from a content palette onto the page, and then position and size each item. Items can be portlets, widgets, or iWidgets. The items for selection depend on the products that are in your Tivoli Integrated Portal installation.

About this task

Restriction: The following restriction applies if you create the page in freeform mode: If you overlay portlets on top of another, so that one portlet is only partially visible beneath another portlet, limitations apply. If the portlet underneath is applet-based and the portlet on top is HTML-based, the applet-based portlet is visible through the HTML portlet. This limitation shows when you arrange the portlets on the page. The following Web GUI portlets are applet-based: Active Event List (AEL), Maps, and Event Dashboard. For example, if you arrange an Event Viewer over an AEL, the AEL is visible through the Event Viewer. To avoid this problem, arrange applet-based portlets and HTML-based portlets alongside each other, not over each other.

Procedure

- If the page layout is in classic mode:

1. Create a window for the new portlet by splitting one of the windows displayed.
 - Use the **Horizontal split** icon to create a window below an existing window.
 - Use the **Vertical split** icon to create a window to the right of an existing window.

The Portlet Picker is displayed within the new portlet window for selecting the portlet content.

2. Scroll through the list or use the **Filter** field to find the portlet you want to add.
 3. Click **OK**. The portlet is added to the window.
- If the page layout is in freeform mode:
 1. From the content palette, select an item. The selectable items are displayed in alphabetical order. Use the **Next** and **Previous** buttons to scroll between the items. Hover over an item to display a short description of the item.
 2. Drag the item into the lower section of the page, and position and size it. To size the item hover over the lower right corner and drag the mouse until the item reaches the right size.
 3. Add further items to the page, if required, and position and size them.

What to do next

- To specify the preference for the item, click **Edit options** . You can set the default portlet preferences by clicking **Edit shared settings**.
- To configure the items to communicate, click **Show wires**.

Related tasks:

“Creating pages” on page 31

The first step of creating a page is to set the properties of the page. This properties include the page name, the location of the page in the navigation pane, and the page layout. All pages that are created in the console have a resource type of “Custom”.

Configuring communications between portlets using wires

You can create connections, or *wires*, between portlets so that they can exchange messages with each other. When an action occurs in a source portlet, it creates an event, which contains information that can be sent to other portlets. To work with wires on a page, the page must be in edit mode.

Default wires are provided with Web GUI portlets. You can develop custom wires and the transformation that manipulate the event generated by a source target before it is delivered to the target portlet.

The target portlet can be on the same or on a different page from the portlet that is the source of the event. A page can also be the target of a wire. In this case, all portlets on the target page can receive the event. In response to the event, the target portlet can update its content.

Not all portlets support wires and events. Portlets must use specific code to process events that are sent or received through a wire. Each portlet is designed to process certain events. You should have thorough knowledge of the portlets and the events that they support before creating or editing wires. To determine if a portlet supports an event, click the **Events** icon to view a list of all events that the portlets subscribes to or publishes.

Some target portlets are capable of processing events after they have been transformed to match certain criteria. For example, an event that sends the cost of a transaction in one currency might need to be transformed to a different currency before the target portlet can receive it. When you create a wire, you have the option of selecting a transformation for the event, if the target portlet requires it. The console provides the Simple String Transformation to transform from one event to another. Other transformations might be available from other applications in the console.

Before you begin

If the functionality that you require is not provided by the default wires, develop the custom wires and transformations that you need.

Procedure

1. Click **Show Wires**. The Summary of wires panel is displayed. The Wire Type column indicates whether the existing wires are system or custom.
 - System wires are created by applications in the console. You cannot create, edit, or delete system wires. Select or deselect the checkboxes under **Enable** to enable or disable a wire.
 - Custom wires are created by console users with “Editor” access to a page. You can also edit and delete these wires as necessary.
2. Click **New Wire**. A dialog is displayed that allows you to select an event provided by a source portlet on the page. If no events are listed, then you cannot create a wire from this page. You can select from the events listed to read a description of each event.
3. Select one of the available source events for the new wire and click **OK**. A dialog is opened that allows you to select the target for the new wire. You can browse through the pages and folders listed to select a target portlet or page, or use the search field to find the target.
4. Select a target for the new wire.
5. Optional: If the target is on another page, select from the following options:
 - **Load the selected target page**
This option opens the target page if it is not already opened when the event is launched.
 - **Switch to the selected target page**
This option makes the target page the current page when the event is launched.

Option	Description
	This option opens the target page if it is not already opened when the event is launched.
	This option makes the target page the current page when the event is launched.

6. Click **OK**. A dialog is opened that allows you to select from a list of transformations. Transformations are used to change event names or parameters so that the target can process them. You should be familiar with the transformation and target before defining a transformation for the wire. You can select from the list of transformations to read a description.
7. Select the transformation for the new wire, or select None if no transformation is needed, and click **OK**. If you selected “Simple String Transformation”, select a target event from the list and select the source parameter names for each target

parameter in the list. When the original event is sent, it is transformed into this target event before it is received by the target portlet.

Related concepts:

“Developing transformations” on page 66

Transformations manipulate the event generated by a source target before it is delivered to the target portlet. You can develop a transformation to convert an event name, parameter name, or parameter value to match the needs of a target portlet. Using transformations to handle events is optional.

Related tasks:

“Creating pages” on page 31

The first step of creating a page is to set the properties of the page. This properties include the page name, the location of the page in the navigation pane, and the page layout. All pages that are created in the console have a resource type of “Custom”.

Editing page content

Pages are an arrangement of one or more portlets in the work area and contain the portlets needed to complete tasks. Users whose roles have “Editor” access to a page can edit the layout and content. Users with “Privileged User” access can change the size of portlet windows on the page.

To put a page into edit mode:

1. Locate the page you want to edit in the navigation pane and open the page.
2. In the page bar, select **Edit Page** from the page actions selection list.

Procedure

You can make the following changes to the content of a page:

- To replace a portlet in a window:
 1. Click the **Replace content** icon in the title bar where you want to replace the portlet content. The Portlet Picker is displayed within the new window.
 2. Scroll through the list or use the **Filter** field to find the portlet you want to add.
 3. Click **Add Portlet**. The portlet is added to the window.
- To remove a portlet and its window, click the **Delete** icon in the title bar. The content is removed immediately without a warning prompt.
- To create wires between portlets so they can share information and updates, click **Show Wires**. Before working with wires, make sure that you have enough information about the events that a portlet supports. See “Configuring communications between portlets using wires” on page 33 for more information.
- To change the settings of a page:
 1. Click **Page settings**. Then, click **General**.
 2. In the **Page name** field, type a descriptive name for the page and in the **Page location** field indicate where you want the page to be displayed in the navigation pane. Consider the content on the page and how users will find that content by looking for the page name in the navigation pane.
 3. Use the **Navigation visibility** list to indicate whether or not you want the page to be listed in the navigation pane.
 4. From the **Page persistence** list, make one of the following selections:
 - Client side (default setting) - This setting preserves any changes that the user makes on the page when the user navigates away from the page.

Changes include not only form data, but any state changes to portlets, for example, opening edit mode, switching to another panel in the portlet, or minimizing a portlet. Page data and page state are maintained on the client side until the user closes the page or logs out of the console.

- None
- Server side - This setting maintains unsubmitted or unsaved form data from a page when the user navigates away from the page. The data is saved on the server and fetched when the user returns to the page. Unsaved data is saved until the user closes the page or logs out of the console.

Note: The Server side setting only applies to forms on a page. Any user interaction outside of a form is not maintained.

5. Use the **Page tasking** radio buttons to indicate whether multiple instances of the page can be launched.
 6. In the **Component direction** drop-down list, you can accept the **Default** setting to allow the component direction to be governed at console level or select one of the other settings to indicate whether you want to display page components from left-to-right or from right-to-left. If you select a setting other than **Default**, it will override any component direction setting that may be set at console or browser level.
 7. In the **Text direction** drop-down list, you can accept the **Default** setting to allow the text direction to be governed at console level or select Left-to-Right or from Right-to-Left to indicate the direction that you want the page text to display. You can also select **Contextual Input** so that for pages that include text entry fields, the direction of text is dependent on the language used to enter data. If you select a setting other than **Default**, it will override any text direction setting that may be set at console or browser level.
- Click the **Roles** tab to update the list of roles with permissions to the page and their access level. A list of all roles with access to the page is displayed.

User Roles with User access, have view access to the configured portlet, when it is subsequently added to a page.

Privileged User

Roles with privileged user access, have view access and such users can personalize their own experience of a portlet through the **Edit options** icon in the portlet taskbar. Personalizing a portlet does not affect the experience of other users of the portlet.

Editor

Roles with Editor access can subsequently edit shared settings for a portlet through the **Edit options** icon in the taskbar. When an editor modifies shared settings, it affects other portlet user settings for that portlet.

Also, roles with Editor access can subsequently edit the portlet's general settings in the Portlet Wizard. Editor access (unlike manager access) does not provide access to portlet-specific customization pages or to the security settings page in the Portlet Wizard.

Manager

Roles with Manager access can subsequently modify any aspect of the portlet in the Edit Portlet Wizard.

Note: As the creator of the custom portlet you are given *Manager* access by default.

Attention: Make sure that the roles with access to a page also have access to the portlets that are on the page.

- Click the **View Membership** tab to update the list of views that include this page.

Option	Description
To add this page to a view	Click Add and select one or more views.
To remove this page from a view	Select one or more views in the list and click Remove .

- When you are satisfied with your updates, click **Save** to commit your changes.

Results

You are returned to the page with your changes displayed.

Related tasks:

Chapter 8, “Setting portlet preferences,” on page 173

You can change the settings of the portlets to customize their appearance and setup to your requirements.

“Configuring communications between portlets using wires” on page 33

You can create connections, or *wires*, between portlets so that they can exchange messages with each other. When an action occurs in a source portlet, it creates an event, which contains information that can be sent to other portlets. To work with wires on a page, the page must be in edit mode.

Creating folders

Folders are used to group nodes in the navigation pane. All folders that are created in the portal have a resource type of “Custom”.

Procedure

1. Click **Settings > Pages** in the navigation pane. A Page Settings page is displayed.
2. Click **New Folder**. The properties panel for the new folder is displayed.
3. Complete the fields in the properties panel.
4. Click **Save** to save your changes and return to Pages.

Results

The new folder is displayed in the summary table. The folder is also displayed in the navigation pane once you have added page content to it. Add other nodes to the folder by editing their location properties.

Editing the properties of a page, folder, or external URL

You can edit the properties of custom and system navigation nodes, which include pages, folders, and external URLs. Properties of a node include its display name and its location in the navigation. You can also indicate whether multiple or only single instances of a page node can be launched in the portal.

About this task

When changes are made to a system node, the updated system node is saved as System - Customized. You cannot delete a system node. Instead, you can restore the system node, which deletes the custom copy of it.

You can perform the following tasks when you edit a node's properties.

- Define who can access a page or external URL and the level of access
- Determine which view should include the node. When the view is selected, the page, folder, or URL is included in the navigation pane for that view.
- Change the name that is displayed in the navigation pane for a node.
- Change the location of a node in the navigation pane. For example, you can group pages into folders.

Attention: You cannot create URLs in the portal. Instead, URLs are created when an application is deployed to the portal that includes the URL node in its descriptors.

Procedure

1. Click **Settings** > **Pages** in the navigation pane. Pages is opened displaying navigation nodes in a summary table.
2. Locate the node that you want to edit in the table provided. Use the filter in the table to type in the node name and quickly display it.
3. Click the link for the node provided in the **Name** column. The properties panel for the node is displayed.
4. Make your changes to the node's Page, Folder, and External URL properties.
5. Click **Save** when you have finished.

Results

The changes you made are reflected in the navigation pane.

Deleting custom pages and folders

You can delete only pages with the resource type of Custom. These are nodes created using the portal.

About this task

System nodes that have been customized can be restored.

Attention: Before deleting a page or folder, consider whether any users are actively using the resource and any impacts this might have on services. If necessary, notify users in advance of any plans for changes that could affect their work.

Procedure

1. Click **Settings** > **Pages** in the navigation pane. Pages is opened displaying portal navigation nodes in a summary table.
2. Locate the node that you want to delete in the table provided. Use the filter in the table to type in the node name and quickly display it.
3. Check the box in the **Select** column for the node. You can select more than one custom page or folder for deletion.
4. Click **Delete**. A message is displayed at the top prompting you to confirm the deletion.
5. Click **OK**.

Results

The page or folder is deleted and removed from the navigation pane.

Restoring system pages, folders, and external URLs

System nodes are always preserved with their original settings. After making changes to a system node, the changes are saved in a customized copy of the page, folder, or URL. When you restore a system node, the customized copy is deleted and the original system node is restored in its place.

About this task

To delete the customized copy and restore the system node, follow these steps.

Procedure

1. Click **Settings** > **Pages** in the navigation pane. Pages is opened displaying portal navigation nodes in a summary table.
2. Locate the node that you want to edit in the table provided. Use the filter in the table to type in the node name and quickly display it.
3. Click the link for the node provided in the **Name** column. The properties panel for the node is displayed.
4. Scroll to the bottom of the panel and click **Restore**.
5. Click **OK** to save your changes.

Results

You are returned to the main panel of Pages. The resource type of the node is displayed as System.

Creating startup pages

You can create startup pages, which are displayed after a user logs in, and assign them to users or user groups based on their role. You can also hide the links to other portlets and pages from the navigation.

Before you begin

Make sure that the user account you want to use has the isadmins role assigned.

About this task

To create startup pages:

Procedure

1. Optional: To create a new role, click **Users and Groups > Role Management** and follows the steps under “Creating roles” on page 118.
2. Optional: To create a new page:
 - a. Click **Settings > Page Management**
 - b. Follow the steps under Creating classic pages.
Add the necessary content to the page. For example, you can add AEL portlets to an IFrame portlet along with other content for the intended users.
 - c. To specify the role or roles required to access the page, click **Roles with access to this page**. Click **Add** and select the required roles.
3. Add the startup page to a view:
 - a. Click **Settings > View Management** and click **New**.
 - b. In the **View name** field, type a name for the view.
 - c. Select **Hide any open pages in the work area that are not part of this view**.
 - d. Click **Roles with Access to This View**.
 - e. On the Available Roles page, select the required roles and click **Add**.

Tip: To give Web GUI administrators access to the view, select the ncw_admin role.
 - f. Select the level of access for each assigned role.

Tip: Set editor-level access for the ncw_admin role.
 - g. Click **Pages in This View** and click **Add**.
 - h. On the Available Pages page, select the required pages and click **Add**.
 - i. Select **Select and Set all pages in this view to launch**.
 - j. Click **Save**.
4. Link the view and the role by creating a console preference profile:
 - a. Click **Settings > Console Preference Profiles** and click **New**.
 - b. In the **Preference profile name** field, type a name for the profile.
 - c. Select **Show navigation tree**.
 - d. To restrict the navigation options to only the pages specified in the view, click **Required view** and clear **All tasks** .
 - e. Clear **Core views**.
 - f. Click **Roles using this preference profile** and click **Add**.
 - g. On the Available Roles page, select the required roles and click **Add**.
 - h. Under **Default console view** select the view that you created in step 3.
 - i. Click **Save**.
5. To assign roles to users:
 - a. Click **Users & Groups > User Roles**.
 - b. Complete any combination of the search fields to help locate the users.
 - c. Select how many users to display and click **Search**. A list of matching users appears in the grid.
 - d. Click the user ID of the user you want to assign roles to.
 - e. From the **Role(s)** list, select the roles to assign the user.
 - f. Click **Save**.
6. To assign roles to user groups:

- a. Click **Users & Groups > Group Roles**.
- b. Complete any combination of the search fields to help locate the groups.
- c. Select how many groups to display and click **Search**. A list of groups appears in the grid.
- d. Click the name of the group you want to assign roles to.
- e. From the **Role(s)** list, select the roles to assign the user group.
- f. Click **Save**.

Results

When a user belonging to a group that has the assigned role logs in, the selected startup page is automatically loaded. In the **View** list above the navigation, the user can switch between navigation displays: **All tasks** displays all the navigation options assigned to the role, and *viewname* displays all the options assigned to the view. If a user is assigned to multiple roles that have startup pages, all pages are automatically loaded after login.

Related tasks:

“Creating roles” on page 118

Portal users are granted access to resources based on the role to which they have been assigned. All roles that are created in the portal have a resource type of Custom. This procedure describes creating a role for testing purposes. After completing these steps, you can remove or edit this role for production use.

“Creating views” on page 44

Views determine what pages are listed in the navigation pane as well as which pages are launched when the view is selected. All views that are created in the portal have a resource type of Custom. This procedure walks you through the task of creating a view for testing purposes. After completing these steps, you can remove or edit this view for production use.

“Creating preference profiles” on page 55

Preference profiles are a collection of console behavior preferences for using the console that are created by the console administrator. Follow these steps to create a preference profile and assign it to a role.

“Creating users” on page 107

You can create one or more users. The users are added to the registry and a login account for each new user is automatically created. When creating the new user, you can also add the user as a member of one or more groups.

“Creating groups” on page 124

You can create one or more groups. The group names and descriptions are added to the user registry.

“Administering users” on page 104

You can perform tasks that help you manage users.

“Administering groups” on page 121

You can perform tasks that help you manage groups.

Related information:

“Administering pages” on page 30

Portal content is composed of pages, folders, and external URLs. Each of these resources is represented in the navigation pane as a node. Click **Settings > Pages** to create, edit, and delete pages and folders for the portal navigation. You can also edit external URLs that are launched from the navigation pane. You cannot create URLs in the portal. Instead, URLs are created when an application is deployed to the portal that includes the URL node in its descriptors.

“Administering console preference profiles” on page 54

Preference profiles are a collection of portal behavior preferences for using the portal that are created by the portal administrator. These preferences include the visibility of the navigation tree, contents of the view selection list, and the default view. Assign preference profiles to roles to manage how the navigation area and view selections are displayed to the users in the role.

“Administering views”

*Views*Views are a defined set of tasks that are displayed in the navigation pane. Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal are a defined set of tasks that are displayed in the console navigation pane. Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal view differ from the view that you can configure in the Web GUI. Web GUI views are a means of constraining the columns that are displayed in event lists.

Administering views

*Views*Views are a defined set of tasks that are displayed in the navigation pane.

Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal are a defined set of tasks that are displayed in the console navigation pane. Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal view differ from the view that you can configure in the Web GUI. Web GUI views are a means of constraining the columns that are displayed in event lists.

For example, if you find a set of tasks related to obtaining sales and cost reports from retail stores throughout a region, you could create a view called “Reports” that includes all of the pages associated with those tasks in the navigation. Each page, along with the folders that include them, would be added to the view. You could then set some of the most important pages to launch when the view is selected. In this way, views can make your experience with the portal more productive than sorting through all of the navigation tasks that are displayed by default.

If you have sufficient access, you can create your own custom views. You can only edit system views.

To access Views in the console, click **Settings** > **Views** in the navigation.

Field descriptions

This section describes the fields and controls in the main panel of Views.

Select all icon

Selects all items displayed in the table for deletion. If you are displaying only a filtered set of items, only those items are selected. You can deselect specific items before actually deleting.

Deselect all icon

Deselects all items displayed in the table.

New Opens a panel for creating a new view.

Delete Immediately deletes all selected items in the list. Only Custom resource types can be deleted.

Filter Type in this field to quickly find an item in the table. This field is useful when there are a large number of items to look through.

Select Selects or deselects a single item in the table.

View Name

Displays the name of the view as it is shown in the **View** selection list in the banner. Click the name to edit the view.

Type Displays the type of view. The actions you can perform on a view depend upon its type.

Role Count

Displays the number of roles that have access to this view..

Page Count

Displays the number of pages that are available in the portal when the view is selected.

Related tasks:

“Creating startup pages” on page 39

You can create startup pages, which are displayed after a user logs in, and assign them to users or user groups based on their role. You can also hide the links to other portlets and pages from the navigation.

Related information:

“Administering roles” on page 115

Portal users are granted access to resources based on the role to which they have been assigned. In the navigation pane, click **Settings > Roles** to add and remove roles and to assign access to portlets, pages, and views.

Creating views

Views determine what pages are listed in the navigation pane as well as which pages are launched when the view is selected. All views that are created in the portal have a resource type of Custom. This procedure walks you through the task of creating a view for testing purposes. After completing these steps, you can remove or edit this view for production use.

Before you begin

You should understand the portal layout before starting this task.

Procedure

1. Click **Settings > Views** in the navigation pane. The Views page is displayed with the list of system and custom views in the portal.
2. Click **New**. The properties panel for the new view is displayed.
3. Enter a descriptive name for the view. This name is displayed in the **View** selection list in the banner.
4. Expand the **Roles with Access to This View** section and click **Add**. The **Add Roles** panel is displayed with a list of available roles. For this task, add a role that can be used to test the view before adding access for other roles.
Attention: Granting access to the view does not grant access to the pages within the view.
5. Select your role in the table. You can use the filter to quickly find your role if the list of roles is very large.
6. Click **Add** after making your selection. You are returned to the view properties. The next step is to determine the pages that make up the view.
7. Expand the **Pages in This View** section and click **Add**. The **Add Pages** panel is displayed with a list of available pages.
8. Select several folders or pages in the list. Selecting a folder also selects all of the pages contained in that folder. You can individually deselect pages in a folder if necessary.
9. Click **Add** after making your selections. You are returned to the view properties.
10. Select the **Launch** option for two or three of the pages and select one of the launch pages as the default.
11. Click **Save** to save the new view and return to the Views page.

Results

Select the new view from the **View** drop down list located above the navigation pane. Verify that all pages and folder that you selected are displayed in the

navigation, that the pages selected to launch are available is the page bar, and that the default selection has focus in the work area.

Editing views

Views provide a limited set of nodes in the navigation pane and optional set of startup pages to help users focus on their tasks. If you have sufficient authorization in the portal, you can change the view name, navigation content, and access permissions for system and custom views. You can delete only custom views. Changes you make to a system view are saved as *System Customized*.

About this task

Procedure

1. In the navigation pane, click **Settings > Views**. The Views page is displayed with the list of system and custom views in the portal.
2. Click the view name in the list displayed in Views. This displays the view's properties.
3. Optional: Expand **Roles with Access to This View** to update the list of roles with permissions to the view and their access level. A list of all roles with access to the view is displayed.

User Roles with User access, have view access to the configured portlet, when it is subsequently added to a page.

Privileged User

Roles with privileged user access, have view access and such users can personalize their own experience of a portlet through the **Edit options** icon in the portlet taskbar. Personalizing a portlet does not affect the experience of other users of the portlet.

Editor

Roles with Editor access can subsequently edit shared settings for a portlet through the **Edit options** icon in the taskbar. When an editor modifies shared settings, it affects other portlet user settings for that portlet.

Also, roles with Editor access can subsequently edit the portlet's general settings in the Portlet Wizard. Editor access (unlike manager access) does not provide access to portlet-specific customization pages or to the security settings page in the Portlet Wizard.

Manager

Roles with Manager access can subsequently modify any aspect of the portlet in the Edit Portlet Wizard.

Note: As the creator of the custom portlet you are given *Manager* access by default.

Note: Granting access to the view does not grant access to the pages within the view.

4. Optional: Expand **Pages in This View** to change which pages are displayed in the navigation when the view is selected.

Option	Description
Add a page to the view	Click Add to add a page to the view.

Option	Description
Remove a page from the view	Select the page in the Select column and click Remove . You can select multiple pages to remove.
Change the launch options for a page	Select Launch for each page that should be opened when the view is selected. Only one page can be in focus (current) when the view is selected. When multiple pages are set to launch, set the current page in the Default column.

5. Click **Save** to save your changes and return to the main view panel.

Results

For customized versions of a system view, you can retrieve the system view settings by editing the system customized view and clicking **Restore**. The “system customized” version of the view is removed and replaced by the original system view.

Deleting custom views

You can delete only views with the resource type of Custom. These are views created using the portal.

About this task

Customized versions of system views can be restored. Restoring a System Customized view deletes the custom copy and replaces it with the original system view.

Attention: Before deleting a view, consider whether any users are actively using the view and any impacts this might have on services. If necessary, notify users in advance of any plans for changes that could affect their work.

Follow these steps to delete a custom view.

Procedure

1. Click **Settings > Views** in the navigation pane. The Views page is displayed with the list of system and custom views in the portal.
2. Select the custom view that you want to delete. You can select more than one custom view.
3. Click **Delete**. A message is displayed at the top prompting you to confirm the deletion.
4. Click **OK**.

Results

The custom view is removed from the view list.

Administering portlets

Portlets are web applications that display information or provide a service in a portal page. You can only work with portlets that have been deployed to the portal. Use Portlets to create, edit, and delete a portlet from a page.

To access Portlets in the portal, click **Settings > Portlets** in the navigation pane. The main panel displays a list of all of the portlets in the portal.

In relation to the portlet palette that is displayed when creating freeform page, portlets can be associated with one or more portlet catalogs. Portlets that are not organized into catalogs, are said to be uncategorized, but depending on your authorization, may still be listed in the portlet palette.

Field descriptions

This section describes the fields and controls in the main panel of the Portlets management page.

New icon

Launches the Create Portlet Wizard that allows you to create a customized copy of an existing portlet.

Edit Launches the Edit Portlet Wizard that allows you to edit settings for a non-core portlet.

Delete Deletes a selected custom portlet.

Restore icon

Reloads the portlets list.

Filter Type in this field to quickly find an item in the table. This field is useful when there are a large number of items to look through.

Select Selects or deselects a single item in the table.

Name Displays the title of the portlet as it is shown on the page. To edit details for a portlet, click its name entry in the table to launch the Edit Portlet Wizard.

Type Indicates whether a portlet is a core, system, or custom portlet.

Catalog

Displays the catalog that contains the portlet.

Description

Provides a description of a portlet and its intended function.

Related information:

“Administering pages” on page 30

Portal content is composed of pages, folders, and external URLs. Each of these resources is represented in the navigation pane as a node. Click **Settings > Pages** to create, edit, and delete pages and folders for the portal navigation. You can also edit external URLs that are launched from the navigation pane. You cannot create URLs in the portal. Instead, URLs are created when an application is deployed to the portal that includes the URL node in its descriptors.

“Administering roles” on page 115

Portal users are granted access to resources based on the role to which they have been assigned. In the navigation pane, click **Settings > Roles** to add and remove roles and to assign access to portlets, pages, and views.

Creating portlets

You can configure settings using an existing portlet to create a custom portlet. You can create many different custom portlets and configure them in the Create Portlet Wizard, each portlet with a different name and configuration settings. The portlet must already be installed in the portal for you to create a custom version of it.

About this task

Follow these steps to create and configure a custom portlet:

Important: *Manager* access to the *Portlets* portlet is required in order to be able to create and edit portlets in the Portlet Wizard.

Procedure

1. In the navigation pane, click **Settings > Portlets**. A list of all of the portlets is displayed in a scrollable table.
2. In the task bar, click the **New** icon to start the Create Portlet Wizard. The Welcome page is displayed.
3. Click **Next** to display the Select Base Portlet page. In this page, you can directly select an portlet on which to base your custom portlet or filter the number of portlets displayed by searching for portlets with a particular name.
4. Optional: To search for a portlet, enter a text string in the search field and click **Search**. To clear a search and again list all portlets, clear the search field and click **Search**.
5. Select a base portlet from list of portlets and click **Next**. The General portlet information page is displayed.
6. Required: Enter a new, descriptive name, which in most circumstances, becomes the portlet's display name.
7. Enter a description for the portlet, indicating its function.
8. Select a thumbnail icon that you want associated with the portlet. The selected thumbnail icon is used in the portlet palette when a user is creating a freeform page in the self-service dashboard.
9. Select a description image that you want associated with the portlet. The selected image is displayed when a user points to a thumbnail icon in the portlet palette when they are creating a freeform page in the self-service dashboard.
10. Optional: In the **Component direction** and **Text direction** fields, accept the default whereby portal components and text are displayed according to your browser settings. Alternatively, you can choose to impose either left-to-right or right-to-left display settings.
11. Optional: To associate the portlet with one or more portlet catalogs, select catalogs in the **Available Catalogs** list and move them to the **Selected Catalogs** list. Catalogs are used to logically group portlets when they are displayed in the portlet palette of the self-service dashboard.
12. Click **Next** to display the portlet Security page is displayed. In the Security page, you can provide some or all portal roles with varying levels of access to the portlet. The following access levels are available:

User Roles with User access, have view access to the configured portlet, when it is subsequently added to a page.

Privileged User

Roles with privileged user access, have view access and such users

can personalize their own experience of a portlet through the **Edit options** icon in the portlet taskbar. Personalizing a portlet does not affect the experience of other users of the portlet.

Editor

Roles with Editor access can subsequently edit shared settings for a portlet through the **Edit options** icon in the taskbar. When an editor modifies shared settings, it affects other portlet user settings for that portlet.

Also, roles with Editor access can subsequently edit the portlet's general settings in the Portlet Wizard. Editor access (unlike manager access) does not provide access to portlet-specific customization pages or to the security settings page in the Portlet Wizard.

Manager

Roles with Manager access can subsequently modify any aspect of the portlet in the Edit Portlet Wizard.

Note: As the creator of the custom portlet you are given *Manager* access by default.

13. Optional: To associate a role with a particular access level for the portlet:
 - a. Select the role in the **Available Roles** panel.
 - b. In the right hand panel, click the access level that you want the role to be associated with and click **Add** to move the selected role to that access level's panel.

For example, to provide the *chartAdministrator* role with *Editor* access, select **chartAdministrator** in the left panel and then click the **Editor** bar in the right hand panel to display its content panel. Click **Add** to move the **chartAdministrator** role to the **Editor** content panel.

14. Click **Next** to display portlet specific customization pages.

What to do next

Customize your portlet further in the portlet specific wizard pages. Portlet specific settings vary for each portlet type and you can use the portlet level help (available through **Help (?)** in the wizard page taskbar) to assist you. Once you have customized the portlet, and click **Next**, a Summary page is displayed where you can review your settings.

Note: Some portlets do not have customization pages associated with them. In those cases, when you click **Next** in the portlet Security page, the Summary page is displayed.

Editing portlets

Portlets provide content on a portal page, for example, viewing system information or submitting reports. If you have sufficient authorization, you can change access permissions to a portlet. You can also change the display name of the portlet and its configuration settings.

About this task

Note: You cannot edit portlets of the portlet type *core*.

Important: *Manager* access to the *Portlets* portlet is required in order to be able to create and edit portlets in the Portlet Wizard.

To edit details for a custom portlet:

Procedure

1. Click **Settings > Portlets** in the navigation pane. A list of all of the portlets is displayed in a scrollable table.
2. You can select the portlet that you want to edit in two ways:
 - Click the name of the portlet that you want to edit to start the Edit Portlet Wizard.
 - Select the radio button associated with the portlet that you want to edit and click the **Edit** icon to start the Edit Portlet Wizard.

The Welcome page is displayed.

3. Click **Next** to display the General portlet information page.
4. Optional: Edit the portlet's name and description.
5. Optional: Select a thumbnail icon that you want associated with the portlet. The selected thumbnail icon is used in the portlet palette when a user is creating a freeform page in the self-service dashboard.
6. Optional: Select a description image that you want associated with the portlet. The selected image is displayed when a user points to a thumbnail icon in the portlet palette when they are creating a freeform page in the self-service dashboard.
7. Optional: To associate the portlet with one or more portlet catalogs, select catalogs in the **Available Catalogs** list and move them to the **Selected Catalogs** list. Catalogs are used to logically group portlets when they are displayed in the portlet palette of the self-service dashboard.
8. Click **Next** to display the portlet Security page is displayed. In the Security page, you can provide some or all portal roles with varying levels of access to the portlet. The following access levels are available:

User Roles with User access, have view access to the configured portlet, when it is subsequently added to a page.

Privileged User

Roles with privileged user access, have view access and such users can personalize their own experience of a portlet through the **Edit options** icon in the portlet taskbar. Personalizing a portlet does not affect the experience of other users of the portlet.

Editor

Roles with Editor access can subsequently edit shared settings for a portlet through the **Edit options** icon in the taskbar. When an editor modifies shared settings, it affects other portlet user settings for that portlet.

Also, roles with Editor access can subsequently edit the portlet's general settings in the Portlet Wizard. Editor access (unlike manager access) does not provide access to portlet-specific customization pages or to the security settings page in the Portlet Wizard.

Manager

Roles with Manager access can subsequently modify any aspect of the portlet in the Edit Portlet Wizard.

Note: As the creator of the custom portlet you are given *Manager* access by default.

9. Optional: To associate a role with a particular access level for the portlet:
 - a. Select the role in the **Available Roles** panel.
 - b. In the right hand panel, click the access level that you want the role to be associated with and click **Add** to move the selected role to that access level's panel.

For example, to provide the *chartAdministrator* role with *Editor* access, select **chartAdministrator** in the left panel and then click the **Editor** bar in the right hand panel to display its content panel. Click **Add** to move the **chartAdministrator** role to the **Editor** content panel.

What to do next

Customize your portlet further in the portlet specific wizard pages. Portlet specific settings vary for each portlet type and you can use the portlet level help (available through **Help (?)** in the wizard page taskbar) to assist you. Once you have customized the portlet, and click **Next**, a Summary page is displayed where you can review your settings.

Note: Some portlets do not have customization pages associated with them. In those cases, when you click **Next** in the portlet Security page, the Summary page is displayed.

Editing portlet shared settings

Some portlets include an *Edit Shared Settings* mode that allows users with “Editor” access level to configure common settings for other users of the portlet. Once shared settings are configured, users with “Privileged User” level of access can change these values for their own personal use of the portlet. Default settings cannot be changed by users with “User” level of access. Follow these steps to set the shared settings for a portlet.

Before you begin

You must have “Editor” access to the portlet to perform this task.

Procedure

1. Navigate to the page where the portlet is located.
2. Click **Edit options** in the portlet title bar. Two options are displayed: **Personalize** and **Edit Shared Settings**.

Attention: If **Edit Shared Settings** option is not available, then either the portlet does not support *Edit Shared Settings* mode, or you do not have “Editor” access for the portlet.

3. Select **Edit Shared Settings**. The portlet displays shared settings that can be changed.
4. Make any changes to the settings and submit them when you are finished. The portlet might provide a **Save**, **OK**, or **Submit** button. Once you have submitted your changes, you should be returned to the main panel for the portlet. If not, click **Back** in the title bar.

Results

The shared settings for using this portlet are saved. If the portlet is located on more than one page, the updated settings will be observed on the other pages as well.

What to do next

The updated settings configuration only affect settings that have not been personalized by users. To verify that the a user's preferences have been preserved, log in with a test user name and verify that the shared settings are set as intended.

Deleting portlets

You can use the portlet to delete a custom portlet. To remove the original portlet, the portal administrator must undeploy the portal module application to which the portlet belongs.

Procedure

1. Click **Settings** > **Portlets** in the navigation pane. A list of all of the portlets is displayed in a scrollable table.
2. Browse through the list or use the Filter field to locate the portlet you want to remove. To use the filter field, start typing the portlet name. The list is reduced to portlets whose names match the characters you entered.
3. Select the radio button associated with the portlet that you want to delete.
4. Click the **Delete** icon.
5. In the **Messages** area at the top of the page, click **OK** to confirm that you want to delete this portlet.

Configuring a web portlet in the Portlet Wizard

You can configure a web portlet and subsequently customize its settings in the portlet-specific configuration pages of the Portlet Wizard.

About this task

Once you configure access levels for the web portlet in the Portlet Wizard, a portlet specific configuration page is displayed:

Procedure

1. Required: In the **Widget title** field provide a brief descriptive name. When selecting a title, consider the purpose of the web portlet, its home page, and that the title is used in the navigation pane to access the portlet.
2. Required: In the **Home page** field provide a valid web address. This the web address of the page that displays by default when a user accesses the portlet from the navigation pane.
3. Optional: In the **Help page** field, provide a relative or absolute URL to a custom help page HTML topic to replace the default help topic that ships with the web portlet.
4. Required: In the **HTML iFrame name** field, provide a unique HTML iFrame name. The entry in this field serves to uniquely identify the web widget to allow its content to be dynamically updated.

Attention: It is important to provide a unique iFrame name. If you do not, web portlets sharing iFrame names may not display correctly until you configure its **HTML iFrame name** value.

5. Optional: Check the **Show a browser control toolbar** to provide users with a web navigation toolbar, that is, standard web navigation buttons and a web address entry field.
6. Optional: To allow users to personalize their portlet settings , check the relevant check box. By default, the following check boxes are cleared:
 - **Widget title**
 - **Home page**
 - **Help page**
 - **Browser control bar**
7. Click **Save** to commit your changes, or **Restore Default Settings** to reset the form.
8. Click **Next** to display a Summary page is displayed where you can review your settings.
9. Click **Finish** to complete the wizard steps. The configured portlet is available to be included on portal pages.

Editing shared settings for a web portlet

Administrators can set shared settings to provide a common experience for users of a web portlet.

About this task

If you have not configured any shared settings for a web portlet, users can by default enter a complete web address in the field provided and browse web pages. To edit shared settings:

Procedure

1. In the title bar of the web portlet, click the **Edit options** icon and select **Edit Shared Settings**.
2. Required: In the **Widget title** field provide a brief descriptive name. When selecting a title, consider the purpose of the web portlet, its home page, and that the title is used in the navigation pane to access the portlet.
3. Required: In the **Home page** field provide a valid web address. This the web address of the page that displays by default when a user accesses the portlet from the navigation pane.
4. Optional: In the **Help page** field, provide a relative or absolute URL to a custom help page HTML topic to replace the default help topic that is associated with the web portlet.
5. Required: In the **HTML iFrame name** field, provide a unique HTML iFrame name. The entry in this field serves to uniquely identify the web widget to allow its content to be dynamically updated.

Attention: It is important to provide a unique iFrame name. If you do not, web portlets sharing iFrame names may not display correctly until you configure its **HTML iFrame name** value.

6. Optional: Check the **Show a browser control toolbar** to provide users with a web navigation toolbar, that is, standard web navigation buttons and a web address entry field.
7. Optional: To allow users to personalize their portlet settings , check the relevant check box. By default, the following check boxes are cleared:

- **Widget title**
 - **Home page**
 - **Help page**
 - **Browser control bar**
8. Click **Save** to commit your changes, or **Restore Default Settings** to reset the form.

Administering console preference profiles

Preference profiles are a collection of portal behavior preferences for using the portal that are created by the portal administrator. These preferences include the visibility of the navigation tree, contents of the view selection list, and the default view. Assign preference profiles to roles to manage how the navigation area and view selections are displayed to the users in the role.

Attention: Each role is limited to one preference profile.

Field descriptions

This section describes the fields and controls in the main panel of Console Preference Profiles.

Select all icon

Selects all items displayed in the table for deletion. If you are displaying only a filtered set of items, only those items are selected. You can deselect specific items before actually deleting.

Deselect all icon

Deselects all items displayed in the table.

New Opens a panel for creating a new preference profile.

Delete Immediately deletes all selected items in the list. Only Custom resource types can be deleted.

Filter Type in this field to quickly find an item in the table. This field is useful when there are a large number of items to look through.

Select Selects or deselects a single item in the table.

Profile Name

Indicates the name of the profile. You can sort the list of names by clicking the column heading.

Role Count

Indicates the number of roles assigned to a preference profile. Each role is limited to one preference profile. However, multiple roles can be assigned to any single preference profile.

Related tasks:

“Creating startup pages” on page 39

You can create startup pages, which are displayed after a user logs in, and assign them to users or user groups based on their role. You can also hide the links to other portlets and pages from the navigation.

Creating preference profiles

Preference profiles are a collection of console behavior preferences for using the console that are created by the console administrator. Follow these steps to create a preference profile and assign it to a role.

About this task

Procedure

1. Click **Settings** > **Console Preference Profiles** in the console navigation. The Console Preference Profiles page is displayed with the list of preference profiles that have already been created in the console.
2. Click **New**. The properties panel for the new preference profile is displayed.
3. Required: Enter a descriptive name for the preference profile. Consider how the name reflects the roles that have been assigned to it or the console settings that are defined.
4. Optional: Edit the system-provided unique name for the preference profile. Accept the default value or provide a custom value.
5. Optional: Select a theme for the preference profile. A theme dictates how elements of the console are displayed, for example, background colors and contrast. You can select a theme, click **Preview**, and navigate to areas of the console to assess the impact of your selection. The theme that you select is committed only when you save the preference profile, so that you can preview other themes before deciding which one is appropriate.
6. Indicate whether the navigation tree should be hidden. This might be preferable when the user has few pages to access and display space in the console is better reserved for page content.
7. Optional: Use the Console Bidirection Options to set the direction to display console content and text. The default option lets the browser dictate the text and content direction, for example, for Arabic and Hebrew, the text is displayed right-to-left, whereas for other languages it is displayed left-to-right. Alternatively, you can decide to set the text and content direction to either left-to-right or right-to-left. In the **Text direction** list, you can also select **Contextual Input** so that for portlets that include text entry fields, the direction of text is dependent on the language used to enter data.
8. Select which view options should be available for users in the role.
9. Expand the section **Roles Using this Preference Profile**.
10. Click **Add** and select one or more roles to use this preference profile. When assigning roles, you might notice some roles missing from the list. This means they are assigned to another preference profile. The role must be removed from the other profile before it can be assigned to this one.
11. Select the default console view for this preference profile. The default view is the one that is selected when users in this role log in to the console. This field is enabled when at least one role has been added for this preference profile.
12. Click **Save** to save your changes and return to Console Preference Profiles.

Results

The new preference profile is created and listed on the main panel for Console Preference Profiles.

Editing console preference profiles

Preference profiles are a collection of console behavior preferences for using the console that are created by the console administrator. Follow these steps to change the properties or roles assigned to a preference profile.

About this task

Procedure

1. In the navigation pane, click **Settings > Console Preference Profiles**. The Console Preference Profiles page is displayed with the list of preference profiles that have already been created in the console.
2. Click the name of the preference profile that you want to edit. The properties panel for the preference profile is displayed.
3. Enter a descriptive name for the preference profile. Consider how the name reflects the roles that have been assigned to it or the console settings that are defined.
4. Optional: Edit the system-provided unique name for the preference profile. Accept the default value or provide a custom value.
5. Optional: Select a theme for the preference profile. A theme dictates how elements of the console are displayed, for example, background colors and contrast. You can select a theme, click **Preview**, and navigate to areas of the console to assess the impact of your selection. The theme that you select is committed only when you save the preference profile, so that you can preview other themes before deciding which one is appropriate.
6. Optional: Indicate whether the navigation tree should be hidden. This might be preferable when the user has few pages to access and display space in the console is better reserved for page content.
7. Optional: Use the Console Bidirection Options to set the direction to display console content and text. The default option lets the browser dictate the text and content direction, for example, for Arabic and Hebrew, the text is displayed right-to-left, whereas for other languages it is displayed left-to-right. Alternatively, you can decide to set the text and content direction to either left-to-right or right-to-left. In the **Text direction** list, you can also select **Contextual Input** so that for portlets that include text entry fields, the direction of text is dependent on the language used to enter data.
8. Optional: Select which view options should be available for users in the role.
9. Expand the section **Roles Using this Preference Profile**.

Option	Description
To add roles	Click Add and select one or more roles to add to the list. Click OK when you have made all of your selections. Note: If a role is not listed, it likely means that it has been assigned to another preference profile.
To remove roles	Select one or more roles in the list and click Remove . Be certain of your selections. When you delete, there is no warning prompt and the action cannot be undone.
To assign a default view	Select from the Default console view section to the side of the role list.

10. Click **Save** to save your changes.

Results

The preference profile is updated and you are returned to the main panel for Console Preference Profiles.

Deleting console preference profiles

Preference profiles are a collection of console behavior preferences for using the console that are created by the console administrator. Follow these steps to delete a preference profile.

About this task

Procedure

1. Click **Settings > Console Preference Profiles** in the navigation pane. The Console Preference Profiles page is displayed with the list of preference profiles that have already been created in the console.
2. Locate the preference profile that you want to delete in the table provided. You can use the filter in the table to type in the preference profile name and quickly display it.
3. In the **Select** column select one or more preference profiles.
4. Click **Delete**. A message is displayed at the top prompting you to confirm the deletion.
5. Click **OK**.

Results

The preference profile is removed.

Developing wires

Wires are the route or connections of client-side events between source portlets and targets. A wire defines the event name, the source portlet that sends the event, and the target that receives the event. The target can be a portlet on the same page, a portlet on a different page, or a different page. When the target of an event is a page, the event is delivered to all portlets on the page. There are two types of wires: system and custom.

The types of wires are as follows:

System

Create system wires by deploying console modules that define source and target portlets in their event descriptors. Subscription and publication definitions in the event descriptor are optional, but strongly encouraged. When an administrator edits a page, the supported events to which a portlet publishes or subscribes are displayed using an icon in the portlet title bar.

To create a system wire, the following conditions must be true:

- The event is defined in the event descriptor for a console module that has been deployed
- The source portlet publishes the event through its event descriptor and has been deployed
- The target portlet subscribes to the event through its event descriptor and has been deployed

The event definition as well as the publish and subscribe definitions can be deployed as part of the same console module package or separate packages. However, the wire does not exist until the event and both portlets have been deployed with their publish and subscribe definitions.

You can create a system wire using the `<events:portlet-definition-ref/>` element and its child elements in the event descriptor.

Custom

Create custom wires using either of the following methods:

- Administrators can create custom wires when they edit a page at runtime.
- Define the custom wire using the `<wiredefinition:wire/>` element in a wire descriptor and deploy the wire descriptor to the console.

The **switchPage** and **loadPage** attributes for the `<wiredefinition:wire-target-navigation-ref/>` and `<wiredefinition:wire-target-portlet-ref/>` elements handle whether the event can be delivered to a closed page when the event is fired. If the page is not open and neither of these attributes are set to true, the event is discarded. If these attributes are set, the type of page effects the target page and event handling.

Table 4. Target page and event handling for page types

Page type	Actions
Client-side	<ul style="list-style-type: none"> • If the target page is already open, the event is passed to the target regardless of the loadPage and switchPage settings. The target page is not brought into focus unless <code>switchPage="true"</code>. • If the target page is not open, the event is discarded unless the following conditions are true: <ul style="list-style-type: none"> – The loadPage attribute is set to true and the switchPage attribute is set or defaults to false. The target page opens but not brought into focus, and the event is passed to the target. – The switchPage attribute is set to true and the setting for loadPage is ignored.
Server-side	If <code>switchPage="true"</code> , the target page opens and brought into focus, and the event is passed to the target; otherwise, the event is discarded.

Creating system wires in the events descriptor

You can create a system wire using the `<events:portlet-definition-ref/>` element and its child elements in the event descriptor.

About this task

The value of the **portletDefinitionRef** attribute is the same as the value for the **uniqueName** attribute of the `<topology:portlet-definition/>` element in the portal topology descriptor. The value of the `<events:name/>` element for the published or subscribed event must be the same as the value of the `<events:name/>` element in the `<events:event-definition/>` element.

Procedure

1. Open the `ibm-portal-event.xml` file.
2. Enter the `<events:portlet-definition-ref/>` element.

```
<events:portlet-definition-ref
portletDefinitionRef="com.ibm.tip.samples.sm.ServerSelection
Portlet.definition"></events:portlet-definition-ref>
```

- For each event to which the portlet publishes, enter a `<events:supported-publishing-event/>` element within the `<events:portlet-definition-ref/>` element.

```
<events:portlet-definition-ref
portletDefinitionRef="com.ibm.tip.samples.sm.ServerSelection
Portlet.definition">
```

```
<events:supported-publishing-event>
<events:name xmlns:x="http://ibm.com/TIP" x:ServerChangedEvent
</events:name>
</events:supported-publishing-event>
```

```
</events:portlet-definition-ref>
```

- For each event to which the portlet subscribes, enter a `<events:supported-subscribed-event/>` element within the `<events:portlet-definition-ref/>` element.

```
<events:portlet-definition-ref
portletDefinitionRef="com.ibm.tip.samples.sm.ServerSelection
Portlet.definition">
```

```
<events:supported-publishing-event>
<events:name xmlns:x="http://ibm.com/TIP" x:ServerChangedEvent
</events:name>
</events:supported-publishing-event>
```

```
<events:supported-subscribed-event>
<events:name xmlns:x="http://ibm.com/TIP" x:ServerChangedEvent
</events:name>
</events:supported-subscribed-event>
```

```
</events:portlet-definition-ref>
```

What to do next

The portlets that subscribe to or publish an event must be capable of processing the event.

Defining custom wires in the wire descriptor

You can define a custom wire using the `<wire:wire-definition/>` element in the wire descriptor, `ibm-portal-wiredefinition.xml`. You can define only one source, event, and target for the custom wire.

About this task

Table 5 outlines the minimum information that you need to define a custom wire between two portlets.

Table 5. Custom wire information

Information	Source Attribute or Element	Descriptor	Wire Attribute or Element
Unique name of the source portlet's window	<code>uniqueName</code> attribute of <code><topology:window/></code>	Portal topology	<code>window-element-ref</code> attribute of <code><wiredefinition:wire-source-portlet-ref/></code>

Table 5. Custom wire information (continued)

Information	Source Attribute or Element	Descriptor	Wire Attribute or Element
Unique name of the source portlet's navigation element	uniqueName attribute of <topology:navigation-element/>	Portal topology	navigation-element-ref attribute of <wiredefinition:wire-source-portlet-ref/>
Event name	<events:name/> element in <events:event-definition/>	Event	<wiredefinition:name/> element in <wiredefinition:source-event/>
Unique name of the target portlet's window	uniqueName attribute of <topology>window/>	Portal topology	navigation-element-ref attribute of <wiredefinition:wire-target-portlet-ref/>
Unique name of the target portlet's navigation element	uniqueName attribute of <topology:navigation-element/>	Portal topology	window-element-ref attribute of <wiredefinition:wire-target-portlet-ref/>

Procedure

1. Open the `ibm-portal-wiredefinition.xml` file.
2. Enter the `<wiredefinition:wire/>` element.

```

<wiredefinition:wire
  uniqueName=
    "com.ibm.TIP.samples.actions.SendEventPage.SendEventPortlet.
  wireDef.WireToPortletA">
</wiredefinition:wire>

```
3. Enter a `<wiredefinition:wire-source-portlet-ref/>` element within the `<wiredefinition:wire/>` element to define the source portlet and source event.

```

<wiredefinition:wire
  uniqueName=
    "com.ibm.TIP.samples.actions.SendEventPage.SendEventPortlet.
  wireDef.WireToPortletA">

  <wiredefinition:wire-source-portlet-ref
    navigation-element-ref=
      "com.ibm.TIP.samples.actions.navigationElement.SendEventPage"
    window-element-ref="com.ibm.TIP.samples.actions.window.SendEventPortlet">
    <wiredefinition:source-event>
      <wiredefinition:name xmlns:x="http://ibm.com/TIP">
        x:WireToPortletA
      </wiredefinition:name>
    </wiredefinition:source-event>
  </wiredefinition:wire-source-portlet-ref>
</wiredefinition:wire>

```
4. If you want to define a target portlet as the target, enter a `<wiredefinition:wire-target-portlet-ref/>` element within the `<wiredefinition:wire/>` element.

```

<wiredefinition:wire
  uniqueName=
    "com.ibm.TIP.samples.actions.SendEventPage.SendEventPortlet.
  wireDef.WireToPortletA">

```

```

<wiredefinition:wire-source-portlet-ref
  navigation-element-ref=
    "com.ibm.TIP.samples.actions.navigationElement.SendEventPage"
  window-element-ref="com.ibm.TIP.samples.actions.window.SendEventPortlet">
  <wiredefinition:source-event>
    <wiredefinition:name xmlns:x="http://ibm.com/TIP">
      x:WireToPortletA
    </wiredefinition:name>
  </wiredefinition:source-event>
</wiredefinition:wire-source-portlet-ref>

<wiredefinition:wire-target-portlet-ref
  navigation-element-ref="com.ibm.TIP.samples.actions.navigationElement.
SendEventPage"
  switchPage="true" loadPage="true"
  window-element-ref="com.ibm.TIP.samples.actions.window.TargetPortletA">
</wiredefinition:wire-target-portlet-ref>

</wiredefinition:wire>

```

5. If you want to define a page as the target, enter a `<wiredefinition:wire-target-navigation-ref/>` element within the `<wiredefinition:wire/>` element.

```

<wiredefinition:wire
  uniqueName=
    "com.ibm.TIP.samples.actions.SendEventPage.SendEventPortlet.
wireDef.WireToPortletA">

  <wiredefinition:wire-source-portlet-ref
    navigation-element-ref=
      "com.ibm.TIP.samples.actions.navigationElement.SendEventPage"
    window-element-ref="com.ibm.TIP.samples.actions.window.SendEventPortlet">
    <wiredefinition:source-event>
      <wiredefinition:name xmlns:x="http://ibm.com/TIP">
        x:WireToPortletA
      </wiredefinition:name>
    </wiredefinition:source-event>
  </wiredefinition:wire-source-portlet-ref>

  <wiredefinition:wire-target-portlet-ref
    navigation-element-ref="com.ibm.TIP.samples.actions.navigationElement.
SendEventPage"
    switchPage="true" loadPage="true"
    window-element-ref="com.ibm.TIP.samples.actions.window.TargetPortletA">
  </wiredefinition:wire-target-portlet-ref>

  <wiredefinition:wire-target-navigation-ref
    navigation-element-ref="
      com.ibm.TIP.samples.actions.navigationElement.SamplePageA"
    switchPage="true" loadPage="true">
  </wiredefinition:wire-target-navigation-ref>

</wiredefinition:wire>

```

Defining transformations for custom wires

You can define which transformation processes an event using the `<wiredefinition:wire-transform-ref/>` element in the wire descriptor, `ibm-portal-wiredefinition.xml`.

Procedure

1. Open the `ibm-portal-wiredefinition.xml` file.
2. `<wiredefinition:wire-target-portlet-ref/>` element within the `<wiredefinition:wire/>` element.
3. Define the transformation using the `<wiredefinition:wire-transform-ref/>` element.

```
<wiredefinition:wire
  uniqueName=
    "com.ibm.TIP.samples.actions.SendEventPage.SendEventPortlet.
    wireDef.WireToPortletA">

  <wiredefinition:wire-source-portlet-ref
    navigation-element-ref=
      "com.ibm.TIP.samples.actions.navigationElement.SendEventPage"
    window-element-ref="com.ibm.TIP.samples.actions.window.
    SendEventPortlet">
    <wiredefinition:source-event>
      <wiredefinition:name xmlns:x="http://ibm.com/TIP">
        x:WireToPortletA
      </wiredefinition:name>
    </wiredefinition:source-event>
  </wiredefinition:wire-source-portlet-ref>

  <wiredefinition:wire-target-portlet-ref
    navigation-element-ref="com.ibm.TIP.samples.actions.navigationElement.
    SendEventPage"
    switchPage="true" loadPage="true"
    window-element-ref="com.ibm.TIP.samples.actions.window.TargetPortletA">

    <!-- Simple String transformation reference -->
    <wiredefinition:wire-transform-ref uniqueName=
      "com.ibm.tip.samples.transformation.ISCSimpleStringTransformation"
      locationUniqueName="com.ibm.tip.transform.SimpleStringTransformation">
      <wiredefinition:target-event>
        <wiredefinition:name xmlns:x="http://ibm.com/TIP">
          x:SimpleStringTransformationEvent
        </wiredefinition:name>
      </wiredefinition:target-event>
      <wiredefinition:param-mapping>
        <wiredefinition:param-mapping-entry
          source-param-name="paramAA" target-param-name="paramBA" />
        <wiredefinition:param-mapping-entry
          source-param-name="paramAB" target-param-name="paramBB" />
        <wiredefinition:param-mapping-entry
          source-param-name="paramAC" target-param-name="paramBC" />
      </wiredefinition:param-mapping>
    </wiredefinition:wire-transform-ref>

  </wiredefinition:wire-target-portlet-ref>

</wiredefinition:wire>
```

Changing wire definitions after deployment

You can change wire definitions in `ibm-portal-wiredefinition.xml` after the wires have been deployed, and force the console to recognize the changes. To remove a wire descriptor, remove the **folderName** value from `wireRegistration.properties`, which removes the wire definitions from the console repository. The removal of the wire descriptor does not delete `ibm-portal-wiredefinition.xml` from the `locationUniqueName` directory.

Procedure

1. Remove the entry from `wireRegistry.properties`.
2. Log in to console; then log out of the console.
3. Add the entry back into `wireRegistry.properties`.
4. Log in to console.

Deploying custom wires

After you have defined the custom wire in the wire descriptor, you must register the location of the wire descriptor in the wire registry using the `Wires/wireRegistry.properties` file. On the next login, the console checks whether `wireRegistration.properties` has changed; if it has changed, the file is inspected and information from the new wire descriptor is added to the console repository.

Procedure

1. Put `ibm-portal-wiredefinition.xml` in a uniquely named folder (`locationUniqueName`) in one of the following locations:

Option	Description
In your IDE Tivoli Integrated Portal runtime environment	<code>tip_rad_profile/installedApps/TIPCell/isc.ear/ISCWire.war/Wires/locationUniqueName</code>
In your stand-alone Tivoli Integrated Portal environment	<code>tip_rad_profile/installedApps/TIPCell/isc.ear/ISCWire.war/Wires/locationUniqueName</code>

2. Edit the file, `tip_rad_profile/installedApps/TIPCell/isc.ear/ISCWire.war/Wires/wireRegistry.properties` and add a line that registers the location of the new descriptor to the console. For example:

```
folderName=locationUniqueName
```

Passing properties to other portlets

This topic describes how portlets can send and receive properties, which are also known as *context*. Be careful not to confuse this use of context with the `PortletContext` class in the Java™ Portlet Specification.

Before you begin, familiarize yourself with the concepts for launching portlets and pages before reading this topic.

Sending context

Contextual information can be provided to portlets on the same page using the `addPortlet()` and `addSharedPortlet()` methods. The console module creates context in the form of property values, which are of the type `com.ibm.portal.propertybroker.property.PropertyValue`. It is assumed that the

portlet has already performed a JNDI lookup to determine that the PropertyFactory, DynamicUIManagerFactoryService, and URLGeneratorFactoryService services are available.

- In the following example, the portlet that is the source of the properties needs the object ID of the target portlet. The object ID is determined by performing a JNDI lookup using the values from the portlet's <resource-link/> element in the topology descriptor.
- The property, cproperty, is created using the PropertyController interface and the createProperty() method of the PropertyFactory interface. The data type for the property must be a string.
- Before sending the property, the source portlet creates an instance of the DynamicUICtrl interface, passing the string isc.tasklaunch as the configuration name.
- The addSharedPortlet() method sends the properties to the target portlet on the request. After the action phase, the target portlet updates the output for the response.

```
Context ctx = null;
ObjectID portletDefinitionID1 = null;
ObjectID portletDefinitionID2 = null;

String portletname1="com.ibm.isclite.samples.PortletContext/PortletGetPerformance";
String portletname2="com.ibm.isclite.samples.PortletContext/PortletGetApps";

PortletSession ps = request.getPortletSession(false);

try
{
    ctx = new InitialContext(com.ibm.portal.jndi.Constants.ENV);
    portletDefinitionID1 =
        (ObjectID)ctx.lookup("portal:config/portletdefinition/"+portletname1);
    portletDefinitionID2 =
        (ObjectID)ctx.lookup("portal:config/portletdefinition/"+portletname2);
} catch (NamingException ne)
{
    logger.log(
Level.FINE, "portletdefinitionID not found - Naming exception:"+ne.getMessage());
    return;
}
logger.log(Level.FINE, "portletdefinitionID="+portletDefinitionID1.toString());

try
{
    PropertyController cproperty =
        propertyFactoryService.createProperty(myconfig);
    cproperty.setType("String");

    PropertyValue[] propertyValues = new PropertyValue[1];
    propertyValues[0] =
        propertyFactoryService.createPropertyValue(request, cproperty, serverName);

    DynamicUICtrl dmanagerCtrl =
        dynamicUIManagerFactoryService.getDynamicUICtrl(request, response,
"isc.tasklaunch");

    ObjectID newPortletID1 =
        dmanagerCtrl.addSharedPortlet(portletDefinitionID1, null, propertyValues);
    ObjectID newPortletID2 =
        dmanagerCtrl.addSharedPortlet(portletDefinitionID2, null, propertyValues);

    logger.log(Level.FINE, "portlet ID created:"+newPortletID1.getOID());
} catch ...
```

Sending context to a page

In some cases, the target portlet might be on a separate page. In this case, the properties are passed using the `addPage()` or `addSharedPage()` method. The target portlet receives the properties only when the page is launched that contains the portlet. If a property value is set multiple times before the page is launched, the value that was set last for the property is passed to the portlets on the page.

Properties provided on the `addPage()` and `addSharedPage()` methods are available to all portlets on the target page.

Receiving context

To receive properties, the target portlet must provide the `com.ibm.portal.pagecontext.enable` preference parameter in the `portlet.xml` deployment descriptor with a value of `true`. If the portlet receives any subsequent updates, set the `com.ibm.portal.context.enable` read-only preference to `true`. Only `String` property types are supported and the context is passed as parameters of the action request. The following example shows how a portlet receives context.

```
public void processAction(ActionRequest request, ActionResponse response)
    throws PortletException, IOException {

    PortletSession ps = request.getPortletSession(true);
    appDeployed = request.getParameter("appDeployed");
    serverName=request.getParameter("servername");

    ps.setAttribute("servername",serverName);
    ps.setAttribute("appDeployed",appDeployed);
    launchPage(request, response);

}
```

The target portlet checks the value of the `com.ibm.portal.action` parameter for the request during action processing to determine if any properties have been passed. If properties are being passed to the portlet, the value of this parameter is `com.ibm.portal.pagecontext.receive`. For example:

```
String action = req.getParameter(com.ibm.portal.action.name);
if (action!=null && action.equalsIgnoreCase(
"com.ibm.portal.pagecontext.receive")) {

    // code to get the properties as a parameter on the request

}
```

Setting the scroll location when launching new portlets

After a portlet is launched and the console page is refreshed, the user's browser is scrolled to the location of the launched portlet. To turn this behavior off and have the browser scroll back to the user's previous location, the console module must indicate this by including the `com.ibm.isc.portlet.anchor.off` property on the `addPortlet()` method with a value of `true`. The constant `com.ibm.isc.api.ExternalConstants.PORTLET_ANCHOR_OFF` can be used for this purpose, as in the following example.

```
PropertyValue[] propertyValues = new PropertyValue[1];
PropertyController pc =
    propertyFactoryService.createProperty(config);
pc.setName(ExternalConstants.PORTLET_ANCHOR_OFF);
pc.setClassname("java.lang.String");
```

```

PropertyValue value =
    propertyFactoryService.createPropertyValue(request, pc, "true");
propertyValues[0] = value;

```

The default setting for this property, if not specified, is false.

Developing transformations

Transformations manipulate the event generated by a source target before it is delivered to the target portlet. You can develop a transformation to convert an event name, parameter name, or parameter value to match the needs of a target portlet. Using transformations to handle events is optional.

For example, if the source target sends an event that includes the cost of a selected item in US dollars, use a transformation to convert the cost to Japanese yen before the event is delivered to the target portlet.

Specify the transformation for an event using one of the following methods:

- During runtime, the console administrator edits a page to create or edit wires. The administrator has the option of specifying the transformation for an event.
- A wire descriptor is deployed to the console and specifies the unique name of a transformation for a wire. The unique name is provided in the transformation descriptor.
- The target portlet can use the transformation APIs to specify which transformation handles an event before it is delivered to the target.

Transformation types

The transformation types are: Java class, JavaScript functions, and URL servlets. You can use APIs specific to each type to develop transformations that can convert an event name, parameter names, or parameter values before the event is delivered to the target portlet. Tivoli Integrated Portal also provides a simple string transformation which can be used to transform parameter names only.

All transformation types that you can develop receive the following objects from the event broker:

Source event

The event sender triggers the event and is provided as an object that contains a name value pair. The first name value pair is the source event name.

Source element

Table 6 outlines the name value pairs of the object.

Table 6. Name value pairs for the source element

Name	Value
srcPortletName	A String that provides the source portlet name as specified by the <portlet-name/> element in the portlet descriptor.
srcModuleId	A String that provides the appID (from the application-definition/> element of the topology descriptor) of the console module where the source portlet is included.

Table 6. Name value pairs for the source element (continued)

Name	Value
srcPortletApplication	A String that provides the portlet application (as specified by the id attribute of the <portlet-app/> element in the portlet descriptor) of the source portlet.

Target event name

An object that provides the QName of the target event.

These objects are passed to the transformation depending on the transformation type.

All transformations must return the target event. For JavaScript and URL transformations, the target event object is returned as a regular JSON object that is structured as name value pairs. The first property must be name and its value set to the event name. All other properties are optional.

```
{
  'name' : 'http://ibm.com/tip/TestEventA',
  'paramA' : 'paramAValue',
  'paramB' : 'paramBValue'
}
```

For Java transformations, the event returned to the target by this transformation must be an instance of the Event interface. Any additional event parameters are stored as a Hashtable and returned as the event payload.

Developing Java transformations

You can use Java class files to handle event transformations.

Procedure

1. Create a Java class file and import the following classes:

```
import com.ibm.portal.Transformation;
import com.ibm.portal.TransformationException;
import com.ibm.portal.Event; // to handle the source event
import com.ibm.portal.WireSourceElement; // to handle the source element
import javax.xml.namespace.QName; // to handle the target event name
```

2. Implement the Transformation interface.

```
public class JavaTransformationSample implements Transformation {}
```

3. Provide the eventTransform() method, which the event broker invokes to pass the transformation information when the event is fired.

```
public Event eventTransform(Event srcEvent, WireSourceElement srcElement,
    QName targetEventName) throws TransformationException {

    Object value = srcEvent.getValue();
    transformValue((Hashtable) value);
    return srcEvent;
}
```

The srcEvent object is passed using the Event interface. The code in this sample passes the source event as a hash table to a transformValue() method where the event parameters are changed.

Developing JavaScript transformations

You can use JavaScript functions to handle event transformations.

Procedure

1. Create a Javascript file.
2. Create a JavaScript function.

```
TIPJavaScriptTransformationSample=function(srcEvent,srcElement,targetEventName){

    if(srcEvent==null)return null;
    if(targetEventName==null) return srcEvent;

    var appendTransformedLabel=function(obj){
        for(var i in obj){
            if(i == "name"){
                continue;
            }else if(typeof(obj[i]) == "object"){
                obj[i] = appendTransformedLabel(srcEvent[i]);
            }else{
                obj[i] += "_jstransformed";
            }
        }
        return obj;
    }
    if(targetEventName)
        srcEvent.name = targetEventName;

    srcEvent = appendTransformedLabel(srcEvent);
    return srcEvent;

}
```

Developing URL servlet transformations

A URL transformation is a servlet that has been deployed to the same application server as Tivoli Integrated Portal. The servlet gets `srcElement`, `srcEvent`, and `targetEventName` as HTTP parameters from the request. These parameters are Strings in JSON format.

Procedure

1. Create a servlet class.
2. Create the source and target event.

```
String srcEvent = request.getParameter("srcEvent");
String srcElement = request.getParameter("srcElement");
String targetEventName = request.getParameter("targetEventName");
```

Defining transformations in the transformation descriptor

Define transformations using the `<transformation:transformation/>` in `ibm-portal-transformation.xml`, which is deployed to the console along with the transformation code.

About this task

Each transformation definition contains a description, a title, and one of the following elements depending on the transformation type:

- `<transformation:java-class/>` element that provides the fully-qualified class name of the JAR file with the transformation class
- `<transformation:function-name/>` element that provides the name of the JavaScript function

- `<transformation:url/>` element that provides the relative or absolute URL to the servlet performing the transformation. The servlet must be deployed on the same application server as the console.

Procedure

1. Open the `ibm-portal-transformation.xml` file.
2. Enter a `<transformation:transformation/>` element, its description, and title.

```
<transformation:transformation uniqueName=
  "com.ibm.TIP.samples.actions.transformation.JavaTransformationSample">

  <transformation:description uniqueName=
    "com.ibm.TIP.samples.actions.transformations.JavaTransformationSample.
description">
    <base:nls-ref key="JavaTransformationSample.description" locationName=
      "classes/com/ibm/TIP/samples/actions/transformations/nl/
JavaTransformationSample" />
  </transformation:description>

  <transformation:title uniqueName=
    "com.ibm.TIP.samples.transformation.JavaTransformationSample.title">
    <base:nls-ref key="JavaTransformationSample.title" locationName=
      "classes/com/ibm/TIP/samples/actions/transformations/nl/
JavaTransformationSample" />
  </transformation:title>

</transformation:transformation>
```

3. If it is a Java transformation, enter the `<transformation:java-class/>` element.

```
<transformation:java-class>
  com.ibm.TIP.samples.actions.transformations.JavaTransformationSample
</transformation:java-class>
```

4. If it is a JavaScript transformation, enter the `<transformation:function-name/>` element.

```
<transformation:function-name>
  TIPJavaScriptTransformationSample
</transformation:function-name>
```

5. If it is a URL servlet transformation, enter the `<transformation:url/>` element.

```
<transformation:url>
  https://www.example.com:9046/ibm/ClientSideActions/servlet/com.ibm.TIP.
URLTransformationSampleServlet
</transformation:url>
```

Deploying transformations

After you have defined the transformation in the transformation descriptor, deploy the transformation code and descriptor to the console.

Java transformation

1. After compiling the Java transformation class, create a JAR file to contain the class and any other necessary artifacts (for example, resource bundles).
2. Place the JAR file in the following location on the server.
`tip_rad_profile/installedApps/TIPCell/isc.ear/ISCWire.war/pojoTransformations`
3. Place the transformation descriptor, `ibm-portal-transformation.xml`, in following location on the server.

```
tip_rad_profile/installedApps/TIPCell/isc.ear/ISCWire.war/
Transformations/locationUniqueName
```

locationUniqueName is a unique directory for this transformation descriptor. This value is also used in a wire descriptor to specify a transform to handle an event.

4. Restart the console.

JavaScript transformation

1. Save the JavaScript transformation code using the file name `transformation.js`.
2. Place `transformation.js` and the transformation descriptor, `ibm-portal-transformation.xml` in the following location on the server.

```
tip_rad_profile/installedApps/TIPCell/isc.ear/ISCWire.war/  
Transformations/locationUniqueName
```

locationUniqueName is a unique directory for this transformation descriptor. This value is also used in a wire descriptor to specify a transform to handle an event.

URL transformation

1. Deploy the servlet to the application server on the same machine as the console.
2. Place the transformation descriptor, `ibm-portal-transformation.xml` in the following location on the server.

```
tip_rad_profile/installedApps/TIPCell/isc.ear/ISCWire.war/  
Transformations/locationUniqueName
```

locationUniqueName is a unique directory for this transformation descriptor. This value is also used in a wire descriptor to specify a transform to handle an event.

After the transformation has been deployed to the console, it can be specified on the wire definition using the wire descriptor or when editing the page in the console user interface.

Exporting and importing Tivoli Integrated Portal data

You can export customized configuration data from an existing *Tivoli Integrated Portal* Web GUI installation to another by exporting the data and subsequently importing the exported data.

Exporting and importing customized settings can be done at the command line through the `tipcli.bat|.sh Export` and `tipcli.bat|.sh Import` commands.

Note: The `tipcli.bat|.sh Export` and `tipcli.bat|.sh Import` commands are case sensitive. Also, if you make a typing error, that is, if you type a parameter incorrectly, or use the incorrect case, then the commands runs as if no parameters were specified and no warning message is displayed.

You can export and import the following elements:

- Custom pages and customized system page elements, with the exception of core and system pages, including:
 - Page name and layout.
 - Portlet entities.

Note: Copies of a portlet entity are not exported; either through the console Export Wizard or through the `tipcli.bat|.sh Export` command.

- View profiles.

- Events and wires.
- Access permissions.
- Navigation structure.
- Custom views (or customized system views).

Note: You can also export pages associated with a view if the `exportpageinview` parameter is set to true.

- Custom roles, including:
 - Role name, creation date, and update date.
 - Role mapping information in relation to users and groups.
 - Associated role preference, that is, the relevant console preference profile.
- Console properties and customization properties, including:
 - Transformations.
 - Themes and images.
 - Bundles.

In a load balanced environment the import operation migrates imported elements across all the computers in the pool, with following conditions:

- All the required applications (WAR files) must be deployed on all computers in the pool.
- The load balanced pool configuration must be locked during the import operation.
- The import operation must be ran on one of the nodes in the pool.
- You must provide the load balancing manager an updated file list to update the load balancing scope. The migration tool plugin provides the file list.
- The load balanced pool configuration, can then be unlocked.
- The import of transformations in a load balanced environment is not supported. Transformations must be imported to each node independently.

The **haSupport** command controls this aspect of the import operation:

- If it is set to `True`, then only load balancing information is imported, that is, no transformation data.
- If it is set to `False`, then only transformation data is imported, that is, no load balancing data.
- If it is set to `Both`, then transformation data and load balancing data is imported.

Basic export commands

You can export pages, views and profile preferences using the basic export commands.

Exporting pages in simplified mode

By using the **ExportPage** command you can export specific pages without having to provide additional qualifying parameters.

Before you begin

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To export specific pages in simplified mode for an instance of Tivoli Integrated Portal:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin`.
2. To return a list of customized pages that can be exported, run the following command:

- **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat ListPages --customizePages true`
- **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListPages --customizePages true`

Note: The page ID is the last element of the returned records, for example, the page ID for the following record is BIXRjLkKYngNsRavnu0fYpx1279539744250:

```
com.ibm.isclite.global.custom.module-SPSVS-  
com.ibm.isclite.admin.PortletPicker.navigationElement  
.pagelayoutA  
.modified.BIXRjLkKYngNsRavnu0fYpx1279539744250
```

3. Review the list of returned page records and take note of the page IDs for the pages that you want to export.
4. To export specific pages, run the following command:

- **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat ExportPage --uniqueName pageID_1,pageID_2,pageID_3`
- **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ExportPage --uniqueName pageID_1,pageID_2,pageID_3`

Note: The file `portletEntities.xml` is always exported, even if you specify `NONE` as an argument to the `uniqueName` parameter.

Results

When the command completes, a `Data.zip` file is created in `tip_home_dir/profiles/TIPProfile/output/`.

What to do next

Locate `tip_home_dir/profiles/TIPProfile/output/Data.zip` and copy it to the computer where you intend to apply the exported customization data.

Exporting views in simplified mode

By using the **ExportView** command you can export specific views without having to provide additional qualifying parameters.

Before you begin

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To export specific views in simplified mode for an instance of Tivoli Integrated Portal:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin`.
2. Optional: To return a list of customized views that can be exported, run the following command:
 - **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat ListViews`
 - **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListViews`
3. Review the list of returned view records and take note of the view IDs for the views that you want to export.
4. To export specific views, run the following command:
 - **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat ExportView --uniqueName viewID_1, viewID_2, viewID_3`
 - **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ExportView --uniqueName viewID_1, viewID_2, viewID_3`

Note: The file `portletEntities.xml` is always exported, even if you specify `NONE` as an argument to the `uniqueName` parameter.

Results

When the command completes, a `data.zip` file is created in `tip_home_dir/profiles/TIPProfile/output/`.

What to do next

Locate `tip_home_dir/profiles/TIPProfile/output/data.zip` and copy it to the computer where you intend to apply the exported customization data.

Exporting console preference profiles in simplified mode

By using the **ExportProfile** command you can export console preference profiles without having to provide additional qualifying parameters.

Before you begin

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To export console preference profiles in simplified mode:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin`.
2. Optional: To return a list of console preference profiles that can be exported:
 - **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat`
ListPreferenceProfiles
 - **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh`
ListPreferenceProfiles
3. Review the list of returned records and take note of the unique names for the console preference profiles that you want to export.
4. To export specific console preference profiles, run the following command:
 - **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat`
ExportProfile --uniqueName *profile_ID1,profile_ID2,profile_ID3*
 - **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh`
ExportProfile --uniqueName *profile_ID1,profile_ID2,profile_ID3*

Note: The file `portletEntities.xml` is always exported, even if you specify `NONE` as an argument to the `uniqueName` parameter.

Results

When the command completes, a `Data.zip` file is created in `tip_home_dir/profiles/TIPProfile/output/`.

What to do next

Locate `tip_home_dir/profiles/TIPProfile/output/Data.zip` and copy it to the computer where you intend to apply the exported customization data.

Advanced export commands

You can use the advanced `tipcli` Export commands and apply a number of parameters to define which items you want to include and exclude in relation to the export operation.

Exporting all customization data

You can export all customization data for an instance of Tivoli Integrated Portal in one command.

Before you begin

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To export all customization data for an instance of Tivoli Integrated Portal:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin`.
2. Optional: To return a list of plugins that will be run during the export operation, run the following command:
 - **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat`
ListExportPlugins

- `UNIX` `Linux` `tip_home_dir/profiles/TIPProfile/bin/tipcli.bat ListExportPlugins`
3. To export all customization data, run the following command:
- `UNIX` `Linux` `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh Export --username tipadmin_user_name --password tipadmin_password`
 - `Windows` `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat Export --username tipadmin_user_name --password tipadmin_password`

Results

When the Export command completes, a `data.zip` file is created in `tip_home_dir/profiles/TIPProfile/output/`.

Note:

Refer to the links at the end of the page to view details of customs parameters that can be applied to the Export command.

What to do next

Locate `tip_home_dir/profiles/TIPProfile/output/data.zip` and copy it to the computer where you intend to apply the exported customization data.

Related reference:

“`tipcli` - Export plugins” on page 82

Use the Export command to export customization data for an instance of Tivoli Integrated Portal. Use the `ListExportPlugins` command to list plugins that are available for export.

Exporting using a properties file

You can specify your export requirements in properties file instead of specifying your requirements using separate parameters at the command line.

Before you begin

By default, the `tipcli` command uses the `tip_home_dir/TIPProfile/etc/tipcli.properties` file unless this behavior is overridden by the specifying a discrete settings file using the `settingFile` parameter.

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To export customization data using a properties file:

Procedure

1. Create a properties file that specifies the data that you want to export and save it as `export-settings.properties` in a known location.

Below is example content for an export properties file:

```
import.includePlugins=ImportPagePlugin
export.includePlugins=ExportPagePlugin
import.backupDir=c:/tmp/bkups
export.exportFile=c:/tmp/extest.zip
```

```
import.importFile=c:/tmp/extest.zip
username=tip_admin_user
password=tip_admin_password
import.haSupport=true
```

Note: Some parameters are import or export specific. Import specific parameters should be prefixed by `import.` and export specific parameters should be prefixed by `export..` For example, `import.backupDir=c:/tmp/bkups.`

2. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin.`
3. To export customization data based on the contents of a specific properties file, run the following command:

- **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh`
Export `--username tipadmin_user_name --password tipadmin_password`
`--settingFile export_properties_file`
- **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat` Export
`--username tipadmin_user_name --password tipadmin_password`
`--settingFile export_properties_file`

Where:

`export_properties_file`

An argument to the `settingFile` parameter that provides the location and name of the export properties file, for example, `C:\tmp\export.properties.`

Note: **Windows** You must use double backslashes characters (`\\`) when specifying the path to your settings file.

Note: If there is a conflict between settings specified in the properties file and parameters provided at the command line, then the command line parameters take precedence.

Results

When the **Export** command completes, a `extest.zip` file is created in the root temporary directory, for example on Windows systems the file is saved in `c:\tmp.`

What to do next

Locate `extest.zip` and copy it to the computer where you intend to apply the exported customization data.

Exporting specific pages

When exporting Tivoli Integrated Portal data, you can specify that you want to export particular pages.

Before you begin

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To export specific pages for an instance of Tivoli Integrated Portal:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin.`

2. To return a list of customized pages that can be exported, run the following command:

- **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat ListPages --customizePages true`
- **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListPages --customizePages true`

Note: The page ID is the last element of the returned records, for example, the page ID for the following record is BIXRjLkKYngNsRavnu0fYpx1279539744250:

```
com.ibm.isclite.global.custom.module-SPSVS-  
com.ibm.isclite.admin.PortletPicker.navigationElement  
.pageLayoutA  
.modified  
.BIXRjLkKYngNsRavnu0fYpx1279539744250
```

3. Review the list of returned page records and take note of the page IDs for the pages that you want to export.

4. To export specified pages, run the following command:

- **UNIX** **Linux** `tip_home_dir/profiles/TIPProfile/bin/tipcli.sh Export --username tipadmin_user_name --password tipadmin_password --pages pageID_1, pageID_2, pageID_3`
- **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat Export --username tipadmin_user_name --password tipadmin_password --pages pageID_1, pageID_2, pageID_3`

Results

When the command completes, a data.zip file is created in `tip_home_dir/profiles/TIPProfile/output/`.

What to do next

Locate `tip_home_dir/profiles/TIPProfile/output/Data.zip` and copy it to the computer where you intend to apply the exported customization data.

Exporting specific views

When exporting Tivoli Integrated Portal data, you can specify that you want to export particular views.

Before you begin

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To export specific views for an instance of Tivoli Integrated Portal:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin`.

2. Optional: To return a list of customized views that can be exported, run the following command:

- **Windows** `tip_home_dir\profiles\TIPProfile\bin\tipcli.bat ListViews`

- `UNIX Linux tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListViews`
3. Review the list of returned view records and take note of the view IDs for the views that you want to export.
 4. To export specific views, run the following command:
 - `UNIX Linux tip_home_dir/profiles/TIPProfile/bin/tipcli.sh Export --username tipadmin_user_name --password tipadmin_password --views viewID_1,viewID_2,viewID_3 --exportpageinviews [true|false]`
 - `Windows tip_home_dir\profiles\TIPProfile\bin\tipcli.bat Export --username tipadmin_user_name --password tipadmin_password --views viewID_1,viewID_2,viewID_3 --exportpageinviews [true|false]`

Where:

exportpageinviews

An optional parameter, when set to true ensures that you also export pages associated with the views that you have specified.

Note: Whether the optional parameter `exportpageinviews` is set to true or false, if a view has a default node in the navigation pane associated with it, then the page associated with the node is always exported. This is also true, even if you specify NONE as the argument to the `--pages` parameter.

Results

When the command completes, a `data.zip` file is created in `tip_home_dir/profiles/TIPProfile/output/`.

What to do next

Locate `tip_home_dir/profiles/TIPProfile/output/data.zip` and copy it to the computer where you intend to apply the exported customization data.

Rules for exporting

When exporting customized configuration data, it is important to know the rules governing the export function and the options available to you.

The following rules apply when exporting customized configuration data from a Tivoli Integrated Portal environment:

Rules and options for pages

Rule

1. You can export a particular page by page ID or choose to export all pages.
2. You can export pages associated with a particular view.
3. You can export pages that are associated with a particular portlet from a particular WAR.
4. If a page contains multiple portlets, but only some from a specified WAR, then all elements of the page are exported.
5. Pages that are targets of a wire for a specified page are exported.
6. The default export scope is All if you do not define pages to be exported under rule 2 and rule 3.
7. The default export scope is NONE if you define pages to be exported under rule 2 and rule 3.

Rules and options for views

1. You can export a particular view by view ID or choose to export all views.
2. You can optionally export all views that contains a specified page.
3. The default export scope is All.
4. You can optionally export all pages associated with the views that you want to export.
5. If an view has a default node in the navigation pane associated with it, then that page is automatically exported with the view.

Rules and options for custom roles and role preferences (console preference profiles)

1. You can export a particular role by role ID or choose to export all roles.
2. You can export a custom role and role preference that is associated with a specified page or view.
3. The default export scope is set to All, unless the **includeEntitiesFromApps** parameter has been specified for a page or view, whereby it is then set to REQUIRED.
4. If a console preference profile has a custom view as its default view, then that view is automatically exported. If the exported view has a default node in the navigation pane, then the associated page is automatically exported with the view.

Rules and options for user preferences

1. You can export user preferences by user ID or choose to export preferences for all users.
2. The default export scope is set to All, unless the **includeEntitiesFromApps** parameter has been specified for a page or view, whereby it is then set to REQUIRED.

Rules and options for console properties and customization properties

All console properties and customization properties are exported.

Rules and options for transformations

All transformations are exported.

Import commands

You can use the **tipcli Import** commands and apply a number of parameters to define which items you want to include and exclude in relation to the import operation.

Importing previously exported data

You can import data that was exported from another instance of Tivoli Integrated Portal.

Before you begin

Ensure that the Tivoli Integrated Portal Server is running.

Ensure that you have run the export operation on an originating instance of the Tivoli Integrated Portal Server and that you have copy the output file (data.zip) to the following directory on the other instance:

```
tip_home_dir/profiles/TIPProfile/input
```

About this task

To import data from a data.zip file that was exported from another instance Tivoli Integrated Portal Server:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin`.
2. Optional: To return a list of plugins that will be run during the import operation, run the following command:
 - `Windows tip_home_dir\profiles\TIPProfile\bin\tipcli.bat ListImportPlugins`
 - `UNIX Linux tip_home_dir/profiles/TIPProfile/bin/tipcli.bat ListImportPlugins`
3. To import the customization data, run the following command:
 - `Windows tip_home_dir\profiles\TIPProfile\bin\tipcli.bat Import --username tipadmin_user_name --password tipadmin_password`
 - `UNIX Linux tip_home_dir/profiles/TIPProfile/bin/tipcli.sh Import --username tipadmin_user_name --password tipadmin_password`

Results

When the **Import** command completes, the imported data is merged with the existing Tivoli Integrated Portal environment.

Related reference:

“Import tipcli commands” on page 83
tipcli commands for importing Tivoli Integrated Portal data.

Rolling back imports

After you import data you can rollback your configuration to the pre-import state provided you have made no changes to the environment.

Before you begin

If you have performed multiple imports, you can also consecutively rollback individual imports. In all cases, you must have not had made changes to the environment.

Ensure that the Tivoli Integrated Portal Server is running.

About this task

To roll back imports for a Tivoli Integrated Portal environment:

Procedure

1. At the command line change to: `tip_home_dir/profiles/TIPProfile/bin`.
2. To rollback an import, run the following command:
 - `Windows tip_home_dir\profiles\TIPProfile\bin\tipcli.bat Import --rollback ALL`
 - `UNIX Linux tip_home_dir/profiles/TIPProfile/bin/tipcli.sh Import --rollback ALL`

When the command completes successfully, the Tivoli Integrated Portal environment is restored to the state that prevailed before the latest import operation was performed.

- Optional: If you performed multiple imports and you want to roll back more than the most recent import operation, you can re-run the `tipcli.bat Import --rollback ALL` command. You can re-run the rollback command multiple times to consecutively roll back a number of import operations.

When you re-run the rollback command a second or subsequent time, the Tivoli Integrated Portal environment is restored to the state that prevailed prior the settings for that particular import operation being applied.

Rules for importing

When importing customized configuration data, it is important to know the rules governing the import function and the options available to you.

The following rules apply when importing customized configuration data for a Tivoli Integrated Portal environment:

Rules and options for pages

Rule

- You can import all pages included in an exported package.
- You can exclude system customized pages that do not exist in the new environment.
- You can exclude pages associated with a WAR that is not deployed in the new environment and thereby avoid introducing empty pages.
- If a page contains multiple portlets and some of portlets are associated with a WAR that is not deployed in the new environment, the page is not imported.

Rules and options for views

All views included in an exported package are imported.

Rules and options for custom roles and role preferences (console preference profiles)

All roles included in an exported package are imported.

Rules and options for user preferences

All user preferences included in an exported package are imported.

Rules and options for console properties and customization properties

All console properties and customization properties included in an exported package are imported.

Rules and options for transformations

All transformations included in an exported package are imported, if the **haSupport** parameter is set to Both or False.

Table 1 provides details how various elements are processed during import:

Table 7. Rules for overwriting and merging during import

Element	Action	Comments
Pages	Overwritten	In relation to pages, roles are merged, view memberships remain unchanged, and positions are modified.

Table 7. Rules for overwriting and merging during import (continued)

Element	Action	Comments
Views	Overwritten	In relation to views, existing page memberships are merged with imported pages
Roles	Skipped	In relation to roles, user and group mappings are merged.
Console preference profiles	Skipped	
Credential data	Merged	
Property files	Merged	
Transformations	Skipped	
Charts	Overwritten	

tipcli command reference

tipcli - Export plugins

Use the Export command to export customization data for an instance of Tivoli Integrated Portal. Use the ListExportPlugins command to list plugins that are available for export.

Syntax

ListExportPlugins

Use the ListExportPlugins command to list all plugins that can be exported. Use the list of returned plugins to assist you when you are specifying plugins to be exported.

Export [--includePlugins|--excludePlugins *plugin1,plugin2*] [--settingFile *setting_file*] --username *tip_username* --password *tip_user_password*

Parameters

If you provide no parameters to the Export command, all custom data is exported by default.

Note: If you specify additional parameters for the tipcli.bat|.sh Export and make a typing error, that is, if you type a parameter incorrectly, or use the incorrect case, then the commands runs as if no parameters were specified and no warning message is displayed.

Table 8. Export parameters and arguments

Parameter and arguments	Description
[--includePlugins --excludePlugins <i>plugin1,plugin2</i>]	Optional parameter. You can choose to include or exclude a list of plugins when you run the Export command.

Table 8. Export parameters and arguments (continued)

Parameter and arguments	Description
<code>[--settingFile <i>setting_file</i>]</code>	Optional parameter. You can specify your export requirements in properties file instead of specifying your requirements using separate parameters at the command line. Provide a path to the settings file as the argument to the <code>settingFile</code> parameter. On systems running Windows you must use double backslashes characters (\\) when specifying the path to your settings file, for example, <code>C:\\tmp\\export.properties</code> . Command line parameters take precedence over entries in the settings file.
<code>--username <i>tip_username</i></code>	Mandatory parameter. The user name for a user with the <code>iscadmin</code> role.
<code>--password <i>tip_user_password</i></code>	Mandatory parameter. The password for the specified user name.

Example 1 - Return a list of plugins available for exporting

The following example returns a list of plugins that can be exported: Windows
`C:\IBM\tivoli\tipv22\profiles\TIPProfile\bin>tipcli.bat ListExportPlugins`

Example 2 - Export a subset of available plugins

The following example exports the CMS plugin only: Windows
`C:\IBM\tivoli\tipv22TWLa\profiles\TIPProfile\bin>tipcli.bat Export
--includePlugins com.ibm.tivoli.tip.cli.cms.CmsExportPlugin
--username tipadmins --password tippassword`

Import tipcli commands

`tipcli` commands for importing Tivoli Integrated Portal data.

Note: If you specify additional parameters for the `tipcli.bat|.sh Import` and make a typing error, that is, if you type a parameter incorrectly, or use the incorrect case, then the commands runs as if no parameters were specified and no warning message is displayed.

ListImportPlugins

Use the `ListImportPlugins` command to list all plugins that are available to be imported.

Import `[--includePlugins|--excludePlugins plugin1,plugin2] [--settingFile setting_file] [--backupDir backup_dir] --username tip_username --password tip_user_password`

Use the `Import` command to import customization data into a Tivoli Integrated Portal environment. If you provide no parameters to the `Import` command, all custom data is imported by default.

Table 9. Import command arguments

Parameter and arguments	Description
<code>[--includePlugins --excludePlugins <i>plugin1,plugin2</i>]</code>	Optional parameter. You can choose to include or exclude a list of plugins when you run the <code>Import</code> command.

Table 9. Import command arguments (continued)

Parameter and arguments	Description
<code>[--settingFile <i>setting_file</i>]</code>	Optional parameter. You can specify your import requirements in a properties file instead of specifying your requirements using separate parameters at the command line. Provide a path to the settings file as the argument to the <code>settingFile</code> parameter. On systems running Windows you must use double backslashes characters (\\) when specifying the path to your settings file, for example, <code>C:\\tmp\\import.properties</code> . Command line parameters take precedence over entries in the settings file.
<code>[--backupDir <i>backup_dir</i>]</code>	You can specify a directory to save the backup data during an import operation so that if it is required you can subsequently restore settings.
<code>--username <i>tip_username</i></code>	Mandatory parameter. The user name for a user with the <code>iscadmin</code> role.
<code>--password <i>tip_user_password</i></code>	Mandatory parameter. The password for the specified user name.

Resource types

You can use the portal to create pages, roles, and views. All of these resources that you create using the portal are assigned a resource type of Custom. With other resource types, a more limited set of actions are available.

The type of resource is determine by how it was created.

Core This resource type is central to the operation of the portal. Core resources cannot be created or deleted in the portal, and you cannot edit its properties. However, you can make other changes that do not alter the nature of the resource, for example, including a core page in a custom view.

System

This resource type is created by products and applications that deploy the resource to the portal. For example, when an application is installed to the portal environment, it can define certain pages, roles, and views needed to administer the application through the portal. All of these have a resource type of System. Like core resources, system resources cannot be created or deleted. However, for views, pages, and folders, you can create copies of system resources, which are explained under System Customized. And like core resources, you can perform actions on a system resource, like changing access to the resource, without modifying its properties.

System Customized

This is a copy of a system resource with properties, such as the name of the resource, that have been changed in the portal. The original system resource is always maintained, but the system customized version of the resource is used until the original is restored. When the system resource is restored, the system customized copy is deleted.

You can create system customized pages, folders, and views, but not roles, wires, or external URLs.

Custom

These are resources that you create using the portal. Custom resources can be created, edited, and deleted by any user whose role has access to the **Pages, Views, Portlets, and Roles** portlets under the **Settings** folder in the navigation.

Manage Global Refresh

Portal administrators use Manage Global Refresh to configure portlet refresh settings for all users of the portal. Portlet refresh is used to refresh the content of a single module without reloading the entire page. As a result, your experience with the portal interface is quicker and more interactive. Use these settings to fine tune how each portlet refreshes its content individually on the page.

Using Manage Global Refresh

Use this module for the following tasks:

- Giving permission to portal users to edit their own portlet refresh options.
- Configuring default refresh settings for portal modules. Administrators can set values for refresh mode, refresh interval, and show timer settings. These settings become the default values for Configure Portlet Refresh.
- Setting the minimum refresh interval for each portal module. Use this setting to prevent the performance impacts of too many calls to the server to refresh content.

Portlet refresh settings

Restore Default Configuration

Changes all of the displayed field values to the values that were last saved. At least one portlet must be selected to enable this button. To save the changes displayed by this button, select the portlets that you want to restore to the default settings and click **Apply** or **OK**.

Select all Select all icon

Selects all of the portlets displayed. A maximum of 10 refreshable portlets can be displayed and selected at a time.

Deselect all Deselect all icon

Deselects all of the portlets displayed.

Select Use the checkbox to select individual portlets that you want to restore to the default settings.

Portlet

Indicates the name of the portlet or portal module which can be refreshed.

Refresh Mode

Select one of the following options:

- **No Refresh**

Indicates that the portlet content will not be refreshed automatically. The refresh timer is not displayed in the portlet title bar, but the portlet can still be refreshed manually.

- **Timed Refresh**

Indicates that the portlet content is refreshed automatically based on the value of the refresh interval.

- **Smart Refresh**

Indicates that after the refresh interval has timed out, the client should query the portlet on the server to determine if it should refresh the content. If the portlet has updates to provide, then the content is updated on the client. Otherwise, no change is made and the timer is started again.

- **Unregister**

Disables portlet refresh capabilities for this portlet. The portlet still displays in Manage Global Refresh. Portlet refresh can be subsequently restored by setting this value to one of the other settings.

Refresh Interval

Indicate a value in seconds after which the portlet's content can be refreshed from the server without reloaded the entire page. This value must be greater than or equal to the minimum refresh interval.

Minimum Refresh Interval

Indicates the minimum value for the refresh interval. This value is determined by the administrator.

User Configurable

Indicates whether users can change refresh setting in Configure Portlet Refresh.

Show Timer

Indicates whether to display a timer in the portlet title bar showing the number of seconds remaining until the next refresh can take place.

Chapter 3. Developing dashboards for event visualization

You can create pages that act as “dashboards” for visualizing events. You can select from the portlets that are provided with the Web GUI, and also from other products that are deployed in your Tivoli Integrated Portal environment.

For example, you can develop a map or a set of gauges that give an at-a-glance overview of the state of your network, and one or more event lists for drilling into the details of specific nodes. You can use wires to configure the communications between the portlets. Provided the portlets are supported on mobile devices, you can view these pages on a supported mobile device.

Before you begin

- Determine which portlets you want on the page.
- If you want a map on the page, design the map.
- If you want a custom gauge on the page, develop the metric that will feed the gauge display.
- Decide which users, groups, or user roles you want to have access to the page and assign the roles accordingly.
- If you want the portlets to communicate in a custom wire, develop the wires and transformations that will control the communications between the portlets.
- If you want a custom event relationship to be displayed on an Event View, define the relationship.
- If you want custom tools to run in response to a user clicking a row in an Active Event List, develop the tool.

About this task

Tip: More information about dashboards is provided in the publication *IBM Tivoli Netcool/OMNIBus dashboard best practice guide*, which you can obtain from the IBM Integrated Service Management Library at <https://www-304.ibm.com/software/brandcatalog/ismlibrary/details?catalog.label=1TW10NC87>.

Related concepts:

“Developing wires” on page 57

Wires are the route or connections of client-side events between source portlets and targets. A wire defines the event name, the source portlet that sends the event, and the target that receives the event. The target can be a portlet on the same page, a portlet on a different page, or a different page. When the target of an event is a page, the event is delivered to all portlets on the page. There are two types of wires: system and custom.

“Developing transformations” on page 66

Transformations manipulate the event generated by a source target before it is delivered to the target portlet. You can develop a transformation to convert an event name, parameter name, or parameter value to match the needs of a target portlet. Using transformations to handle events is optional.

Related tasks:

“Visualizing event information on maps” on page 317

You can use maps to graphically represent the status of a network.

“Visualizing event information on gauges” on page 298

You can graphically represent the values of various metrics on gauges.

“Assigning roles to users and groups” on page 131

Assign roles to users or groups so that users are authorized to perform functions in the Web GUI. If you assign the roles to groups, the authorizations that are associated with the roles cascade to all users that are members of the groups.

“Defining event relationships” on page 246

Use event relationships to organize an Event Viewer. Event relationships group events in the list by the relationships between them.

“Creating event management tools” on page 205

You can create and administer CGI, SQL, command line and script tools to be used in the AEL. You can also configure prompts that are displayed to users in the Active Event List (AEL) when performing actions with tools.

Wiring Event Viewers and Active Event Lists

You can use wires and transformations to configure an Event Viewer and an Active Event List (AEL) to pass event data between each other. Under the configuration described here, a custom wire and transformation are applied. When a user clicks a row in the Event Viewer, all unacknowledged events that have the same Node as the selected row are displayed to the AEL. The instructions in this topic describe a possible option for wiring two portlets. You can develop your own transformations and apply them to the wires.

Before you begin

Depending on the requirements that you have of the page, perform some or all of the tasks described in Chapter 3, “Developing dashboards for event visualization,” on page 87.

About this task

Restriction: The following restriction applies if you create the page in freeform mode: If you overlay portlets on top of another, so that one portlet is only partially visible beneath another portlet, limitations apply. If the portlet underneath is applet-based and the portlet on top is HTML-based, the applet-based portlet is visible through the HTML portlet. This limitation shows when you arrange the portlets on the page. The following Web GUI portlets are applet-based: Active

Event List (AEL), Maps, and Event Dashboard. For example, if you arrange an Event Viewer over an AEL, the AEL is visible through the Event Viewer. To avoid this problem, arrange applet-based portlets and HTML-based portlets alongside each other, not over each other.

Procedure

To develop a page that wires an Event Viewer and an AEL:

1. Log in as a user that has the `iscadmins` role.
2. Create the page, assign it to a location in the navigation and specify the roles that users need to view the page.
3. Add the AEL and the Event Viewer to the page.
4. From the page action list, select **Edit Page**.
5. Click **Show Wires**, and then click **New Wire**.
6. Specify the wires that connect the Event Viewer and the AEL:
 - In the Select Source Event for New Wire window, click **Event Viewer > NodeClickedOn**, and then click **OK**.
 - In the Select Target for New Wire window, click **My Workspaces > This page page > Active Event List (AEL)**, where *page* is the name of the page that you created in step 2.
 - In the Transformation window, select **Unacknowledged Matched Nodes**. A description of the transformation is displayed, which states that the transform may be applied to the Web GUI Event Viewer. This transformation is the default custom transformation. However, you can add your own custom transformations
7. Save the page.

Results

You can now click an event in the Event Viewer and display all the associated unacknowledged events for the selected Node in the AEL.

What to do next

Test the wires as follows:

1. Identify unacknowledged events that belong to a particular Node.
2. Open the page that you defined in step 2 of the preceding procedure.
3. In the Event View, click an even that belongs to the Node that you identified.

In the AEL, all the unacknowledged events that belong to that Node are displayed.

Related tasks:

“Selecting items for display on a page” on page 32

After you created a page, or while you are editing a page, select or change the portlets that are displayed on the page. If the page layout is in classic mode, you split the page into sections and then select the item that is displayed in each section from a list. If the page layout is in freeform mode, you drag the items from a content palette onto the page, and then position and size each item. Items can be portlets, widgets, or iWidgets. The items for selection depend on the products that are in your Tivoli Integrated Portal installation.

“Configuring communications between portlets using wires” on page 33

You can create connections, or *wires*, between portlets so that they can exchange messages with each other. When an action occurs in a source portlet, it creates an event, which contains information that can be sent to other portlets. To work with wires on a page, the page must be in edit mode.

“Editing the properties of a page, folder, or external URL” on page 38

You can edit the properties of custom and system navigation nodes, which include pages, folders, and external URLs. Properties of a node include its display name and its location in the navigation. You can also indicate whether multiple or only single instances of a page node can be launched in the portal.

Chapter 8, “Setting portlet preferences,” on page 173

You can change the settings of the portlets to customize their appearance and setup to your requirements.

Wiring an event list to display related events from a gauge

To configure a page to display events for a gauge metric in an Event Viewer or AEL, create a page that contains the Gauges portlet and the Event Viewer or Active Event List (AEL) portlet, and then customize the Gauges portlet to display events in the Event Viewer or AEL when you click the gauge.

Before you begin

Depending on the requirements that you have of the page, perform some or all of the tasks described in Chapter 3, “Developing dashboards for event visualization,” on page 87.

About this task

Restriction: The following restriction applies if you create the page in freeform mode: If you overlay portlets on top of another, so that one portlet is only partially visible beneath another portlet, limitations apply. If the portlet underneath is applet-based and the portlet on top is HTML-based, the applet-based portlet is visible through the HTML portlet. This limitation shows when you arrange the portlets on the page. The following Web GUI portlets are applet-based: Active Event List (AEL), Maps, and Event Dashboard. For example, if you arrange an Event Viewer over an AEL, the AEL is visible through the Event Viewer. To avoid this problem, arrange applet-based portlets and HTML-based portlets alongside each other, not over each other.

Procedure

In these steps, “event list” refers to either the AEL or Event Viewer, depending on which portlet you want to add to the page. To create the page, and configure the communication between the portlets:

1. Log in as a user that has the `iscadmins` role.

2. Create the page, assign it to a location in the navigation and specify the roles that users need to view the page.
3. Add the Gauges portlet and the required event list to the page.
4. Edit the portlet preferences for the gauges.
5. From the **Click action** list, select **Send Event (using wires)**, and then click **OK**. Repeat this step for each gauge with associated metrics that represent event data. By default, events for the following metrics can be rendered as events in the Event Viewer or AEL:
 - **status**
 - **escalated**
 - **unresolved**
 - **acknowledged**
 - **lastminute**
6. Specify the wires that connect the Event Viewer and the AEL:
 - From the page action list, select **Edit Page**.
 - Click **Show Wires**, and then click **New Wire**.
 - In the Select Source Event for New Wire window, select **Gauges > NodeClickedOn**, and then click **OK**.
 - In the Select Target for New Wire window, select the **Event Viewer**, and then click **OK**.
 - In the Transformation window, select **Unacknowledged Matched Nodes**. A description of the transformation is displayed, which states that the transform can be applied to the Event Viewer. This transformation is the default custom transformation. However, you can add your own custom transformations.
 - Select **Event Viewer** from the Select Target for New Wire window, and then click **OK**.
 - In the Transformation window, select **Show Gauge Events**. A description of the transformation is displayed.
7. Save the page.

Results

You can now click a gauge in the Gauges portlet page and display its associated events in the Event Viewer portlet page.

Related tasks:

“Selecting items for display on a page” on page 32

After you created a page, or while you are editing a page, select or change the portlets that are displayed on the page. If the page layout is in classic mode, you split the page into sections and then select the item that is displayed in each section from a list. If the page layout is in freeform mode, you drag the items from a content palette onto the page, and then position and size each item. Items can be portlets, widgets, or iWidgets. The items for selection depend on the products that are in your Tivoli Integrated Portal installation.

“Configuring communications between portlets using wires” on page 33

You can create connections, or *wires*, between portlets so that they can exchange messages with each other. When an action occurs in a source portlet, it creates an event, which contains information that can be sent to other portlets. To work with wires on a page, the page must be in edit mode.

“Editing the properties of a page, folder, or external URL” on page 38

You can edit the properties of custom and system navigation nodes, which include pages, folders, and external URLs. Properties of a node include its display name and its location in the navigation. You can also indicate whether multiple or only single instances of a page node can be launched in the portal.

Chapter 8, “Setting portlet preferences,” on page 173

You can change the settings of the portlets to customize their appearance and setup to your requirements.

Wiring gauges to an Event Viewer for display on mobile devices

Create a gauge and configure a wire to launch a mobile event list with a predefined filter when you click the gauge. Configure the gauge for display on mobile devices.

Before you begin

Depending on the requirements that you have of the page, perform some or all of the tasks described in Chapter 3, “Developing dashboards for event visualization,” on page 87.

Procedure

1. Log in as a user that has the `iscadmins` role.
2. Create the page, assign it to a location in the navigation and specify the roles that users need to view the page.
3. Add the Gauges portlet and the Event Viewer to the page.
4. Specify the metrics that you want to be applied to the gauges.
5. Edit the portlet preferences for the Gauges portlet as follows:
 - Select the **HTML for mobile devices** checkbox.
 - Select a metric that you defined in step 1 from the **Metrics** list.
 - Select **SEND EVENTS via Wires** from the **Click action** list and define the wire:
 - a. Select the **NodeClickedOn** event and click **OK**.
 - b. Select **Event Viewer** as the target for the wire and click **OK**.
 - c. Select **Show Gauge Events** as the transformation and click **OK**.
 - d. Save the wire.
 - Select **url** from the **Mobile device touch action** list and type the URL in the **Mobile device Script/URL** field.

6. Open the page and click the gauge that you defined in step 2 on page 92. An Event Viewer is launched with the filter applied.
7. Re-edit the portlet preferences for the Gauges page that you created in step 2 on page 92. Then, copy the URL and send it to a mobile device by email or SMS, or scan the QR code using a mobile device. The Gauges page is displayed on the display of the mobile device.
8. Tap the gauge that you defined in step 1. The mobile event list is displayed with the filter defined by the gauge.

Related tasks:

“Selecting items for display on a page” on page 32

After you created a page, or while you are editing a page, select or change the portlets that are displayed on the page. If the page layout is in classic mode, you split the page into sections and then select the item that is displayed in each section from a list. If the page layout is in freeform mode, you drag the items from a content palette onto the page, and then position and size each item. Items can be portlets, widgets, or iWidgets. The items for selection depend on the products that are in your Tivoli Integrated Portal installation.

“Configuring communications between portlets using wires” on page 33

You can create connections, or *wires*, between portlets so that they can exchange messages with each other. When an action occurs in a source portlet, it creates an event, which contains information that can be sent to other portlets. To work with wires on a page, the page must be in edit mode.

“Editing the properties of a page, folder, or external URL” on page 38

You can edit the properties of custom and system navigation nodes, which include pages, folders, and external URLs. Properties of a node include its display name and its location in the navigation. You can also indicate whether multiple or only single instances of a page node can be launched in the portal.

Chapter 8, “Setting portlet preferences,” on page 173

You can change the settings of the portlets to customize their appearance and setup to your requirements.

Chapter 4. Administering users, roles, and groups

You can create different kinds of Web GUI users, assign them roles and add them to groups to determine their ability to perform tasks. You can also modify the preferences of a Web GUI user.

Web GUI users, roles, and groups

The users of all products that are installed into the Tivoli Integrated Portal framework, including the Web GUI, are centrally administered. Users are associated with roles and groups.

Groups and roles can be administered only by a Tivoli Integrated Portal administrator, that is, a user with the iscadmins role.

Web GUI users

Web GUI users can be classified in different ways. Users can be classified according to the roles that are assigned to them. This determines their ability to access features and administer content. Within the Web GUI, administrators and users are defined by the roles they are assigned.

The following table describes the different types of Web GUI users that can be defined using roles.

Table 10. Web GUI user types

Type of user	Roles necessary	Description
Administrator	Web GUI administrator role (ncw_admin) Web GUI user role (ncw_user)	The administrator can access the administrative functions and all event management functions of the Web GUI.
Read-write user	Web GUI user role (ncw_user) Web GUI read-write role (netcool_rw) Optional: Web GUI editor role for the portlet preferences of the Event Dashboard (ncw_dashboard_editor)	A read-write user can access event management functions, run AEL tools, and change the filter or view applied to an AEL or monitor box. Read-write users who are also ObjectServer users can modify ObjectServer data. Read-write users who are also assigned the ncw_dashboard_editor role can modify the portlet preferences of the event dashboard; these preferences control the layout of the monitor boxes, and the actions that can be executed from the monitor boxes.
Read-only user	Web GUI user role (ncw_user) Web GUI read-only role (netcool_ro)	A read-only user can access event management functions, but cannot run AEL tools or modify ObjectServer data.

Related tasks:

“Administering users” on page 104

You can perform tasks that help you manage users.

“Creating the Web GUI administrative user” on page 100

The Web GUI is supplied with one administrative user, ncoadmin. It is good practice for the Tivoli Integrated Portal administrator to create one or more additional Web GUI administrative users to have permissions to modify Web GUI settings.

Web GUI roles

Roles must be assigned to users so that the users can view data and execute functions.

The user roles for the Web GUI are as follows:

ncw_user

This role gives a user access to the event management functions of the Web GUI. In addition to this role, the user must also have the ncw_admin role, netcool_rw role or the netcool_ro role; these roles control whether the user has administrative access, read-write access or read-only access to these functions.

ncw_admin

This role gives a user access to the administrative functions of the Web GUI. A user with this role also requires the ncw_user role.

netcool_rw

This role gives a user read-write access to Web GUI event management functions. Users with this role have access to AEL tools and can change event data. A user with this role also requires the ncw_user role.

netcool_ro

This role gives a user read-only access to Web GUI event management functions. Users with this role can access the AEL and view events, but cannot run AEL tools or change event data. A user with this role also requires the ncw_user role.

ncw_dashboard_editor

This role gives a user access to the portlet preferences of the Event Dashboard portlet. Read-only users can also have this role.

ncw_gauges_viewer

This role gives a user access to the Gauges page. Users without the ncw_user role require this role to view the Gauges page in a Web browser, or to view an HTML page generated from the Gauges page on a supported mobile device. Use this role in preference to ncw_user when you want to restrict a user to viewing gauges only and not other parts of the Web GUI, for example the Active Event List. Users with the ncw_admin role also require this role to view and edit a Gauges page.

ncw_gauges_editor

This role gives a user access to the portlet preferences of the Gauges page. Users with this role also require the ncw_user role. Users with the netcool_ro role can edit the portlet preferences of the Gauges page if they are assigned the ncw_gauges_editor and ncw_user roles.

Related information:

“Administering roles” on page 115

Portal users are granted access to resources based on the role to which they have been assigned. In the navigation pane, click **Settings > Roles** to add and remove roles and to assign access to portlets, pages, and views.

User groups in the Web GUI

Groups can be used to logically categorize users into units with common functional goals.

Related tasks:

“Administering groups” on page 121

You can perform tasks that help you manage groups.

Supplied users and groups

As supplied, the Web GUI has two users and two groups. These enable you to begin using the product as soon as installation is complete.

The Web GUI is supplied with two users (named ncouser and ncoadmin) and two groups (named Netcool_OMNIBus_User and Netcool_OMNIBus_Admin). Each user is a member of at least one of these groups, as follows:

Table 11. Group membership for the supplied users

User ID	Groups
ncouser	Netcool_OMNIBus_User
ncoadmin	Netcool_OMNIBus_Admin Netcool_OMNIBus_User

Group roles

The groups have the following roles:

Table 12. Roles assigned to the supplied groups

Group name	Roles assigned
Netcool_OMNIBus_Admin	ncw_admin ncw_dashboard_editor ncw_gauges_editor ncw_user netcool_rw
Netcool_OMNIBus_User	ncw_user netcool_ro

These assigned roles mean that ncouser is a read-only user and ncoadmin is an administrator.

Using the users and groups

The supplied users enable you to access the product as soon as the product is ready for use. They also provide a convenient means of accessing the product for temporary or demonstration purposes.

The groups provide a convenient way of allocating user or administrative privileges to any user you create. For example, as you create each read-only user you assign them to the Netcool_OMNibus_User group.

Web GUI user administration

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

By default, the authorization for performing user administration tasks is as follows:

- Generic user administration tasks, such as creating users and assigning roles and groups, are performed by the Tivoli Integrated Portal administrators, that is, users with the iscadmins role.
- Modifying the preferences of a Web GUI user is performed by the Web GUI administrators, that is, users with the ncw_admin role.

Note: The Web GUI does not close sessions that are incorrectly logged-out and counts these as active sessions.

The following table lists the different user administration tasks, and shows what kind of user can perform them.

Table 13. User administration tasks

Task	Performed by
Creating users	Tivoli Integrated Portal administrator
Deleting users	Tivoli Integrated Portal administrator
Changing another user's password	Tivoli Integrated Portal administrator
Assigning roles to a user	Tivoli Integrated Portal administrator
Assigning groups to a user	Tivoli Integrated Portal administrator
Changing a user's display name	Tivoli Integrated Portal administrator
Changing your own password	Any user
Setting ObjectServer SQL filters for a user	Web GUI administrator
Setting the Web GUI home page for a user	Web GUI administrator
Setting event list preferences for a user	Web GUI administrator

Related tasks:

“Creating users” on page 107

You can create one or more users. The users are added to the registry and a login account for each new user is automatically created. When creating the new user, you can also add the user as a member of one or more groups.

“Deleting users” on page 114

You can search for and list the existing users that match your search criteria. After selecting one or more users, you can delete them and remove their user IDs from the user registry.

“Changing information about a user” on page 110

You can change information about a specific user, such as the e-mail address. You can update the e-mail address, change the first or last name information, or set a new password.

“Changing passwords”

You can use the **Change Your Password** portlet to change your password from the default provided by the administrator.

“Modifying the preferences of a Web GUI user” on page 101

Edit the user profile settings and event list options for Web GUI users.

“Assigning roles to users and groups” on page 131

Assign roles to users or groups so that users are authorized to perform functions in the Web GUI. If you assign the roles to groups, the authorizations that are associated with the roles cascade to all users that are members of the groups.

“Creating the Web GUI administrative user” on page 100

The Web GUI is supplied with one administrative user, ncoadmin. It is good practice for the Tivoli Integrated Portal administrator to create one or more additional Web GUI administrative users to have permissions to modify Web GUI settings.

“Administering users” on page 104

You can perform tasks that help you manage users.

Changing passwords

You can use the **Change Your Password** portlet to change your password from the default provided by the administrator.

About this task

When you log in to the portal, you can change your own password using the **Change Your Password** portlet. Administrators can change passwords for other users using the **Manage Users** portlet.

Attention: If you are an administrator and you want to change the password for the tipadmin administrator and the Tivoli Netcool/OMNIBus ObjectServer root user, you must use the **Settings > Change Your Password** portlet to change their password. Do not use the **Users and Groups > Manage Users** portlet.

Tip: For security reasons, change the password of the Tivoli Netcool/OMNIBus ObjectServer root user after installation.

To change passwords:

Procedure

- To change your own password, follow these steps:

1. Log in to the portal using the user ID whose password you would like to change.
 2. In the navigation pane, click **Settings > Change Your Password**.
 3. Enter your new password in the relevant fields and click **Set Password**.
- As an administrator, to change the password for a user, follow these steps:
 1. In the navigation pane, click **Users and Groups > Manage Users** and click the user's name from the **User ID** column. A **User Properties** page is displayed.
 2. In the **General** tab, enter the new password in the relevant fields and click **OK**.

Attention:

If you authenticate to a Microsoft Active Directory server, it must be configured for SSL before you can use the **Change Your Password** portlet. If SSL is not enabled, you will receive an error when attempting to change the password for any user who is registered on the Active Directory Server.

TIPCP0005E Could not set the password via the underlying security system. This could be because a password rule was not met, you do not have access to change the password, or another reason.

Related concepts:

“Web GUI user administration” on page 98

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

Creating the Web GUI administrative user

The Web GUI is supplied with one administrative user, ncoadmin. It is good practice for the Tivoli Integrated Portal administrator to create one or more additional Web GUI administrative users to have permissions to modify Web GUI settings.

About this task

The administrator does not have to be an ObjectServer superuser.

If your configuration uses an ObjectServer as the user authentication source, note that user names cannot exceed 30 characters.

To create a Web GUI administrative user:

Procedure

1. Log in as the Tivoli Integrated Portal administrator, that is a user with the iscadmins role.
2. Optional: Create a new user.
3. Click **Users and Groups > User Roles**.
4. Complete any combination of the search fields to help find the user.
5. Select the number of users to display and click **Search**.
6. Click the user ID of the user in the grid.
7. Set the check boxes for the following roles:
 - ncw_admin (Web GUI administrator)
 - ncw_user (Web GUI user)
8. Click **Save**.

9. Log in as the Web GUI administrative user and check that you have access to administrative pages.

The Web GUI can view the **Administration** entry in the navigation.

Related concepts:

“Web GUI users” on page 95

Web GUI users can be classified in different ways. Users can be classified according to the roles that are assigned to them. This determines their ability to access features and administer content. Within the Web GUI, administrators and users are defined by the roles they are assigned.

“Web GUI user administration” on page 98

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

Related tasks:

“Administering users” on page 104

You can perform tasks that help you manage users.

Modifying the preferences of a Web GUI user

Edit the user profile settings and event list options for Web GUI users.

About this task

You can modify preferences for Web GUI users. All other user account administration tasks are handled by the Tivoli Integrated Portal administrator.

To modify the preferences and the event list options of a Web GUI user:

Procedure

1. Click **Settings > User Preferences for Tivoli Netcool/OMNIbus Web GUI**.
2. Select a user and click **Modify**. The preferences and event list configuration settings are displayed for the selected user.
3. To modify the user profile and set the event list options for the user, set the following parameters:

User filter

Type ObjectServer SQL commands to filter alert data from the ObjectServer for the individual user. This filter is optional, and is the highest level of data filtering applied to a user session. The following example shows alerts only if they occur more than 100 times and have a severity of 4 or higher:

```
Tally > 100 AND Severity >=4
```

Note: If a user is ObjectServer-authenticated, the Restriction Filters defined in the ObjectServer override any user filters.

For more information about ObjectServer SQL syntax, see the *IBM Tivoli Netcool/OMNIbus Administration Guide*.

For more information about ObjectServer SQL syntax, go to the IBM Tivoli Network Management Information Center at <http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp>, and search for *ObjectServer SQL*.

User's home-page

Type a default page for the user. This page is displayed when the user logs in to the Web GUI using the following URL:

`http://server:port/ibm/console/webtop`

To define the home page, you add the full URL or type a path to the page, for example: `/ibm/console/webtop/mypage.html`. The `mypage.html` file needs to be defined in the `tip_home_dir/profiles/TIPProfile/installedApps/TIPCell/isc.ear/OMNIBusWebGUI.war` directory. You can also save the files for user home pages to separate directories within the `OMNIBusWebGUI.war` location. In this case, remember to set the correct path. For example, if the `mypage.html` file is saved to the `.../OMNIBusWebGUI.war/pages` directory, then the path must be set to `.../pages/mypage.html`.

For more information about setting home pages for users, see the *IBM Tivoli Netcool/OMNIBus Web GUI Administration and User's Guide*.

Event List Configuration

The following preferences determine the facilities in the AEL and the Event Viewer event lists available to the user:

Allow filter and view selection

Select this check box if you want the user to be able to select predefined filter and view settings from the drop-down menus for filters and views in the toolbar of the event list.

Allow filter builder access

Select this check box if you want the user to be able to use the Filter Builder component within the event list.

Allow view builder access

Select this check box if you want the user to be able to use the View Builder component within the event list.

Allow preference configuration

Select this check box if you want the user to be able to change user preferences in the event list. For the AEL, if you do not select this check box the **Edit** menu does not contain the **Preferences** option.

Allow refresh rate configuration

Select this check box if you want the user to be able to set the refresh rate of the event list. The user must also have access to the **Preferences** window to be able to do this.

Refresh rate (seconds)

Type the value in seconds to set the default refresh rate for the event list.

Minimum refresh rate (seconds)

Type the value in seconds to set the minimum refresh rate for the event list

Allow event selection

Select this check box if you want the user to be able to select alerts in the event list.

Show basic event information

Select this check box if you want the user to have access to the Information window in the **Alerts** menu of the AEL. If selected,

the user can view the **Fields** tab in the Information window. In the Event Viewer, select this check box if you want the user to be able to double-click an event to display the Information window. You can provide full access to the Information window, or limit what the user can see in this window by selecting or clearing the following check boxes.

Show event details

Select this check box if you want the user to be able to view the **Details** tab in the Information window.

Show journals

Select this check box if you want the user to be able to view the **Journal** tab in the Information window. To view the **Journal** tab, the user must also exist in the ObjectServer that the event is associated with.

Edit journals (read write role)

Select this check box if you want the user to be able to add journal entries.

Restriction: Only users who are also ObjectServer users and have the Web GUI read-write user role (netcool_rw) assigned can add journal entries.

Globalization Settings

The following preferences determine the internationalization features the user requires.

Calendar Type

Choose the type of calendar to use for dates and times in the Web GUI. You can choose any of the following calendars:

Gregorian

Hebrew

Hijri

Hijri Civilian

Enable Bidi support

Select this check box if you want to enable support for bi-directional text in Web GUI portlets. When you set this you can specify further characteristics of the system's behavior:

Plain text alignment in editable fields and cursor position in empty editable fields

You can set either of two behaviors for fields on Web GUI pages that you can edit:

The text direction matches that set for the Web GUI itself.

The text direction follows the text direction set the portlet.

Text alignment in complex expression fields

You can set either of two behaviors for pages that contain complex expressions such as a SQL query, a file path, or a URL:

The text direction matches that set for the Web GUI itself.

The text direction is always left to right.

4. Click **Save** to save and activate the settings.

Related concepts:

“Web GUI user administration” on page 98

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

“Filters” on page 249

Filters constrain the rows returned by a data source by applying SQL correlation conditions to the field data in the data source. Filters can be applied to the following event displays in the Web GUI: the Active Event List (AEL), Lightweight Event List (LEL), the Event Viewer, Table View, and monitor boxes on an Event Dashboard. To create and edit filters, you use an HTML utility called the Filter Builder.

“Views” on page 251

Views constrain the columns displayed in an Active Event List (AEL) and the Event Viewer. You can control the order in which columns are displayed, lock columns in the display, and control the sorting of information in the columns. Views in the Web GUI differ from the views that you can configure in Tivoli Integrated Portal. Views in Tivoli Integrated Portal are a defined set of tasks that are displayed in the console navigation pane

Administering users

Use the Web console to create users and manage user profiles.

What to do next

From the left navigation pane, click **Manage Users**. Before you can perform some tasks for users, you must first search for existing users that match the search criteria that you specify. After the search completes, a table displays the users that match your search criteria. To manage users, you can perform these tasks:

Related concepts:

“Web GUI users” on page 95

Web GUI users can be classified in different ways. Users can be classified according to the roles that are assigned to them. This determines their ability to access features and administer content. Within the Web GUI, administrators and users are defined by the roles they are assigned.

Related tasks:

“Creating startup pages” on page 39

You can create startup pages, which are displayed after a user logs in, and assign them to users or user groups based on their role. You can also hide the links to other portlets and pages from the navigation.

Searching for users

You can search for existing users that match the search criteria that you specify.

Procedure

1. From the navigation pane, click **Manage Users**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more users. For example, select **User ID**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of users, or use the wildcard character (*) to search for all users. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, a table displays the users that match your search criteria.

What to do next

Creating users

You can create one or more users. The users are added to the registry and a login account for each new user is automatically created. When creating the new user, you can also add the user as a member of one or more groups.

Deleting users

You can search for and list the existing users that match your search criteria. After selecting one or more users, you can delete them and remove their user IDs from the user registry.

Duplicating group assignments for a user

You can search for users that match your search criteria. After selecting one or more users, these users can be added as members of the same groups that another existing user is already a member of. For example, if all the members of a department need to belong to the same groups as the department manager, you can duplicate the groups that the manager belongs to for all the other users that you choose.

Customizing search filters for users

You can create a filtered list of users by specifying the type of filter and the text to be used as part of the search criteria. The filtered list of users is limited to displaying only the users that meet the filter requirements. You can filter users by the letters that the user ID contains or by the letters that the user ID starts or ends with.

Changing the display options for the list of users

You can change how the search results are displayed when viewing the list of users. For example, you can change the number of users to be viewed per page or you can display additional details about the users.

Customizing search filters for users

You can create a filtered list of users by specifying the type of filter and the text to be used as part of the search criteria. The filtered list of users is limited to displaying only the users that meet the filter requirements. You can filter users by the letters that the user ID contains or by the letters that the user ID starts or ends with.

Procedure

1. From the navigation pane, click **Manage Users**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more users. For example, select **User ID**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of users, or use the wildcard character (*) to search for all users. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, a table displays the users that match your search criteria.
6. Click the  filter icon.
7. Do one of the following:
 - To create a new filter for an attribute if none exists, click the **[No Filter]** link.
 - To select an existing filter, click on the filter name.
8. If you are creating a new filter, select a filter type from the list. The types of filters are **Contains**, **Starts with**, or **Ends with**.
9. Type the letters that you want to search for in the **Text** field. The wildcard character is not permitted in this field.
10. Click **Apply**.

What to do next

After you click **Apply**, the name of the filter is listed in the column under the attribute. The filter name matches the letters that were typed in the **Text** field. If no filter has been used for an attribute, the text **[No Filter]** displays.

The list of users is refreshed, and a filtered list of user IDs is displayed. The filter name and the total number of filtered user IDs are also shown.

Click the  hide filter icon, or click **Close**, when you have finished working with filters.

Searching for users

You can search for existing users that match the search criteria that you specify.

Changing the display options for the list of users

You can change how the search results are displayed when viewing the list of users. For example, you can change the number of users to be viewed per page or you can display additional details about the users.

Changing the display options for the list of users

You can change how the search results are displayed when viewing the list of users. For example, you can change the number of users to be viewed per page or you can display additional details about the users.

Procedure

1. From the navigation pane, click **Manage Users**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more users. For example, select **User ID**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of users, or use the wildcard character (*) to search for all users. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, a table displays the users that match your search criteria.
6. Click the  options icon.
7. If you want to view more or fewer entries on a page, change the number in the **Entries Per Page** field.
8. If you want to show more details about a user, select one or more check boxes next to the attributes that you want to display additional columns for.
9. If you want to see the user IDs on a different page, type the page number in the field at the bottom of the list, and click **Go** to jump to that page.
10. Click **Apply**.
11. Click the  hide options icon, or click **Close**, after changing the display options for the list of users.

What to do next

Searching for users

You can search for existing users that match the search criteria that you specify.

Customizing search filters for users

You can create a filtered list of users by specifying the type of filter and the text to be used as part of the search criteria. The filtered list of users is limited to displaying only the users that meet the filter requirements. You can filter users by the letters that the user ID contains or by the letters that the user ID starts or ends with.

Creating users

You can create one or more users. The users are added to the registry and a login account for each new user is automatically created. When creating the new user, you can also add the user as a member of one or more groups.

About this task

If your configuration uses an ObjectServer as the user authentication source, note that user names cannot exceed 30 characters.

Ensure that all user IDs are unique across all user repositories that are defined in the realm.

Procedure

1. Click **Manage Users** on the navigation pane.
2. Click **Create** to create a new user.
3. In the **User ID** field, type a unique name to identify the user. This user ID will be added to the user registry and also will be used as the login account name. For example, you might type d1ucas
4. Optional: Click **Group Membership** and then follow the steps in “Changing group membership for a user” on page 109 to add the user as a member of one or more groups.
5. In the **First name** field, type the given or first name of the user. For example, you might type Diana
6. In the **Last name** field, type the family or last name of the user. For example, you might type Lucas
7. Optional: In the **E-mail** field, type an e-mail address for the user. For example, you might type d1ucas@tivoli.com
8. In the **Password** field, type a unique password. For example, you might type d4lucas.
9. In the **Confirm password** field, type the same password again.
10. Click **Create**. If successful, a message will display that indicates that the user has been created. Also, the user ID and other user information will be added to the user registry, and a new login account will be created for the user.
11. To create another user, click **Create Like**.
12. Repeat the procedure until all the new users have been created.

What to do next

Related concepts:

“Web GUI user administration” on page 98

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

Related tasks:

“Assigning roles to users and groups” on page 131

Assign roles to users or groups so that users are authorized to perform functions in the Web GUI. If you assign the roles to groups, the authorizations that are associated with the roles cascade to all users that are members of the groups.

Deleting users

You can search for and list the existing users that match your search criteria. After selecting one or more users, you can delete them and remove their user IDs from the user registry.

Duplicating group assignments for a user

You can search for users that match your search criteria. After selecting one or more users, these users can be added as members of the same groups that another existing user is already a member of. For example, if all the members of a department need to belong to the same groups as the department manager, you can duplicate the groups that the manager belongs to for all the other users that you choose.

Changing group membership for a user

You can search for and list the existing groups that match the search criteria. When creating a new user, you can choose the groups from the search results list in which you want the user to be a member.

Procedure

1. During the process of “Creating users” on page 107, click **Group Membership**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more users. For example, select **Group name**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, the results are displayed in two lists: one list is for groups that matched the search criteria and one list, named **Current Groups**, is for groups that the user is already a member.
6. To add the user to one or more groups, highlight the groups from the matching groups list to select them. For example, you might highlight `ibmaustin01` and `ibmaustin02` and then click **< Add**.
7. Optional: To undo or remove the user as a member, highlight the groups from the **Current Groups** list and then click **Remove >**.
8. Return to the process of “Creating users” on page 107 to complete the steps.

What to do next

Adding a user to other groups

You can add a user as a member to selected groups.

Changing information about a user

You can change information about a specific user, such as the e-mail address.

You can update the e-mail address, change the first or last name information, or set a new password.

Removing a user from other groups

After searching for the groups in which the user is currently a member, you can remove the user from membership in groups that you select.

Viewing information about a user

You can view information about a specific user.

Viewing the groups the group is a member of

You can view a list of existing groups that the specified user is currently a member of.

Viewing information about a user

You can view information about a specific user.

Procedure

1. From the navigation pane, click **Manage Users**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more users. For example, select **User ID**.

3. In the **Search for** field, either type the string that you want to search for to limit the set of users, or use the wildcard character (*) to search for all users. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, the users that match your search criteria are displayed as hypertext links.
6. Click on one of the user links to view information about the selected user. You can only view the information, you cannot change it.
7. Click **Cancel** after viewing to return to the previous window.

What to do next

Changing information about a user

You can change information about a specific user, such as the e-mail address. You can update the e-mail address, change the first or last name information, or set a new password.

Changing group membership for a user

You can search for and list the existing groups that match the search criteria. When creating a new user, you can choose the groups from the search results list in which you want the user to be a member.

Changing information about a user

You can change information about a specific user, such as the e-mail address. You can update the e-mail address, change the first or last name information, or set a new password.

Procedure

1. From the navigation pane, click **Manage Users**.
2. Complete the steps in “Searching for users” on page 105 to find the user.
3. Click on one of the user links to change information about the user, as needed.
4. In the **First name** and **Last name** fields, enter the new information, if needed.
5. Optional: In the **E-mail** field, enter the new information, if needed.
6. Optional: In the **Password** and **Confirm password** fields, enter the new password, if needed, and confirm the new password.
7. To save the changes, either click **OK** to save and return to the previous window, or click **Apply** to save but remain on the same window.

What to do next

Related concepts:

“Web GUI user administration” on page 98

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

Changing group membership for a user

You can search for and list the existing groups that match the search criteria. When creating a new user, you can choose the groups from the search results list in which you want the user to be a member.

Viewing information about a user

You can view information about a specific user.

Viewing the groups the user is a member of
You can view a list of existing groups that the specified user is currently a member of.

Viewing the groups the user is a member of

You can view a list of existing groups that the specified user is currently a member of.

Procedure

1. From the navigation pane, click **Manage Users**.
2. Complete the steps in “Searching for users” on page 105 to find the user.
3. Click the user name link to see the user properties.
4. Click the **Groups** tab to see the list of groups, in ascending order, that the user is currently a member of.

What to do next

Adding a user to other groups

You can add a user as a member to selected groups.

Changing group membership for a user

You can search for and list the existing groups that match the search criteria.

When creating a new user, you can choose the groups from the search results list in which you want the user to be a member.

Changing information about a user

You can change information about a specific user, such as the e-mail address.

You can update the e-mail address, change the first or last name information, or set a new password.

Removing a user from other groups

After searching for the groups in which the user is currently a member, you can remove the user from membership in groups that you select.

Viewing information about a user

You can view information about a specific user.

Adding a user to groups

You can add a user as a member to selected groups.

Procedure

1. Complete the steps in “Viewing the groups the user is a member of”
2. Confirm that the user in the **User ID** field is the user that you want to add to more groups.
3. Click **Add**.
4. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.
5. In the **Search for** field, either type the string that you want to search for to limit the set of users, or use the wildcard character (*) to search for all users. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
6. In the **Maximum results** field, specify the maximum number of search results that you want to display.
7. Click **Search**. After the search completes, a list is displayed of the groups that match your search criteria.
8. Highlight one or more groups to select them, and click **Add**.

9. Repeat steps 3 to 7 for any other groups you want to add the user to.
10. Click **Close**.

What to do next

Removing a user from other groups

After searching for the groups in which the user is currently a member, you can remove the user from membership in groups that you select.

Changing group membership for a user

You can search for and list the existing groups that match the search criteria. When creating a new user, you can choose the groups from the search results list in which you want the user to be a member.

Changing information about a user

You can change information about a specific user, such as the e-mail address. You can update the e-mail address, change the first or last name information, or set a new password.

Viewing information about a user

You can view information about a specific user.

Viewing the groups the user is a member of

You can view a list of existing groups that the specified user is currently a member of.

Removing a user from groups

After searching for the groups in which the user is currently a member, you can remove the user from membership in groups that you select.

Procedure

1. Complete the steps in “Viewing the groups the user is a member of” on page 111.
2. Confirm that the user in the **User ID** field is the user that you want to remove from other groups.
3. Select the check boxes next to one or more groups, and then click **Remove**.
4. Click **Remove** when asked to confirm the removal.

What to do next

Adding a user to other groups

You can add a user as a member to selected groups.

Changing group membership for a user

You can search for and list the existing groups that match the search criteria. When creating a new user, you can choose the groups from the search results list in which you want the user to be a member.

Changing information about a user

You can change information about a specific user, such as the e-mail address. You can update the e-mail address, change the first or last name information, or set a new password.

Viewing information about a user

You can view information about a specific user.

Viewing the groups the group is a member of

You can view a list of existing groups that the specified user is currently a member of.

Adding users as members of a group

You can add more users as members of a group.

Procedure

1. After completing the steps in “Viewing a list of members of a group” on page 127, click **Add Users**.
2. Confirm that the **Group name** field displays the name of the group to which you want to add more users as members.
3. In the **Search by** field, select the attribute from the list that you want to use to search by. For example, select **User ID**.
4. In the **Search for** field, either type the string that you want to search for to limit the set of users or use the wildcard character (*) to search for all users.
5. In the **Maximum results** field, specify the maximum number of search results that you want to display.
6. Click **Search**. After the search is complete, a list displays of the users that matched your search criteria.
7. Highlight one or more users in the list to select them, and then click **Add**.
8. Click **Close**.

What to do next

The users are immediately added to the list of members.

Adding more groups as members of a group

After viewing the list of members in a group that you specify, you can add more groups.

Removing members from a group

After searching for the list of members in a group that you specify, you can remove users and groups as members from the group.

Duplicating group assignments for a user

You can search for users that match your search criteria. After selecting one or more users, these users can be added as members of the same groups that another existing user is already a member of. For example, if all the members of a department need to belong to the same groups as the department manager, you can duplicate the groups that the manager belongs to for all the other users that you choose.

Procedure

1. Complete the steps in “Searching for users” on page 105.
2. Select the check boxes next to one or more users that you want to assign the same membership as another group.
3. Choose the **Duplicate Group Assignments** action.
4. In the **Search by** field, select the attribute from the list that you want to use to search for one or more users. For example, select **User ID**.
5. In the **Search for** field, either type the string that you want to search for to limit the set of users, or use the wildcard character (*) to search for all users. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
6. In the **Maximum results** field, specify the maximum number of search results that you want to display.

7. Click **Search**. After the search has been completed, a table displays the users that match your search criteria.
8. Highlight the name of the user whose group membership you want to duplicate for the previously selected users, and click **OK**. The group membership of the user is duplicated for the previously selected users.

What to do next

Creating users

You can create one or more users. The users are added to the registry and a login account for each new user is automatically created. When creating the new user, you can also add the user as a member of one or more groups.

Deleting users

You can search for and list the existing users that match your search criteria. After selecting one or more users, you can delete them and remove their user IDs from the user registry.

Deleting users

You can search for and list the existing users that match your search criteria. After selecting one or more users, you can delete them and remove their user IDs from the user registry.

Before you begin

If an LDAP directory is defined as the user repository, delete all assignments of the group to roles before you proceed.

Procedure

1. From the navigation pane, click **Manage Users**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more users. For example, select **User ID**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of users, or use the wildcard character (*) to search for all users. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, a table displays the users that match your search criteria.
6. Select the check boxes next to the users that you want to delete.
7. Click **Delete**.
8. Click **Delete** again when asked to confirm the deletion. The users are immediately deleted and removed from the user registry. The table that lists the users is refreshed, and the selected users are no longer displayed in the list.

What to do next

Related concepts:

“Web GUI user administration” on page 98

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

Creating users

You can create one or more users. The users are added to the registry and a

login account for each new user is automatically created. When creating the new user, you can also add the user as a member of one or more groups.

Duplicating group assignments for a user

You can search for users that match your search criteria. After selecting one or more users, these users can be added as members of the same groups that another existing user is already a member of. For example, if all the members of a department need to belong to the same groups as the department manager, you can duplicate the groups that the manager belongs to for all the other users that you choose.

Administering roles

Portal users are granted access to resources based on the role to which they have been assigned. In the navigation pane, click **Settings > Roles** to add and remove roles and to assign access to portlets, pages, and views.

To manage users and groups and assign them to roles, click **Users and Groups**.

After the portal is installed, there are some roles already defined to the server.

Attention: The “suppressmonitor” role is used to hide the tasks associated with the application server, including the tasks in the Security, Troubleshooting, and Users and Groups folders.

Access levels

The access level that a role has to a resource determines the actions that users within that role can perform on the resource.

Table 14. Access rights to portal resources based on access level

Resource	Access Level		
	“User”	“Privileged User”	“Editor”
Portlet	View and interact with the portlet and access portlet help	View and interact with the portlet, edit personal settings, and access portlet help	View and interact with the portlet, edit personal settings, edit global settings, and access portlet help
Page	Launch the node from the navigation		Launch the node from the navigation and edit the content and layout
Folder	Note: Folders are always available in the navigation if the user has access to at least one of its pages.		
External URL	Launch the node from the navigation		
View	Select the view		

For a given resource, if a role does not have one of these access level settings, then the role has no access to the resource.

Only users with “adminsecuritymanager” and “Administrator” role can create, delete or change the properties of a role. If you assign access for any other role to the Roles portlet, users in that role will only be able to view roles and change access to views and pages.

Note: The access control settings are not observed when using the administrative portlets under the **Settings** node. Users with access to these pages and portlets will be able to create, edit, and delete all custom pages, portlets, and views. For example, if a user has no access to “Page Two”, but has access to Pages, that user can edit all of the properties of “Page Two” and change access control settings. Keep this in mind when granting access to the **Settings** portlets for a role.

If a user is assigned to multiple roles, the user acquires the highest access level between these roles for a resource. For example, if a user belongs to the manager role with “Privileged User” access to a portlet and also belongs to the communications role with no access to the portlet, then the user has “Privileged User” access to the portlet.

Tasks

You can grant access for multiple roles while creating or editing a resource, such as a page or a portlet. You can also grant access to multiple pages or views while creating or editing a role.

Related concepts:

“Web GUI roles” on page 96

Roles must be assigned to users so that the users can view data and execute functions.

Related information:

“Administering views” on page 42

Views Views are a defined set of tasks that are displayed in the navigation pane.

Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal are a defined set of tasks that are displayed in the console navigation pane. Views also can include one or more pages that are launched when the view is selected. Tivoli Integrated Portal view differ from the view that you can configure in the Web GUI. Web GUI views are a means of constraining the columns that are displayed in event lists.

“Administering portlets” on page 46

Portlets are web applications that display information or provide a service in a portal page. You can only work with portlets that have been deployed to the portal. Use Portlets to create, edit, and delete a portlet from a page.

“Administering pages” on page 30

Portal content is composed of pages, folders, and external URLs. Each of these resources is represented in the navigation pane as a node. Click **Settings > Pages** to create, edit, and delete pages and folders for the portal navigation. You can also edit external URLs that are launched from the navigation pane. You cannot create URLs in the portal. Instead, URLs are created when an application is deployed to the portal that includes the URL node in its descriptors.

Managing roles for users

Administrators can search for users and manage their roles in the User Roles page.

About this task

To search for users and manage their roles:

Procedure

1. In the navigation pane, click **Users and Groups > User Roles**. The User Roles page is displayed.

2. In the search fields provided, you can enter search criteria by given name, surname, user ID, and e-mail address. If you do not have exact details for a particular item, all of the search fields support using an asterisk (*) as a wildcard character. For example, to return all user records with a given name that starts with “Mich”, enter mich* in the **First name** field.

Tip: You can leave the search fields blank to return all user records.

3. From the **Number of results to display** list, select the number of records that you want returned and click **Search**.

Restriction: Returned records are displayed one page only. If more records are available than the setting you chose from the list, only a partial list is returned. To display all records you need to search again after selecting a larger number from the **Number of results to display** list.

A list of records that match your search criteria are listed in the grid.

4. Select a user from the **User ID** column. A list of available roles for the selected user is displayed on a new page. Those roles that are currently associated with the selected user are checked.
5. Modify the roles associated with the user as required, that is, check the roles that you want associated with the user and clear those that you do not.
6. Click **Save** to commit your changes, or **Reset** to reset the form to its initial state. Once you click **Save**, the User Roles page is displayed. The entry for the user in the **Roles** column is updated to reflect your changes.

What to do next

You can select another user from the search results and update their role settings, enter new search criteria to manage other user records, or close the User Roles page.

Managing roles for groups

Administrators can search for groups and manage their roles in the Group Roles page.

About this task

To search for user groups and manage their roles:

Procedure

1. In the navigation pane, click **Users and Groups > Group Roles**. The Group Roles page is displayed.
2. In the search fields provided, you can enter search criteria by group ID and description. If you do not have exact details for a particular item, both search fields support using an asterisk (*) as a wildcard character. For example, to return all group records with a group ID that starts with “tes”, enter tes* in the **Group ID** field.

Tip: You can leave the search fields blank to return all records.

3. From the **Number of results to display** list, select the number of records that you want returned and click **Search**.

Restriction: Returned records are displayed one page only. If more records are available than the setting you chose from the list, only a partial list is returned. To display all records you need to search again after selecting a larger number

from the **Number of results to display** list.

A list of records that match your search criteria are listed in the grid.

4. Select a group from the **Group Name** column. A list of available roles for the selected group is displayed on a new page. Those roles that are currently associated with the selected group are checked.
5. Modify the roles associated with the group as required, that is, check the roles that you want associated with the group and clear those that you do not.
6. Click **Save** to commit your changes, or **Reset** to reset the form to its initial state. Once you click **Save**, the Group Roles page is displayed. The entry for the group in the **Roles** column is updated to reflect your changes.

What to do next

You can select another group from the search results and update its role settings, enter new search criteria to manage other group records, or close the Group Roles page.

Creating roles

Portal users are granted access to resources based on the role to which they have been assigned. All roles that are created in the portal have a resource type of Custom. This procedure describes creating a role for testing purposes. After completing these steps, you can remove or edit this role for production use.

Procedure

1. Click **Users and Groups > Roles** in the navigation. A list of all roles in the portal is displayed.
2. Click **New**. The properties panel for the new role is displayed.
3. Enter a descriptive name for the role.
4. Optional: Expand the **Users and Groups** section. Use this section to associate a role with one or more users and groups. The method to add users and groups is similar, so this topic describes adding users only. To associate a user with a role, follow these steps:
 - a. In the **Users** panel, click **Add**. A new page is displayed that allows you to search for and select users to be added to the role.
 - b. Provide search filters in the relevant fields, select the maximum number of results that you want returned and click **Search** to return a list of users that match your criteria.

Tip: If you leave the search filter fields blank, the system returns all users (up to a limit of 1000).
 - c. From the returned results, select the users that you want to associate with the role and click **Add**. The previous page is displayed listing the selected users in the **Users** panel.
5. Expand the **Access to Views** section. Use this section to grant access to one or more custom views for users who are assigned to the new role. If you have already created a custom view, follow these steps.
 - a. Click **Add**. A list of available views is displayed.
 - b. Select one or more views and click **OK**.
 - c. To make sure the role has access to all of the pages within the view, click **Grant to All**.

6. Expand the **Access to Pages** section. A list of pages that the role can access is displayed. However, this list is empty if you did not add a view and grant access to all of the pages within the view.
7. Optional: Click **Add** to grant access to additional pages.
8. For each page that is listed, verify that the **Access Level** is set correctly.
9. Click **Save** to save your changes and return to Roles.

Results

The new role is created with access to the views, users and groups, and pages that you indicated. To grant access to the portlets on those pages you must edit the portlets.

Related concepts:

“Web GUI roles” on page 96

Roles must be assigned to users so that the users can view data and execute functions.

Related tasks:

“Assigning roles to users and groups” on page 131

Assign roles to users or groups so that users are authorized to perform functions in the Web GUI. If you assign the roles to groups, the authorizations that are associated with the roles cascade to all users that are members of the groups.

Editing roles

Portal users are granted access to resources based on the role to which they have been assigned. If you have sufficient authorization in the portal, you can change the name of custom roles. For all roles, you can change access to views and pages and set the access level to pages.

About this task

Procedure

1. In the navigation pane, click **Users and Groups > Roles**. A list of all roles in the portal is displayed.
2. Click the name of the role that you want to edit. The properties panel for the role is displayed. If this is a custom role, the only field you can edit is **Role Name**. For all other resource types, you cannot edit any of the role properties.
3. Optional: Expand the **Users and Groups** section. Use this section to associate a role with one or more users and groups. The method to add users and groups is similar, so this topic describes adding users only. To associate a user with a role, follow these steps:
 - a. In the **Users** panel, click **Add**. A new page is displayed that allows you to search for and select users to be added to the role.
 - b. Provide search filters in the relevant fields, select the maximum number of results that you want returned and click **Search** to return a list of users that match your criteria.

Tip: If you leave the search filter fields blank, the system returns all users (up to a limit of 1000).

- c. From the returned results, select the users that you want to associate with the role and click **Add**. The previous page is displayed listing the selected users in the **Users** panel.

4. Expand the **Access to Views** section. Use this section to grant access to one or more custom views for users who are assigned to the new role. If you have already created a custom view, follow these steps.
 - a. Click **Add**. A list of available views is displayed.
 - b. Select one or more views and click **OK**.
 - c. To make sure the role has access to all of the pages within the view, click **Grant to All**.
5. Expand the **Access to Pages** section. A list of pages that the role can access is displayed. However, this list is empty if you did not add a view and grant access to all of the pages within the view.
6. Optional: Click **Add** to grant access to additional pages.
7. For each page that is listed, verify that the **Access Level** is set correctly.
8. Click **OK**.

Results

Your changes are saved and you are returned to the Roles page.

What to do next

For any pages that you added for the role, you should ensure that the role also has access to the portlets on the page..

Related concepts:

“Web GUI roles” on page 96

Roles must be assigned to users so that the users can view data and execute functions.

Related tasks:

“Assigning roles to users and groups” on page 131

Assign roles to users or groups so that users are authorized to perform functions in the Web GUI. If you assign the roles to groups, the authorizations that are associated with the roles cascade to all users that are members of the groups.

Deleting custom roles

You can delete only roles with the resource type of Custom. These are roles created using the portal.

About this task

Attention: Before deleting a role, consider whether any users are actively using the role and any impacts this might have on services. If necessary, notify users in advance of any plans for changes that could affect their work.

Follow these steps to delete a custom role.

Procedure

1. Click **Users and Groups > Roles** in the navigation pane. The Roles page is displayed with the list of roles in the portal.
2. Select the custom role that you want to delete. You can select more than one custom role.
3. Click **Delete**. A message is displayed at the top prompting you to confirm the deletion.
4. Click **OK**.

Results

The custom role is removed from the list.

Administering groups

You can perform tasks that help you manage groups.

What to do next

From the left navigation pane, click **Users and Groups > Manage Groups**. Before you can perform some tasks for groups, you must first search for existing groups that match the search criteria that you specify. After the search completes, a table displays the groups that match your search criteria. To manage groups, you can perform these tasks:

Related concepts:

“User groups in the Web GUI” on page 97

Groups can be used to logically categorize users into units with common functional goals.

Related tasks:

“Creating startup pages” on page 39

You can create startup pages, which are displayed after a user logs in, and assign them to users or user groups based on their role. You can also hide the links to other portlets and pages from the navigation.

Creating groups

You can create one or more groups. The group names and descriptions are added to the user registry.

Deleting groups

You can search for and list the existing group names that match the search criteria that you specify. After selecting one or more groups, you can delete them and remove the group names from the user registry.

Duplicating group assignments for a group

You can search for groups that match the search criteria that you specify. After selecting one or more groups, these groups can be members of the same groups as another existing group. For example, if all groups at the Austin site should belong to the same groups as an existing group, you can duplicate the groups that the one group belongs to for all the other groups that you choose.

Customized search filters for groups

You can create a filtered list of groups by specifying the type of filter and the text to be used as part of the search criteria. The list of groups will be limited because only the groups that meet the extended search criteria will be displayed.

Changing the display options for the list of groups

You can change how the search results are displayed when viewing the list of groups. For example, you can change the number of groups to be viewed per page.

Searching for groups

You can search for existing groups that match the search criteria that you specify.

Procedure

1. From the navigation pane, click **Users and Groups > Manage Groups**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, a table is displayed that lists the group names that match your search criteria. Descriptions, if any, are also provided.

What to do next

Creating groups

You can create one or more groups. The group names and descriptions are added to the user registry.

Deleting groups

You can search for and list the existing group names that match the search criteria that you specify. After selecting one or more groups, you can delete them and remove the group names from the user registry.

Duplicating group assignments for a group

You can search for groups that match the search criteria that you specify. After selecting one or more groups, these groups can be members of the same groups as another existing group. For example, if all groups at the Austin site should belong to the same groups as an existing group, you can duplicate the groups that the one group belongs to for all the other groups that you choose.

Customized search filters for groups

You can create a filtered list of groups by specifying the type of filter and the text to be used as part of the search criteria. The list of groups will be limited because only the groups that meet the extended search criteria will be displayed.

Changing the display options for the list of groups

You can change how the search results are displayed when viewing the list of groups. For example, you can change the number of groups to be viewed per page.

Customizing search filters for groups

You can create a filtered list of groups by specifying the type of filter and the text to be used as part of the search criteria. The list of groups will be limited because only the groups that meet the extended search criteria will be displayed.

Procedure

1. From the navigation pane, click **Users and Groups > Manage Groups**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.

3. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, a table displays the groups that match your search criteria.
6. Click the  filter icon.
7. Do one of the following:
 - To create a new filter for an attribute if none exists, click the **[No Filter]** link.
 - To select an existing filter for an attribute, click on the filter name link.
8. If you are creating a new filter, select a filter type from the list. The types of filters are **Contains**, **Starts with**, or **Ends with**.
9. Type the letters that you want to search for in the **Text** field. The wildcard character is not permitted in this field.
10. Click **Apply**. The list of groups is refreshed and a filtered list of group names displays. The filter name and the total number of filtered group names are also shown.
11. Click the . hide filter icon, or click **Close**, when you have finished working with filters.

What to do next

If no filter has been applied for an attribute, the text **[No Filter]** displays. If you click **Apply**, the name of the filter is listed in the column under the attribute. The filter name matches the letters that were typed in the **Text** field.

Searching for groups

You can search for existing groups that match the search criteria that you specify.

Changing the display options for the list of groups

You can change how the search results are displayed when viewing the list of groups. For example, you can change the number of groups to be viewed per page.

Changing the display options for the list of groups

You can change how the search results are displayed when viewing the list of groups. For example, you can change the number of groups to be viewed per page.

Procedure

1. From the navigation pane, click **Manage Groups**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.

5. Click **Search**. After the search completes a table displays the groups that match your search criteria.
6. Click the  options icon.
7. If you want to view more or fewer entries on a page, change the number in the **Entries per page** field, and click **Apply**.
8. If you want to see the group names on a different page, type the page number in the field at the bottom of the list, and click **Go** to jump to that page.
9. Click the  hide options icon, or click **Close**, after changing the display options for the list of groups.

What to do next

Searching for groups

You can search for existing groups that match the search criteria that you specify.

Customizing search filters for groups

You can create a filtered list of groups by specifying the type of filter and the text to be used as part of the search criteria. The list of groups will be limited because only the groups that meet the extended search criteria will be displayed.

Creating groups

You can create one or more groups. The group names and descriptions are added to the user registry.

Procedure

1. From the navigation pane, click **Users and Groups > Manage Groups**.
2. Click **Create** to create a new group.
3. In the **Group name** field, type a name to be used to identify the group. This group name will be added to the user registry. For example, you might type `ibm`
4. Optional: In the **Description** field, type a brief description for the group to distinguish this group from other groups. This description will be added to the user registry. The description must be an alphanumeric string with characters that are part of the local code set. For example, `Users and groups, CNC Company Dept 047`
5. Click **Create** to add the group name and the description, if entered, to the user registry. If successful, a message displays indicating that the group has been created.
6. To create another group, click **Create like**.
7. Repeat the procedure until all the new groups have been created.

Related tasks:

“Assigning roles to users and groups” on page 131

Assign roles to users or groups so that users are authorized to perform functions in the Web GUI. If you assign the roles to groups, the authorizations that are associated with the roles cascade to all users that are members of the groups.

Deleting groups

You can search for and list the existing group names that match the search criteria that you specify. After selecting one or more groups, you can delete them and remove the group names from the user registry.

Duplicating group assignments for a group

You can search for groups that match the search criteria that you specify. After

selecting one or more groups, these groups can be members of the same groups as another existing group. For example, if all groups at the Austin site should belong to the same groups as an existing group, you can duplicate the groups that the one group belongs to for all the other groups that you choose.

Viewing information about a group

You can view information about a specific group.

Procedure

1. Complete the steps in “Searching for groups” on page 122.
2. Click on one of the group name links to view the information about the selected group. You can only view the information, you cannot change it.
3. Click **Cancel** after viewing to return to the previous window.

What to do next

Adding a group to other groups

Before you can add a group to other groups, you must first search for the groups in which you want the group to be a member.

Changing information about a group

You can change the information about a specific group. You can change the name of the group, add a new description for the group if none exists, or change the existing description.

Viewing the groups the group is a member of

You can view a list of existing groups that the specified group is currently a member of.

Changing information about a group

You can change the information about a specific group. You can change the name of the group, add a new description for the group if none exists, or change the existing description.

Procedure

1. From the navigation pane, click **Users and Groups > Manage Groups**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, the groups that match your search criteria are displayed in the column as hypertext links.
6. Click on one of the group links to change information about the group, as needed.
7. Optional: In the **Group name** field, enter a different name for the group, if needed.
8. Optional: In the **Description** field, enter a different description that the existing description, or enter a new description if none currently exists, if needed.
9. To save the changes, either click **OK** to save and return to the previous window, or click **Apply** to save but remain on the same window.

What to do next

Viewing information about a group

You can view information about a specific group.

Viewing the groups the group is a member of

You can view a list of existing groups that the specified group is currently a member of.

Viewing the groups the group is a member of

You can view a list of existing groups that the specified group is currently a member of.

Procedure

1. From the navigation pane, click **Users and Groups > Manage Groups**.
2. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.
3. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
4. In the **Maximum results** field, specify the maximum number of search results that you want to display.
5. Click **Search**. After the search completes, a table displays a list of groups, as hypertext links, that match your search criteria.
6. Click the group name link to see the group properties.
7. Click the **Groups** tab to see the list of groups, in ascending order, that the group is currently a member of.

What to do next

Adding a group to other groups

Before you can add a group to other groups, you must first search for the groups in which you want the group to be a member.

Changing information about a group

You can change the information about a specific group. You can change the name of the group, add a new description for the group if none exists, or change the existing description.

Viewing information about a group

You can view information about a specific group.

Viewing the members of a group

You can search for a list of users and groups that are existing members of a specific group.

Adding a group to other groups

Before you can add a group to other groups, you must first search for the groups in which you want the group to be a member. Note that when an ObjectServer registry is used to manage users and groups you cannot add groups to other groups.

About this task

Restriction: If the ObjectServer acts as the user repository for your system, a group cannot contain other groups.

Procedure

1. Complete the steps in “Viewing the groups the group is a member of” on page 126.
2. Confirm that the group in the **Group name** field is the group that you want to add to other groups.
3. Click **Add**.
4. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.
5. In the **Search for** field, either type the string that you want to search if for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
6. In the **Maximum results** field, specify the maximum number of search results that you want to display.
7. Click **Search** . After the search completes, a list is displayed of the groups that match your search criteria.
8. Highlight one or more groups to select them, and click **Add**.
9. Click **Close**.

Viewing the members of a group

You can search for a list of users and groups that are existing members of a specific group.

Viewing a list of members of a group

You can search for a list of users and groups that are existing members of a specific group.

Procedure

1. From the navigation pane, click **Users and Groups > Manage Groups**.
2. Complete the steps in “Searching for groups” on page 122.
3. Click the name of a group.
4. Click the **Members** tab to view the users and groups that are existing members of the specified group. Icons are used to help distinguish a user . from a group member.

What to do next

Adding more groups as members of a group

After viewing the list of members in a group that you specify, you can add more groups.

Adding more users as members of a group

You can add more users as members of a group.

Removing members from a group

After searching for the list of members in a group that you specify, you can remove users and groups as members from the group.

Removing a user from groups

After searching for the groups in which the user is currently a member, you can remove the user from membership in groups that you select.

Procedure

1. Complete the steps in “Viewing the groups the user is a member of” on page 111.
2. Confirm that the user in the **User ID** field is the user that you want to remove from other groups.
3. Select the check boxes next to one or more groups, and then click **Remove**.
4. Click **Remove** when asked to confirm the removal.

What to do next

Adding a user to other groups

You can add a user as a member to selected groups.

Changing group membership for a user

You can search for and list the existing groups that match the search criteria.

When creating a new user, you can choose the groups from the search results list in which you want the user to be a member.

Changing information about a user

You can change information about a specific user, such as the e-mail address.

You can update the e-mail address, change the first or last name information, or set a new password.

Viewing information about a user

You can view information about a specific user.

Viewing the groups the group is a member of

You can view a list of existing groups that the specified user is currently a member of.

Adding groups as members of a group

After viewing the list of members in a group that you specify, you can add more groups. Note that when an ObjectServer registry is used to manage users and groups you cannot add groups as members of a group.

About this task

Restriction: If the ObjectServer acts as the user repository for your system, a group cannot contain other groups.

Procedure

1. After completing the steps in “Viewing a list of members of a group” on page 127, click **Add Groups**.
2. Confirm that the **Group name** field displays the name of the group to which you want to add more groups as members.
3. In the **Search by** field, select the attribute from the list that you want to use to search by. For example, select **Group name**.
4. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups.
5. In the **Maximum results** field, specify the maximum number of search results that you want to display.

6. Click **Search**. After the search is complete, a list of the groups that matched your search criteria is displayed.
7. Highlight one or more groups in the list to select them, and then click **Add**.
8. Click **Close**.

What to do next

The groups are immediately added to the list of members.

Adding more groups as members of a group

You can add more users as members of a group.

Removing members from a group

After searching for the list of members in a group that you specify, you can remove users and groups as members from the group.

Removing members from a group

After searching for the list of members in a group that you specify, you can remove users and groups as members from the group.

Procedure

1. Complete the steps in “Viewing a list of members of a group” on page 127.
2. Confirm that the **Group name** field displays the name of the group from which you want to remove members.
3. Select the check boxes next to one or more group members.
4. Click **Remove**.
5. Click **Remove** again when queried to confirm the removal of the selected members from the group. The members are immediately removed and are no longer displayed in the table.

What to do next

Adding more users as members of a group

You can add more users as members of a group.

Adding more groups as members of a group

After viewing the list of members in a group that you specify, you can add more groups.

Duplicating group assignments for a group

You can search for groups that match the search criteria that you specify. After selecting one or more groups, these groups can be members of the same groups as another existing group. For example, if all groups at the Austin site should belong to the same groups as an existing group, you can duplicate the groups that the one group belongs to for all the other groups that you choose.

Procedure

1. Complete the steps in “Searching for groups” on page 122.
2. Select the check boxes next to one or more groups that you want to assign the same membership as another group.
3. Choose the **Duplicate Group Assignments** action.
4. In the **Search by** field, select the attribute from the list that you want to use to search for one or more groups. For example, select **Group name**.

5. In the **Search for** field, either type the string that you want to search for to limit the set of groups, or use the wildcard character (*) to search for all groups. Whether the search is case sensitive or case insensitive depends on the user registry that you are using.
6. In the **Maximum results** field, specify the maximum number of search results that you want to display.
7. Click **Search**. After the search has been completed, a table displays the groups that match your search criteria.
8. Highlight the name of the group whose group whose group assignment is to be duplicated for the previously selected groups, and click **OK**. The group membership of the group is duplicated for the previously selected groups

What to do next

Creating groups

You can create one or more groups. The group names and descriptions are added to the user registry.

Deleting groups

You can search for and list the existing group names that match the search criteria that you specify. After selecting one or more groups, you can delete them and remove the group names from the user registry.

Deleting groups

You can search for and list the existing group names that match the search criteria that you specify. After selecting one or more groups, you can delete them and remove the group names from the user registry.

Before you begin

If an LDAP directory is defined as the user repository, delete all assignments of the group to roles before you proceed.

Procedure

1. Complete the steps in “Searching for groups” on page 122.
2. Select the check boxes next to the groups that you want to delete.
3. Click **Delete**.
4. Click **Delete** again when asked to confirm the deletion. The groups are immediately deleted and removed from the user registry. The table that lists the groups is refreshed, and the selected groups are no longer displayed in the list.

What to do next

Creating groups

You can create one or more groups. The group names and descriptions are added to the user registry.

Duplicating group assignments for a group

You can search for groups that match the search criteria that you specify. After selecting one or more groups, these groups can be members of the same groups as another existing group. For example, if all groups at the Austin site should belong to the same groups as an existing group, you can duplicate the groups that the one group belongs to for all the other groups that you choose.

Groups

A group is a collection of *members* that can be used to satisfy specific business needs, such as granting access to a resource.

Membership in a group named Company XYZ can be all the users in a department (Dept 047). A group within another group is referred to as a *nested group*. For example, Dept 047 might be a group within a larger group named Company XYZ Austin.

Members

A member is a *user* or *group* within a group.

For example, membership in a group named Company XYZ can be both an individual user (Harry Jones) as well as all the users in his department (Dept 047).

Users

A user is an individual who uses a computer. Users can include any user from expert programmers to computer novices.

For example, users might include:

- Users who use a computer product.
- Users who administer the same product and provide their users with access privileges.
- Users who administer users and groups by using a console menu to complete tasks.
- Users who use the same product for development purposes.

An example of a user task might be resetting your own password. An example of an administrator task might be creating new users and groups.

Assigning roles to users and groups

Assign roles to users or groups so that users are authorized to perform functions in the Web GUI. If you assign the roles to groups, the authorizations that are associated with the roles cascade to all users that are members of the groups.

Procedure

To assign roles to users and groups:

- To assign roles to user groups:
 1. Click **Users & Groups > Group Roles**.
 2. Complete any combination of the search fields to help locate the groups.
 3. Select how many groups to display and click **Search**. A list of groups appears in the grid.
 4. Click the name of the group you want to assign roles to.
 5. From the **Role(s)** list, select the roles to assign the user group.
 6. Click **Save**.
- To assign roles to users:
 1. Click **Users & Groups > User Roles**.
 2. Complete any combination of the search fields to help locate the users.

3. Select how many users to display and click **Search**. A list of matching users appears in the grid.
4. Click the user ID of the user you want to assign roles to.
5. From the **Role(s)** list, select the roles to assign the user.
6. Click **Save**.

Results

The changes take effect immediately.

What to do next

Ensure that users log out and log back in again, so that their authorizations are refreshed. If users need write-permission to the ObjectServer, for example to use the Active Event List (AEL) or the Web GUI tools, ensure that the user synchronization function is enabled.

Related concepts:

“Web GUI user administration” on page 98

User administration in the Web GUI is divided between the Tivoli Integrated Portal administrators and the Web GUI administrators.

Related tasks:

“Creating roles” on page 118

Portal users are granted access to resources based on the role to which they have been assigned. All roles that are created in the portal have a resource type of Custom. This procedure describes creating a role for testing purposes. After completing these steps, you can remove or edit this role for production use.

“Editing roles” on page 119

Portal users are granted access to resources based on the role to which they have been assigned. If you have sufficient authorization in the portal, you can change the name of custom roles. For all roles, you can change access to views and pages and set the access level to pages.

“Creating groups” on page 124

You can create one or more groups. The group names and descriptions are added to the user registry.

“Creating users” on page 107

You can create one or more users. The users are added to the registry and a login account for each new user is automatically created. When creating the new user, you can also add the user as a member of one or more groups.

Chapter 5. Administering a load balancing cluster

Tasks for administering the Web GUI in a load balancing environment.

For instructions on how to set up a load balancing cluster, add nodes to a cluster, and remove nodes from a cluster, refer to the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

For instructions on how to set up a load balancing cluster, add nodes to a cluster, and remove nodes from a cluster see Setting up and configuring a load balancing environment.

Related concepts:

“The Web GUI in a load balancing environment”

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

The Web GUI in a load balancing environment

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

A load balancing environment consists of a group of Web GUI servers that are linked together and operate as a single server. The name for the group of servers is a *cluster* and each of the servers is known as a *node*.

The primary benefits of a cluster are as follows:

- Load balancing – where the workload of servicing user requests is spread among the nodes. This improves the overall performance of the system.
- Availability – to maintain the availability of network monitoring even if some cluster nodes are unavailable for any reason (for example, they are shut down for maintenance).

The following sections contain more information on clusters, on administering them, and on using them:

- “Structure of a cluster” on page 134
- “Configuration data” on page 134
- “Updating configuration data” on page 135
- “Conditions necessary for changing configuration data” on page 136
- “Administering a load balancing cluster” on page 136
- “Using a load-balanced cluster” on page 137

Related concepts:

Chapter 5, “Administering a load balancing cluster”

Tasks for administering the Web GUI in a load balancing environment.

Structure of a cluster

A cluster consists of a group of Web GUI servers, an HTTP server, and a DB2 database.

- The servers carry out service requests from users. In addition, each server is configured to trust the other servers in the cluster and is able to communicate with all the other cluster members. This enables them to cooperate as a single unit.
- The HTTP server distributes user HTTP sessions among the servers. It allocates requests among the servers either randomly or in a round robin fashion. The method that the HTTP server uses depends on how it was set up when installed.
- The DB2 database holds the configuration data for the cluster.

Configuration data

Configuration data defines how a Web GUI server operates. It is held differently in a cluster than it is in a standalone server.

A standalone Web GUI server holds its configuration data in the local file system. In a cluster, the DB2 database holds the configuration data for the entire cluster. This is the master copy of the data that is shared by all the cluster nodes. A single set of configuration data means that each node is configured identically. There is no configuration data that is specific to a cluster node.

Although the database holds the master copy, each node also has a copy in its local file system. This is for fault tolerance reasons and allows the cluster to continue operation should the configuration database become unavailable during operation. When a node starts it reads a complete set of configuration data from the database into the local file system and loads it into memory to improve performance.

The configuration data that the database holds includes:

- Data sources
- Users, groups, and roles
- Page layouts, customized page information, and portlet descriptors
- Deployment descriptors
- Filters and views
- All items in the configstore:
 - AEL menus and menu configuration data
 - Metrics for gauges
 - Prompts
 - Tools
 - User preferences
- AEL preferences such as the refresh time and the number of rows to display
- Web GUI properties such as the default time zone and the timeout period
- Maps and resources, together with their properties
- Gauges and their properties
- Charts and their properties
- Predictive eventing information
- TADDM events
- Access information for the Inline frame portlet

Updating configuration data

Changes to the configuration data need to be coordinated across the entire cluster irrespective of which node initiated the changes.

The configuration data can change in any of three ways:

- The facilities of the Web GUI itself (for example, setting a set of preferences for a portlet)
- By editing the configuration files directly (for example, setting the metrics for a gauge)
- By using WAAPI commands (for example, enabling predictive eventing)

A change could originate on any cluster node. However, this change needs to be propagated to the entire cluster to maintain the commonality of the cluster's configuration.

Updating the database

The process for changing configuration data is as follows:

1. A user on a node changes an item in the configuration and requests that the node saves the change.
2. The node writes the new information (for example a configuration file) to the database.
3. The node notifies all the other cluster nodes that there is revised configuration information.
4. The node updates its local copy of the configuration data to reflect the change.
5. The other cluster nodes read the new information from the database and update the copies in their local file systems.
6. The cluster continues to operate with the new configuration settings.

Detecting changes to the configuration files

It is not always necessary to restart the cluster or any of its nodes to pick up the new configuration information. Instead, revised configuration data is automatically applied when it occurs. This is achieved through:

- The Web GUI timed tasks facility
- A file that lists the files to be monitored and an associated set of monitor processes

Timed tasks determine when each node loads changed files from the database.

The file is named *webgui-home/etc/system/stores.list* and contains a list of all the configuration files that are kept in the database. When a node starts or joins the cluster it creates a set of processes that monitor each of the files listed in *stores.list*. Whenever a change occurs to one of those files, the corresponding process propagates the changed file to the DB2 database and notifies other nodes of the change.

This file monitoring capability means that an individual component of the Web GUI (such as a portlet) does not need to know whether configuration information is maintained in a database or in the local file system. Instead, the component always writes changes to its configuration directly to the local file system. The monitoring processes take care of updating the database.

There are some exceptions where a restart of a node, and usually the cluster, is necessary. Changing any of the following files requires a restart of the server:

- `server.init`
- `ncwDataSourceDefinitions.xml`

Conditions necessary for changing configuration data

To be able to operate correctly, certain conditions need to be met before the cluster can allow changes to its configuration data.

For the cluster to operate successfully, the DB2 database must be available. The database is the key coordination point of the cluster because it contains the configuration data.

If the database becomes unavailable after the cluster has started, operations continue, with each node using their local copy of the configuration data. However, each node prevents any changes occurring to the configuration data. This state continues until the DB2 database becomes available again. At this point, the cluster nodes refresh their locally stored configuration from the database and allow changes to configuration data to take place once more. The policy of allowing changes to occur only when the database is available helps to ensure that the cluster remains synchronized and that common behavior is maintained across the cluster.

When a node starts and joins the cluster, it reads the configuration data from the database, even though it may have data in its local file system. Nodes do this to ensure that they always have the latest set of configuration data. If the database is unavailable when a node starts, it cannot continue because it cannot be sure that the local copy of the configuration data is up to date.

In addition to the configuration data, each cluster node must be run the same version of the Web GUI, with the same set of features, and set up in the same way. As with the data, this is the only way to provide a common service to the users of the Web GUI.

Administering a load balancing cluster

Administration of a load balancing cluster has two aspects that you need to be aware of:

- “Day-to-day administration”
- “Cluster administration” on page 137

Day-to-day administration

In day-to-day administration, bear in mind that any change you make always applies to the entire cluster not just the node where you make the change. For instance, adding a user to one node adds that user to all nodes. There may be a short time delay before a change is applied to all the nodes. This depends on how often the timed tasks interval is set, and how long it is until the next execution of the timed tasks facility.

An advantage of this propagation of configuration data is that it simplifies your administration job. You need only to make each change once, and the cluster ensures that all nodes receive it. If the database is unavailable, you cannot make any change to the configuration data. When using the Web GUI itself, the system prevents you from saving any changes to the data. When editing files or using

WA-API, the node you are using will not propagate the changed information until the database becomes available once more.

Cluster administration

After set up, a cluster requires little administration over and above the day-to-day administration that any Web GUI installation requires. However, the Web GUI provides a comprehensive set of tools for you to administer the cluster. These tools enable you to do the following:

- Enable load balancing after installation
- Administer the timed tasks facility
- Add and remove nodes
- Resynchronize a cluster node
- Export configuration information from a test environment into production
- Maintain the list of files to be monitored and propagated to the database whenever they change

Related tasks:

“Administering timed tasks” on page 7

Timed tasks are the key part to a Web GUI server automatically loading changes in configuration data, without the need to restart the server. You manage timed tasks through properties in the Web GUI initialization file (`server.init`).

Using a load-balanced cluster

To users, the Web GUI behaves almost identically in a clustered environment as a standalone server. All that many users might notice, after a move to a clustered environment, is an increased responsiveness of the product. This is due to the overall increases in performance that the cluster provides.

Maintaining the list of files to monitor

On each cluster member has a copy of a file named `stores.lst` that holds a list of files to monitor for changes. When any of these files changes, the monitoring process copies it to the database.

About this task

You can add further files to the list for monitoring and saving to the database. Carry out the following procedure on each member of the cluster.

Important: You can add further files to store in the database only. Do not modify or remove any of the supplied entries in the file. Doing so adversely affects the operation of the cluster.

Procedure

1. In a text editor, open the file `webgui-home/etc/system/stores.lst`.
2. Add entries for any other directories that you want to include in the database. Note that subdirectories associated with entries in the `stores.lst` are not monitored. Additional entities must be added to monitor the subdirectories. Specify all directories relative to the path `webgui-home/etc/configstore`.
3. Save the file and exit from the text editor.

The revised content of the file is copied to the database and propagated to all nodes in the cluster.

Related reference:

“Load balancing best practices” on page 139

When administering the Web GUI in a load balancing environment, there are a number of practices you can use to avoid problems occurring in the cluster.

Cluster administration tools

Use the cluster tools to administer the members of the cluster.

Monitoring a load balancing cluster

If synchronized data fails to be committed to a node in the cluster, that node should be removed from the cluster for corrective action. Use the diagnosis tool to identify any unsynchronized nodes in the load balancing cluster.

To determine if changes to global data are not committed to any of the nodes, use the **HATool** command script to check the synchronization of modules and repositories on the nodes in a cluster. For the HATool, you must provide the DB2 administrator's credentials.

Query synchronization of modules

Use this command to determine if all nodes have identical sets of modules deployed.

```
HATool.bat/sh modules username password -byNodes -showAll
```

The following parameters are optional.

- **-byNodes**

Specifies that the results of the command are ordered by the node in the cluster. This parameter is optional. The default is to list the results by module.

- **-showAll**

Specifies that all modules and nodes in the cluster should be returned. This parameter is optional. The default is to return only modules for unsynchronized nodes.

Query the synchronization of global repositories

Use this command to determine if all repositories are synchronized on all nodes.

```
HATool.bat/sh repositories username password -byNodes -showAll
```

The following parameters are optional.

- **-byNodes**

Specifies that the results of the command are ordered by the node in the cluster. This parameter is optional. The default is to list the results by repository.

- **-showAll**

Specifies that all modules and nodes in the cluster should be returned. This parameter is optional. The default is to return only repositories for unsynchronized nodes.

Release the global lock

Use this command to manually release the global lock placed on all of the console nodes when the cluster is in maintenance mode. This command is used when a node cannot commit a change during synchronization and has to be taken offline.

Load balancing best practices

When administering the Web GUI in a load balancing environment, there are a number of practices you can use to avoid problems occurring in the cluster.

Overview

Administrative items that need special attention in a load balancing environment are:

- “Timed tasks”
- “The configuration database”
- “The list of files to maintain in the database” on page 140
- “Custom web content” on page 140

Timed tasks

Timed tasks are an essential element in the smooth running of a load balancing cluster. They ensure that all changes to files in *webgui-home/etc/configstore/* and its subdirectories are detected and loaded into the server, without the need to restart the Web GUI server.

As a minimum, ensure that the **timedtasks.enabled** property in *theserver.init* file is set to true.

In most cases the schedules supplied for filters and views and for other components are adequate. However, you can change the schedules to suit your specific needs. If you do this in a load balancing environment, you are recommended to create identical schedules for the same set of components on all nodes in the load balancing cluster.

The configuration database

A load balancing cluster uses a database to hold the configuration data. Individual nodes in the cluster hold only a copy of this data, primarily for performance reasons. The master copy of the configuration data is always the one in the database.

Always make sure that the database is available before making any changes to the Web GUI configuration. This is especially important if you are modifying the configuration files directly, such as defining the metrics for the gauge page. Without the database, the node where you make the change is unable to put the change into the database and then propagate that to all other nodes. The result is an inconsistent configuration in the cluster. In extreme cases this could affect the performance of the cluster.

Where ever possible, use the Web GUI itself to change the configuration. The Web GUI always checks that the database is available before allowing you to save any changes to the configuration. This avoids many of the potential data inconsistencies that could arise were you to edit the files directly.

The list of files to maintain in the database

A cluster includes a file named `stores.lst` that holds a list of directories whose content is to be stored in the configuration database. As supplied, the file specifies all the directories that contain information which must be synchronized across a cluster. You can add further directories to this list for other files that you want synchronized on all nodes. Note that subdirectories associated with entries in the `stores.lst` are not monitored. Additional entities must be added to monitor the subdirectories.

Periodically check the `stores.lst` to ensure it is fully up to date. The file itself is one of those synchronized across all nodes. So any changes you make to it are automatically propagated to the other nodes.

Take care when editing `stores.lst` to change only those entries you have added. Do not remove any of the supplied entries, as this can adversely affect the operation of the cluster.

Custom web content

Place any custom web content, such as HTML file, in subdirectories of `tip_home_dir/profiles/TIPProfile/installedApps/TIPCell/isc.ear/OMNIBusWebGUI.war`. In addition, add these directories to the list of files to maintain in the database.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

“Overview of timed tasks” on page 8

Timed tasks simplify the administration of a Web GUI server or of a cluster of Web GUI servers.

Related tasks:

“Administering timed tasks” on page 7

Timed tasks are the key part to a Web GUI server automatically loading changes in configuration data, without the need to restart the server. You manage timed tasks through properties in the Web GUI initialization file (`server.init`).

“Maintaining the list of files to monitor” on page 137

On each cluster member has a copy of a file named `stores.lst` that holds a list of files to monitor for changes. When any of these files changes, the monitoring process copies it to the database.

Troubleshooting

Use the troubleshooting notes to help correct problems with a load balancing cluster.

Resynchronizing a node with the cluster

In rare circumstances a fault may cause the configuration data of a node to become corrupted. Use this procedure to bring the data of a node back in synchronization with the cluster.

About this task

To resynchronize a node with the cluster restart the node.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Recovering from a database corruption

An event such as a power failure may corrupt the content of the load-balancing database. To recover from a database corruption, disjoin all nodes from the cluster, destroy and then recreate the IBM DB2 database, and rejoin the nodes to the cluster.

Procedure

To recover from a cluster configuration database corruption, proceed as described in the steps below.

For more information about how to remove nodes from a load balancing cluster, rejoin nodes to a cluster, and start these Web GUI load balancing operations, see the section *Setting up and configuring a load balancing environment* in Chapter 20 of the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

For more information about removing and creating DB2 database, see the IBM DB2 information center at <http://pic.dhe.ibm.com/infocenter/db2luw/v9r7/index.jsp>.

1. Remove all nodes from the load balancing cluster.
2. Remove the DB2 database.
3. Create a new DB2 database.
4. Rejoin all the nodes to the cluster.
5. Restart Web GUI load balancing operations.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

disjoin command fails with DB2 SQL errors

Actions to take if the **disjoin** command fails.

Failure on line 166 of uninsta11.ant

The **disjoin** command fails with the following error.

```
[java] Disjoin from HA system procedure commencing...
[java] Exception thrown: Problem with the database!
[java] DB2 SQL error: SQLCODE: -204, SQLSTATE: 42704, SQLERRMC: DB2INST1.NODES
[java] Please check that the database is not empty!
```

BUILD FAILED

/opt/IBM/tivoli/typv2/profiles/TIPProfile/bin/ha/uninstall.ant:166: Java returned: 1

To resolve this problem:

- Ensure that the DB2® host is running.
- Ensure that the user and database information in the properties file is correct.
- Check that the database is not empty.
- Ensure that the port for communication between the DB2 host and the Tivoli Integrated Portal server is correctly defined.

Failure on line 90 of uninstall.ant

The **disjoin** command fails with the following error.

```
/opt/IBM/tivoli/tipv2/profiles/TIPProfile/bin/ha/uninstall.ant:90: The server is running, it must be
```

To diagnose this problem, change to `$TIPHOME/bin` and run the following command:

```
./serverStatus.sh -all -profileName TIPProfile -username adminuser -password adminpass
```

Output is displayed that is similar to the following sample:

```
ADMU0116I: Tool information is being logged in file
/opt/pstanto/IBM/tivoli/tipv2/profiles/TIPProfile/logs/serverStatus.log
ADMU0128I: Starting tool with the TIPProfile profile
ADMU0503I: Retrieving server status for all servers
ADMU0505I: Servers found in configuration:
ADMU0506I: Server name: server1
ADMU0509I: The Application Server "server1" cannot be reached. It appears to be stopped.
```

This problem is because the `uninstall.sh` command is running and hanging on the **serverStatus** command. The message `ADMU0509I: The Application Server "server1" cannot be reached. It appears to be stopped.` indicates that the Tivoli Integrated Portal server is hanging. The following table describes some common causes and solutions for this problem:

Table 15. Causes and solutions for stopping the `serverStatus`

Cause	Solution
More than one Tivoli Integrated Portal application or component is running. For example, Tivoli Common Reporting is running alongside the Web GUI. In this case, the serverStatus command is hanging on a Tivoli Common Reporting process that is still running.	For Tivoli Common Reporting, run the Tivoli Common Reporting stop script before you run the disjoin . The Tivoli Common Reporting script stops all underlying Tivoli Integrated Portal.
A <code>JAVA_HOME</code> or <code>JAVA</code> environment variable is incorrectly set.	Check the values of these environment variables and correct if necessary.
The <code>server.xml</code> file is corrupted.	In the output of the serverStatus command, review the error information and fix the configuration in the file. Alternatively, restore a backup copy of the file.

Chapter 6. Troubleshooting

Consult these troubleshooting notes to help determine the cause of the problem and what to do about it.

Establishing the cause of problems

When problems occur in your Web GUI environment, the product contains a number of utilities that can help you establish the cause of the problems. You can change the logging levels and consult the relevant log files for information, set traces, and turn on auditing for Web GUI objects.

Checking system information

To determine the status of the server and client, and to help you with troubleshooting, access the system information for the Web GUI.

Procedure

To access the system information, in the navigation pane, click **Troubleshooting and Support > System Information for Tivoli Netcool/OMNIBus Web GUI**.

Results

The following information is displayed:

- Web GUI server version
- Java Runtime Environment
- Memory usage
- Operating system information
- Web GUI server properties
- ObjectServer properties
- System properties

Setting the log level

The log level determines the amount of detail that the Web GUI writes to the log files. As supplied, the product logs all events of the Information severity and above. Use these procedures to change the level if required.

About this task

You can change the log in either of the following ways:

- Setting the log level in the server initialization file
- Using the WebSphere administration console

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Editing the server initialization file Procedure

To change the logging level in the server initialization file:

1. Log in to the machine running the Web GUI using a command line interface.
2. Open *webgui-home/etc/server.init* in a text editor.
3. Locate the **trace.level** property.
4. Change its value to the required minimum severity level to write to the log files

The available log levels, in ascending order of ascending severity, are:

FINEST
FINER
PROFILE
FINE
CONFIG
INFO
WARNING
SEVERE

5. Save the file.
6. Restart the Tivoli Integrated Portal server.

Using the WebSphere administration console Procedure

You can also use the WebSphere administration console. Use this method when diagnosing an issue with the help of IBM Technical Support. To set the logging level using the WebSphere administration console:

1. Log in to the Web GUI as an administrative user.
2. Click **Settings > WebSphere Admin Console**.
3. On the Web Sphere Admin Console page, click **Launch WebSphere Admin Console**.

The console opens in a new browser window.

4. Click **Troubleshooting > Logs and Trace**.
5. In the Logging and Tracing page, click the name of the Tivoli Integrated Portal (for example, server1).
6. Click **Change Log Detail Levels** and click the **Runtime** tab.
7. Expand the tree of components under **All Components**, expand the tree under **com.ibm.tivoli.*** and then the tree under **com.ibm.tivoli.ncw.***.
8. For each of the elements that technical support have advised you to change the log level:
 - a. Click the name of the element.
 - b. Click **Message and Trace Levels** and choose the required minimum severity level to write to the log files.
9. Click **OK** and close the WebSphere administration console window.

Generating performance logs

A performance log can help to identify bottlenecks in your system configuration. Use these procedures to create a performance log if required.

About this task

You can generate a performance log in either of the following ways:

- Setting the trace level in the server initialization file
- Using the WebSphere administration console

Related tasks:

“Setting the log level” on page 143

The log level determines the amount of detail that the Web GUI writes to the log files. As supplied, the product logs all events of the Information severity and above. Use these procedures to change the level if required.

Editing the server initialization file

Procedure

Follow the instructions in “Editing the server initialization file” on page 144 in “Setting the log level” on page 143 to set **trace.level** to PROFILE.

Using the WebSphere administration console

Procedure

Follow the instructions in “Using the WebSphere administration console” on page 144 in “Setting the log level” on page 143 to set the log level to FINER.

Setting a trace

Enable a trace of the Tivoli Integrated Portal Server when you want to keep a record of activity.

Before you begin

The portal has a Troubleshooting Logs and Trace option for enabling a trace.

About this task

Follow these steps to set a trace that will record the Tivoli Integrated Portal Server actions in a log file: *tip_home_dir/profiles/TIPProfile/logs/server1/trace.log*.

Procedure

1. Log in to the *Tivoli Integrated Portal* Web GUI.
2. In the navigation pane, click **Settings > Websphere Admin Console** and click **Launch Websphere Admin Console**.
3. In the WebSphere Application Server administrative console, select **Troubleshooting > Logs and traces**.
4. Select the Tivoli Integrated Portal Server name (such as server1) in the Logging and Tracing portlet.
5. In the **Configuration** tab, click **Change Log Detail Levels**.
6. In the **Groups** list, expand **com.ibm.tivoli.*** and click **com.ibm.tivoli.tip.***.
7. Select a log level (such as **All Messages and Traces**) and click **OK** or **Apply**.
8. When prompted to save the configuration, click **Save**.

9. Restart the Tivoli Integrated Portal Server:
 - a. In the *tip_home_dir*/profiles/TIPProfile/bin directory, depending on your operating system, enter one of the following commands:
 - Windows stopServer.bat server1
 - UNIX Linux stopServer.sh server1

Note: On UNIX and Linux systems, you are prompted to provide an administrator username and password.
 - b. In the *tip_home_dir*/profiles/TIPProfile/bin directory, depending on your operating system, enter one of the following commands:
 - Windows startServer.bat server1
 - UNIX Linux startServer.sh server1

Results

After the server has been stopped and restarted, trace entries are saved to the *tip_home_dir*/profiles/TIPProfile/logs/server1/trace.log file.

Auditing the usage of objects

How to set up auditing of objects such as maps, filters, and views to determine which are being used.

Procedure

To enable auditing of objects in the Web GUI:

1. Navigate to the following directory:


```
tip_home_dir/profiles/TIPProfile/config/cells/TIPCell/nodes/TIPNode/servers/server1
```
2. Edit server1.xml
3. Locate the <services> element with an xmi:type attribute of logging.service.http:HTTPAccessLoggingService. For example:


```
<services xmi:type="logging.service.http:HTTPAccessLoggingService"
  xmi:id="HTTPAccessLoggingService_1183077764084"
  enable="false" enableErrorLogging="true"
  enableAccessLogging="true">
  <errorLog xmi:id="LogFile_1183077764084"
    filePath="{SERVER_LOG_ROOT}/http_error.log"
    maximumSize="500"/>
  <accessLog xmi:id="LogFile_1183077764085"
    filePath="{SERVER_LOG_ROOT}/http_access.log"
    maximumSize="500"/>
</services>
```
4. Change the value of the enable attribute of the <services> element to true.
5. Add the following attributes to the <services> element:


```
errorLogLevel="DEBUG" accessLogFormat="COMBINED"
```
6. Locate the 4 <transportChannels> elements that have an xmi:type attribute with a value channel.service.channels:HTTPInboundChannel.
7. In each of these elements, set the value of the enableLogging attribute to true.
8. Save the file.
9. Restart the server.

Results

After restarting the server, page navigation is recorded in the following log files:

http_access.log

http_error.log

Both files are in *tip_home_dir/profiles/TIPProfile/logs/server1*.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Web GUI log files

The Web GUI has several log files providing information on various aspects of its operation, as described here.

The following table describes the Web GUI log files.

Table 16. Log files

Log file	Description
<i>webgui-home/integration/migration_tool/log/migration.log</i>	The migration log. Contains information relating to the migration process, if you have migrated to the Tivoli Netcool/OMNIBus Web GUI V7.4.0 from a previous version. If any errors caused the migration to fail at any point, these are listed in the migration log file. Any files, directories, or properties that could not be migrated are also listed in the migration log file. You can set the level of detail in this log in <i>webgui-home/integration/migration_tool/etc/logging.properties</i> file.
<i>tip_home_dir/profiles/TIPProfile/logs</i> and subdirectories	Several Tivoli Integrated Portal log files are contained in this directory.
<i>tip_home_dir/profiles/TIPProfile/logs/ncw/ncw.n.log</i> In the file name a number replaces <i>n</i> .	Contains event and user monitoring information. You can set the level of detail in this log in the initialization file.
<i>tip_home_dir/profiles/TIPProfile/logs/ncw/ncw.n.profile</i> In the file name a number replaces <i>n</i> .	Contains performance metrics. You can set the level of detail in this log in the initialization file.
<i>tip_home_dir/profiles/TIPProfile/logs/ncw/ncw.n.trace</i> In the file name a number replaces <i>n</i> .	Contains trace information. You can set the level of detail in this log in the initialization file.

Table 16. Log files (continued)

Log file	Description
<i>tip_home_dir</i> /profiles/TIPProfile/logs and subdirectories	For more information about server logs, go to the IBM WebSphere® Application Server Information Center at the following Web address and search for <i>server logs</i> . http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/index.jsp ,
<i>tip_home_dir</i> /profiles/TIPProfile/logs/dci-common/OMNIBusWebGUI/dci-security.log	DCI Security component log file. You can set the level of detail in this log in <i>webgui-home/etc/dci-common/security/dci-security.properties</i>

Viewing TIPProfile logs for login errors

In the event of a login error, review the system outage and system error logs to help determine the cause.

About this task

Follow these steps to open the system outage and system error logs:

Procedure

1. At the command line, change to the *tip_home_dir*/profiles/TIPProfile/logs/server1 directory.
2. Open SystemOut.log and SystemErr.log in a text editor. On Windows, for example, the command notepad systemout.log opens the log in Windows Notepad.
3. Review the errors.
4. If the cause and solution to your login error is not apparent, send the SystemOut.log and SystemErr.log from this directory and the server1_exception.log (and any other files that were modified within a few minutes of this one) from the sibling ffdc directory to your security administrator for further examination.

Related tasks:

“Viewing the application server profile” on page 2

Open the application server profile to review the port number assignments and other information.

Editing a properties file

Properties files describe the environment and their settings are usually predefined or added during installation. You do not need to change these files unless instructed by IBM Software Support.

About this task

The properties files are on the computer where the Tivoli Integrated Portal Server is installed.

Procedure

1. Locate the *tip_home_dir*/properties directory, where *tip_home_dir* represents the installation path for the application server. For example, C:\IBM\tivoli\tipv2 is the default installation path on Windows; /opt/IBM/tivoli/tipv2/ is the default installation path on Linux or UNIX.

2. Open the desired properties file in a text editor.
3. Edit the file as needed, and then save and close it.
4. Stop the application server, and then restart it.

Applying fix packs for the Web GUI

Considerations to make when applying a fix pack for the Web GUI. In particular there are special considerations when applying a fix pack in a load balancing environment.

About this task

Each fix pack for the Web GUI includes a Readme file that contains detailed installation instructions. The following information, however, provides a general overview of the installation process.

Important: Always use the instructions in the Readme file to apply a fix pack. There may be additional steps required in addition to the general advice given here.

Stand-alone system

Procedure

On a stand-alone installation of the Web GUI, the general procedure for applying a fix pack is:

1. Stop the Tivoli Integrated Portal and its associated services.
2. Extract the installation files from the archive.
3. Install the fix pack in silent mode.
4. Restart the Tivoli Integrated Portal.

Load balancing environment

Procedure

In a load balancing environment a number of co-operating instances of the Web GUI form a cluster. In such an environment, the general procedure for applying a fix pack is:

1. Remove each node from the cluster and restart them as stand-alone systems.
2. On each node in turn, follow the procedure for a stand-alone system to apply the fix pack.
3. Recreate the cluster and each node in turn.

When doing this you do not need to recreate or edit any of the configuration files or the database. Instead:

- a. On one node run the commands to set up the cluster.
- b. On all other nodes run the commands to join the cluster.
- c. Prepare the HTTP server for load balancing.
- d. Start Web GUI load balancing operations on each node.

MustGather information for opening Problem Management Reports

IBM Software Support requires specific information to help you diagnose and resolve problems. This information is called MustGather information. It can be log files, operating system information and descriptions of the behavior that your environment exhibits. The MustGather information that is required for the Web GUI is published in a technote.

If you need to open a Problem Management Report (PMR), refer to <https://www-304.ibm.com/support/docview.wss?uid=swg21631338>. MustGather information consists of general information, which is required for all PMRs, and problem-specific information. Refer to the section that describes your problem to find out which problems-specific information is needed.

Troubleshooting user authentication

This information lists common problems that you might encounter when configuring the user authentication for the Web GUI, either through an LDAP directory, an ObjectServer, or the Tivoli Integrated Portal file-based repository. It contains likely solutions to these problems and references other useful sources of information.

Harmless authentication messages

Certain sign-on messages are routine and might not indicate that a problem has occurred.

For installations that have been configured to use the Tivoli Integrated Portal authentication service, it is possible that an authentication client receives CTGES1504E and CTGES1505E messages. These messages are generated when an unused single sign-on LTPA token is discarded, and might be insignificant.

An authentication client attempts to use all single sign-on tokens provided to it when authenticating to an authentication service. Some of these tokens might not apply to the configured authentication service, causing CTGES1504E and CTGES1505E messages to be generated on the client and CTGES1089E on the server. When not accompanied by other CTGES0008E authentication client errors, these messages indicate only that a particular single sign-on token was discarded.

Troubleshooting LDAP user repositories

If you defined an LDAP directory as a user repository in the realm and you experience problems, this information lists some common problems and likely solutions.

The following information lists common best practices for using an LDAP directory as your Web GUI user repository. Ensure that the following information is true of your environment before you read the troubleshooting topics.

- All repositories that are defined in the realm need to be available and running. If one repository becomes unavailable, all other repositories are affected. If this problem occurs, you cannot log in, even if your user is in a repository that is still available. To solve this problem, use WebSphere Application Server commands to allow access when all repositories are available, or the federated repositories will not function properly. For more information, see <http://www-01.ibm.com/support/docview.wss?uid=swg1PK78677> and

http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp?topic=/com.ibm.websphere.web20fep.multiplatform.doc/info/ae/ae/xml_atidmgrrealmconfig.html.

- All user IDs need to be unique across all repositories in the realm. Ensure that no user IDs are duplicated: if duplicates exist, delete them.
- If users cannot perform functions that write to the ObjectServer, the user synchronization function might not be enabled.
- If user synchronization is enabled, no ObjectServers can be defined as repositories in the realm.
- Ensure that users and groups are configured in the Websphere administrative console.
- Ensure that the `maxSearchResults` attribute in the `wimconfig.xml` file is set to a suitable value. For more information, see “No LDAP groups available” on page 158.

If the information in this troubleshooting section does not resolve the problems with your LDAP user repository, see the Websphere Application Server information center at <http://pic.dhe.ibm.com/infocenter/wasinfo/v7r0/topic/com.ibm.websphere.wim.doc/LDAPRepositoryIssues.html>. Additionally, you can view the default values in the `wimconfig.xml` file, for each type of LDAP server at <http://pic.dhe.ibm.com/infocenter/wasinfo/v7r0/index.jsp?topic=/com.ibm.websphere.wim.doc/defaultldapconfigurationmappingbasedonldapservertype.html>.

Logging into the Web GUI after the LDAP server has failed

If the Web GUI is configured to authenticate against an LDAP server, no user can log into the Web GUI if the LDAP server fails.

This problem also affects the default `tipadmin` user. To enable access to the Web GUI installation for the `tipadmin` user if the LDAP server fails:

1. Change to the `/opt/IBM/tip_v2/profiles/TIPProfile/bin` directory and start the `wsadmin` utility.
2. Use the `updateIdMgrRealm` command to change the `allowOperationIfReposDown` parameter from `false` to `true`, on the `defaultWIMFileBasedRealm` realm:

```
$AdminTask updateIdMgrRealm {-name defaultWIMFileBasedRealm
                              -allowOperationIfReposDown true}
```
3. Restart the Tivoli Integrated Portal server.

You can now log into the Web GUI by using the `tipadmin` user and password.

For more information about the `wsadmin` command and its associated commands, see the *Websphere Application Server* information center at <http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp?topic=/com.ibm.websphere.wim.doc/UnableToAuthenticateWhenRepositoryIsDown.html>

Unable to log in

An LDAP directory is defined as a repository in the realm but the LDAP users cannot log in to the Web GUI.

Cause

A value might be missing from the **Distinguished name of a base entry in this repository** field for the LDAP directory in the realm. The value of this field corresponds to the `nameInRepository` attribute in the `wimconfig.xml` configuration file.

Resolution

1. Open the `$TIPHOME/profiles/TIPProfile/config/cells/TIPCell/wim/config/wimconfig.xml` file.
2. In this file, search for the `nameInRepository` attribute and check whether the value of the attribute is missing, as in the following example:

```
<config:baseEntries name="o=example" nameInRepository=""/>
```
3. Add a value to the `nameInRepository` attribute. For example, for a domain called "example.com" where the search base is the root domain, change the attribute to look like the following example:

```
<config:repositories xsi:type="config:LdapRepositoryType"
adapterClassName="com.ibm.ws.wim.adapter.ldap.LdapAdapter"
id="example" isExtIdUnique="true" supportAsyncMode="false"
supportExternalName="false" supportPaging="false" supportSorting="false"
supportTransactions="false" certificateFilter="" certificateMapMode="exactdn"
ldapServerType="AD2003" translateRDN="false">
<config:baseEntries name="o=example" nameInRepository="DC=example,DC=com"/>
```
4. Save the file and restart the server.

If the **stopServer** command fails, terminate the underlying process and reissue the command.

Related tasks:

"Restarting the server" on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Login failed message

An LDAP directory is defined as a repository in the realm, but certain LDAP users cannot log in.

Affected users receive the following error message:

```
Login failed. Check the user ID and password and try again
```

Cause

In the LDAP directory, the affected users do not have sufficient privileges to look up all the groups in the directory. If this is the cause of the problem, the following entries are written to the `SystemOut.log` file.

```
com.ibm.websphere.security.CustomRegistryException
com.ibm.ws.security.auth.ContextManagerImpl.runAs 4161
java.security.PrivilegedActionException com.ibm.ws.security.web.
FormLoginServlet.formLogin 308
```

```
com.ibm.websphere.security.CustomRegistryException
com.ibm.ws.security.registry.UserRegistryImpl.createCredential 818
```

```
com.ibm.websphere.security.auth.WSLoginFailedException  
com.ibm.ws.security.server.lm. wsMapDefaultInboundLoginModule.login 556
```

```
com.ibm.websphere.security.auth.WSLoginFailedException  
com.ibm.ws.security.server.lm.ltpaLoginModule.login 452
```

```
com.ibm.websphere.security.auth.WSLoginFailedException  
com.ibm.ws.security.auth.ContextManagerImpl.login 3560
```

```
com.ibm.websphere.security.CustomRegistryException  
com.ibm.ws.security.ltpa.LTPAServerObject.authenticate 798
```

```
com.ibm.websphere.security.auth.WSLoginFailedException  
com.ibm.ws.security.auth.JaasLoginHelper.jaas_login 487
```

```
com.ibm.websphere.wim.exception.WIMSystemException  
com.ibm.websphere.security.CustomRegistryException 190
```

Resolution

Work with your LDAP administrator to ensure that the affected LDAP users have sufficient privileges to look up all the groups in the LDAP directory.

Users in LDAP groups cannot use the Active Event List

If you use the Manage Groups page to assign a role to an LDAP group that authorizes the group members to use the AEL, for example `ncw_admin` or `ncw_user`, the users in that group cannot use the AEL. However, if you assign one or both of these roles to the individual users, they can use the AEL.

Cause

The `wimconfig.xml` configuration file contains an invalid line.

Resolution

Edit the `wimconfig.xml` file as follows:

1. Locate the following section:

```
<config:groupConfiguration>  
  <config:memberAttributes dummyMember="uid=dummy" name="member"  
    objectClass="groupOfNames" scope="direct"/>  
  <config:membershipAttribute name="member" scope="direct"/>  
</config:groupConfiguration>
```

2. Delete the following line from this section:

```
<config:membershipAttribute name="member" scope="direct"/>
```

The section now reads as follows:

```
<config:groupConfiguration>  
  <config:memberAttributes dummyMember="uid=dummy" name="member"  
    objectClass="groupOfNames" scope="direct"/>  
</config:groupConfiguration>
```

3. Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Cannot search for LDAP users

On the Manager Users page, you cannot search for individual users that originate from an LDAP directory. However, you can search for user groups from the LDAP directory, and see the users that are members of the groups.

Cause

In the LDAP directory, the field that you use to populate the **Login properties** field in the repository might contain NULL values, or non-unique values. NULL values and non-unique values are not permitted.

Resolution

Contact your LDAP administrator and verify that the field contains no NULL values, and that all values are unique. If the field contains NULL values, or values that are not unique, you need to use a different field to populate the **Login properties** field.

For example, if you specify `cn` as the login property and your LDAP administrator confirms that this field contains NULL values, you need to use a different field, that does not contain NULL values, as the login property.

Cannot log in after the LDAP bind password is changed

If the bind password of the LDAP directory is changed, no user is able to log in, even the `tipadmin` user. This restriction is due to the design of the underlying IBM WebSphere Application Server. The application server expects all user repositories that are in the federated repository to be running so that any user in any repository can be authenticated. To resolve this problem, change the LDAP bind password in the federated repository to match the password in the LDAP directory.

1. Change to `tip_home_dir/bin` and run the **wsadmin** command-line utility with the argument `-conntype NONE`.
2. At the prompt, run the **updateIdMgrLDAPBindInfo** command to update the LDAP password under the federated repository.

```
$AdminTask updateIdMgrLDAPBindInfo -id repositoryId -bindPassword bindpassword -bindDN bindDN
```

Where *repositoryId* is the unique ID of the LDAP directory in the federated repository, *bindpassword* is the binding password of the LDAP directory, and *bindDN* is the binding distinguished name.

3. Run the following command to save the change to the configuration and then log out of **wsadmin**.

```
$AdminConfig save
```

4. Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

No LDAP users in duplicate Web GUI

After you configure a Web GUI instance to be a duplicate of another, working instance of the Web GUI, with the identical LDAP configuration, no LDAP users are displayed in the duplicate.

When you use the Manager Users page to search for users, no LDAP users are available. The tipadmin user, and any other users that are in the Tivoli Integrated Portal file-based repository are available on the Manager Users page and can log in.

The most likely cause of this problem is that you did not restart the Tivoli Integrated Portal after you added the LDAP configuration to the duplicate Web GUI. Restart the server for the configuration to take effect.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Cannot search for LDAP users and groups

Users and groups that originate from an LDAP directory are not shown in the realm when you search on the Manage Users page or the Manage Groups page.

The following exception is written to the SystemOut.log log file:

```
com.ibm.ws.wim.adapter.ldap.LdapConnection search(String, String, Object[],
SearchControls)CWWIM4520E The 'javax.naming.NameNotFoundException:
[LDAP: error code 32 - 0000208D:NameErr: DSID-031001A8, problem 2001
(NO_OBJECT), data 0, best match of:
''
```

Cause

In the realm, the configuration of the repository for the LDAP directory is lacking the properties for the base search entry for the repository in the realm and in the LDAP directory.

Resolution

1. From your LDAP administrator, obtain the base search entry.
2. In Tivoli Integrated Portal, click **Settings > Websphere Administrative Console > Security > Global Security > Federated repositories**. Click the link under **Base entry** that corresponds to the LDAP directory.
3. Ensure that the following fields contain valid entries:

Distinguished name of a base entry that uniquely identifies this set of entries in the realm

Type the root entry for the LDAP directory in the realm.

Distinguished name of a base entry in this repository

Type the root of the subtree in the LDAP directory for the objects that you want to be added to the repository in the realm. For example, if you want all users in the dc=ibm,dc=com subtree to be added to the repository, type dc=ibm,cd=com.

4. Save your changes and restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Error message Class 'Entity' does not have a feature named 'uid' displayed when searching for users or group

A Class 'Entity' does not have a feature named 'uid' is displayed in Tivoli integrated Portal.

This error occurs in the following instances:

- When you search for LDAP users or groups on the Manage Users page or the Manage Groups page. No users are identified by the search.
- When you add filters to an LDAP repository in the realm.

You are searching for users or groups that originate from an LDAP directory that was added as a repository to the realm. The users are in the LDAP subtree that was defined in the repository.

Cause

The LDAP entity types that are defined for the repository are invalid.

Resolution

1. From your LDAP administrator, obtain the values for the search base, objects, and search filter that are supported by the type of LDAP directory that is defined in the realm. For example IBM Tivoli Directory Server or Microsoft Active Directory.
2. In Tivoli Integrated Portal, click **Settings > Websphere Administrative Console > Security > Global Security**. Click the **Configure** button and then click the link under **Repository Identifier** that corresponds to your LDAP directory. Then click **LDAP entity types**.
3. For the Group entity type, review the values the following fields. Ensure the values that are entered in these fields are identical to the values that you obtained from your LDAP administrator, and that there are no typos or mistakes in the syntax.
 - **Object classes**
 - **Search bases**
 - **Search filter**
4. Repeat the previous step for the PersonAccount entity type and the OrgContainer entity type.
5. Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

No users or groups available for setting preferences

When you attempt to set user preferences, no LDAP users are available for selection.

Cause

The search base, which is used to search the LDAP directory for users and groups, is left blank. When the LDAP directory is searched, too many LDAP objects are returned. Narrow the search base.

Resolution

1. Edit the federated repository, selecting the LDAP directory.
2. In the Configuration window, click **LDAP entity types**, at the bottom of the window.
3. Under **Entity types**, click **Group**.
4. In the **Search base** field, type a search base that narrows the range of objects searched. See the samples below.
5. Repeat these steps for the **PersonAccount** entity type.

Sample search bases

The following example shows a search base that narrows the objects searched to users in the organizational unit (OU) `webtopuser`, in the `example.com` domain .

```
OU=webtopuser,OU=users,DC=example,DC=com
```

The following example shows a search base that narrows the objects searched to users in two OUs in the `example.com` domain : `webtopuser` and `webtopadmin`. In the **Search base** field, use a semicolon (;) to separate the OUs.

```
OU=webtopuser,OU=users,DC=example,DC=com;OU=webtopadmin,OU=users,DC=example,DC=com
```

No LDAP users on the Manage Users page

You cannot find any LDAP users by using the Manage Users page. The LDAP directory was previously defined for a different instance of the Web GUI and works, so you know the problem is not caused by the LDAP directory or the repository in the realm. You can still log in as the `tipadmin` user, or any LDAP user.

Cause

The server was not restarted after the LDAP repository was defined.

Resolution

Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

No LDAP groups available

No groups are present in the Manage Groups page. An LDAP directory is defined as a repository in the realm. Groups are defined in the search base for the repository.

Cause

The maximum number of search results, as defined in the `wimconfig.xml` configuration file, is too small. This number is controlled by the `maxSearchResults` attribute. The default value for this attribute is 4,500.

Resolution

1. Edit the `wimconfig.xml` file, by changing the `maxSearchResults` attribute to a value greater than 50,000, as shown in the following example:

```
<config:configurationProvider maxPagingResults="500" maxSearchResults="500000"
maxTotalPagingResults="1000" pagedCacheTimeout="900" pagingEntityObject="true"
searchTimeOut="600000">
```

2. Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

No permissions to run tools from the Active Event List

When you attempt to run tools from the Active Event List (AEL), an error is displayed that states that you do not have permission. Your user is defined in the LDAP directory, the correct roles are assigned, and the user is synchronized with the ObjectServer.

Cause

The login properties of the bind account of the LDAP directory are defined in the incorrect order. These properties are as follows:

- `cn`: Used to verify the LDAP directory users
- `uid`: Used to synchronize the LDAP directory users with the ObjectServer

In the configuration of the bind account, the `uid` property needs to precede the `cn` property.

Resolution

1. In Tivoli Integrated Portal, click **Settings > WebSphere Administrative Console > Security > Global Security**.
2. Select **Federated repositories** and click **Configure**.
3. Select the LDAP repository.
4. In the **Login properties** field, ensure that the properties are entered as follows:
`uid;cn`.
5. Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Failed to execute tool error in the Active Event List

In the Active Event List (AEL) you attempt to acknowledge events, add journal entries, assign an event to another user, or delete an event, a Failed to execute tool error message is displayed.

The `webtop.log` log file might contain an error message, stating that the user concerned does not exist, even though you have verified the existence of the user in the ObjectServer and the Web GUI.

Cause

The user that is attempting to run the tool does not have write-access to the ObjectServer.

Resolution

This problem might have one of several different causes. To resolve the problem, perform all the following resolution tasks:

- Ensure that the `webgui_home_dir/etc/dci-common/security/dci-security.properties` file contains the following entries:
 - **login.property:uid**
 - **group.property:cn**

If these entries are not present, add them and then restart the Tivoli Integrated Portal server.

- Ensure that the ObjectServer user and the LDAP user have identical user names. The ObjectServer user name needs to be identical to the distinguished name of the user in the LDAP directory. The user names are case-sensitive.
- Ensure that the ObjectServer user is assigned to the Normal group. This group gives the permissions that are needed to modify events.
- Ensure that the user is enabled. If the user is not used to log in to the ObjectServer no password is required. When a user runs SQL tools from the AEL, the user is not authenticated against the ObjectServer, only the roles are checked.

Users not synchronized to the ObjectServer

LDAP users that are assigned the `ncw_admin` role or the `ncw_role` are not synchronized to the ObjectServer, although the user synchronization functionality is enabled.

Cause

The `wimconfig.xml` configuration file contains an invalid line.

Resolution

Edit the `wimconfig.xml` file as follows:

1. Locate the following section:

```
<config:groupConfiguration>
  <config:memberAttributes dummyMember="uid=dummy" name="member"
  objectClass="groupOfNames" scope="direct"/>
  <config:membershipAttribute name="member" scope="direct"/>
</config:groupConfiguration>
```

2. Delete the following line from this section:

```
<config:membershipAttribute name="member" scope="direct"/>
```

The section now reads as follows:

```
<config:groupConfiguration>
  <config:memberAttributes dummyMember="uid=dummy" name="member"
  objectClass="groupOfNames" scope="direct"/>
</config:groupConfiguration>
```

3. Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Cannot log in as the tipadmin user, or start or stop the Tivoli Integrated Portal server

After you define an ObjectServer in the federated repository, you can no longer log in to Tivoli Integrated Portal as the tipadmin user. Additionally, an error is displayed on the command-line interface if you attempt to run the **stopServer** or **startServer** commands.

Attempts to stop or start the server result in the following error.

```
00000000 AdminTool      E  ADMU0111E: Program exiting with error:
javax.management.JMRuntimeException:
ADMN0022E: Access is denied for the stop operation on Server MBean because of
insufficient or empty credentials.
```

Provided that you could log in as the tipadmin user before you added the ObjectServer to the realm, the most likely cause of this error is duplicate tipadmin users in the Tivoli Integrated Portal file-based repository and in the ObjectServer. The file-based repository has a tipadmin user that was used previously to authenticate with the ObjectServer. The ObjectServer that was added also has a tipadmin user, and the application server is attempting to use that user to authenticate with the ObjectServer, instead of the file-based tipadmin user.

To resolve this problem:

1. Use the **nco_sql** command to drop the tipadmin user from the ObjectServer.
2. Use a **kill** command to manually stop the Tivoli Integrated Portal process.
3. Restart Tivoli Integrated Portal by using the **startServer** command.

Tivoli Integrated Portal cannot use the ObjectServer for user authentication

After you put the application server into SP800-131a mode, Tivoli Integrated Portal cannot connect to the ObjectServer to authenticate users. This problem occurs in both transition mode and strict mode.

The following error is written to the SystemError.log file.

```
NCOS VMM plug-in could not connect to the primary ObjectServer
```

If this problem occurs, check the SSL setting in the *tip_home_dir/profiles/TIPProfile/etc/com.sybase.jdbc3.SybDriver.props* file. The SSL settings can be reset when the Virtual Member Manager (VMM) component starts and set to `false`, which means that SSL is not used. If this is the case, reedit the file; it is not reset again by the VMM component.

No user role assigned

Users should have the minimum required product level roles assigned or they might not see the contents of their default product pages after logging in.

Troubleshooting security problems

This information lists common problems that you might encounter when configuring the security settings for the Web GUI. This information covers problems encountered with SSL and TLS encryption, and the FIPS 140-2 and NIST SP800-131a security standards.

Problems loading applets after TLS is enabled

After you enable TLS 1.0 or 1.2 and restart the Tivoli Integrated Portal server, problems occur when you open Web GUI pages that contain an applet, for example, the Active Event List.

The applet can fail to load, or the applet is able to load by using the cached JAR files but cannot connect to the server, which results in an error on the client that is similar to the following sample.

```
[ERROR] HttpReply.setFromStream() Remote host closed connection during handshake
```

If this error occurs, TLS 1.0 or 1.2 is not enabled in the Java plug-in. Use the Java control panel to enable the required version of TLS to make the applet work.

Cannot log into Tivoli Integrated Portal on Internet Explorer 9 with TLS support

After you enable Transport Layer Security (TLS) 1.0 or 1.2, you cannot log in to Tivoli Integrated Portal on Internet Explorer 9.

An error message is displayed in the browser that is similar to the following sample.

```
Internet Explorer cannot display the webpage
```

To resolve this problem, ensure that the TLS protocols are enabled in the Internet Explorer settings. Ensure that all the relevant SSL and TLS options are selected and try to log in again.

stopServer command fails after change to SSL configuration

After you change the secure mode or the SSL type in the administrative console, the next time you run the **stopServer** command, it hangs and then fails.

On the command-line interface, an error message is displayed that is similar to the following sample.

```
ADMU0509I: The server "server1" cannot be reached. It appears to be stopped.
```

In the `stopServer.log` file, a SOAP connection error is recorded, which is similar to the following sample.

```
ADMU3007E: Exception com.ibm.websphere.management.exception.ConnectorException:  
com.ibm.websphere.management.exception.ConnectorException:  
ADMC0016E: The system cannot create a SOAP connector to connect to  
host sig-9-146-157-179.uk.ibm.com at port 16313.
```

This error occurs because the application server treats administrative tools such as the **stopServer** command as clients. After the change to the secure mode or SSL configuration, the client needs to know how to connect to the application server.

To solve this problems, edit the *tip_home_dir/profiles/TIPProfile/properties/ssl.client.props* file as follows, depending on the configuration of the application server. After you make the changes, rerun the **stopServer** command and then restart. If the command still fails, use a **kill** command to stop the underlying Tivoli Integrated Portal process and then attempt to restart.

Table 17. Settings to make in client SSL properties file to enable clients to connect to the application server

Secure mode or SSL configuration	Parameters and their values
FIPS 140-2	com.ibm.security.useFIPS=true
SP800-131a transition mode	com.ibm.security.useFIPS=true com.ibm.websphere.security.FIPSLevel=transition
SP800-131a strict mode	com.ibm.security.useFIPS=true com.ibm.websphere.security.FIPSLevel=SP800-131
SSL	com.ibm.ssl.protocol=SSL_TLS
TLS 1.0	com.ibm.ssl.protocol=SSL_TLS
TLS 1.2	com.ibm.ssl.protocol=TLSv1.2

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Troubleshooting problems with SP800-131a encryption

This information contains problems that you might encounter when you configure NIST SP800-131a levels of encryption.

Tivoli Integrated Portal cannot use the ObjectServer for user authentication

After you put the application server into SP800-131a mode, Tivoli Integrated Portal cannot connect to the ObjectServer to authenticate users. This problem occurs in both transition mode and strict mode.

The following error is written to the `SystemError.log` file.

```
NCOS VMM plug-in could not connect to the primary ObjectServer
```

If this problem occurs, check the SSL setting in the *tip_home_dir/profiles/TIPProfile/etc/com.sybase.jdbc3.SybDriver.props* file. The SSL settings can be reset when the Virtual Member Manager (VMM) component starts and set to `false`, which means that SSL is not used. If this is the case, reedit the file; it is not reset again by the VMM component.

Certificate warning is displayed after certificate conversion

After you convert the server certificates with SP800-131a levels of encryption, a Java warning message is displayed the next time you stop the Tivoli Integrated Portal server. The warning message asks if you want the new certificate to be added to the truststore of the client.

This warning is to be expected. The application server treats administration tools, such as the **stopServer** command, as clients, so the tools need to make a secure connection to the server. For this reason, the application server signer certificate needs to be in the truststore of the client.

Click **y** in response to this message to add the updated certificate to the truststore.

SSL handshake error on the command-line interface after certificate conversion

After you convert the server certificates with SP800-131a levels of encryption, an CWPKI022E: SSL HANDSHAKE FAILURE error is displayed on the command-line interface the next time you stop the Tivoli Integrated Portal server.

This error is the same as is described in the topic “Certificate warning is displayed after certificate conversion.” In this case the application server is unable to display a Java dialog to prompt you to accept the signer certificate. If the CWPKI022E: SSL HANDSHAKE FAILURE error is displayed, you can use the **retrieveSigners** command, which is included in the application server, to copy the signer certificate to the truststore. The command is at *tip_home_dir/bin*.

Related reference:

 [retrieveSigner command reference](#)

Cannot connect to the ObjectServer with TLS 1.2

After TLS 1.2 is enabled in the ObjectServer and the `server.init` file is updated with the `webtop.fips.level` set to `sp800-131`, the Web GUI log records errors that it is unable to connect to the ObjectServer.

The most likely cause of this problem is that the application server is not set to SP800-131a mode (either transition mode or strict mode). If the server is accidentally set to FIPS 140-2 mode, or left in FIPS 140-2 mode, TLS 1.2 can be enabled but does not work because the FIPS provider does not support TLS 1.2. SP800-131a mode is needed for the JSSE2 provider to be used and for the system properties to be set that enforce NIST compliance in the provider.

Troubleshooting connections to the ObjectServer

This information contains common problems that you might encounter with the event feed connection to the ObjectServer. These problems might occur on one of the event display portlets, for example the Active Event List or Event Dashboard, and can result in slow performance.

Slow network response

Performance issues can cause an unresponsive script message to display after login.

If, immediately after logging in, you get a message about an unresponsive script and you are asked whether to continue or cancel opening the Web page, click **Continue**. After a short time, the welcome page for the console is displayed.

Such messages can indicate a slow network link between your computer and the application server. Ping the server computer to see the round trip response time. Use response times of 40 ms or better.

Try using a remote desktop connection to a computer that has a better response time with the application server and logging in from there.

Consider using a caching HTTP proxy to improve speed and reduce network traffic.

Unresponsive Active Event List

The Active Event List (AEL) becomes unresponsive, or some AEL functions, for example tools, fail to run. If this problem occurs, contact the system administrator to find out whether a Web GUI Application Programming Interface (WAAPI) script is running.

If a WAAPI script is running at the time you experience an unresponsive AEL, wait for the script to finish running. After the script finishes, the AEL is restored and works normally.

AEL fails to start and displays message W0025

If the Active Event List (AEL) fails to start and the W0025 message is displayed, there are a number of checks that can be made in order to resolve the problem. These checks are presented in the following topic.

About this task

If there is a problem with the connection to the ObjectServer or an incorrect JVM or browser installed, the AEL may fail to start and the following message is displayed:

W0025 The event list is unavailable. Contact your administrator.

Procedure

Should that message appear on a user's web browser, carry out the following checks:

1. Make sure that the ObjectServer is running.
If not, start it and ask the user to try again.
2. Make sure that user's computer can connect to the ObjectServer.
3. Make sure that the user's computer has one of the supported web browsers.
4. Make sure that the latest support version of the Java Virtual Machine (JVM) is installed on the user's computer and that it is appropriate for the web browser in use.

Event Dashboard unable to get data from server

For certain monitor boxes the Event Dashboard displays the error message: Unable to get data from the server. In addition, the Event Dashboard fails to display some filters correctly.

About this task

The Event Dashboard displays the following error message for certain monitor boxes:

Unable to get data from the server

Clicking on one of those monitor boxes causes the following error message to appear:

The event list is unavailable

However, the default Active Event List (AEL) can successfully display events.

This problem arises because the Event Dashboard fails to display some filters correctly. This is due to a mismatch between the data source name provided for these filters and the data source names defined in `ncwDataSourceDefinitions.xml`.

Procedure

1. Carry out one of the following actions to correct this mismatch
 - Use the Filter Builder to correct the name in the relevant filters.
 - Edit `ncwDataSourceDefinitions.xml` to use the correct data source name.
2. Restart the server.

Related tasks:

“Setting up filters for event data” on page 252

Use the Filter Builder to apply filters to an event list or Event Dashboard portlet. Administrators and read-write users can create and edit filters.

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

The connection to the ObjectServer is lost or the AEL issues a timeout

If the connection to the ObjectServer persistently is lost or the AEL issues a timeout, adjust the query timeout setting for the datasource associated with the ObjectServer.

Procedure

1. Edit `ncwDataSourceDefinitions.xml`.
2. Locate the `<ncwConnectionParameters>` element for the appropriate data source, and within that element, locate the `<ncwQueryTimeout>` element.
3. Increase the value of the `baseTime` attribute to increase the period of the timeout.
4. Restart the server.
5. If the problem persists, repeat this procedure to increase the timeout further.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Related reference:

Appendix B, “ncwDataSourceDefinitions.xml reference,” on page 371

To change the configurations that control how the Web GUI receives events from data sources, modify the `ncwDataSourceDefinitions.xml` configuration file that is in `webgui-home/etc/datasources`. The file structure must conform to the content of the Web GUI configuration Document Type Definition (DTD). The elements and attributes that are in the DTD are described here.

Troubleshooting event displays on maps

Use this information to help you troubleshoot problems with event displays on Web GUI maps.

Maps are slow to display severity colors

Filters in maps are slow to show severity colors. This may be accompanied by high CPU usage on the Web GUI server.

If the performance of the Web GUI is otherwise satisfactory, there are three likely causes of this condition:

- “Frequency of map refresh”
- “Result caching”
- “Map complexity”

Frequency of map refresh

The frequency that a map refreshes is defined in two ways:

- The `maplet.refresh` property in the `server.ini` file. This sets a global refresh rate for the system.
- The portlet preferences for individual maps.

In either case, make sure that the refresh frequency is no lower than 10 seconds. For complex maps, use a higher value.

Result caching

Use the `<result-cache>` element in the data source configuration file for data sources that provide the map with data. This can help to reduce the load on the data sources.

Map complexity

The complexity of a map is the most likely cause of this condition. Rather than use a small number of maps that contain many filters, limit the number of filters on a map to no more than 30 to 40. Then drill down from these filters to further maps.

Related tasks:

“Setting preferences for the Map portlet” on page 190

To customize the appearance and setup of the Map portlet, edit the preferences of the portlet.

Related reference:

Appendix B, “ncwDataSourceDefinitions.xml reference,” on page 371

To change the configurations that control how the Web GUI receives events from data sources, modify the `ncwDataSourceDefinitions.xml` configuration file that is in `webgui-home/etc/datasources`. The file structure must conform to the content of the Web GUI configuration Document Type Definition (DTD). The elements and attributes that are in the DTD are described here.

Changing the height setting of a Map portlet has no effect

Changing the height of a map portlet using the **Height** box or the **Use Customizer** check box in the portlet preferences has no effect. The map always renders to the same size.

The **Height** and **Use Customizer** do not override the height of the Map portlet. That is controlled by the height settings available in the Map Editor. To set the height of a map, set the **Use Customizer** portlet preference, and configure the height of the map in the Map Editor.

Related tasks:

“Setting preferences for the Map portlet” on page 190

To customize the appearance and setup of the Map portlet, edit the preferences of the portlet.

“Customizing maps” on page 321

After you have created your map, you can customize it by added map objects to the map, and editing the properties of the map objects.

The Event Viewer portlet page is blank

The Event Viewer portlet opens but the page is blank and you are unable to customize the appearance and setup of the Event Viewer portlet.

Cause

This problem is caused because a user, other than the user that installed the Tivoli Integrated Portal server, attempted to stop and then restart the Tivoli Integrated Portal server. As a result, several additional microbroker files, that are associated with this user, have been created in the `$TIPHOME/profiles/TIPProfile/temp/microbroker` directory. The Event Viewer then fails to load when the Tivoli Integrated Portal server is restarted by the original user.

Resolution

1. Stop the Tivoli Integrated Portal server.
2. Remove the microbroker files, that belong to the unspecified user, from the following directory: `$TIPHOME/profiles/TIPProfile/temp/microbroker`
3. Restart the Tivoli Integrated Portal server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Chapter 7. Performance tuning tips for the Web GUI

Use this information to troubleshoot performance in the Web GUI.

Increasing JVM memory on the Web GUI server

To improve Web GUI performance, you can increase the amount of memory on the server.

About this task

To increase (or decrease) the amount of memory available to the Java Virtual Machine (JVM), carry out the following steps:

Procedure

1. Manually stop the application server.
2. Change to the `tip_home_dir/profiles/TIPProfile/bin` directory.
3. Use the `wsadmin` command to increase the heap size for the JVM, as follows:
`wsadmin.sh -lang jython -conntype NONE`
4. At the `wsadmin>` prompt, issue the following commands, where `xxx` is the new heap size value, in megabytes.

```
jvm=AdminConfig.list("JavaVirtualMachine")

AdminConfig.modify(jvm, '[[initialHeapSize xxx]]')
AdminConfig.modify(jvm, '[[maximumHeapSize xxx]]')
AdminConfig.save()

exit
```

5. Restart the Tivoli Integrated Portal Server. The changes take effect when the Tivoli Integrated Portal Server is restarted.

Attention: If you attempt to start the Tivoli Integrated Portal Server with a maximum heap size that is too large, error messages that are similar to the following are generated in the `tip_home_dir/profiles/TIPProfile/logs/server1/native_stderr.log` file:

```
JVMJ9GC019E -Xms too large for -Xmx
JVMJ9VM015W Initialization error for library j9gc23(2): Failed to initialize
Could not create the Java virtual machine.
```

Increasing memory on Web GUI client Java Virtual Machines

To increase event volumes in the Active Event List (AEL), or if a `java.lang.OutOfMemoryError` error occurs on the AEL, modify the heap sizes of the Java Virtual Machine (JVM) on the Web GUI client.

About this task

A `java.lang.OutOfMemoryError` error might occur during failover from the primary ObjectServer to the backup ObjectServer. This error might also occur if, depending on the configuration of your views, an AEL is running more than 20,000 events. If this error occurs, the following message is displayed in the AEL:

```
Entity Unavailable
```

By increasing the initial and maximum heap sizes, you can solve this error.

To increase heap sizes:

Procedure

1. On the Web GUI client, open the Control Panel for the Java Plug-In.
2. Click **Advanced**.
3. In the field under **Java Runtime Parameters**, modify the heap sizes. For example:
`-Xms64m -Xmx128m`
4. Click **Apply** and close the Control Panel.
5. Log out of the Web GUI and log back in.

What to do next

Verify that the error no longer occurs. If the error persists then increase the heap size further, for example to `-Xms256m -Xmx512m`

Performance tuning

To improve the throughput of events from a data source to the Web GUI, or to distribute the load between the ObjectServer and the Web GUI server, you can adjust several configuration settings.

Important: Several factors, such as the availability of system memory, event load and the number of products running in your network, influence performance. Consider these factors when changing the configuration settings of the Web GUI because they might negate any performance benefits achieved by changing the Web GUI configuration.

The following parameters in the `webgui-home/etc/server.ini` file can be modified to tune performance:

ael.top-n.value

This property limits the number of events to be displayed in any given Active Event List (AEL). Limiting this value, for example to 3000, might improve the time required to load or refresh an AEL.

aelview.queries.enabled

This property enables the creation of transient AEL views, but it also increases the load on the Web GUI. If you do not use this functionality, disable this property.

maplet.refresh

This property controls the frequency with which Web GUI maps are refreshed. If you lower the value of this property, for example to 10, event throughput might be increased. If you increase the value of this property, for example to 30, the load on the Web GUI server might be reduced. Consider this property alongside results caching in the `ncwDataSourceDefinitions.xml` file.

The following elements in the `ncwDataSourceDefinitions.xml` file can be modified to tune performance. These elements are child elements of the `<results-cache>` element.

<chart>

This property controls caching for Web GUI charts. If you set the **enabled**

attribute to true, the Web GUI server caches the results of SQL queries for a configurable period of time. This reduces the load on the ObjectServer, but may increase the memory requirements of the Web GUI server, in order to store the cached data.

<eventList>

This property controls caching for event list results, that is, for the AEL, Lightweight Event List (LEL) and Table View. If you set the **enabled** attribute to true, the Web GUI server caches the results of SQL queries for a configurable period of time. This reduces the load on the ObjectServer, but may increase the memory requirements of the Web GUI server, in order to store the cached data.

<eventSummary>

This property controls caching for event summary results, that is, for the Event Dashboard and map pages. If you set the **enabled** attribute to true, the Web GUI server caches the results of SQL queries for a configurable period of time. This reduces the load on the ObjectServer, but may increase the memory requirements of the Web GUI server, in order to store the cached data.

<ncw0SConnection>

This property has two attributes that control the pool of JDBC connections to the data source: `minPoolSize` and `maxPoolSize`. By default, `minPoolSize` has a value of 5 and `maxPoolSize` a value of 10. To improve throughput, you can increase the values of these attributes. This increases the number of parallel requests to the data source and reduces the occurrence of requests being blocked through lack of an available connection.

<metric>

This property controls caching for the event metrics that provide information for the gauges on Gauges pages. If you set the **enabled** attribute to true, the Web GUI server caches the results of SQL queries for a configurable period of time. This reduces the load on the ObjectServer, but may increase the memory requirements of the Web GUI server, in order to store the cached data.

The following parameter in the `webgui-home/etc/system/userdefaults.props` file can be modified to tune performance:

ael_user_properties_refresh_time

This property controls the default AEL refresh frequency for new users. To improve event throughput, set the value of this property as low as possible. The lowest configurable value is 30. Individual users can override this value by setting their AEL user preferences.

Related tasks:

“Restricting the number of rows displayed in the Active Event List” on page 197
You can impose a limit on the number of rows returned to the Active Event List (AEL). When operators open the AEL, they see only the specified number of rows.

Chapter 8. Setting portlet preferences

You can change the settings of the portlets to customize their appearance and setup to your requirements.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Creating event management tools” on page 205

You can create and administer CGI, SQL, command line and script tools to be used in the AEL. You can also configure prompts that are displayed to users in the Active Event List (AEL) when performing actions with tools.

Setting AEL portlet preferences

To customize the appearance and setup of the AEL portlet, edit the preferences of the portlet.

Before you begin

Before a click-action can be used to operate a tool, you must have previously defined the tool.

About this task

To set AEL portlet preferences:

Procedure

1. Open an AEL portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. In the **General Settings** and the **Appearance of the AEL** area, set the following portlet properties:

Filter Select a predefined filter from this list.

Filter SQL

Type the SQL syntax that is used to create a transient filter. When the filter string is applied to an AEL, only the rows that meet the criteria set by the filter are displayed. If any value is typed in this field, the **Filter** list is disabled.

View Select the view that is applied to the AEL. When a view is applied to an AEL, only the columns that are specified by the view are displayed. The view selected from the list overrides the default view that is assigned to a filter selected from the **Filter** list.

Transient filter name

Type the name to assign to the transient filter generated by the SQL

expression in the **Filter SQL** field. This name is displayed as the title for the associated AEL. If any value is typed in this field, the **Filter** list is disabled.

Event list single-click action

Select the action to perform when you click an event in the AEL once. You can select default actions, such as opening the information window for the selected event, or you can select tools to be run on event data. You can create tools in the Tool Creation editor.

Event list double-click action

Select the action to perform when you double-click an event in the AEL. You can select default actions, such as opening the information window for the selected event, or you can select tools to be run on event data. You can create tools in the Tool Creation editor.

Data Sources

Select one or more data sources from which the event data is retrieved.

Portlet Title

Type the label to be displayed at the top of the AEL portlet.

Use Customizer

Select this check box to use drag and drop to control the height of the AEL applet on a page that contains multiple portlets. If you clear this check box, use the **Height** field to specify an alternative height, in pixels.

Height

Set the height of the portlet frame in pixels.

Title Bar

Select this check box to display the title bar.

Menu Bar

Select this check box to display the menu bar.

Tool Bar

Select this check box to display the tool bar.

Filters and Views

Select this check box to display the **Edit Filters** button and the list of available filters, and the **Edit Views** button and the list of available views on the tool bar.

Summary Bar

Select this check box to display the summary bar.

Status Bar

Select this check box to display the status bar.

4. In the **Appearance of the AEL** area, select the check box for the bars you want to be displayed in the AEL portlet, and clear the check box for the bars you do not want to be displayed.
5. In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

6. Click **OK** to save and apply your settings to the portlet.

Related tasks:

“Editing portlet shared settings” on page 51

Some portlets include an *Edit Shared Settings* mode that allows users with “Editor” access level to configure common settings for other users of the portlet. Once shared settings are configured, users with “Privileged User” level of access can change these values for their own personal use of the portlet. Default settings cannot be changed by users with “User” level of access. Follow these steps to set the shared settings for a portlet.

“Creating CGI tools” on page 214

Create a CGI tool that runs a CGI script from the AEL to process and return ObjectServer field information.

“Creating SQL tools” on page 218

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Creating script tools” on page 224

Create script tools to pass contextual data from selected events in the Active Event List (AEL) to separate portlet instances or to dynamically customized page content.

Setting Chart portlet preferences

To customize the appearance and setup of the Chart portlet, edit the preferences of the portlet.

About this task

To set Chart portlet preferences:

Procedure

1. Open a Chart portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. In the **General Settings** area, set the following portlet properties:

Chart Template

Select the chart template you want to use to generate the chart image. The list contains all available Web GUI chart templates.

Description

Type the description that is used as the alternative text in the HTML image tag.

Width Set the width of the rendered chart image in pixels.

Height

Set the height of the rendered chart image in pixels.

4. In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

5. Click **OK** to save and apply your settings to the portlet.

Related tasks:

“Editing portlet shared settings” on page 51

Some portlets include an *Edit Shared Settings* mode that allows users with “Editor” access level to configure common settings for other users of the portlet. Once shared settings are configured, users with “Privileged User” level of access can change these values for their own personal use of the portlet. Default settings cannot be changed by users with “User” level of access. Follow these steps to set the shared settings for a portlet.

Setting Event Dashboard portlet preferences and defaults

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

Before you begin

To edit the portlet preferences of the Event Dashboard, either the `ncw_dashboard_editor` and the `ncw_user` roles, or the `ncw_admin` role must be assigned to your user.

Before a click-action can be used to operate a tool, you must have previously defined the tool.

About this task

In addition to setting portlet preferences, you can set the default preferences for all users (including your own).

To set portlet preferences and defaults for the Event Dashboard:

Procedure

1. Open an Event Dashboard portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. To change the title of the portlet, type a new name in the **Title** field.
4. From the **Data Sources** list, select the data sources against which to run the filters associated with the monitor boxes.

You must make sure that the data sources specified in the filter and the data sources selected in the Event Dashboard contain identical fields; if this is not the case, an error message is displayed in the affected monitor boxes instead of event data.

5. To add or remove *existing* filters, and therefore monitor boxes, proceed as follows:
 - To remove all monitor boxes from the portlet, click **Remove All Monitor Boxes**  .
 - To show all global filters, filters defined for the groups you are a member of, and any user filters that you have defined on the Event Dashboard, click **Show Assigned Filters**.
 - To remove a single monitor box, click **Remove Monitor Box**  next to the required monitor box.
 - To restore a previously-removed monitor box, or add a new monitor box, click **Add Monitor Box**  and select the monitor boxes you require from the Add Monitor Boxes window. You can select from global filters, filters defined for the groups you are a member of, and any user filters that you have defined.
6. To specify the number of columns in which the monitor boxes are arranged, type a number in the **Columns** field.
7. To add a *new* filter, and therefore a new monitor box to the Event Dashboard,

click **Edit Filters**  .

The Filter Builder opens, in which you can specify the filter data and SQL query.

8. To specify the type of information displayed in the monitor boxes, and the format of that information:

- a. Click **Edit Preferences**  .

- b. In the Preferences window, on the **Monitor Boxes** tab, complete the following fields:

Show Number of Alerts

Displays the number of alerts that match the filter.

Show Highest Severity

Displays the highest severity of the alerts that match the filter.

Show Lowest Severity

Displays the lowest severity of the alerts that match the filter.

Show Highest Severity Border

Displays a border around the monitor box in the color of the highest-severity alert that matches the filter.

Show Metric

Displays the selected filter metric value.

Show Highest Color

Applicable only if you selected the **Show Highest Severity** option:
Displays the highest-severity alert indicator in the color of the alert, for example, in red if the highest-severity alert is critical.

Show Lowest Color

Applicable only if you selected the **Show Lowest Severity** option:
Displays the lowest-severity alert indicator in the color of the alert.

Font Select the font and the font size for the text on the monitor boxes.

Distribution meter

Specify the format for the distribution meter:

- **Show Lava Lamp:** Displays the distribution meter as a series of horizontal bars.
- **Show Histogram:** Displays the distribution meter as a bar graph.
- **Show None:** Switches off the distribution meter.

c. Optional: To specify preferences for Active Event Lists (AELs), complete the information on the other tabs.

d. Click **Close**.

9. In the **Dashboard Layout** display area, drag the monitor boxes into the required layout.

10. To edit the filter associated with a monitor box, click **Edit Filters**  next to the filter name of a monitor box.

The Filter Builder opens, and the data and SQL query associated with the filter are loaded.

11. To access the Event Dashboard from a mobile device, copy the URL and send it to users of mobile devices in an e-mail or SMS message. Alternatively, scan the QR Code using the camera and QR Code reader on your mobile device.

12. In the **Single Click** field, select the required action from the list in response to a single click on the distribution indicator of a monitor box:

- **Update Event List (using wires):** Sets the filter and view of the event list to match those on the monitor box.
- **Open AEL in New Window:** Opens a new AEL applet with the filter and default view associated with the clicked monitor box. If you select this option, you can specify what actions are executed when you click or double-click a row in the AEL. This is the default action.
- **Open Event Viewer in New Window:** Opens a new Event Viewer window with the filter and default view associated with the clicked monitor box.
- **Script:** Executes a custom JavaScript when you click the monitor box.

13. Optional: If you selected the Show New AEL Window option, specify options for the behavior of the AEL:

Event list single-click action

Select the action to perform when you click an event in the AEL once.
You can select default actions, such as opening the information

window for the selected event, or you can select tools to be run on event data. You can create tools in the Tool Creation editor.

Event list double-click action

Select the action to perform when you double-click an event in the AEL. You can select default actions, such as opening the information window for the selected event, or you can select tools to be run on event data. You can create tools in the Tool Creation editor.

- Optional: If you select the Script option, type the script, using JavaScript, in the **Script** field. You can use the following tokens in the script:

\$(FILTER)

The name of the filter associated with the monitor box that is clicked.

\$(FILTERCATEGORY)

The category of the filter associated with the monitor box.

\$(FILTEROWNER)

The owner of the filter (required when **\$(FILTERCATEGORY)** represents a user or group filter).

\$(VIEW)

The name of the view associated with the monitor box that was clicked.

\$(VIEWCATEGORY)

The category of the view associated with the monitor box that was clicked.

\$(DATASOURCES)

The datasource(s) associated with the monitor box that was clicked

\$(PORTLETNAMESPACE)

The portlet namespace of the Event Dashboard portlet.

For sample scripts, see the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

- Optional: If you selected the Open AEL in New Window option in step 12 on page 178, under **AEL Appearance** specify the areas of the AEL that you want to be displayed when the AEL is opened after you click the distribution indicator of a monitor box.
- In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

- To save and apply your settings to the portlet, click **OK**.

18. To restore the default portlet settings, click **Reset to Defaults**.

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

“Filter Builder overview” on page 252

The Filter Builder is an HTML utility that you use to construct filters that are dynamically applied to event data.

“Event management tools overview” on page 206

From the Tool Creation page, you can create and configure the tools used by clients connected to the AEL. Tools can be either Common Gateway Interface (CGI) tools, SQL tools, command-line tools or script tools. All of these tools are run from configurable menus in the AEL and some of them can include a prompt window or a pop-up menu for users to enter or select information.

Related tasks:

Chapter 9, “Customizing Active Event Lists,” on page 195

You can customize the appearance and behavior of the Active Event List (AEL).

You can also create tools for managing events and customize what functions are in the AEL menus.

“Customizing the monitor boxes on Event Dashboards” on page 312

Use the portlet preferences of the Event Dashboard portlet to control how the monitor boxes are arranged, and which monitor boxes are displayed.

“Creating CGI tools” on page 214

Create a CGI tool that runs a CGI script from the AEL to process and return ObjectServer field information.

“Creating SQL tools” on page 218

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Creating script tools” on page 224

Create script tools to pass contextual data from selected events in the Active Event List (AEL) to separate portlet instances or to dynamically customized page content.

Setting Event Viewer portlet preferences

To customize the appearance and setup of the Event Viewer portlet, edit the portlet preferences.

Before you begin

Before a click-action can be used to operate a tool, you must have previously defined the tool.

Procedure

To set Event Viewer preferences:

1. Open an Event Viewer portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:

- To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. In the **General Settings** area, set the following preferences:

Portlet Title

Type the label to be displayed at the top of the portlet.

Show System Filters

Select this check box to display the system filters in the **Filter** drop-down list.

Filter Select a pre-defined filter from this list to determine the set of events that appear in the Event Viewer. This is especially useful where there are a large number of system filters, and displaying them all in the Event Viewer would affect its performance. This option allows you to customize the system filters that are displayed. Ensure that any filter that is selected has been associated with the data source which is to be used for the Event Viewer.

View Select a view to apply to the Event Viewer. The view determines the columns that appear in the Event Viewer and overrides any default view defined for the filter.

Datasource

Select the data source that provides event information to the Event Viewer from this list.

Use Customizer

Select this check box to be able to resize the Event Viewer on a page with multiple portlets by dragging the mouse pointer. If you clear this check box, use the **Height** field to specify an alternative height in pixels.

Single-click action

Select the action to perform when you click an event in the Event Viewer once:

none Nothing happens. This is the default action.

Open Event List (using wires)

Sends a NodeClickedOn event to any wires that have been configured for a page. For example, where an Event Viewer and an AEL portlet are displayed on the same page, the AEL is updated to show the event currently selected in the Event Viewer. You can then select tools to be run on the event data.

Double-click action

Select the action to perform when you double-click an event in the Event Viewer:

none Nothing happens.

Show Information

Opens the information window for a selected event. This is the default action.

Open AEL in New Window

Opens the AEL in a new window.

Height

Set the height of the portlet frame in pixels.

4. In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

5. Click **OK** to save and apply the new settings.
6. To restore the default portlet settings, click **Reset to Defaults**.

Related tasks:

“Setting the appearance and behavior of the Event Viewer” on page 245
You can configure the appearance and behavior of the Event Viewer window. For example, you can specify the time interval between automatic refreshes of the event list.

“Creating CGI tools” on page 214

Create a CGI tool that runs a CGI script from the AEL to process and return ObjectServer field information.

“Creating SQL tools” on page 218

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Creating script tools” on page 224

Create script tools to pass contextual data from selected events in the Active Event List (AEL) to separate portlet instances or to dynamically customized page content.

Setting Gauge portlet preferences

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

Before you begin

To be able to customize gauges, either the ncw_gauges_editor and the ncw_user roles, or the ncw_admin role must be assigned to your user.

To view gauges on a mobile device, you must have the ncw_gauges_viewer role.

Before a click-action can be used to operate a tool, you must have previously defined the tool.

About this task

To customize gauges:

Procedure

1. Open a Gauges portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. Change the content and appearance of the page as required:
 - “Changing the General settings for all gauges” on page 184.
 - “Selecting the data sources and ObjectServers” on page 185
 - “Generating HTML for mobile devices” on page 185.
 - “Changing the properties of gauges” on page 185.
 - “Adding gauges” on page 187.
 - “Removing gauges” on page 187.
 - “Rearranging gauges” on page 187.
 - “Changing the bi-directional text settings” on page 188.
4. Click **OK** to save the changes to the gauge properties. The page returns to view mode with the changes are applied.

Click **Cancel** to abandon **all** of the changes you have made to the page.

Note: To return the page to its initial settings, as supplied, click **Reset to Defaults**.

Related concepts:

“Gauges and metrics” on page 298

The Gauges page displays the values of selected metrics as a set of gauges. Each gauge has a number of properties.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Setting the thresholds for a gauge” on page 305

A gauge has three display levels: low, medium, and high. This task shows how to set the thresholds for each display level.

“Publishing Gauges pages to mobile devices” on page 297

You can make the gauges displayed on a Gauges page available to Web GUI users on mobile devices, or in a Web browser.

“Creating CGI tools” on page 214

Create a CGI tool that runs a CGI script from the AEL to process and return ObjectServer field information.

“Creating SQL tools” on page 218

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Creating script tools” on page 224

Create script tools to pass contextual data from selected events in the Active Event List (AEL) to separate portlet instances or to dynamically customized page content.

Changing the General settings for all gauges

Set the title of the gauge page and the refresh rate for its gauges.

Procedure

Change any combination of the preferences in the **General Settings** area:

Title Type a title for the Gauges page. The title is displayed on the title bar of the portlet page, not on the tab or in the navigation pane.

Gauge size

Type a display size for the gauge. Use a number between 2 and 2560.

Refresh rate

Type the time (in seconds) between each automatic refresh of the values on the gauges. Use a number between 10 and 99000. The default value is 10.

Selecting the data sources and ObjectServers

Define the data sources and ObjectServers that provide data for the gauges on the page.

Procedure

Select the data sources and ObjectServers that supply data for the gauges in the **Data Sources** area:

- To select an entire data source, set its check box.
- To select individual ObjectServers in a data source:
 - Clear the check box for the data source.
 - Set the check boxes for the ObjectServers you want to use.
- You can choose any combination of data sources and ObjectServers.
- Initially a page receives data from the default data source only.
- The value that each gauge shows is the total for that metric for all the selected data sources and ObjectServers.

Generating HTML for mobile devices

Producing an HTML representation of the gauge page that you can either send to mobile devices using e-mail or SMS, or scan using your mobile device.

Procedure

1. Set the **HTML for mobile devices** check box.

The system generates an HTML representation of the Gauges page whenever you click **OK** to save changes to the preferences or defaults.

The URL and QR Code for the HTML page appears in **Mobile Device Access**.

2. To preview the HTML page, click the URL.

You can now copy the URL into an e-mail or SMS for sending to mobile devices. Alternatively, you can scan the QR Code using the camera and QR Code reader on your mobile device. Once the QR Code is recognized, your Web browser launches automatically to display the associated URL.

Changing the properties of gauges

Modifying the properties of any gauge such as its name, appearance, and metric.

Procedure

1. Click the gauge that you want to modify.
2. Change the fields in the properties box as required:

Type Select type of display for the gauge. For example, a speedometer or traffic lights.

The Preview area shows the selected gauge.

Metric Select a predefined metric from the list.

Note: If you change the metric for an existing gauge, always change the **Unit label**, **Unit label**, and **Description** to match the new metric.

Label Type a label for the gauge. This identifies the gauge on the page.

Unit label

Type a label to describe the units for the values that the gauge displays.

Description

Type a description for the gauge. When the Gauges page is viewed in the Web GUI, or the published URL is viewed in a Web browser or a mobile device, the text in this field is used as hover help.

Tip: you can include the current value of the gauge in the hover help. Add the string {0} where you want the value to appear. For example:
The number of client connections. Current value: {0}

Click action

Select the action that is performed when a user clicks the gauge:

none Nothing happens.

script Execute a script.

url Open a URL.

Script/URL

Type the fully-qualified URL that you want to be opened when you click a gauge, or the JavaScript code that you want to run.

Tip: You can use the URL of a Web GUI application page.

You can use a script to launch Web GUI applications and applications from other parts of Tivoli that are based on Tivoli Integrated Portal. For example, you can write a script to launch the IBM Tivoli Network Manager IP Edition.

Mobile device touch action

Select the action that is performed when a user taps the gauge:

none Nothing happens.

as desktop

The mobile touch action works like the desktop click action.

script Execute a script.

url Open a URL.

Mobile device Script/URL

Type the fully-qualified URL that you want to be opened when you tap a gauge, or the JavaScript code that you want to run.

Tip: You can use the URL of a Web GUI application page. For example, you can specify a Lightweight Event List (LEL) or a map page.

You can use a script to launch Web GUI applications and applications from other parts of Tivoli that are based on Tivoli Integrated Portal. For example, you can write a script to launch the IBM Tivoli Network Manager IP Edition.

3. Click Apply Changes.

Adding gauges

Adding a new gauge to the page and choosing its properties such as name and appearance.

Before you begin

Decide on the properties of the gauge:

- The type of the gauge.
Example: thermometer
- The name of the metric the gauge displays.
Example: connections
- The label for the gauge that appears on the Gauges page.
Example: Connections
- The units that the gauge displays.
Example: clients
- A more detailed description of the gauge.
Example: The number of current client connections.
- The action that the portlet takes, if any, when the user clicks on the gauge.
For URL actions, determine the fully-qualified URL that the Web GUI is to display.
For script actions, obtain or write the corresponding JavaScript.

About this task

To add the gauge to the page:

Procedure

1. Set the properties of the gauge from the information you gathered. See “Changing the properties of gauges” on page 185.
2. Click **Add Gauge**.

Removing gauges

Removing one or more gauges that you no longer require on the page.

Procedure

To remove a gauge from the page, click ✕.

Rearranging gauges

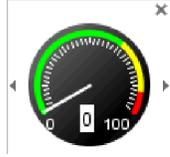
Rearrange the position of the gauges on the page to suit your needs.

About this task

Do either of the following actions:

Procedure

1. Use the arrows on either side of each gauge to change the order of them on the page.



- Use the left arrow ◀ to move the gauge up the list (to the left and up).
 - Use the right arrow ▶ to move the gauge down the list (to the right and down)
2. Position the mouse pointer over a gauge and hold down the left mouse button. Then drag the gauge to its now position and release the mouse button.

Changing the bi-directional text settings

Customize the settings for displaying bi-directional text.

Procedure

In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

Setting Inline Frame portlet preferences

To customize the appearance and setup of the Inline Frame portlet, edit the preferences of the portlet.

About this task

Note: The Inline Frame portlet is deprecated in the Web GUI from V7.3.1. Use the Web widget portlet instead.

To set Inline Frame portlet preferences:

Procedure

1. Open an Inline Frame portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.

3. In the **General Settings** area, set the following portlet properties:
 - URL** Type the URL of the content to be included in the portal page.
 - Portlet Title**
Type the title to be displayed for the portlet.
 - Use Customizer**
Select this check box to be able to resize the Inline Frame on a page with multiple portlets by dragging the mouse pointer. If you clear this check box, use the **Height** field to specify an alternative height in pixels.
 - Height**
Set the height of the portlet frame in pixels.
 - iFrame Name**
Type a custom name to be used to identify the frame when the content of the frame is loaded on demand, for example using JavaScript.
4. Click **OK** to save and apply your settings to the portlet.

Related tasks:

“Editing portlet shared settings” on page 51

Some portlets include an *Edit Shared Settings* mode that allows users with “Editor” access level to configure common settings for other users of the portlet. Once shared settings are configured, users with “Privileged User” level of access can change these values for their own personal use of the portlet. Default settings cannot be changed by users with “User” level of access. Follow these steps to set the shared settings for a portlet.

Setting LEL portlet preferences

To customize the appearance and setup of the LEL portlet, edit the preferences of the portlet.

About this task

Note: The Lightweight Event List (LEL) is deprecated from V7.4.0 of the Web GUI. Use the Event Viewer instead.

To set LEL portlet preferences:

Procedure

1. Open an LEL portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. In the **General Settings** area, set the following portlet properties:
 - Filter** Select the filter you want to apply to the event list. The default view associated with the filter is automatically applied.
 - Use Customizer**
Automatically determines the required height of the portlet frame. You can override the height by clearing this check box and typing a value in the **Height** field.

Height

Set the height of the portlet frame in pixels.

4. In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

5. Click **OK** to save and apply your settings to the portlet.

Related tasks:

“Editing portlet shared settings” on page 51

Some portlets include an *Edit Shared Settings* mode that allows users with “Editor” access level to configure common settings for other users of the portlet. Once shared settings are configured, users with “Privileged User” level of access can change these values for their own personal use of the portlet. Default settings cannot be changed by users with “User” level of access. Follow these steps to set the shared settings for a portlet.

Setting preferences for the Map portlet

To customize the appearance and setup of the Map portlet, edit the preferences of the portlet.

About this task

To set Map portlet preferences:

Procedure

1. Open a Map portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. In the **General Settings** area, set the following portlet properties:

Map Name

From the list of available maps, select the map that you want to display as an applet in the portlet.

Sound URL

Type the URL to the sound file that specifies the sound to play when the status of the map is updated during a refresh. The URL must be specified in the following format:

protocol://host:port/path/filename.fileextension

Refresh Rate

Type a time value in seconds that specifies the interval between refresh operations for the map.

Enable hover help for active objects

Select this check box to display hover help for active map objects that are associated with a filter. The hover help displays information from the filter.

Show status bar

Select this check box to display the status bar, which displays a countdown of the time, in seconds until the map is next refreshed.

Use Customizer

Uses the height setting specified in the map on the map page. If you clear this check box, you can explicitly specify the height in the **Height** field.

Height

If you clear the **Use Customizer** field, type an alternative height value in pixels.

4. In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

5. Click **OK** to save and apply your settings to the portlet.

Related tasks:

“Editing portlet shared settings” on page 51

Some portlets include an *Edit Shared Settings* mode that allows users with “Editor” access level to configure common settings for other users of the portlet. Once shared settings are configured, users with “Privileged User” level of access can change these values for their own personal use of the portlet. Default settings cannot be changed by users with “User” level of access. Follow these steps to set the shared settings for a portlet.

Setting Relationship Definitions portlet preferences

Use the Relationship Definitions portlet to set the Relationship Definitions preferences.

Procedure

To set the Relationship Definitions preferences:

1. Open a Relationship Definitions portlet.
2. Edit your portlet preferences:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
3. In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

4. Click **OK** to save and apply the new settings.

Setting Table View portlet preferences

To customize the appearance and setup of the Table View portlet, edit the preferences of the portlet.

About this task

Note: The Table View portlet is deprecated from V7.4.0 of the Web GUI. Use the Event Viewer instead.

To set Table View portlet preferences:

Procedure

1. Open a Table View portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. In the **General Settings** area, set the following portlet properties:

Filter Select the filter you want to apply to the event list. The default view associated with the filter is automatically applied.

Maximum rows

Set the number of event rows you want to display. If the number you enter is smaller than the actual event count, you are notified at the bottom of the table. To display all events, set this value to -1.

Use Customizer

Automatically determines the required height of the portlet frame. You can override the height by clearing this check box and typing a value in the **Height** field.

Height

Set the height of the portlet frame in pixels.

4. In the **Bidi Settings** area, specify the settings for the display of bi-directional text:

Component direction

Select the arrangement of items in the portlet, left-to-right or right-to-left. The default setting uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the layout.

Text direction

Select the direction of text on the portlet. The default settings uses the value defined for the page or the console. If the page and console both use the default setting, the locale of your browser determines the text direction. The Contextual Input setting displays text you enter in the appropriate direction for your globalization settings.

Any change you make to these settings is effective only if you have enabled bi-directional support in your user preferences. Changes come into effect the next time you use the portlet.

5. Click **OK** to save and apply your settings to the portlet.

Related tasks:

“Editing portlet shared settings” on page 51

Some portlets include an *Edit Shared Settings* mode that allows users with “Editor” access level to configure common settings for other users of the portlet. Once shared settings are configured, users with “Privileged User” level of access can change these values for their own personal use of the portlet. Default settings cannot be changed by users with “User” level of access. Follow these steps to set the shared settings for a portlet.

Setting Web widget portlet preferences

To customize the appearance and set up of the Web widget portlet, edit the preferences of the portlet.

Procedure

To set Web widget portlet preferences:

1. Open a Web widget portlet.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. Set the properties of the Web widget:

Widget title

Type a brief descriptive name for the portlet. The title appears in the navigation pane of the Tivoli Integrated Portal console.

Home URL

Type the Web address of the page to display in the portlet. For Web GUI items such as maps, use a URL relative to the context root. For example, for a map named MyMap use `webtop/Map/MyMap`. You can also display Web pages. In this case specify the fully qualified name of the page. For example, `http://www.mycompany.com/welcome.html`.

Help page

Type the URL of a custom HTML help topic to replace the default help topic for the Web widget.

HTML iFrame name

Type a unique iFrame name for this Web widget. This name uniquely identifies the Web widget and allows its content to be updated dynamically. Ensure that each Web widget has a unique value for this property.

Show a browser control toolbar

set this check box to provide users of the portlet with a Web navigation toolbar. That is a standard set of Web navigation buttons and a Web address entry field.

Users without administrative privileges may see only a subset of these properties, depending on the how the administrator configured the portlet.

4. To allow users to personalize their Web widget settings, set the relevant check boxes:
 - **Widget title**
 - **Home page**
 - **Help page**
 - **Browser control bar**

Initially, all check boxes are clear.

5. Click **Save** to save and apply your settings to the portlet.

Chapter 9. Customizing Active Event Lists

You can customize the appearance and behavior of the Active Event List (AEL). You can also create tools for managing events and customize what functions are in the AEL menus.

Setting the appearance and behavior of the Active Event List

You can configure the appearance and behavior of the AEL window and any monitor boxes associated with it. For example, you can specify the manner in which you are notified of changes in alert status, list refresh time, window layout, and so on.

Before you begin

An administrator must set the Allow preference configuration permission in your user profile in so that you can edit your user preferences.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Modifying the preferences of a Web GUI user” on page 101

Edit the user profile settings and event list options for Web GUI users.

Changing the AEL refresh rate

You can change the time period in seconds after which the AEL is automatically refreshed on a regular basis by the Web GUI server.

Before you begin

A user can view the **Refresh** tab and change the refresh rate only if the permission for Allow refresh rate configuration has been selected in their user profile.

About this task

Setting a timed refresh forces the event list to reload data pertaining to changed events. Do not set the refresh to a low value (for example, less than 60 seconds) because this has an impact on ObjectServer performance and network traffic.

To change the refresh rate:

Procedure

1. Click **Settings > User Preferences for Tivoli Netcool/OMNIBus Web GUI**.
2. From the **Available users** list, select the required user and click **Modify**.
3. Select **Allow refresh rate configuration** and type a time in the **Refresh rate (seconds):** field.
4. Click **Save**.

Related tasks:

“Refreshing the event data” on page 281

The event list refreshes automatically at regular intervals to show all incoming alerts from the ObjectServer. You can choose to refresh the event list manually between the configured intervals to view all the latest alerts at the current point in time.

Turning data row caching on or off

When the AEL is refreshed, event data in its rows is loaded from the cache if the refresh interval is less than 60 seconds. To have the event list refreshed from the database, turn data row caching off.

About this task

To turn off data row caching:

Procedure

1. Open the following file:
ncwDataSourceDefinitions.xml
2. Set the **enabled** attribute of the <eventList> element to false. For example:
`<eventList maxAge="60" enabled="false" cleantime="120" />`
3. Save and close the file.
4. Restart the server.

Results

When the AEL is refreshed, data is drawn directly from the ObjectServer instead of the data cache.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Changing event severity icons

To make the icons that denote event severity more recognizable to users, replace the default icons with images of your choice.

About this task

The replacement images must be in PNG format. The file names must correspond to the integers that denote event severity in the ObjectServer. The following table describes the default file names for the images.

Table 18. Default file names for event severity icons

File name	Corresponding event severity
5.png	Critical
4.png	Major
3.png	Minor
2.png	Warning
1.png	Indeterminate
0.png	Clear

To change the icons for event severity:

Procedure

1. Rename the files for the replacement icons so that they correspond to the required event severity.
2. Change to the following directory:
`tip_home_dir/profiles/TIPProfile/installedApps/TIPCell/isc.ear/OMNIBusWebGUI.war/graphicconversions/severity`
3. Overwrite the existing PNG files with the replacements.

Results

After users have logged out, and logged back into the Web console, the icons in the Active Event List are changed.

Restricting the number of rows displayed in the Active Event List

You can impose a limit on the number of rows returned to the Active Event List (AEL). When operators open the AEL, they see only the specified number of rows.

About this task

To restrict the number of rows, edit the **ael.top-n.value** property in the `webgui-home/etc/server.init` file. If you set this property to a value greater than 0, the AEL queries are modified to include a TOP keyword that restricts the number of rows returned to the AEL to the first *n* query results that match the selection criteria specified by the filter.

For example, if an AEL filter matches 8000 rows in the ObjectServer, and the **ael.top-n.value** value is set to 4000, only the top 4000 alerts are displayed. If an AEL displays events from multiple data sources, the top *n* rows per data source are displayed. For example, if the **ael.top-n.value** value is set to 50, and the AEL is configured to display events from three data sources, a maximum of 150 rows are displayed.

After you edited the `server.init` file, restart the Tivoli Integrated Portal server.

To restrict the number of events displayed:

Procedure

1. In the command-line interface, open the `webgui-home/etc/server.init` file.
2. Uncomment the section Active Event List properties.
3. In this section, set the value of the **ael.top-n.value** property to a value greater than 0.
4. Leave the values of the other properties in the Active Event List properties section at their default values.

For more information about these properties, see the information in the `server.init` file.

5. Save and close the file.
6. Restart the server.

Results

When operators view an AEL, the number of rows that match the filter criteria is restricted to the value of the **ael.top-n.value** property. If the AEL displays events from multiple data sources, the number is restricted to the value of **ael.top-n.value** per data source. A Top Set to message is also displayed above the distribution status bar in the AEL indicating that a TOP condition is being applied.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Related reference:

“Performance tuning” on page 170

To improve the throughput of events from a data source to the Web GUI, or to distribute the load between the ObjectServer and the Web GUI server, you can adjust several configuration settings.

Enabling notifications and setting notification criteria

You can set the AEL to inform you about changes in alert status. You can also specify the conditions which must be met before you receive a notification.

Procedure

1. Press Shift+P to open the Preferences window.
2. Click **Notifications** and complete the fields as follows:

Enabled

Select this check box to receive notification of new, changed, or deleted alerts when the event list is minimized.

When Iconized

Select this check box to receive notification of new, changed, or deleted alerts on iconized desktop environments. An iconized desktop environment displays an icon when the event list is minimized.

Use the **When** and **How** options to set the notification method.

Always

Select this check box to always receive notification of new, changed, or deleted alerts.

When Select each check box to receive notification as follows:

New You receive a notification when a new alert is added to the event list.

Change

You receive a notification when an existing alert changes in the event list.

Delete You receive a notification when an existing alert is deleted from the event list.

How Select each option to indicate how a notification should occur:

Alert Icon

Flashes the minimized event list.

Open Window

Opens the event list on the screen.

Play Sound

Plays a sound on the workstation. In the text box, specify the sound file to play in the following format:

`$(SERVER)/sounds/soundfile`

Replace *soundfile* with the name of the sound file. For example:
gong.au

Open URL

Opens a URL

URL Target

If you selected **Open URL**, type the URL that you want to be opened.

Note: When the AEL runs as an applet in a separate browser window, only the Play Sound and Open URL notifications are effective.

3. Save the settings for use in the current session, or for future sessions:
 - To use these preferences in the current session only, click **Apply**.
 - To use these preferences in future sessions, click **Save**.
4. Click one of the other tabs to make more changes or, to exit the Preferences window, click **Close**.

Enabling flashing and setting flash speed and brightness

You can specify flashing in the AEL for alerts where the Flash field in the alerts.status table has been set to 1, or converted to Yes. Also, you can adjust the interval between each flash and the brightness of the flash in the window.

About this task

To enable flashing and adjust the speed and brightness of the flashing:

Procedure

1. Press Shift+P to open the Preferences window.
2. Click **Flashing** and complete the fields as follows:

Enable Flashing

Select this check box to enable event list flashing.

Use the **Speed** slider to indicate how quickly the event list flashes.

Use the **Brightness** slider to indicate the degree of brightness of the flashing.

3. Save the settings for use in the current session, or for future sessions:
 - To use these preferences in the current session only, click **Apply**.
 - To use these preferences in future sessions, click **Save**.
4. Click one of the other tabs to make more changes or, to exit the Preferences window, click **Close**.

Modifying the AEL font and window settings

You can set the AEL font type, and specify the color and toolbar preferences for AELs.

About this task

To set the preferences for the font type, color and toolbar:

Procedure

1. Press Shift+P to open the Preferences window.
2. Click **Event List** and complete the fields under **Event Window** it as follows:

Show Colors

Displays each row of the event list with a background color that corresponds to the severity of the event.

Show Distribution Summary Bar

Select this check box to display the distribution summary bar in the event list. The distribution summary bar displays the number of alerts that match each severity color.

Show Toolbar

Select this check box to make the toolbar available on the event list.

Font Name

Select a font for your event list from the list.

Font Size

Select a font size for your event list from the list.

3. Save the settings for use in the current session, or for future sessions:
 - To use these preferences in the current session only, click **Apply**.
 - To use these preferences in future sessions, click **Save**.
4. Click one of the other tabs to make more changes or, to exit the Preferences window, click **Close**.

Modifying the AEL date and time format

You can specify the date and time format used on the AEL.

About this task

Procedure

1. Press Shift+P to open the Preferences window.
2. Click **Event List**.
3. Under **Date Format**, select a format for the date and time:

Option	Description
Short	This is the default setting, and is of the format m/d/yy h:mm:ss a, for example: 12/11/00 2:15:55 PM.
Long	This is of the format MMMM d, yyyy h:mm:ss a, for example December 11, 2000 2:15:55 PM.

Option	Description
Customize	Create your own format based on available date and time formats. See “Permitted date and time formats” for more information.

- Specify the operator timezone by selecting an entry from the menu. You can select the location of the operator, the timezone, or the number of hours before or after Greenwich Mean Time.

Tip: Choose the name of a locale-based timezone (for example America/Chicago) rather than one relative to GMT (for example, etc/GMT-6).

- Save the settings for use in the current session, or for future sessions:
 - To use these preferences in the current session only, click **Apply**.
 - To use these preferences in future sessions, click **Save**.
- Click one of the other tabs to make more changes or, to exit the Preferences window, click **Close**.

Permitted date and time formats

The following table describes the date and times formats that you can use for a customized date and time display in step 3 on page 200.

Table 19. Date and time formats

Symbol	Description	Presentation	Example
G	era designator	Textual	AD
y	year	Numeric	1996
M	month in the year	Text and Numeric	July and 07
d	day in the month	Numeric	10
h	hour in am/pm (1 - 12)	Numeric	12
H	hour in the day (0 - 23)	Numeric	0
m	minute in hour	Numeric	30
s	second in minute	Numeric	55
S	millisecond	Numeric	978
E	day in week	Textual	Tuesday
D	day in year	Numeric	189
F	day of week in month	Numeric	2 (2nd Wed in July)
w	week in year	Numeric	27
W	week in month	Numeric	2
a	am or pm marker	Textual	PM
k	hour in day (1 - 24)	Numeric	24
K	hour in am or pm (0 - 11)	Numeric	0
z	time zone	Textual	Pacific Standard Time

Date and time formats in the AEL

Read about the format of the date and time presentation types, including additional information on specific data formats.

When using the customized date format in the AEL, the display presentation is determined by the total letters or numbers.

Textual

In a textual presentation with four or more pattern symbols, the full form is used. In a textual presentation with fewer than four symbols, the short or abbreviated form is used (if one exists).

For example, if you want the date to start with the day of the week, you use the symbol E (Day in week). If you enter E fewer than four times, the day is abbreviated. If you enter E four or more times, the day is presented in the full form.

- EEE is displayed as Mon
- EEEE is displayed as Monday

Numeric

In a numeric presentation, the minimum number of digits is used. Shorter numbers are zero-padded to this amount.

The Y (year) symbol is a special case. If the count of y is two, the value for the year is truncated to two digits. If the count of y is four, the year is shown in four digits. For example:

- yy is displayed as 03
- yyyy is displayed as 2003

Textual and numeric

In a textual and numeric presentation, where three or more pattern letters are used, the textual form is used. Otherwise, a numeric form is used.

For example, if you use the symbol M (month in year) the presentation of month is determined by how many times you enter M. For example, for the month of February:

- M is displayed as 2
- MM is displayed as 02
- MMM is displayed as Feb
- MMMM is displayed as February

Additional information

Other points to note about letters and numbers in date formats:

- You can use non-alphabetic characters in date formats, such as colons (:), commas (,), periods (.), the number sign (#) and the at sign (@), without having to contain them in quotes.
- If you include a colon to separate hours and minutes, then the colon is displayed. For example, HH:mm a is displayed as 5:48 PM.

- A pattern containing any invalid symbol results in an error during formatting or parsing.

Locale date and time

Each country has its own locale date and time format. The following table shows examples of date and time in the US Locale format.

Table 20. US locale date format

Format Pattern	Result
EEE, MMM d, 'yy	Wed, July 10, '96
h:mm a	12:08 PM
hh a,zzzz	12 PM, Pacific Daylight Time
K:mm a, z	0:00 PM, PST
yyyyy.MMMMM.dd GGG hh:mm aa	1996.July.10 AD 12:08 PM

Changing how event severity is depicted in the AEL

You can specify how the severity of events is displayed in the AEL: as icons, as text, or as a combination of both icons and text.

About this task

Default icons for event severity are provided. These icons are as follows.

If required, you can change these icons.

-  : Denotes critical severity (severity 5)
-  : Denotes major severity (severity 4)
-  : Denotes minor severity (severity 3)
-  : Denotes warning severity (severity 2)
-  : Denotes indeterminate severity (severity 1)
-  : Denotes clear severity (severity 0)

To change the depiction of event severity:

Procedure

1. Press Shift+P to open the Preferences window.
2. Click **Event List**.
3. Under **Event List Icons**, select one of the following options:
 - **Show**: Displays an icon to denote event severity.
 - **Show With Text**: Displays an icon and text to denote event severity.
 - **Don't Show**: Displays text to denote event severity.
4. Save the settings for use in the current session, or for future sessions:
 - To use these preferences in the current session only, click **Apply**.
 - To use these preferences in future sessions, click **Save**.
5. Click one of the other tabs to make more changes or, to exit the Preferences window, click **Close**.

Changing which areas of the AEL are displayed

Depending on your preferences, you can set up the AEL so that only the areas that you want to work with are displayed, for example, the menu and title bars. As an administrator, you can control which areas are displayed for all users.

About this task

You can control whether the following areas are displayed or hidden:

- Title bar
- Menu bar
- Tool bar
- Filters and view section of the tool bar
- Summary bar
- Status bar

Tip: To provide the maximum space for displaying alert data, by default, the title bar and the menu bar are hidden.

To change which areas of the AEL are displayed:

Procedure

1. Open an AEL.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. To change the areas of the AEL that are displayed, use the following fields:

Title Bar

Select this check box to display the title bar.

Menu Bar

Select this check box to display the menu bar.

Tool Bar

Select this check box to display the tool bar.

Filters and Views

Select this check box to display the **Edit Filters** button and the list of available filters, and the **Edit Views** button and the list of available views on the tool bar.

Summary Bar

Select this check box to display the summary bar.

Status Bar

Select this check box to display the status bar.

4. Click **OK**.

Changing the font color for an event after it has been acknowledged

You can set the color of the event font to change to after the event has been acknowledged.

Procedure

To set the color of the font for an event that has been acknowledged for all new users:

1. Do one of the following actions:
 - To change the font color for all new users, edit the file `webgui-home/etc/system/userdefaults.props`
 - To change the font color for an existing user, edit the file `webgui-home/etc/configstore/ncwUserPreferences/username.nova`
Replace `username` with the user ID of the user.
2. Locate the property `ael_user_properties_acknowledge_font_color` and change its value to the name of the required color.
3. Save the file.
4. If you have changed the `userdefaults.props` file, restart the server.
If you changed the font color for an existing user, the change takes effect next time they log in.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Adding sounds to use for notifications

You can add sound files to the Web GUI to use in AEL notifications.

Procedure

Prepare the sound file and place it in the following directory:

```
tip_home_dir/profiles/TIPProfile/installedApps/TIPCell/isc.ear/  
OMNIBusWebGUI.war/sounds
```

Creating event management tools

You can create and administer CGI, SQL, command line and script tools to be used in the AEL. You can also configure prompts that are displayed to users in the Active Event List (AEL) when performing actions with tools.

Before you begin

If you want to create tools that will be run against more than one data source, note the following criteria:

- The tool must be valid against the ObjectServer from which the events originate. If you select events from multiple ObjectServers, the tool must be valid against all the ObjectServers. For example, if the tool is configured to run against fields that are not contained in one ObjectServer, the tool cannot be run against the entire selection of events.

- You must have write permission against all the ObjectServers from which the selected events originate. If you select events from multiple ObjectServers, and you do not have write permission in all the ObjectServers, the tool runs against only the ObjectServers that you are permitted to modify.

Important: For each tool, you must select at least one data source. From this data source, the Tool Editor obtains the fields against which the tool can be configured. If you select multiple data sources, the Tool Editor displays only the fields common to all the selected data sources. The data sources selected in the Tool Editor are not used in the AEL, Map Editor, or Event Dashboard to retrieve event data. You select the data source or data sources from which event data is retrieved in the portlet preferences for the AEL, Map Editor, and Event Dashboard.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

Chapter 8, “Setting portlet preferences,” on page 173

You can change the settings of the portlets to customize their appearance and setup to your requirements.

Event management tools overview

From the Tool Creation page, you can create and configure the tools used by clients connected to the AEL. Tools can be either Common Gateway Interface (CGI) tools, SQL tools, command-line tools or script tools. All of these tools are run from configurable menus in the AEL and some of them can include a prompt window or a pop-up menu for users to enter or select information.

CGI tools

CGI tools are typically used by clients to process ObjectServer field information and return useful information about the data to the client browser.

For example, the CGI script **nco_ping** provided with Web GUI sends specially marked packets from the local computer to a remote device to determine whether the remote computer is currently available. The script uses the IP address contained in the Node field of the selected alert (or alerts) as its target. The source file for **nco_ping** is located in the following directory:

webgui-home/etc/cgi-bin

Query string for **nco_ping**

The following example shows the URL for the **nco_ping** CGI script run on an event generated from a device with the node name zen1 and data source NCOMS. The GET query string is as follows.

`selected_rows.Node=zen1&datasource=NCOMS`

This data is passed to the CGI script.

*protocol://server:port/ibm/console/webtop/cgi-bin/
nco_ping.cgi?%24selected_rows.Node=zen1&datasource=NCOMS*

CGI tools do not have to run CGI scripts. CGI tools can also be used to open a local or remote Web page. Be aware that a remote script or page that contains SmartPage commands cannot be presented correctly within Web GUI. Pages that contain SmartPage commands must be hosted on the local Web GUI server.

CGI scripts can use different kinds of variables, including HTTP variables, ObjectServer fields, and browser cookie values.

Note: If any required resources, for example, Perl, are installed in nonstandard locations, ensure that the paths to the resources in any CGI scripts are correct.

Related tasks:

“Setting up CGI and URL tools” on page 210

A CGI is a server-resident program that provides a standard way of adding dynamic content to a Web site by allowing external gateway programs to interface with information servers such as Web servers.

SQL tools

SQL tools are a predefined way to run ObjectServer SQL commands on the alerts.status table and the alerts.journal data table from the Active Event List (AEL).

To run an SQL tool, you must be a read-write user authenticated with the ObjectServer against which the tool is run.

The Web GUI provides several default SQL tools. To view the tools, open the **Alerts** menu in the AEL.

In a Dual-Server Desktop environment, SQL tools run simultaneously against the master ObjectServer and the display server from which the AEL data is displayed. The same is true of journal actions.

An example of an SQL tool is **acknowledge**, which contains the following data.
update alerts.status set Acknowledged=1 where Serial in (\$selected_rows.Serial);
Alert acknowledged by %username

These instructions acknowledge any selected alert in the name of the user who ran the tool. The first line applies to the data held in the alerts.status table, the second line to the alerts.journal table.

For more information about ObjectServer SQL syntax, see the *IBM Tivoli Netcool/OMNibus Administration Guide*.

Related tasks:

“Creating SQL tools” on page 218

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

Command-line tools

Command-line tools are predefined command strings that run a command-line action on a client system. When invoked from the Active Event List (AEL), the instruction typically instructs the client system to open a command prompt and pass field data to an application.

Attention: IBM cannot guarantee that command-line tools will not adversely affect your system. IBM does not accept responsibility for the consequences of any actions performed through the execution of a command-line tool.

A command-line tool is useful when all members of a particular user group are known to have specific (usually generic) applications on their systems. Because command-line tools are started client-side rather than server-side, the load on the Web GUI server is reduced.

When a command-line tool is started by a client, the client operating system type is automatically determined, and the appropriate command-line instruction is sent, if one is available for that operating system.

The following example shows a command-line tool instruction:

```
start cmd /k %WINDIR%\SYSTEM32\PING.EXE {@Node}
```

In this example, if the client is a Windows operating system the instruction opens a command-line and starts the Windows **ping** utility against the Node field of the selected alert. The data is then returned to the command-line window on the client system.

Related tasks:

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

Script tools

Script tools are a predefined way of passing contextual data from selected events in the Active Event List (AEL) to JavaScript methods. A script tool can be run from within the AEL.

Use script tools for inter-portlet activity through the Tivoli Integrated Portal Actions framework, and to customize dynamic content using JavaScript.

Script tool syntax follows JavaScript rules. The command text might also contain variables that are evaluated when the script tool is executed.

You can create, copy, modify, and delete script tools in the Tool Creation editor. Script tools can be added to menus using the Menu Configuration editor.

When an AEL is opened, all script tools that are referred to by the AEL tools are retrieved from the server.

Access criteria for tools

You can define access criteria for any SQL, CGI, URL, script or command-line tool based on the groups that a user belongs to and the class of an event. If the access criteria are satisfied for a given tool, user, and event, the tool is displayed.

By default, no access criteria are defined for any tools. Tools that do not have access criteria defined are displayed for all users for all events. Changes in access criteria take effect when the Active Event List (AEL) is reloaded, without the need to restart the Web GUI server.

If the access criteria for a tool, user, and event are not satisfied, the tool is not displayed. If both group and class access criteria are defined, then both must be satisfied for the tool to be displayed for a given event and user. If multiple events are selected in the AEL, all access criteria must be satisfied for all selected events in order for a tool to be displayed.

Prompt types

When you create or edit a tool, you can include a prompt to which a user must respond, for example by typing in information or selecting a value from a list.

Each prompt has a user-configurable label that is displayed above the prompt window. It informs the user of the expected input, such as the name of the server to be pinged. You can refer to prompts in tools using the `$prompt.promptname` parameter or the `{$prompt.promptname}` parameter for CGI and Script tools.

The following example shows a dynamic choice prompt type:

```
<methodCall xmlns:prompt="http://www.ibm.com/tivoli/netcool/webtop/
prompts/2.2">
  <method methodName="command">
    <prompt:prompt type="DynamicChoice" name="prompt name">
      <prompt:parameters label="prompt label" order="prompt order"
errorMessage="error message" localized="true|false">
        <prompt:additionalParams>
          <prompt:param name="sqlCommand" value="sql string"/>
        </prompt:additionalParams>
      </prompt:parameters>
    </prompt:prompt>
  </method>
</methodCall>
```

Prompt parameters can be modified using the WAAPI client. View the `webgui-home/waapi/etc/samples/samlrequest_prompt.xml` file for samples.

You can create the following types of prompts:

String This creates a prompt window that accepts one or more characters. If more than one prompt has been defined for a tool, all prompts will be displayed on a single panel. The **order** attribute is responsible for determining in what order prompts are displayed on this panel, from higher values to lower values in a page orientation. To ensure a prompt is always displayed last, set the value of the **order** attribute to 0.

Integer

This creates a prompt window that accepts an integer value.

Float This creates a prompt window that accepts a floating point number, which can contain a decimal point.

Time This creates a prompt window that accepts a time.

Fixed Choice

This creates a menu that is populated with options that you specify.

Lookup

This creates a menu or list that is populated by the values in a specified file. The **file** attribute contains an absolute path to a file in the server, where each line of text is displayed as an item in a list.

Password

This creates a prompt window that accepts one or more characters as a password.

Dynamic Choice

This creates a pop-up menu or drop-down list that is populated by the results of an ObjectServer query. The **sqlCommand** attribute contains an ObjectServer SQL SELECT statement for two columns from a table. Each row that is returned by the ObjectServer is displayed on the client as an

item in a submenu or list. If a Dynamic Choice tool is run against multiple ObjectServers that have different column definitions, you can select only from the columns or column values that are common to all ObjectServers.

Multiline String

This creates a multiline prompt window that accepts one or more characters.

Tip: You can use the **order** attribute to enforce a mandatory journal entry as the last prompt to be completed by a user. (This is similar to the forced journal entry functionality in the event list). To do so, create a multiline string prompt, enter a name of Journal entry and an order of 0.

Formatted String

This creates a prompt window that accepts one or more characters, provided they are in the predefined format.

The **format** attribute contains a regular expression that the user must match in order for the value to be accepted.

Real-Time Dynamic Choice

This creates a scrollable list populated by the results of an ObjectServer query in real-time, which means during tool execution. This prompt is meant to be used to display data from an ObjectServer table that is frequently changeable. As this prompt type is executed in real time, it should be used sparingly to reduce the load on the Web GUI server.

The **sqlCommand** attribute contains an ObjectServer SQL SELECT statement for two columns from a table. Each row that is returned by the ObjectServer is displayed on the client as an item in a submenu or list. If a Real-Time Dynamic Choice tool is run against multiple ObjectServers that have different column definitions, you can select only from the columns or column values that are common to all ObjectServers.

Related tasks:

“Acknowledging and deacknowledging events” on page 275

You can acknowledge and deacknowledge events in the event list.

Setting up CGI and URL tools

A CGI is a server-resident program that provides a standard way of adding dynamic content to a Web site by allowing external gateway programs to interface with information servers such as Web servers.

Related concepts:

“CGI tools” on page 206

CGI tools are typically used by clients to process ObjectServer field information and return useful information about the data to the client browser.

Creating a CGI script

Create the CGI script you want to make available as a tool for your users.

Procedure

1. Create your CGI script. You can create a CGI script using any programming language.

Attention: Ensure the script is executable.

2. Save your CGI script on the Web GUI server in the `webgui-home/etc/cgi-bin` directory.

Environment variables in CGI script:

The following table is a list of all HTTP variables that can be passed from the Web GUI server to CGI scripts.

Table 21. HTTP server variables

Variable	Description
AUTH_TYPE	The name of the authentication scheme used to protect the servlet. For example, BASIC, SSL, or null if the servlet was not protected.
CONTENT_LENGTH	The length of the request body in bytes made available by the input stream or -1 if the length is not known. For HTTP servlets, the value returned is the same as the value of the CGI variable CONTENT_LENGTH.
CONTENT_TYPE	The MIME type of the body of the request, or null if the type is not known. For HTTP servlets, the value returned is the same as the value of the CGI variable CONTENT_TYPE.
GATEWAY_INTERFACE	The revision of the CGI specification being used by the server to communicate with the script. It is "CGI/1.1".
HTTP_ACCEPT	Variables with names beginning with "HTTP_" contain values from the request header, if the scheme used is HTTP. HTTP_ACCEPT specifies the content types your browser supports. For example, text/xml.
HTTP_ACCEPT_CHARSET	Character preference information. Used to indicate the client's preferred character set if any. For example, utf-8;q=0.5.
HTTP_ACCEPT_ENCODING	Defines the type of encoding that may be carried out on content returned to the client. For example, compress;q=0.5.
HTTP_ACCEPT_LANGUAGE	Used to define which languages you would prefer to receive content in. For example, en;q=0.5. If nothing is returned, no language preference is indicated.
HTTP_FORWARDED	If the request was forwarded, shows the address and port through of the proxy server.
HTTP_HOST	Specifies the Internet host and port number of the resource being requested. Required for all HTTP/1.1 requests.
HTTP_PROXY_AUTHORIZATION	Used by a client to identify itself (or its user) to a proxy which requires authentication.
HTTP_USER_AGENT	The type and version of the browser the client is using to send the request. For example, Mozilla/1.5.

Table 21. HTTP server variables (continued)

Variable	Description
PATH_INFO	Optionally contains extra path information from the HTTP request that invoked the script, specifying a path to be interpreted by the CGI script. PATH_INFO identifies the resource or sub-resource to be returned by the CGI script, and it is derived from the portion of the URI path following the script name but preceding any query data.
PATH_TRANSLATED	Maps the script's virtual path to the physical path used to call the script. This is done by taking any PATH_INFO component of the request URI and performing any virtual-to-physical translation appropriate.
QUERY_STRING	The query string that is contained in the request URL after the path.
REMOTE_ADDR	Returns the IP address of the client that sent the request. For HTTP servlets, the value returned is the same as the value of the CGI variable REMOTE_ADDR.
REMOTE_HOST	The fully-qualified name of the client that sent the request, or the IP address of the client if the name cannot be determined. For HTTP servlets, the value returned is the same as the value of the CGI variable REMOTE_HOST.
REMOTE_USER	Returns the login of the user making this request if the user has been authenticated, or null if the user has not been authenticated.
REQUEST_METHOD	Returns the name of the HTTP method with which this request was made. For example, GET, POST, or PUT.
SCRIPT_NAME	Returns the part of the URL from the protocol name up to the query string in the first line of the HTTP request.
SERVER_NAME	Returns the host name of the server that received the request. For HTTP servlets, it is the same as the value of the CGI variable SERVER_NAME.
SERVER_PORT	Returns the port number on which this request was received. For HTTP servlets, the value returned is the same as the value of the CGI variable SERVER_PORT.
SERVER_PROTOCOL	Returns the name and version of the protocol the request uses in the following form: protocol/majorVersion.minorVersion. For example, HTTP/1.1. For HTTP servlets, the value returned is the same as the value of the CGI variable SERVER_PROTOCOL.
SERVER_SOFTWARE	Returns the name and version of the servlet container on which the servlet is running.
HTTP_COOKIE	HTTP Cookie String.
WEBTOP_USER	The user name of the user who is logged in.
NCHOME	The NCHOME environment variable.

CGI support:

Use the initialization parameters to control the behavior of CGIServlet.

CGIServlet

CGI scripts run on a Web server and use the Common Gateway Interface (CGI) to perform tasks. The support for CGI in Tivoli Integrated Portal is provided by *CGIServlet*, extracted from Apache Tomcat. The Tomcat CGI support is largely compatible with the Apache HTTP Server but there are some limitations (such as only one `cgi-bin` directory). To change the configuration, edit `web.xml` in the directory where the CGI application is installed.

Servlet initialization parameters

Several initialization parameters are available for configuring the behavior of the CGIServlet.

cgiPathPrefix

The CGI search path will start at the Web application root directory + `File.separator` + this prefix. Default setting: `cgiPathPrefix` is `Web-INF/cgi`.

debug Determines the level of debugging detail for messages that are logged by the servlet. Default setting: 0.

executable

This is type of the program to be used to run the script. Default setting: `perl`.

parameterEncoding

Names the parameter encoding to be used with the CGI servlet. Default setting: `System.getProperty("file.encoding", "UTF-8")`.

passShellEnvironment

Determines whether shell environment variables, if there are any, shall be passed to the CGI script. Default setting: `false`.

Registering CGI scripts

After you have installed a CGI script on the server, for security purposes, the script must be registered. CGI scripts cannot be used as tools until they are registered.

Before you begin

UNIX **Linux** Ensure that the CGI script has the appropriate file permissions.

About this task

The registration process authorizes execution, ensures that any SmartPage tags present in the source are processed correctly, and attaches a group to the script in order to minimize the possibility of misuse.

To register a CGI script:

Procedure

1. Save the CGI script (for example, `nco_ping`) in the `webgui-home/etc/cgi-bin` directory.
2. Click **Administration > Event Management Tools > CGI Registry**.

3. Click **Register**.
4. In the Register CGI window, use the following fields and buttons to register the CGI script:

Name Type a name for the CGI script. This does not have to be the same as the file name of the CGI script.

By default, the following characters may not be used in names:

\$! £ % ^ & * () + = ~ ` ~ # @ ' : ; < > { } [] ? / \ \ | , "

By default, the following characters may not be used as the initial character of names:

/ \ \ * ? " < > | & .

These invalid characters are defined in the following file:

webgui-home/etc/illegalChar.prop

Use Smartpage commands

Select this check box if the output of the CGI script is HTML data that contains SmartPage commands.

File name

Type the file name of the script in the text field. It is not necessary to include the path.

Groups for this CGI

If you want to restrict access to the CGI script, click **Groups** and select the groups to which you want to allow access. The default group is *, where all users have access.

5. Click **Save**.

Results

The CGI script is now registered for use in the Web GUI, and is displayed as an entry in the **Available CGIs** registration list of the **CGI Registry**.

What to do next

To change an entry in the list, select the entry and click **Modify**. To remove an entry, select the name and click **Unregister**.

Creating CGI tools

Create a CGI tool that runs a CGI script from the AEL to process and return ObjectServer field information.

Before you begin

Before creating a CGI tool, you must create a CGI script and register the script for use in the Web GUI.

About this task

You can use an existing CGI tool as a template.

Procedure

1. In the navigation, click **Administration > Event Management Tool > Tool Creation**
2. In the Tool Creation, click **Create Tool**.

3. Select **CGI/URL** from the **Type** list.
4. Optional: To copy an existing tool, select it from the list of tools displayed and click **Copy Tool**.
5. Type a name for the tool in the **Name** field. Do not use spaces or special characters in the name.

By default, the following characters cannot be used in tool names:

\$! £ % ^ & * () + = - ` ~ # @ ' : ; < > { } [] ? / \ \ | , "

By default, the following characters cannot be used as the initial character of tool names:

/ \ \ * ? " < > | & .

These invalid characters are defined in the following file:

webgui-home/etc/illegalChar.prop

6. Click **Show Data Sources** to display a list of available data sources and select the data sources that you require.
7. Complete the following tool configuration fields:

URL Type the location of the CGI script. By default this field contains the correct path for the `cgi-bin` directory on the local Web GUI server. The `$(SERVER)` keyword is resolved at runtime to `protocol://host:port/ibm/console/webtop`. Append the path with the file name of the script that you want to associate with the tool.

To pass field data to a script on a remote server, replace `$(SERVER)` with an external URL address. For example `http://www.ibm.com`.

The `$(NGFSERVER)` keyword resolves at runtime to `protocol://host:port`.

Fields Click **Show** and select the ObjectServer columns that you want to pass as arguments to the tool from the **Available** column. If you select more than one data source from the **Data Sources** list, the **Fields** list contains only columns that are common to all data sources.

To pass a full list of all selected rows to a tool, select **Serial**, select the **Execute for each selected row** check box, and clear the **Window for each selected row** check box. At runtime, the **Serial** field resolves to the `$(selected_rows.Serial)` parameter. If you select more than one data source from the **Data Sources** list, add the `$(selected_rows.datasource)` parameter to distinguish between identical serial numbers that originate in different data sources.

Method

Specify the method for submitting field data to the CGI script:

- **GET:** Appends the name-value pairs to the URL, and is therefore useful if you want to bookmark the page containing the output.
- **POST:** Encodes the name-value pairs inside the body of the HTTP request. Note that firewalls can be configured to intercept and destroy this data stream, causing the form to be interpreted as empty.

The CGI script receives the data via a `QUERY_STRING` environment variable regardless of the method chosen. This differs from the CGI convention where, if a method of `POST` is used, the script receives data via `stdin`.

Open in

Select either the **New window** or **Specific window** radio button. If you select **Specific window**, type a name for the window in the adjacent text field.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

Window for each selected row

Select this check box to open a separate window for each selected row in the AEL.

8. Define access for tools based on the groups that a user belongs to and the class of an event against which the tool is deployed:

Group Select the group that you want to access the tool and click >. To give all groups access to the selected tool, click >>. Users must be members of a selected group to use the tool. If you selected multiple data sources, this list displays all groups from all selected data sources.

Class Select the class that you want to access the tool and click >. To give all classes access to the selected tool, click >>.

Tip: Each event in the ObjectServer has an associated Class field. The value of this field is set by the event source. The Class field typically describes what kind of device an event comes from. If the class of an event matches any of the classes you select, the tool is available when the user selects the event in the AEL.

If you selected multiple data sources, this list displays classes from all selected data sources. Each time you select a different data source the list of available classes is updated accordingly. Any previously selected classes are cleared to allow new classes to be selected.

9. Click **Save**.

The tool appears as an entry in the list of available tools and is now available for use in the Active Event List (AEL).

10. Select either the **Open in: New window** or **Open in: Specific window** radio button.

Option	Description
New Window	Displays the output of the tool in a new browser window.
Specific Window	Opens the tool output in a window of your choice. Enter a name for the window in the text field.

Example

Example 1: Using values from cookies

CGI scripts can also use values from cookies that originate from the same domain as the Web GUI server.

Attention: Using browser cookie values in CGI scripts is an advanced task. You are responsible for setting browser cookies and using cookie values correctly.

To reference a value from a cookie, use the following syntax:

```
{%cookie.cookieName}
```

In this syntax, *cookieName* is the name of the cookie. For example, the full syntax of referencing a value from a cookie is:

```
$(SERVER)/cgi-bin/scriptName.cgi?parameterName={%cookie.cookieName}
```

Example 2: Referencing a value from an ObjectServer field

To reference a value from an ObjectServer field in a query string, use the following syntax:

```
{@fieldName}
```

In this syntax, *fieldName* is the name of the ObjectServer field.

Example 3: Showing a query string

The following example shows a query string using the Node and Summary fields from the ObjectServer:

```
protocol://server:port/ibm/console/webtop/cgi-bin/  
scriptName.cgi?node={@Node}&abstract={@Summary}
```

What to do next

For users to have access to a new tool in the AEL, you must create a menu entry for it. Additionally, before a tool can operate in response to a click-action from a portlet, you must first define the click-action in the portlet preferences.

Related tasks:

“Adding tools to a menu” on page 238

If you have created a new tool, you need to add the tool as an entry to an AEL menu in order to use the tool. You can also add other existing tools to menus.

“Modifying tools” on page 227

You can modify the settings of existing CGI, SQL, command-line or script tools.

“Setting AEL portlet preferences” on page 173

To customize the appearance and setup of the AEL portlet, edit the preferences of the portlet.

“Setting Event Dashboard portlet preferences and defaults” on page 176

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

“Setting Event Viewer portlet preferences” on page 180

To customize the appearance and setup of the Event Viewer portlet, edit the portlet preferences.

“Setting Gauge portlet preferences” on page 182

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

Related reference:

“Tool runtime parameters” on page 234

Tools can contain one or more runtime parameters. The values of these parameters are determined when the tool is executed.

Appendix G, “URLs for opening Web GUI pages,” on page 417

Use the URL to open Web GUI portlets and applets from a map, from a link on an HTML page, or through a link generated by script tool or a CGI tool.

Creating SQL tools

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

About this task

Any SQL tool that modifies ObjectServer data must be run by a Web GUI user that also exists in the ObjectServer as a write user.

To create an SQL tool:

Procedure

1. In the navigation, click **Administration > Event Management Tool > Tool Creation**.
2. On the Tool Creation page, click **Create Tool**.
3. Select **SQL** from the **Type** list.
4. Optional: To use an existing tool as a template, select it from the list of tools displayed and click **Copy Tool**.
5. Click **Data Source** to select the data sources against which you want to run the SQL instructions. The data source selection also specifies the user groups or classes that are used to define the access criteria.
6. Enter a name for the tool in the **Name** field. Do not use spaces or special characters in the name.

By default, the following characters cannot be used in tool names:
\$! £ % ^ & * () + = ~ ` ~ # @ ' : ; < > { } [] ? / \ \ | , "

By default, the following characters cannot be used as the initial character of tool names:

/ \ \ * ? " < > | & .

These invalid characters are defined in the following file:
webgui-home/etc/illegalChar.prop

7. On the **SQL** table, complete the following fields:

SQL Commands

Type the SQL commands that you want to use to update the alerts.status table in the ObjectServer.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL.

Clear the check box if you want the tool to run against only the first row in the selection.

Important: Do not select this checkbox if the SQL instructions explicitly state that the command must run against all rows.

8. Optional: To update the alerts.journal table of the selected data source or data sources, click **SQL** and complete the following fields:

Journal Entry

Type the SQL commands that you want to use to update the alerts.journal table in the ObjectServer.

If you leave the **Journal Entry** field empty, no journal entry is recorded when the tool is run. If you want a blank journal entry to be recorded when the tool is run, enter a space or type another character in the field.

Tip: You can use a Multiline String prompt for forced journal entry.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL, and modify all corresponding journal entries. Clear the check box if you want the tool to run against only the first row in the selection, and modify the corresponding journal entry.

9. Define access for tools based on the groups that a user belongs to and the class of an event against which the tool is deployed:

Group Select the group that you want to access the tool and click >. To give all groups access to the selected tool, click >>. Users must be members of a selected group to use the tool. If you selected multiple data sources, this list displays all groups from all selected data sources.

Class Select the class that you want to access the tool and click >. To give all classes access to the selected tool, click >>.

Tip: Each event in the ObjectServer has an associated Class field. The value of this field is set by the event source. The Class field typically describes what kind of device an event comes from. If the class of an event matches any of the classes you select, the tool is available when the user selects the event in the AEL.

If you selected multiple data sources, this list displays classes from all

selected data sources. Each time you select a different data source the list of available classes is updated accordingly. Any previously selected classes are cleared to allow new classes to be selected.

If no group or class is selected, users of any group can execute the tool, and the tool can be executed against events of any class.

10. Click **Save**.

Results

The tool appears as an entry in the list of available tools and is now available for use in the Active Event List (AEL).

Examples

The following SQL command updates the alerts.status table in the ObjectServer by setting the OwnerGID of the selected rows to the value that is chosen from the \$prompt menu. The \$prompt menu is a system-managed sub-menu of the groupassign tool that contains all the user groups.

```
update alerts.status set OwnerGID=$prompt.groupassign
where Serial in ($selected_rows.Serial);
```

The following SQL command updates the alerts.journal table in the ObjectServer: Alert assigned to group CONVERSION(\$prompt.groupassign) by %username.

What to do next

For users to have access to a new tool in the AEL, you must create a menu entry for it. Additionally, before a tool can operate in response to a click-action from a portlet, you must first define the click-action in the portlet preferences.

Related concepts:

“SQL tools” on page 207

SQL tools are a predefined way to run ObjectServer SQL commands on the alerts.status table and the alerts.journal data table from the Active Event List (AEL).

Related tasks:

“Creating command-line tools”

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Adding tools to a menu” on page 238

If you have created a new tool, you need to add the tool as an entry to an AEL menu in order to use the tool. You can also add other existing tools to menus.

“Modifying tools” on page 227

You can modify the settings of existing CGI, SQL, command-line or script tools.

“Setting AEL portlet preferences” on page 173

To customize the appearance and setup of the AEL portlet, edit the preferences of the portlet.

“Setting Event Dashboard portlet preferences and defaults” on page 176

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

“Setting Event Viewer portlet preferences” on page 180

To customize the appearance and setup of the Event Viewer portlet, edit the portlet preferences.

“Setting Gauge portlet preferences” on page 182

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

Creating command-line tools

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

About this task

To create a command-line tool:

Procedure

1. In the navigation, click **Administration > Event Management Tool > Tool Creation**
2. On the Tool Creation, click **Create Tool**.
3. Select **Command** from the **Type** list.
4. Optional: To use an existing tool as a template, select it from the list of tools displayed and click **Copy Tool**.
5. Click **Data Source** to select the data sources against which you want to run the SQL instructions. The data source selection also specifies the user groups or classes that are used to define the access criteria.
6. Type a name for the tool in the **Name** field above the Tool Configuration dialog. Do not use spaces or special characters in the name.

By default, the following characters cannot be used in tool names:

\$! £ % ^ & * () + = ~ ` ~ # @ ' : ; < > { } [] ? / \ \ | , "

By default, the following characters cannot be used as the initial character of tool names:

/ \ \ * ? " < > | & .

These invalid characters are defined in the following file:

webgui-home/etc/illegalChar.prop

7. Complete the following tool configuration fields:

Platform

Select this checkbox to specify which client operating system types can access this tool from the AEL.

Command

For each selected client operating system, modify the default entry and type the command to launch the target application. Include the full path to the command.

Tip: On the Windows operating system use the following construct to ensure the DOS console closes when the tool completes:

```
start /b cmd /k
```

In addition you can launch multiple applications from one tool by inserting && between each command. For example, to launch two Internet Explorer windows use the following command: **start /b cmd /k cmd iexplore.exe && start /b cmd /k iexplore.exe**

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

8. Define access for tools based on the groups that a user belongs to and the class of an event against which the tool is deployed:

Group Select the group that you want to access the tool and click >. To give all groups access to the selected tool, click >>. Users must be members of a selected group to use the tool. If you selected multiple data sources, this list displays all groups from all selected data sources.

Class Select the class that you want to access the tool and click >. To give all classes access to the selected tool, click >>.

Tip: Each event in the ObjectServer has an associated Class field. The value of this field is set by the event source. The Class field typically describes what kind of device an event comes from. If the class of an event matches any of the classes you select, the tool is available when the user selects the event in the AEL.

If you selected multiple data sources, this list displays classes from all selected data sources. Each time you select a different data source the list of available classes is updated accordingly. Any previously selected classes are cleared to allow new classes to be selected.

If no group or class is selected, users of any group can execute the tool, and the tool can be executed against events of any class.

9. Click **Save**.

Results

The tool appears as an entry in the list of available tools and is now available for use in the Active Event List (AEL).

What to do next

For users to have access to a new tool in the AEL, you must create a menu entry for it. Additionally, before a tool can operate in response to a click-action from a portlet, you must first define the click-action in the portlet preferences.

Related concepts:

“Command-line tools” on page 207

Command-line tools are predefined command strings that run a command-line action on a client system. When invoked from the Active Event List (AEL), the instruction typically instructs the client system to open a command prompt and pass field data to an application.

Related tasks:

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Creating SQL tools” on page 218

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

“Creating script tools” on page 224

Create script tools to pass contextual data from selected events in the Active Event List (AEL) to separate portlet instances or to dynamically customized page content.

“Modifying tools” on page 227

You can modify the settings of existing CGI, SQL, command-line or script tools.

“Adding tools to a menu” on page 238

If you have created a new tool, you need to add the tool as an entry to an AEL menu in order to use the tool. You can also add other existing tools to menus.

“Setting AEL portlet preferences” on page 173

To customize the appearance and setup of the AEL portlet, edit the preferences of the portlet.

“Setting Event Dashboard portlet preferences and defaults” on page 176

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

“Setting Event Viewer portlet preferences” on page 180

To customize the appearance and setup of the Event Viewer portlet, edit the portlet preferences.

“Setting Gauge portlet preferences” on page 182

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

Related reference:

“Script tool examples” on page 225

Script tool syntax follows JavaScript rules, and you can create many different script tools to extract data from events, as illustrated by these examples.

Creating script tools

Create script tools to pass contextual data from selected events in the Active Event List (AEL) to separate portlet instances or to dynamically customized page content.

Before you begin

About this task

Script tool syntax follows JavaScript rules. The command text might also contain variables that are evaluated when the script tool is executed.

To create a script tool:

Procedure

1. In the navigation, click **Administration > Event Management Tool > Tool Creation**.
2. In the Tool Creation page, click **Create Tool**.
3. Select **Script** from the **Type** list.
4. Optional: To use an existing tool as a template, select it from the list of tools displayed and click **Copy Tool**.
5. Click **Data Source** to select the data sources against which you want to run the SQL instructions. The data source selection also specifies the user groups or classes that are used to define the access criteria.

6. Type a name for the tool in the **Name** field above the Tool Configuration dialog. Do not use spaces or special characters in the name.

By default, the following characters cannot be used in tool names:

`$! £ % ^ & * () + = - ` ~ # @ ' : ; < > { } [] ? / \ \ | , "`

By default, the following characters cannot be used as the initial character of tool names:

`/ \ \ * ? " < > | & .`

These invalid characters are defined in the following file:

`webgui-home/etc/illegalChar.prop`

7. Complete the following tool configuration fields:

Script Commands

Type the script that you want to use to configure the new tool.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

8. Define access for the tool based on the groups that a user belongs to and the class of an event against which the tool is deployed:

Group Select the group that you want to access the tool and click **>**. To give all groups access to the selected tool, click **>>**. Users must be members of a selected group to use the tool. If you selected multiple data sources, this list displays all groups from all selected data sources.

Class Select the class that you want to access the tool and click **>**. To give all classes access to the selected tool, click **>>**.

Tip: Each event in the ObjectServer has an associated **Class** field. The value of this field is set by the event source. The **Class** field typically describes what kind of device an event comes from. If the class of an

event matches any of the classes you select, the tool is available when the user selects the event in the AEL.

If you selected multiple data sources, this list displays classes from all selected data sources. Each time you select a different data source the list of available classes is updated accordingly. Any previously selected classes are cleared to allow new classes to be selected.

If no group or class is selected, users of any group can execute the tool, and the tool can be executed against events of any class.

9. Click **Save**.

Results

The tool appears as an entry in the list of available tools and is now available for use in the Active Event List (AEL).

What to do next

For users to have access to a new tool in the AEL, you must create a menu entry for it first. Additionally, before a tool can operate in response to a click-action from a portlet, you must first define the click-action in the portlet preferences.

Related tasks:

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Setting AEL portlet preferences” on page 173

To customize the appearance and setup of the AEL portlet, edit the preferences of the portlet.

“Setting Event Dashboard portlet preferences and defaults” on page 176

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

“Setting Event Viewer portlet preferences” on page 180

To customize the appearance and setup of the Event Viewer portlet, edit the portlet preferences.

“Setting Gauge portlet preferences” on page 182

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

Script tool examples

Script tool syntax follows JavaScript rules, and you can create many different script tools to extract data from events, as illustrated by these examples.

Sample: itnmBroadcast Event

This script tool invokes a JavaScript method from the AEL portlet page and is included in Network Manager IP Edition as default functionality to enable intra-portlet communication.

The script commands are as follows:

```
{ $portletparam.iscPortletNamespace } sendPortletEvent({ 'name':  
'http://ibm.com/TIP#BroadcastEvent', 'client':  
'NW', 'entityId': '{@NmosEntityId}' });
```

The method invoked is uniquely signed by the use of the **iscPortletNamespace** applet parameter, which is a unique signature for each instance of the AEL portlet. The `sendPortletEvent()` method takes a **itmBroadcastEvent** as a parameter.

In the following example, the **itmBroadcastEvent** has been configured with the following attributes:

- name: `http://ibm.com/TIP#BroadcastEvent`
- client: NW
- entityId: `{@NmosEntityId}`

At runtime, `{@NmosEntityId}` is resolved into the `NmosEntityId` field value of the selected event.

Sample: Event “scratchpad”

This JavaScript code sample creates a simple “scratchpad” tool and illustrates the potential of script tools.

After you execute the scratchpad tool against a selected event, below the AEL a new area is displayed containing event data, such as a summary of the event, the time of occurrence, the node where the event occurred, and its severity. The event data is added to the page using the Document Object Model (DOM).

The script commands are as follows:

```
var str = 'Event \''{@Serial}\'' at Node \''{@Node}\'' has Summary \''{@Summary}\'',  
Severity \''{@Severity}\'' and last occurred on ' + new Date({@LastOccurrence}*1000);  
  
var scratchpad = document.getElementById("scratchpad_{"$appletparam.EntityName}");  
  
if (scratchpad == null)  
{  
  scratchpad = document.createElement("div");  
  scratchpad.setAttribute( "id", "scratchpad_{"$appletparam.EntityName}" );  
  scratchpad.setAttribute( "style", "overflow:auto;height:200px;border-width:1px;  
border-style: solid;margin:5px;padding:5px;font-family:Verdana,Arial,Helvetica,  
sans-serif;font-size:0.7em;" );  
  
  var header= document.createElement("h2");  
  header.appendChild( document.createTextNode( "Scratch Pad for entity  
{$appletparam.EntityName}" ) ); scratchpad.appendChild( header );  
  document.body.appendChild(scratchpad);  
}  
  
var div = document.createElement("div");  
var dl = document.createElement("dl");  
  
var dt = document.createElement("dt");  
dt.appendChild( document.createTextNode( new Date() ) );  
dl.appendChild(dt);  
  
var dd = document.createElement("dd");  
dd.appendChild( document.createTextNode( str ) );  
dl.appendChild(dd);  
  
div.appendChild(dl);  
  
scratchpad.appendChild(div);
```

Related tasks:

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

Modifying tools

You can modify the settings of existing CGI, SQL, command-line or script tools.

About this task

To modify a tool:

Procedure

1. In the navigation, click **Administration > Event Management Tool > Tool Creation**.
2. In the Tool Creation page, select the tool you want to modify from the list of tools displayed.
3. Select a tool type from the **Type** list.
4. For SQL tool types: To modify the tool, use the following fields:

SQL Commands

Type the SQL commands that you want to use to update the alerts.status table in the ObjectServer.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL.

Clear the check box if you want the tool to run against only the first row in the selection.

Important: Do not select this checkbox if the SQL instructions explicitly state that the command must run against all rows.

Journal Entry

Type the SQL commands that you want to use to update the alerts.journal table in the ObjectServer.

If you leave the **Journal Entry** field empty, no journal entry is recorded when the tool is run. If you want a blank journal entry to be recorded when the tool is run, enter a space or type another character in the field.

Tip: You can use a Multiline String prompt for forced journal entry.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL, and modify all corresponding journal entries. Clear the check box if you want the tool to run against only the first row in the selection, and modify the corresponding journal entry.

5. For CGI tool types: To modify the tool, use the following fields:

URL Type the location of the CGI script. By default this field contains the correct path for the cgi-bin directory on the local Web GUI server. The \$(SERVER) keyword is resolved at runtime to *protocol://host:port/*

ibm/console/webtop. Append the path with the file name of the script that you want to associate with the tool.

To pass field data to a script on a remote server, replace \$(SERVER) with an external URL address. For example `http://www.ibm.com`.

The \$(NGFSERVER) keyword resolves at runtime to `protocol://host:port`.

Fields Click **Show** and select the ObjectServer columns that you want to pass as arguments to the tool from the **Available** column. If you select more than one data source from the **Data Sources** list, the **Fields** list contains only columns that are common to all data sources.

To pass a full list of all selected rows to a tool, select **Serial**, select the **Execute for each selected row** check box, and clear the **Window for each selected row** check box. At runtime, the **Serial** field resolves to the `$selected_rows.Serial` parameter. If you select more than one data source from the **Data Sources** list, add the `$selected_rows.datasource` parameter to distinguish between identical serial numbers that originate in different data sources.

Method

Specify the method for submitting field data to the CGI script:

- **GET**: Appends the name-value pairs to the URL, and is therefore useful if you want to bookmark the page containing the output.
- **POST**: Encodes the name-value pairs inside the body of the HTTP request. Note that firewalls can be configured to intercept and destroy this data stream, causing the form to be interpreted as empty.

The CGI script receives the data via a `QUERY_STRING` environment variable regardless of the method chosen. This differs from the CGI convention where, if a method of `POST` is used, the script receives data via `stdin`.

Open in

Select either the **New window** or **Specific window** radio button. If you select **Specific window**, type a name for the window in the adjacent text field.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

Window for each selected row

Select this check box to open a separate window for each selected row in the AEL.

6. For command-line tool types: To modify the tool, use the following fields:

Platform

Select this checkbox to specify which client operating system types can access this tool from the AEL.

Command

For each selected client operating system, modify the default entry and type the command to launch the target application. Include the full path to the command.

Tip: On the Windows operating system use the following construct to ensure the DOS console closes when the tool completes:

```
start /b cmd /k
```

In addition you can launch multiple applications from one tool by inserting && between each command. For example, to launch two Internet Explorer windows use the following command: **start /b cmd /k cmd iexplore.exe && start / cmd /k iexplore.exe**

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

7. For script tool types: To modify the tool, use the following fields:

Script Commands

Type the script that you want to use to configure the new tool.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

8. Define access for tools based on the groups that a user belongs to and the class of an event against which the tool is deployed:

Group Select the group that you want to access the tool and click >. To give all groups access to the selected tool, click >>. Users must be members of a selected group to use the tool. If you selected multiple data sources, this list displays all groups from all selected data sources.

Class Select the class that you want to access the tool and click >. To give all classes access to the selected tool, click >>.

Tip: Each event in the ObjectServer has an associated Class field. The value of this field is set by the event source. The Class field typically describes what kind of device an event comes from. If the class of an event matches any of the classes you select, the tool is available when the user selects the event in the AEL.

If you selected multiple data sources, this list displays classes from all selected data sources. Each time you select a different data source the list of available classes is updated accordingly. Any previously selected classes are cleared to allow new classes to be selected.

9. Click **Save**.

Results

The tool appears as an entry in the list of available tools and is now available for use in the AEL.

Related tasks:

“Creating command-line tools” on page 221

Create command strings that run a command-line action on a client system. With the command string available as a tool, users can instruct a client system to open a command prompt and pass field data to an application.

“Creating CGI tools” on page 214

Create a CGI tool that runs a CGI script from the AEL to process and return ObjectServer field information.

“Creating SQL tools” on page 218

Create SQL tools that contain SQL instructions for modifying the event data stored in the ObjectServer alerts.status and alerts.journal data tables. The SQL tools can be run from within the Active Event List (AEL).

“Copying tools” on page 231

You can copy any of the existing CGI, SQL, script or command-line tools to have a copy of the tool, or to modify the configuration of the tool and save it as a new tool. This helps in using an existing tool configuration as a template for new tools.

Renaming tools

You can change the name of any of the existing CGI, SQL, script or command-line tools.

About this task

If you rename a tool, the names of menu items that link to the tool might also be renamed. If a menu item has the same name as the tool, when you rename the tool the menu item is renamed automatically. If a menu item has a different name than the tool, when you rename the tool the menu item label does not change. In both cases, the link from the menu item to the tool is retained.

To rename a tool

Procedure

1. In the navigation, click **Administration > Event Management Tool > Tool Creation**.
2. In the Tool Creation page, select the tool you want to rename.
3. Enter a new name for the tool in the **Name** field. Do not use spaces or special characters in the name.

By default, the following characters cannot be used in tool names:

`$! £ % ^ & * () + = - ` ~ # @ ' : ; < > { } [] ? / \ \ | , "`

By default, the following characters cannot be used as the initial character of tool names:

`/ \ \ * ? " < > | & .`

These invalid characters are defined in the following file:

`webgui-home/etc/illegalChar.prop`

4. Click **Save**.

The tool appears as an entry in the list of available tools and is now available for use in the Active Event List (AEL).

Related tasks:

“Renaming menu items” on page 242

You can change the label of a tool that is displayed in the AEL menu. To rename the tool itself, edit the name of the tool in the Tools Editor.

Copying tools

You can copy any of the existing CGI, SQL, script or command-line tools to have a copy of the tool, or to modify the configuration of the tool and save it as a new tool. This helps in using an existing tool configuration as a template for new tools.

About this task

To copy a tool:

Procedure

1. Click **Administration > Event Management > Tool > Tool Creation**.
2. In the Tool Creation page, select the tool you want to copy from the list of tools displayed, and click **Copy Tool**.
3. In the **Name** field, type a new name for the tool. The tool name cannot contain spaces.

By default, the following characters cannot be used in tool names:

`$! £ % ^ & * () + = ~ ` ~ # @ ' : ; < > { } [] ? / \ \ | , "`

By default, the following characters cannot be used as the initial characters of tool names:

`/ \ \ * ? " < > | & .`

These invalid characters are defined in the following file:

`.webgui-home/etc/illegalChar.prop`

4. For SQL tool types: To modify the tool, use the following fields:

SQL Commands

Type the SQL commands that you want to use to update the alerts.status table in the ObjectServer.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL.

Clear the check box if you want the tool to run against only the first row in the selection.

Important: Do not select this checkbox if the SQL instructions explicitly state that the command must run against all rows.

Journal Entry

Type the SQL commands that you want to use to update the alerts.journal table in the ObjectServer.

If you leave the **Journal Entry** field empty, no journal entry is recorded when the tool is run. If you want a blank journal entry to be recorded when the tool is run, enter a space or type another character in the field.

Tip: You can use a Multiline String prompt for forced journal entry.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected

rows individually within the AEL, and modify all corresponding journal entries. Clear the check box if you want the tool to run against only the first row in the selection, and modify the corresponding journal entry.

5. For CGI tool types: To modify the tool, use the following fields:

URL Type the location of the CGI script. By default this field contains the correct path for the `cgi-bin` directory on the local Web GUI server. The `$(SERVER)` keyword is resolved at runtime to `protocol://host:port/ibm/console/webtop`. Append the path with the file name of the script that you want to associate with the tool.

To pass field data to a script on a remote server, replace `$(SERVER)` with an external URL address. For example `http://www.ibm.com`.

The `$(NGFSERVER)` keyword resolves at runtime to `protocol://host:port`.

Fields Click **Show** and select the ObjectServer columns that you want to pass as arguments to the tool from the **Available** column. If you select more than one data source from the **Data Sources** list, the **Fields** list contains only columns that are common to all data sources.

To pass a full list of all selected rows to a tool, select `Serial`, select the **Execute for each selected row** check box, and clear the **Window for each selected row** check box. At runtime, the `Serial` field resolves to the `$(selected_rows.Serial)` parameter. If you select more than one data source from the **Data Sources** list, add the `$(selected_rows.datasourcesource)` parameter to distinguish between identical serial numbers that originate in different data sources.

Method

Specify the method for submitting field data to the CGI script:

- **GET**: Appends the name-value pairs to the URL, and is therefore useful if you want to bookmark the page containing the output.
- **POST**: Encodes the name-value pairs inside the body of the HTTP request. Note that firewalls can be configured to intercept and destroy this data stream, causing the form to be interpreted as empty.

The CGI script receives the data via a `QUERY_STRING` environment variable regardless of the method chosen. This differs from the CGI convention where, if a method of `POST` is used, the script receives data via `stdin`.

Open in

Select either the **New window** or **Specific window** radio button. If you select **Specific window**, type a name for the window in the adjacent text field.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

Window for each selected row

Select this check box to open a separate window for each selected row in the AEL.

6. For command-line tool types: To modify the tool, use the following fields:

Platform

Select this checkbox to specify which client operating system types can access this tool from the AEL.

Command

For each selected client operating system, modify the default entry and type the command to launch the target application. Include the full path to the command.

Tip: On the Windows operating system use the following construct to ensure the DOS console closes when the tool completes:

```
start /b cmd /k
```

In addition you can launch multiple applications from one tool by inserting `&&` between each command. For example, to launch two Internet Explorer windows use the following command: **start /b cmd /k cmd iexplore.exe && start /b cmd /k iexplore.exe**

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

7. For script tool types: To modify the tool, use the following fields:

Script Commands

Type the script that you want to use to configure the new tool.

Execute for each selected row

Select this checkbox if you want the tool to run against all selected rows individually within the AEL. Clear the check box if you want the tool to run against only the first row in the selection.

8. Define access for the tool based on the groups that a user belongs to and the class of an event against which the tool is deployed:

Group Select the group that you want to access the tool and click `>`. To give all groups access to the selected tool, click `>>`. Users must be members of a selected group to use the tool. If you selected multiple data sources, this list displays all groups from all selected data sources.

Class Select the class that you want to access the tool and click `>`. To give all classes access to the selected tool, click `>>`.

Tip: Each event in the ObjectServer has an associated `Class` field. The value of this field is set by the event source. The `Class` field typically describes what kind of device an event comes from. If the class of an event matches any of the classes you select, the tool is available when the user selects the event in the AEL.

If you selected multiple data sources, this list displays classes from all selected data sources. Each time you select a different data source the list of available classes is updated accordingly. Any previously selected classes are cleared to allow new classes to be selected.

9. Click **Save**.

Results

The tool appears as an entry in the list of available tools and is now available for use in the AEL.

What to do next

For users to have access to a new tool in the AEL, you must create a menu entry for it first.

Related tasks:

“Modifying tools” on page 227

You can modify the settings of existing CGI, SQL, command-line or script tools.

Deleting tools

You can delete any of the existing CGI, SQL, script or command-line tools to remove it from the available tools in the AEL.

About this task

Procedure

1. Click **Administration > Event Management Tool > Tool Creation**. The Tool Creation page is displayed.
2. Select the specific tool you want to delete from the list of tools displayed, and click **Delete Tool**.
3. Click **OK** when prompted for confirmation. A message is displayed confirming that the tool has been deleted, and the tool is removed from the list of tools.

Tool runtime parameters

Tools can contain one or more runtime parameters. The values of these parameters are determined when the tool is executed.

@fieldname

fieldname is the name of a field in an ObjectServer alerts.status table. When the tool is executed, this variable is resolved to the value of the *fieldname* of the selected row.

\$selected_rows.fieldname

fieldname is the name of a field in the alerts.status table in an ObjectServer. When the tool is executed, this variable is resolved to a comma-separated string of the field values of all the selected rows.

If your environment uses multiple data sources, use the **\$selected_rows.serial** parameter in combination with the **\$selected_rows.datasources** parameter. This combination ensures that no duplicate serials are returned by tools because a unique combination of serial and data source is returned.

\$prompt.promptname

promptname is the name of a defined Web GUI prompt. When the tool is executed, this variable is resolved to the prompt value. If a prompt contains multiple values, the value can be a comma-separated list.

%username

username is resolved to the user name of the user. If the user is not an ObjectServer user, the string *#unknownUser* is substituted.

%datasource

datasource is resolved to the name of the data source from which events are received.

%cookie.cookieName

cookieName is resolved to the value of the cookie named *cookieName*. This value might be an empty string if not available.

\$appletparam.parameterName

parameterName is the name of an applet parameter on an AEL, or a portlet parameter in an Event Viewer. When the tool is executed, this variable is resolved to the value of the applet parameter. This value might be an empty string if not available.

\$selected_rows.datasource

Identifies the data source in which the row originates. This parameter does not resolve to an ObjectServer field. Use this parameter for tools that are to be run against events from multiple data sources to distinguish between identical data from different data sources.

CONVERSION(@fieldName)

fieldName is the name of a field in an ObjectServer alerts.conversion table. When the tool is executed, this variable is resolved to the conversion value of the field value for the selected row.

Example: Alert prioritized from CONVERSION(@Severity)

CONVERSION(\$selected_rows.fieldName)

fieldName is the name of a field in an ObjectServer alerts.status table. When the tool is executed, this variable is resolved to a comma-separated string of the conversion values of the field values for all selected rows.

CONVERSION(\$prompt.promptName)

promptName is the name of a prompt. When the tool is executed, this variable is resolved to the prompt label (as opposed to the prompt value).

Example: Alert assigned to CONVERSION(\$prompt.userassign)

Important: If **\$selected_rows.fieldName** is used (with or without CONVERSION), clear the **Execute for each selected row** check box in the tool settings to avoid performance degradation in the ObjectServer.

Specifying parameters

For CGI/URL, Command and Script tools, enclose these parameters (where supported) in braces. For example:

```
start cmd /k %WINDIR%\SYSTEM32\PING.EXE {$prompt.hostname}
```

For conversions, the CONVERSION keyword is enclosed in the braces. Braces are not necessary for parameters in SQL tools (including in the Journal component).

Parameters supported by each type of tool

The following table shows the parameters that each type of tool supports. For more information, see the footnotes.

Table 22. Parameters supported by each type of tool

Parameter	SQL (including Journal)	CGI/URL	Command	Script
@fieldName	Y	Y	Y	Y

Table 22. Parameters supported by each type of tool (continued)

Parameter	SQL (including Journal)	CGI/URL	Command	Script
<i>\$selected_rows.fieldname</i>	Y	Y (This parameter can also be implicitly inserted through the selection of fields during CGI/URL tool creation. At run time, the field resolves to the <i>\$selected_rows.fieldname</i> parameter.)	Y	Y
<i>\$prompt.promptname</i>	Y	Y	Y	Y
<i>%username</i>	Y	Y	Y	Y
<i>%datasource</i>	Y	Y (At run time, the CGI/URL tool inserts the data source parameter even if this parameter is not explicitly set during tool creation.)	Y	Y
<i>%cookie.cookieName</i>	N	Y	Y	Y
<i>\$appletparam.parameterName</i>	N	N	N	Y
<i>\$selected_rows.datasource</i>	Y	Y	Y	Y
CONVERSION(<i>@fieldname</i>)	Y	Y	Y	Y

Table 22. Parameters supported by each type of tool (continued)

Parameter	SQL (including Journal)	CGI/URL	Command	Script
CONVERSION(\$selected_rows.fieldname)	Y	Y(This parameter can also be implicitly inserted through the selection of fields during CGI/URL tool creation. At run time, the field resolves to the CONVERSION.\$selected_rows.fieldname parameter.)	Y	Y
CONVERSION(\$prompt.promptname)	Y	Y	Y	Y

Customizing AEL Menus

You can change the content of the menus of the Active Event List (AEL). You can add tool entries to the menus, create new sub-menus, and modify or delete menu items. A tool can include a prompt window or pop-up menu for the user to enter information, and you can edit these prompts or create new prompts.

The Alerts and Tools menus

The **Alerts** and **Tools** menus are configurable menus that can be accessed from the AEL. The **Alerts** menu contains a number of SQL tools you can use to interact with alert data and manipulate the data. By default, the **Tools** menu contains CGI tools and local (command-line) tools.

The **Alerts** menu can be accessed both from the AEL toolbar and by right-clicking an event in the AEL. The **Tools** menu can be accessed from the AEL toolbar.

You can add your own tools and sub-menus to either the **Alerts** menu or the **Tools** menu. To do this you must use the Tools Editor to create the tool you want to add, and then add the tools to the menu using the Menu Editor.

Tools in the **Tools** menu can be configured with access criteria that apply to users and events. Tools are visible only if the access criteria applied to them are met, or when no criteria are set because no groups or classes have been defined.

If multiple events are selected in the AEL, all access criteria must be satisfied for all selected events for a tool to be displayed.

By default, no access criteria are defined for any tools. Tools that have no access criteria defined are displayed for all users for all events. Changes in access criteria take effect when the AEL is reloaded, without the need to restart the Web GUI server.

The default content of the AEL menu bar cannot be changed. You cannot create new top-level menus.

Related tasks:

“Creating event management tools” on page 205

You can create and administer CGI, SQL, command line and script tools to be used in the AEL. You can also configure prompts that are displayed to users in the Active Event List (AEL) when performing actions with tools.

Adding tools to a menu

If you have created a new tool, you need to add the tool as an entry to an AEL menu in order to use the tool. You can also add other existing tools to menus.

About this task

To add tools to a menu:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. From the **Available menus** list, select a menu to which you want to add a tool and click **Modify**. The **Menus Editor** window is displayed.
3. Select **tool** from the **Available items** list to view a list of available tools.
4. Add an existing tool to the selected menu or create a new tool and then add the tool to the selected menu:
 - a. Select a tool from the list and click **Add selected item**. The tool is added to the list in the **Current items** pane on the left side of the page.
 - b. Select **<new tool>** from the list and click **Add selected item**. The **Tool Configuration** window opens. Define the new tool using the **Tool Configuration** and **Access Criteria** dialogs and click **Save**. Close the **Save Confirmation** window to return to the **Menus Editor** window. The tool is added to the **Current items** list and **Available items** lists.

Tip: If you have several tools in one menu, you can make the menu easier to read by adding a separator. Select **<separator>** from the **Available items** list and click **Add selected item**.

5. Click **Save**. The menu is now updated in the AEL, and is added as an entry in **Available menus**.

Related tasks:

“Creating event management tools” on page 205

You can create and administer CGI, SQL, command line and script tools to be used in the AEL. You can also configure prompts that are displayed to users in the Active Event List (AEL) when performing actions with tools.

Modifying existing tools

You can edit the tools available in the menus.

About this task

To edit a tool menu entry:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. Select the menu that contains the tool you want to modify and click **Modify**. The Menu Editor window is displayed.
3. Select the tool you want to edit from the **Current items** list and click the **Edit** button. The Tool Configuration window is displayed.
4. Edit the tool using the **Tool Configuration** and **Access Criteria** dialogs.
5. Click **Save** and close the Save Confirmation window to return to the Menu Editor window. The tool is saved with the changed settings.

Related tasks:

“Modifying tools” on page 227

You can modify the settings of existing CGI, SQL, command-line or script tools.

Creating submenus

You can create submenus of the **Alerts** and **Tools** AEL menus. Each submenu can contain tool entries, separator bars, and other submenus. A submenu can be used in different menus.

About this task

To create a new submenu:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. Click **New**. The **Menu Editor** window is displayed, with the **Name** and **Label** fields and **Current items** list blank.
3. Enter the properties for the new submenu using the following fields and buttons:

Name Type a name for the new submenu. Do not use spaces or special characters in the name.

Label Type a label for the submenu. This is the text that is displayed in the AEL.

Mnemonic

Select a key entry if you want users to be able to display this menu in the AEL using the keyboard shortcut of Alt and selected character.

Available items

Select **tool** to list all available tools you can then add to the menu, or select **menu** to list all available menus you can add to the menu. Also, you can select **<separator>** to add a line between menus and tools. For example, if you have several tools in one menu, you can make the menu easier to read by adding a separator.

Select the tool or menu you want to make available in the menu and click **Add selected item**.

Current items

Lists all the tools and menus added to the menu. Select the tool or menu you want to remove from the menu and click **Remove selected item**. Use the arrow buttons to the right of this list to change the display order of the tools and menus within the menu.

Rename

Select a tool in the **Current items** list and click this button to change the name of the tool as it appears in the AEL.

Label Type a label for the tool. This is the text that appears in the AEL.

Mnemonic

Select a key entry if you want users to be able to display this menu in the AEL using the keyboard shortcut of Alt and selected character.

ShortCut

Type a shortcut character if you want users to be able to display this menu in the AEL using the keyboard shortcut of Ctrl and the character provided here.

Restriction: The rename options are available only for tools.

Edit Select a tool or menu in the **Current items** list and click **Edit** to modify the tool or menu settings. If you have a tool selected, the Tool Configuration window opens. If you have a menu selected, you are asked to save changes and then redirected to the **Menus Editor** where you can modify the setup of the menu.

4. Click **Save** and **Ok**. The new submenu is displayed in the list of available menus.

Related tasks:

“Adding submenus to a menu”

You can customize what submenus are available in the **Alerts** and **Tools** AEL menus.

Adding submenus to a menu

You can customize what submenus are available in the **Alerts** and **Tools** AEL menus.

About this task

To add a submenu to a menu:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. Select the menu to which you want to add the sub-menu and click **Modify**.
3. In the **Available items** list, select **menu**. A list of available menus is displayed.
4. You can add an existing menu as a sub-menu or create a new menu and add the menu as a sub-menu:

- a. Select the menu you want to add and click **Add selected item**. The menu is added to the list in the **Current items** list. Optionally, configure the sub-menu using the **Edit** button.
- b. Select **<new menu>** from the list and click **Add selected item**. You are asked whether you want to save the changes to the menu that you are modifying. Click **Cancel** if you do not want to add a new menu, click **Yes** to save changes, or **No** to continue without saving changes. The Menu Editor window is displayed for the new menu that you are adding. Define the new menu.

Note: Only menu entries that are logically permitted by the nesting rules are displayed in the list. If the entry you are modifying is a sub-menu itself, the menu or menus above it are not shown.

5. Click **Save** and **Ok**. The new menu is added as a sub-menu to the menu that you chose. The new menu is visible in the list of available menus.

Related tasks:

“Creating submenus” on page 239

You can create submenus of the **Alerts** and **Tools** AEL menus. Each submenu can contain tool entries, separator bars, and other submenus. A submenu can be used in different menus.

Deleting submenus

You can remove any submenu created by users. You cannot delete the **Alerts** or **Tools** menus.

About this task

To delete a menu:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. Select the menu that you want to delete.
3. Click **Delete** and confirm the deletion.

Removing items from a menu

You can remove submenus, tools, and separators from an existing menu. Removing a tool or submenu from a menu does not delete the tool or submenu.

About this task

To remove items from a menu:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. Select the menu from which you want to remove items.
3. Click **Modify**. The Menu Editor window is displayed.
4. Select the item that you want to remove from the **Current items** list and click **Remove selected item**.

Tip: If you select an entry in the list, an icon displayed above the list to the right indicates whether that item is a tool, a menu, or a separator.

5. Click **Save** to save your changes.

Related tasks:

“Deleting tools” on page 234

You can delete any of the existing CGI, SQL, script or command-line tools to remove it from the available tools in the AEL.

“Deleting submenus” on page 241

You can remove any submenu created by users. You cannot delete the **Alerts** or **Tools** menus.

Changing the order of items in a menu

You can move items up and down within a menu to create a customized order of all items.

About this task

To change the order in which items are displayed in a menu:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. Select the menu that you want to modify.
3. Click **Modify**. The Menu Editor window is displayed.
4. Select the item that you want to move from the **Current items** list.
 - Click **Top** to move the item to the top of the menu.
 - Click **Bottom** to move the item to the bottom of the menu.
 - Click **Up** to move the item one place up in the menu.
 - Click **Down** to move the item one place down in the menu.

Tip: If you select an entry in the list, an icon displayed above the list to the right indicates whether that item is a tool, a menu, or a separator.

5. Click **Save** to save your changes.

Renaming menu items

You can change the label of a tool that is displayed in the AEL menu. To rename the tool itself, edit the name of the tool in the Tools Editor.

About this task

To change the label for a tool menu item:

Procedure

1. Click **Administration > Event Management Tools**, and click **Menu Configuration**.
2. Select the menu that you want to modify.
3. Click **Modify**. The Menu Editor window opens.
4. Select the tool menu item you want to modify from the **Current items** list and click **Rename**. A separate window is displayed.

Tip: If you select a submenu or other item that you cannot rename in this way, the **Rename** button is grayed out.

5. Edit the following fields:

Label Type a label for the tool. This is the text that appears in the AEL.

Mnemonic

Select a key entry if you want users to be able to display this menu in the AEL using the keyboard shortcut of Alt and selected character.

ShortCut

Type a shortcut character if you want users to be able to display this menu in the AEL using the keyboard shortcut of Ctrl and the character provided here.

Restriction: The rename options are available only for tools.

6. Click **Save** to save your changes.

Related tasks:

“Renaming tools” on page 230

You can change the name of any of the existing CGI, SQL, script or command-line tools.

Chapter 10. Customizing Event Viewers

You can customize the appearance and behavior of the Event Viewer. In addition you can define relationships for use in organizing the event list.

Setting the appearance and behavior of the Event Viewer

You can configure the appearance and behavior of the Event Viewer window. For example, you can specify the time interval between automatic refreshes of the event list.

Procedure

The following customization features of the AEL also affect the appearance and behavior of the Event Viewer:

- The refresh rate
- The **Show Colors** feature
- Changing the font color of an acknowledged event
- Changing how event severity is depicted

In addition, the following event list user preferences also affect the capabilities of the Event Viewer that are available to the user:

- Allow filter and view selection
- Allow filter builder access
- Show basic event information
- Show event details
- Show journals

Related tasks:

“Changing the AEL refresh rate” on page 195

You can change the time period in seconds after which the AEL is automatically refreshed on a regular basis by the Web GUI server.

“Modifying the AEL font and window settings” on page 200

You can set the AEL font type, and specify the color and toolbar preferences for AELs.

“Modifying the preferences of a Web GUI user” on page 101

Edit the user profile settings and event list options for Web GUI users.

“Changing the font color for an event after it has been acknowledged” on page 205

You can set the color of the event font to change to after the event has been acknowledged.

“Changing how event severity is depicted in the AEL” on page 203

You can specify how the severity of events is displayed in the AEL: as icons, as text, or as a combination of both icons and text.

“Setting Event Viewer portlet preferences” on page 180

To customize the appearance and setup of the Event Viewer portlet, edit the portlet preferences.

Defining event relationships

Use event relationships to organize an Event Viewer. Event relationships group events in the list by the relationships between them.

For example, some events can be considered to be the root causes of problems and some events can be considered to be symptoms of those problems. You can define a hierarchical event relationship in which root cause events are treated as parent events, and are displayed at the top level of the hierarchy, and symptom events are treated as child events and are displayed below root cause events in the hierarchy.

Use the Relationship Definitions portlet to define and manage event relationships. You can create, edit, and delete relationships.

About this task

The relationship definition contains two fields, **Column** and **Key column**, that define the parent-child relationship. You assign fields from the alerts.status table to the **Column** field and **Key column** field. The **Key column** field defines which field of the alerts.status table uniquely identifies parent events. In child events, the **Column** field is set to the value of the **Key column** field of the parent event, to indicate which event is the parent of the child events.

The alerts.status field that you set in the **Column** field is most effective if the field contains unique, numeric values only. It is possible to set a text field, but the performance of the Event Viewer might be impaired. If you set a field that does not contain unique values, duplicate tree structures are displayed in the Event Viewer, to account for the non-uniqueness of the field values.

The Web GUI is supplied with a predefined event relationship. This relationship organizes an Event Viewer by root causes and symptoms for events that are generated by IBM Tivoli Network Manager. Additional configuration is shipped with the Tivoli Netcool/OMNIBus server components that creates a relationship between root-cause and symptom events that originate from a virtual environment. If the Tivoli Netcool/OMNIBus deployment is set up to monitor virtual events, you can apply this relationship to the Web GUI by running the WAAPI client on a WAAPI command file.

Procedure

To create or edit an event relationship:

1. In the Relationship Definitions page, click **Create New Relationship** or select an existing relationship and click **Modify Selected Relationship**.
2. Complete the following fields:

Name Provide an identifier for this relationship that is unique among all the defined relationships. The identifier cannot include spaces.

Display name

Provide a name that users see when selecting a relationship to apply to the Event Viewer.

Description

Provide a description of the relationship.

Data sources

Select the data sources that this relationship uses:

- a. Click the arrow next to **Data sources** to reveal a list of the available data sources.
- b. Set the check box for each data source to include in this relationship.

Column

Select the column that defines the relationship.

Key column

Select the column that is the key for the column selected in **Column**.

3. Save and close the Relationship Definitions page.
4. Use the View Builder to add the relationship to an existing view, or create a new view and add the relationship to that view.
5. Apply the view in which you defined the relationship to the Event Viewer and test that the tree-structure is displayed and contains the expected parent-child event relationship.
6. If you do not want the fields defined in the column and key column of the event relationship to be visible in the Event Viewer, re-edit the view and hide these fields.

Example

The shipped configuration for Network Manager IP Edition uses the following fields of the alerts.status table to define a parent-child relationship between symptom and root-cause events.

NmosSerial

This field is set as the column. If an event is a symptom event, the Serial value of the root-cause event is assigned to the NmosSerial field. If the event is a root-cause event, the NmosSerial field is empty.

Serial This field is set as the key column, so is the parent of the parent child-relationship.

To show how this configuration works, consider the following example: An event with a Serial value of 35 is identified as a root-cause event. Events with the Serial values 23, 45, and 102, are identified as symptoms of the root-cause. In the Event Viewer, Serial 35 is the root of the tree structure and 23, 45, 102 are the subnodes. The NmosSerial value of events 23, 45, and 102 is 35, to indicate that they are symptoms of the root-cause.

What to do next

If your deployment includes IBM Tivoli Netcool/Impact, you can perform further event enrichment on the events in the relationship.

Related tasks:

“Creating views” on page 265

Create views that are dynamically applied to Active Event List data. The views determine what information is displayed from the available event data.

“Organizing an event list by relationships” on page 293

You can apply a view that defines a relationship to reorganize an event list

“Adding and removing columns” on page 266

Set what event information is displayed from the available event data. The selected event data is added in columns to the AEL.

Related information:

 [Netcool/Impact information center](#)

Chapter 11. Filtering event information

Network events typically create many alerts that are not of immediate importance to the personnel monitoring the system. Use filters and views to control the event information that is displayed to users.

Filters

Filters constrain the rows returned by a data source by applying SQL correlation conditions to the field data in the data source. Filters can be applied to the following event displays in the Web GUI: the Active Event List (AEL), Lightweight Event List (LEL), the Event Viewer, Table View, and monitor boxes on an Event Dashboard. To create and edit filters, you use an HTML utility called the Filter Builder.

Filters can be created by Web GUI administrators who have the `ncw_admin` role, and by users who have the `ncw_user` role and the `netcool_rw` role.

Important: Each filter requires at least one data source. From this data source, the Filter Builder obtains the fields that you can use in the SQL query. If you select multiple data sources, the Filter Builder displays only the fields that are common to all those data sources. The data sources selected in the Filter Builder are not used in the AEL, Map Editor, or Event Dashboard to retrieve event data. You select the data sources for event data retrieval in the portlet preferences for the AEL, Map Editor, and Event Dashboard.

When a filter is applied to an event list, only the alerts that meet the criteria are displayed. A view may be assigned to a filter. If you do not assign a view to a filter, a default view is assigned.

The following example shows a filter:

```
Node like '^[a-zA-Z].*' and Severity > 3
```

This statement matches all alerts where the node starts with an alphabetic character and the severity of this data is greater than minor, that is, major or critical events.

Filter categories

Filter categories control user access to filters, and are used for data migrated from IBM Tivoli Netcool/Webtop.

Global filters

Global filters are accessible to all users. By default, a user who is not an administrator can create, copy, and edit global filters.

You can modify global filters and copy them to the user profiles of other users. You can also create new global filters and delete them.

User filters

User filters are specific to a particular user; only that user and the administrator can access this category of filter. In the Filter Builder, user filters are contained in a list called **My Filters**.

You can access the filters that all users have in their user profiles, and create filters in the profiles of users. In the **Available Filters** list, these filters are classified as *username Filters*.

Group filters

Group filters are accessible to all members of a user group. Group filters enable the creation of filters tailored to the needs of specific groups of user, such as network operators. In the **Available filters** list, these filters are classified as *groupname Filters*.

System filters

System filters are accessible to administrators only. An administrator can create, edit, and delete a system filter. In the AEL, only administrators can select system filters from the **Filters** list. However, if the AEL was launched with a system filter already applied, non-administrators can view and select this system filter from the **Filters** list. A Web GUI installation upgraded or migrated from Netcool/Webtop uses system filters to hold entity data migrated from Netcool/Webtop.

Filter collections

Filter collections are logical groupings of filters. They are also used for migrated data from Netcool/Webtop. A Web GUI installation upgraded or migrated from Netcool/Webtop uses filter collections to hold the data migrated from entity groups.

Only global and system filters can be members of a filter collection. To edit a filter collection, your user must have the `ncw_admin` role. You use the Web GUI Administration Application Program Interface (WA-API) client to create or delete filter collections.

Dependent filters

Dependent filters concatenate the SQL statements from multiple filters using the SQL OR operator. Dependent filters do not have their own SQL filter statements; they use only the statements from other filters.

Before you delete a filter, you must make sure that the filter is not used in any dependent filters. Otherwise, the dependent filter may produce incorrect event data.

Transient filters

Transient filters exist for the duration of your current session only.

Related concepts:

“Filter Builder overview” on page 252

The Filter Builder is an HTML utility that you use to construct filters that are dynamically applied to event data.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Modifying the preferences of a Web GUI user” on page 101

Edit the user profile settings and event list options for Web GUI users.

Views

Views constrain the columns displayed in an Active Event List (AEL) and the Event Viewer. You can control the order in which columns are displayed, lock columns in the display, and control the sorting of information in the columns. Views in the Web GUI differ from the views that you can configure in Tivoli Integrated Portal. Views in Tivoli Integrated Portal are a defined set of tasks that are displayed in the console navigation pane

Views can also be applied to the deprecated Lightweight Event List (LEL) and Table View.

When you create a view, you must select at least one data source. The data source is used to control the columns that can be included in the view (the columns represent the fields in the data source). If you select multiple data sources, you can select fields from all data sources.

View categories

Views are either accessible to all users, or are assigned to a user profile. Access to views is controlled as follows:

Global views

These views are accessible to all users. As a read-write user, or a read-only user, you can copy global views to your user profile, where you can modify the views.

You can modify global views and copy them to the user profiles of other users. You can also create new global views.

User views

These views are stored in your user profile; only you and the administrator can access these profiles. User views are contained in a list called **My Views**.

You can access the views that all users have in their user profiles, and create views in the profiles of users. In the **Available Views** list, these views are classified as *username Views*. To assign views to multiple users, you can make copies of existing views and assign them to a user group. The views remain associated with the users in the group, not with the group itself.

System views

In the View Builder, access to system views, and the ability to create, edit, and delete system views is restricted to administrators. In the AEL, only administrators can select system views from the **Views** list. If the AEL was launched with a system view already applied, non-administrators can view and select this system view from the **Views** list. If your Web GUI installation was upgraded or migrated from Netcool/Webtop, system views are present after upgrade or migration. The system views contain entity view data migrated from Netcool/Webtop.

Related concepts:

“The Web GUI in a load balancing environment” on page 133
Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Modifying the preferences of a Web GUI user” on page 101
Edit the user profile settings and event list options for Web GUI users.

Setting up filters for event data

Use the Filter Builder to apply filters to an event list or Event Dashboard portlet. Administrators and read-write users can create and edit filters.

Related concepts:

“The Web GUI in a load balancing environment” on page 133
Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

Filter Builder overview

The Filter Builder is an HTML utility that you use to construct filters that are dynamically applied to event data.

Important: Each filter requires at least one data source. From this data source, the Filter Builder obtains the fields that you can use in the SQL query. If you select multiple data sources, the Filter Builder displays only the fields that are common to all those data sources. The data sources selected in the Filter Builder are not used in the AEL, Map Editor, or Event Dashboard to retrieve event data. You select the data sources for event data retrieval in the portlet preferences for the AEL, Map Editor, and Event Dashboard.

You can use the following modes to create filters; the Filter Builder displays a tab for each mode.

Basic Provides a set of lists and text fields that you use to specify the filter conditions. To build the conditions, select a field from the specified data source or data sources, select a comparator, and type a numeric or string value. The value is the filtering criteria for the field. If you use basic mode to construct your filter, you can view the resulting SQL in the text field on the **Advanced** tab.

Advanced

Provides a text field where you can enter ObjectServer SQL syntax.

If you create a filter in advanced mode, it might not be possible to express the SQL syntax in the fields on the **Basic** tab. Once you save a filter created in advanced mode, the **Basic** tab is removed for that filter.

For more information about ObjectServer SQL syntax, see the *IBM Tivoli Netcool/OMNIBus Administration Guide*.

Dependent.

This tab is displayed only for dependent filters. On this tab, use the **Search** fields to identify the filters that you want to use for the dependencies. After you have identified the required filters, use the buttons to move the

filters from the **Available filters** list to the **Selected dependencies** list. In a dependent filter, the SQL WHERE statements of each filter are concatenated by using OR statements.

Filter Builder metrics

A metric is an aggregate statistic that can be derived from the events that match a filter to display a useful figure, for example, an average, count, or sum of all field values. When a filter is displayed using a monitor box linked to an AEL, the metric information obtained from the set of events that match the filter is used for this display.

User capabilities

The privileges that each user has determines the operations they can carry out on filters, as the following table shows.

Table 23. User capabilities for filters

User privilege	Capabilities
ncw_user	<p>A user with the ncw_user privilege can do the following:</p> <ul style="list-style-type: none"> • Add, edit and delete their personal filters. That is the filters that appear on the My Filters. list. • By default, add and edit global filters. The value of the users.global.filter.mode property in <i>webgui-home/etc/server.init</i> determines whether a user can add and edit global filters. When the property is set to 1 a user can add and edit global filters. When it is set to 0 a user cannot add or edit global filters. • By default, add and edit group filters. The value of the users.group.filter.mode property in <i>webgui-home/etc/server.init</i> determines whether a user can add and edit group filters. When the property is set to 1 a user can add and edit group filters. When it is set to 0 a user cannot add or edit group filters.
ncw_admin	A user with the ncw_admin privilege can add, edit, and delete any filter, including the filters in any user's My Filters . list.

Related concepts:

“Filters” on page 249

Filters constrain the rows returned by a data source by applying SQL correlation conditions to the field data in the data source. Filters can be applied to the following event displays in the Web GUI: the Active Event List (AEL), Lightweight Event List (LEL), the Event Viewer, Table View, and monitor boxes on an Event Dashboard. To create and edit filters, you use an HTML utility called the Filter Builder.

“Filter Builder overview” on page 252

The Filter Builder is an HTML utility that you use to construct filters that are dynamically applied to event data.

Creating and editing filters

Use the Filter Builder to create and edit filters for event data.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Creating and editing filters in basic mode

To create event filter conditions using lists that constrain your selection of values from the data source and the available comparators, use the Filter Builder in basic mode.

About this task

To create and edit filters in basic mode:

Procedure

1. Open the Filter Builder.
2. To create a new filter, click **New Filter**.
3. To edit an existing filter.
 - a. Select the list that contains the required filter.
 - b. After the list has refreshed, click the filter.
4. Select the users you want to grant access to the filter and click **OK**.

Note: If a new user type needs access to an existing user specific filter, you must first create a copy of the filter, and then reassign the user type.

- **Public:** Select **global** to create a filter accessible to all users. Select **system** to create a filter accessible to Web GUI administrators only. All Web GUI users can select and copy global filters.
- **Users:** Select the users that have access to this filter. For each of the selected users, a copy of the filter appears in the **My Filters** list.

The value of the **users.reload.mode** property in *webgui-home/etc/*

server.init determines which users appear in this section of the dialog.

When this property is set to 0, the section contains all system users. When set to 1, the section contains only users that have the *ncw_** roles.

5. Specify the general properties for the filter:

Filter Name

Type a name for the filter. The filter name cannot contain spaces. In each category of filter, filters must have unique names. However filters in different categories (for example, System and User) can have the same name.

By default, a filter name cannot contain the following characters:

\$! £ % ^ & * () + = - ` ~ # @ ' : ; < > { } [] ? / \ \ | , "

These invalid characters are defined in the following file:

webgui-home/etc/illegalChar.prop.

Default View

Select the view to associate with the filter. The default view is applied when you launch an AEL with the filter but do not specify a view.

The default view is also applied when you launch an AEL from an Event Dashboard by clicking the monitor box that is associated with the filter.

Collection

For global filters and system filters only: select the filter collection or collections to which you want to add the filter.

Description

Type a description that helps identify the purpose of the filter.

Data Source

Select the data source or data sources that contain the fields against which you want to run queries. Click **Show Data Sources** to display a list of available data sources.

Important: Each filter requires at least one data source. From this data source, the Filter Builder obtains the fields that you can use in the SQL query. If you select multiple data sources, the Filter Builder displays only the fields that are common to all those data sources. The data sources selected in the Filter Builder are not used in the AEL, Map Editor, or Event Dashboard to retrieve event data. You select the data sources for event data retrieval in the portlet preferences for the AEL, Map Editor, and Event Dashboard.

If you want to add a data source to an existing filter, make sure that the alerts.status table of the new data source contains all the fields that the filter specifies. If you add a data source that does not contain all the specified fields, the filter might return erroneous results.

The default data source corresponds to the default ObjectServer specified in the ncwDataSourceDefinitions.xml configuration file.

6. Click the **Basic** tab and, in the first row, create a filter condition as follows:
 - a. From the **Field** list, select a field from the specified data source.
 - b. From the **Comparator** list, select a comparator.
 - c. In the **Value field**, type a numeric data type value, or a string data type value. The data types must correspond to those in the ObjectServer field. String data type entries in the **Value** field must be contained in single quotes.
 - d. Optional: Use the LIKE and NOT LIKE comparators for regular expression pattern-matching metacharacters against the entry in the **Value** field.

Restriction: Do not use the getdate expression in the **Value** field. If you want to apply the getdate expression, use advanced mode instead.

7. To add additional filter conditions, click **New Condition**. You can add as many filter conditions as required.
8. Use the radio buttons under **Match** to specify how the filter conditions combine in aggregate:
 - Select **And** to trigger the filter only if all the conditions are met.
 - Select **Or** to trigger the filter if any of the conditions are met.

See “Sample SQL statements” on page 256 for sample SQL statements that are generated based on the radio button selected.

9. Optional: To preview the literal SQL WHERE clause output, click **Advanced**.
10. Click **Metric** and use the following fields to set the metric value:

Label Type a title for the metric.

Function

Select a function to perform on the field data. The following functions are available:

- **Average:** Calculates the average value of the selected field for all records that match the filter.
- **Count:** Calculates the total number the records that match the filter. The selected field is not used for this calculation.
- **Sum:** Calculates the total of the selected field for all records that match the filter.
- **Minimum:** Returns the lowest value of the selected field in records that match the filter.
- **Maximum:** Returns the highest value of the selected field in records that match the filter.

Field Select a field from the list that the function is to act on. The list contains all available fields in the alerts.status table of the data source.

11. Click **Save** to save the filter and continue working in the Filter Builder, or click **Save and Close** to save the filter and close the Filter Builder.

Sample SQL statements

In step 8 on page 255, when the **And** radio button is selected, the filter rows create the following SQL statement:

```
SELECT * from alerts.status where Node = 'node1' and Severity > 4 and  
Summary like 'alert on .*'
```

When the **Or** radio button is selected, the filter rows create the following SQL statement

```
SELECT * from alerts.status where Node = 'node1' or Severity > 4 or  
Summary like 'alert on .*'
```

Creating and editing filters in advanced mode

Specify event data filtering conditions in ObjectServer SQL syntax.

About this task

For more information about ObjectServer SQL syntax, see the *IBM Tivoli Netcool/OMNIBus Administration Guide*.

To create or edit a filter using advanced mode:

Procedure

1. Open the Filter Builder.
2. To create a new filter, click **New Filter**.
3. To edit an existing filter.
 - a. Select the list that contains the required filter.
 - b. After the list has refreshed, click the filter.If you are editing an existing filter, omit step 4.
4. Select the users you want to grant access to the filter and click **OK**.
 - **Public:** Select **global** to create a filter accessible to all users. Select **system** to create a filter accessible to Web GUI administrators only. All Web GUI users can select and copy global filters.

- **Users:** Select the users that have access to this filter. For each of the selected users, a copy of the filter appears in the **My Filters** list.

The value of the **users.reload.mode** property in *webgui-home/etc/server.init* determines which users appear in this section of the dialog. When this property is set to 0, the section contains all system users. When set to 1, the section contains only users that have the *ncw_** roles.

5. Use the following fields and buttons to set the general properties for the filter:

Filter Name

Type a name for the filter. The filter name cannot contain spaces. In each category of filter, filters must have unique names. However filters in different categories (for example, System and User) can have the same name.

By default, a filter name cannot contain the following characters:

\$! £ % ^ & * () + = ~ ` ~ # @ ' ; < > { } [] ? / \ | , "

These invalid characters are defined in the following file:

webgui-home/etc/illegalChar.prop.

Default View

Select the view to associate with the filter. The default view is applied when you launch an AEL with the filter but do not specify a view. The default view is also applied when you launch an AEL from an Event Dashboard by clicking the monitor box that is associated with the filter.

Collection

For global filters and system filters only: select the filter collection or collections to which you want to add the filter.

Description

Type a description that helps identify the purpose of the filter.

Data Source

Select the data source or data sources that contain the fields against which you want to run queries. Click **Show Data Sources** to display a list of available data sources.

Important: Each filter requires at least one data source. From this data source, the Filter Builder obtains the fields that you can use in the SQL query. If you select multiple data sources, the Filter Builder displays only the fields that are common to all those data sources. The data sources selected in the Filter Builder are not used in the AEL, Map Editor, or Event Dashboard to retrieve event data. You select the data sources for event data retrieval in the portlet preferences for the AEL, Map Editor, and Event Dashboard.

If you want to add a data source to an existing filter, make sure that the *alerts.status* table of the new data source contains all the fields that the filter specifies. If you add a data source that does not contain all the specified fields, the filter might return erroneous results.

The default data source corresponds to the default *ObjectServer* specified in the *ncwDataSourceDefinitions.xml* configuration file.

6. Click **Advanced**.
7. In the **SQL Where clause** text field, enter any valid *ObjectServer* SQL WHERE clause.
For brevity, the SELECT part of the statement is omitted and you supply only

the WHERE clause; the view associated with the filter determines the columns in the alerts.status table that are selected..

8. Click **Metric** and use the following fields to set the metric value:

Label Type a title for the metric.

Function

Select a function to perform on the field data. The following functions are available:

- **Average:** Calculates the average value of the selected field for all records that match the filter.
- **Count:** Calculates the total number the records that match the filter. The selected field is not used for this calculation.
- **Sum:** Calculates the total of the selected field for all records that match the filter.
- **Minimum:** Returns the lowest value of the selected field in records that match the filter.
- **Maximum:** Returns the highest value of the selected field in records that match the filter.

Field Select a field from the list that the function is to act on. The list contains all available fields in the alerts.status table of the data source.

9. Click **Save** to save the filter and continue working in the Filter Builder, or click **Save and Close** to save the filter and close the Filter Builder.

Creating and editing dependent filters

To aggregate the SQL WHERE clauses of multiple filters by using the OR operator, create a dependent filter.

About this task

Tip: All the filters that you use in a dependent filter must contains an SQL WHERE statement.

To create or edit a dependent filter:

Procedure

1. Open the Filter Builder.
2. Create or edit a filter:
 - To create a new filter, click **New Filter**.
 - To edit an existing filter select the list that contains the required filter, and then select the filter from the refreshed list. You can omit step 3.
3. Select the users you want to grant access to the filter and click **OK**.
 - **Public:** Select **global** to create a filter accessible to all users. Select **system** to create a filter accessible to Web GUI administrators only. All Web GUI users can select and copy global filters.
 - **Users:** Select the users that have access to this filter. For each of the selected users, a copy of the filter appears in the **My Filters** list.

The value of the **users.reload.mode** property in *webgui-home/etc/server.ini* determines which users appear in this section of the dialog. When this property is set to 0, the section contains all system users. When set to 1, the section contains only users that have the ncw_* roles.
4. Use the following fields to set the general properties for the filter:

Filter Name

Type a name for the filter. The filter name cannot contain spaces. In each category of filter, filters must have unique names. However filters in different categories (for example, System and User) can have the same name.

By default, a filter name cannot contain the following characters:

\$! £ % ^ & * () + = ~ ` ~ # @ ' : ; < > { } [] ? / \ \ | , "

These invalid characters are defined in the following file:

webgui-home/etc/illegalChar.prop.

Default View

Select the view to associate with the filter. The default view is applied when you launch an AEL with the filter but do not specify a view. The default view is also applied when you launch an AEL from an Event Dashboard by clicking the monitor box that is associated with the filter.

Collection

For global filters and system filters only: select the filter collection or collections to which you want to add the filter.

Description

Type a description that helps identify the purpose of the filter.

Data Source

Select the data source or data sources that contain the fields against which you want to run queries. Click **Show Data Sources** to display a list of available data sources.

Important: Each filter requires at least one data source. From this data source, the Filter Builder obtains the fields that you can use in the SQL query. If you select multiple data sources, the Filter Builder displays only the fields that are common to all those data sources. The data sources selected in the Filter Builder are not used in the AEL, Map Editor, or Event Dashboard to retrieve event data. You select the data sources for event data retrieval in the portlet preferences for the AEL, Map Editor, and Event Dashboard.

If you want to add a data source to an existing filter, make sure that the alerts.status table of the new data source contains all the fields that the filter specifies. If you add a data source that does not contain all the specified fields, the filter might return erroneous results.

The default data source corresponds to the default ObjectServer specified in the ncwDataSourceDefinitions.xml configuration file.

5. On the **Dependent** tab, use the **Search** fields to identify the filters that you want to use for the dependencies.

Tip: To search through large numbers of filters, select the filter category, and type the filter name in the **Search** field. If a matching filter is found in the selected filter category, the filter is selected in the **Available filters** list.

6. Add filters from the **Available filters** list to the **Selected dependencies** list as required.
7. To set a metric for the filter, click **Metric** and use the following fields to specify the metric value:

Label Type a title for the metric.

Function

Select a function to perform on the field data. The following functions are available:

- **Average:** Calculates the average value of the selected field for all records that match the filter.
- **Count:** Calculates the total number the records that match the filter. The selected field is not used for this calculation.
- **Sum:** Calculates the total of the selected field for all records that match the filter.
- **Minimum:** Returns the lowest value of the selected field in records that match the filter.
- **Maximum:** Returns the highest value of the selected field in records that match the filter.

Field Select a field from the list that the function is to act on. The list contains all available fields in the alerts.status table of the data source.

8. Click **Save** to save the filter and continue working in the Filter Builder, or click **Save and Close** to save the filter and close the Filter Builder.

Editing filter collections

You can add filters to filter collections and remove filters.

Before you begin

To edit filter collections, your user must have the ncw_admin role.

About this task

You can add only global and system filters to a filter collection.

You can use the Filter Builder only to add filters to collections or remove filters from collections. To create or delete filter collections, or to modify collections (for example by changing the name of a collection), use the WAAPI client. There are sample WAAPI commands for filter collections in the following file:

```
webgui-home/waapi/etc/samples/samplerequest_filtercollection.xml
```

Procedure

To edit filter collections:

- To add a filter to a collection:
 1. Open the Filter Builder.
 2. Select **Category** radio button.
 3. Select the category that contains the required filter, and then select the filter. The properties of the selected filter are loaded.
 4. In the **Collections** list of the filter properties, select the filter collection or collections to which you want to add the filter.
 5. Click **Save and Close** to save the assignment of the filter to the collection or collections, and close the Filter Builder.
- To remove a filter from a collection:
 1. Open the Filter Builder.
 2. To identify which filters are assigned to a collection, select the **Collection** radio button and then select the required collection.

The list of filters assigned to the collection is sorted into global filters and system filters.

3. Select the filter that you want to remove from the collection.

The properties of the selected filter are loaded. In the **Collections** list, the collections to which the filter is assigned are highlighted.

4. Press CTRL and click the filter collection from which you want to remove the filter.
5. Click **Save and Close** to save the assignment of the filter to the collection or collections, and close the Filter Builder.

Filter Builder comparison operators

When you use the Filter Builder in basic mode, the **Comparator** field contains these comparison operators.

The operators are described in the following table.

Table 24. Comparison operators in the basic mode of the Filter Builder

Operator	Description
=	Tests for equality.
<>	Tests for inequality.
!=	
< > <= >=	Tests for greater than (>), less than (<), greater than or equal to (>=) or less than or equal to (<=). These operators perform case-sensitive string comparisons. In standard ASCII case-sensitive comparisons, upper case letters precede lower case letters.
[not] like	The like operator performs string comparisons. The string following the like operator, which can be the result of a regular expression, is the pattern to which the column expression is compared. A regular expression can include regular expression pattern-matching metacharacters. The not keyword inverts the result of the comparison.

Pattern-matching meta characters

Regular expressions are made up of normal characters and metacharacters. Normal characters include upper and lower case letters and numbers

Regular expression pattern-matching can be performed with either a single character or a pattern of one or more characters in parentheses, called a character pattern. Metacharacters have special meanings, as described in the following table.

Table 25. Pattern-matching metacharacters

Pattern-matching metacharacter	Description	Example
*	This metacharacter matches zero or more instances of the preceding character or character pattern.	The pattern goo* matches my godness, my goodness, and my goodness, but not my gdness.

Table 25. Pattern-matching metacharacters (continued)

Pattern-matching metacharacter	Description	Example
+	This metacharacter matches one or more instances of the preceding character or character pattern.	The pattern <code>goo+</code> matches <code>my goodness</code> and <code>my goodness</code> , but not <code>my godness</code> .
?	This metacharacter matches zero or one instance of the preceding character or character pattern.	The pattern <code>goo?</code> matches <code>my godness</code> and <code>my goodness</code> , but not <code>my goodness</code> or <code>my gdness</code> .
\$	This metacharacter matches the end of the string.	The pattern <code>end\$</code> matches the end, but not the ending.
^	This metacharacter matches the beginning of the string.	The pattern <code>^severity</code> matches <code>severity level 5</code> , but not <code>The severity is 5</code> .
.	This metacharacter matches any single character.	The pattern <code>b.at</code> matches <code>baat</code> , <code>bBat</code> , and <code>b4at</code> , but not <code>bat</code> or <code>bB4at</code> .
[abcd]	This metacharacter matches any characters in the square brackets or in the range of characters separated by a hyphen (-), such as [0-9].	<code>^[A-Za-z]+\$</code> matches any string that contains only upper or lower case letter characters.
[^abcd]	Matches any character except those in the square brackets or in the range of characters separated by a hyphen (-), such as [0-9].	<code>[^0-9]</code> matches any string that does not contain any numeric characters.
()	This metacharacter indicates that the characters in the parenthesis should be treated as a character pattern.	<code>A(boo)+Z</code> matches <code>AbooZ</code> , <code>AboobooZ</code> , and <code>AboobooobooZ</code> , but not <code>AboZ</code> or <code>AboooZ</code> .
	This metacharacter matches one of the characters or character patterns on either side of the vertical bar.	<code>A(B C)D</code> matches <code>ABD</code> and <code>ACD</code> , but not <code>AD</code> , <code>ABCD</code> , <code>ABBD</code> , or <code>ACCD</code> .

Table 25. Pattern-matching metacharacters (continued)

Pattern-matching metacharacter	Description	Example
\	The backslash escape character indicates that the metacharacter following should be treated as a regular character. The metacharacters in this table require a backslash before them if they appear in a regular expression.	To match an opening square bracket, followed by any digits or spaces, followed by a closed bracket, use the following regular expression: <code>\[[0-9]*\]</code> .

Copying filters

Users who are not administrators can create copies of global filters, group filters, and filters in the **My Filters** category; each copy remains in its original category. Administrators can copy filters from any category to any other, including filters belonging to individual users.

About this task

You can deploy filters directly to individual read-write users, or copy filters to and from the public **Global Filters** category, any group category or the **My Filters** category. In addition, filters can be allocated to user groups.

To copy a filter:

Procedure

1. Open the Filter Builder.
2. Choose the category that contains the filter from the **Available Filters** list.
3. From the filter list, select the filter you want to copy. The page updates with the filter properties.
4. Click **Copy Filter**.
5. Select the users who can access the copy of the filter:

Public Select **global** to create a filter accessible to all users. Select **system** to create a filter accessible to Web GUI administrators only. All Web GUI users can select and copy global filters.

Users Select the users that have access to this filter. For each of the selected users, a copy of the filter appears in the **My Filters** list.

The value of the **users.reload.mode** property in `webgui-home/etc/server.init` determines which users appear in this section of the dialog. When this property is set to 0, the section contains all system users. When set to 1, the section contains only users that have the `ncw_*` roles.

Groups

Select the groups that have access to this filter. For each of the selected groups, a copy of the filter appears in the **groupname Filters** list.

The value of the **groups.reload.mode** system property in `webgui-home/etc/server.init` determines which groups appear in this

section of the dialog. When the property is set to 0, the section contains all groups. When the property is set to 1, the section contains only groups that have the ncw_* roles.

6. Click **OK**. The page updates and you are presented with a copy of the chosen filter.
7. Make any modifications necessary to the filter configuration, and click **Save**. Each user, group, and public category selected in step 5 on page 263 receives a copy of the filter.

Example

For example, to copy a filter from the administrator's personal filter category to the publicly available global category:

1. Choose **My Filters** from the **Available Filters** list.
2. From the filter list, select the filter you want to copy. The page updates with the filter properties.
3. Click **Copy Filter**. The next page contains a grouped list of the possible filter recipients.
4. Select the **global** check box and click **OK**. The page updates and you are presented with a copy of the chosen filter.
5. Make any modifications necessary to the filter configuration, and click **Save**. The filter is saved to the **global** group. Users can now copy the filter from this group to their personal **My Filters** group.

Deleting filters

Delete filters that are no longer required.

Before you begin

Remove the filter that you want to delete from any dependent filters. If you delete a filter that is still specified in a dependent filter, the dependent filter may return incorrect or misleading event information.

About this task

As a read-write user, you can delete only filters in the My Filters list. These filters are assigned to your user.

You can delete filters assigned to your user, filters that are assigned to other users, filters assigned to groups, and global and system filters.

Procedure

1. Open the Filter Builder.
2. From the **Available Filters** list, select the category that contains the filter you want to delete.
3. Select the filter and click **Delete Filters**.
4. A confirmation dialog appears. Click **OK** to delete the filter.

Setting up views for event lists

Use the View Builder, which is an HTML utility, to build views for applying to an Active Event List (AEL). Administrators and read-write users can create and edit views.

Procedure

Open the View Builder from the following locations:

AEL Click **Edit > Views**.

Navigation

Click **Administration > Event Management Tools > Views**.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Creating views

Create views that are dynamically applied to Active Event List data. The views determine what information is displayed from the available event data.

About this task

To create a view:

Procedure

1. Open the View Builder.
2. Click **New View**.
3. Select the users you want to grant access to the view being created and click **OK**.

Public To make the view accessible by all users, select **global**. To add a system view, select **system**. All Web GUI users can select and copy global views.

Users Select the users whom you want to grant access to this view. The view is copied to the **My Views** categories of all selected users.

The list of users who can be granted access to the view is based on the setting of the **users.reload.mode** property in the *webgui-home/etc/server.init* file. If set to 0, all users are available. If set to 1, only users with either *ncw_user* or *ncw_admin* roles are available.

4. Use the following fields and buttons to set the general properties for the view:

Name Type a name for the view. The view name cannot contain spaces.

By default, a view name cannot contain the following characters: \$! £ % ^ & * () + = ~ ` ~ # @ ' : ; < > { } [] ? / \ \ | , "

By default, the initial character of a view name cannot be any of the following characters: / \ \ * ? " < > | & .

These invalid characters are defined in the following file:
webgui-home/etc/illegalChar.prop

Data Source

Select the data source or data sources that contain the fields that you want to be displayed in the view. Click **Show Data Sources** to display a list of available data sources.

Important: For each view you must select at least one data source. From this data source, the View Builder obtains the fields that you can use in the view. If you select multiple data sources, the View Builder displays a union of all the fields contained in all data sources. The data sources selected in the View Builder are not used in the AEL to retrieve event data. You select the data source or data sources from which event data is retrieved in the portlet preferences for the AEL. If a view specifies fields that do not exist in a data source, when the view and the data source are applied to an AEL, the columns that represent the non-existent fields are blank.

If you want to add a data source to an existing view, make sure that the alerts.status table of the new data source contains all the fields that the views specifies.

The default data source corresponds to the default ObjectServer specified in the ncwDataSourceDefinitions.xml configuration file.

5. Click **Save**.

What to do next

You can now configure the view properties, or click **Save and Close** to save the view and close the View Builder.

Related tasks:

"Adding and removing columns"

Set what event information is displayed from the available event data. The selected event data is added in columns to the AEL.

"Configuring column titles and width" on page 267

Customize the columns that display event data.

"Changing the column order" on page 268

Set the horizontal left-to-right order of the event data columns in the view.

"Changing the sorting precedence" on page 270

Set the precedence of sorting principles.

"Changing the sort order in a column" on page 271

Set the sorting order of the event data within a column to ascending or descending.

Adding and removing columns

Set what event information is displayed from the available event data. The selected event data is added in columns to the AEL.

About this task

To add new event data to, or remove event data from the view:

Procedure

1. Open the View Builder.
2. Select a view from the **Available Views** list. The page updates with the view properties.

3. Click the **Display Columns** tab.
4. Use the following fields and buttons to add or remove event data from the view:

Available fields

Lists all available event data fields. The fields available are derived from the alerts.status table in the ObjectServer. If you selected multiple ObjectServers from the **Data Source** list, all fields from all ObjectServers are displayed. Select the field of the event data you want to appear as a new column in the event list. Click **Add selected field** to add the selected event data field to the event list as a column. Click **Add all fields** to add all fields to the event list as columns.

Event list view

Lists all the fields selected and displayed as columns in the event list. Select the fields you want to remove from the event list. Click **Remove selected fields** to remove the selected event data field from the event list columns. Click **Remove all fields** to remove all fields from the event list columns. Use the arrow buttons to the right of this list to change the display order of the columns in the event list.

Lock column

Locks the selected column at the far left of the event list in the view, so that the column is always displayed when you scroll horizontally. Use the arrow buttons to the right of the list to change the display order of the locked columns in the event list. You cannot change the display order to mix locked columns and unlocked columns.

5. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

If you click **Save**, wait for your changes to be applied to the event list before continuing to customize the view.

Configuring column titles and width

Customize the columns that display event data.

About this task

To configure a column used in the view:

Procedure

1. Open the View Builder.
2. Select a view from the **Available Views** list.
3. Click the **Display Columns** tab.
4. In the **Event list view** list, select a field.
The **Column title** field updates with the corresponding column title for the selected field.
5. In the **Column title** field, type a new title for the column or keep the default.
6. Use the **Justify title** drop-down menu to the right of the **Column title** field to set the position of the title text in the column heading. This option is not available in the Event Viewer.
7. Use the **Justify data** drop-down menu to the right of the **Column width** field to set the position of the event data in the columns.

8. To change the width of a column, type a numeric value for the column width in the **Column width** field.
9. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

If you click **Save**, wait for your changes to be applied to the event list before continuing to customize the view.

Results

After a field is moved between the **Available fields** list and the **Event list view** list, the field retains any configurations you apply.

Changing the column order

Set the horizontal left-to-right order of the event data columns in the view.

About this task

To change the order of columns within the view:

Procedure

1. Open the View Builder.
2. Select a view from the **Available views** list. The page updates with the view properties.
3. Click the **Display Columns** tab.
4. In the **Event list view** list, select a field.
5. Use the arrow buttons to the right of the list to change the display order of the columns in the view as follows:

Table 26. View editor column order buttons

Button	Action
	Click Top to move the field to the top of the list. In the view, the field is displayed as the column furthest to the left.
	Click Up to move the selected field up one position in the list. In the view, the field is displayed as the column to the left of the one listed below it in the Event List View list.
	Click Down to move the selected field down one position in the list. In the view, the field is displayed as the column to the right of the one listed above it in the Event List View list.
	Click Bottom to move the selected field to the bottom of the list. In the view, the field is displayed as the column furthest to the right in the view.

Locked columns appear at the top of the **Event list view** list. Unlocked columns always appear displayed beneath locked columns. You cannot change the display order to mix locked columns and unlocked columns.

6. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

If you click **Save**, wait for your changes to be applied to the event list before continuing to customize the view.

Related tasks:

“Locking columns”

Lock columns that are important to you, so that the columns are always displayed when you scroll an Active Event List (AEL) horizontally.

Locking columns

Lock columns that are important to you, so that the columns are always displayed when you scroll an Active Event List (AEL) horizontally.

About this task

Locked columns are displayed at the left side of the view.

To lock columns:

Procedure

1. Open the View Builder.
2. Select a view from the **Available views** list. The page updates with the view properties.
3. Click the **Display Columns** tab.
4. In the **Event list view** area, select the field for the required column and set the **Lock column** check box. The field moves to the top of the list and the name changes to *field_name [locked]*.
5. Lock all of the required columns.
6. Optional: If you have more than one locked column, change the order in which the columns are displayed in the AEL. The top locked column is displayed as the leftmost column of the view, and the bottom locked column is displayed to the left of the first unlocked column.

Button	Action
	Moves the selected column to the top of the list of locked columns.
	Moves the selected column up the list of locked columns.
	Moves the selected column down the list of locked columns.
	Moves the selected column to the bottom of the list of locked columns.

7. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

If you click **Save**, wait for your changes to be applied to the event list before continuing to customize the view.

Changing the sorting precedence

Set the precedence of sorting principles.

About this task

On the **Sort Columns** tab, the field at the top of the **Sorted By** list has the highest precedence when sorting. If you add a second field to the list, and the first field contains a number of identical entries, the second field is used to sort within those entries. To change the sort order of columns in the view:

Procedure

1. Open the View Builder.
2. Select a view from the **Available views** list. The page updates with the view properties.
3. Click the **Sort Columns** tab.
4. Use the following fields and buttons to add or remove fields to be used in setting the sorting precedence:

Available sort fields

Lists all available event data fields that can be used to arrange which data has a priority when the events are displayed in the event list. The fields available are derived from the alerts.status table in the ObjectServer. Select the field of the event data you want to display first in the event list. Click **Add selected field** to add the selected event data field to the event list as a priority. Click **Add all fields** to add all fields to the event list. Then you can set the sorting precedence in the **Sorted by** list.

Sorted by

Lists all the fields selected to be part of the sorting hierarchy. The field at the top of the list has the highest precedence when sorting. If you add a second field to the list, and the first field contains a number of identical entries, the second field is used to sort within those entries. Click **Remove selected fields** to remove the selected event data field from the sorting hierarchy. Click **Remove all fields** to remove all fields from the sorting hierarchy. Use the arrow buttons to the right of this list to change the sorting hierarchy. The fields at the top of the list have a higher priority when event data is displayed in the event list.

With an entry in the **Sorted by** list highlighted, use the direction buttons to the right of the list as follows:

Table 27. View editor sort order buttons

Button	Action
	Click Top to move the field to the top of the list.
	Click Up to move the selected field up one position.
	Click Down to move the selected field down one position.
	Click Bottom to move the selected field to the bottom of the list.

5. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

If you click **Save**, wait for your changes to be applied to the event list before continuing to customize the view.

Changing the sort order in a column

Set the sorting order of the event data within a column to ascending or descending.

About this task

Each entry in the **Sorted by** list on the **Sort Columns** tab has a suffix that indicates the sort order of data within that field. By default, this entry is [desc], meaning that the field is sorted in descending alphabetical or alphanumerical order. The suffix [asc] indicates that the field is sorted in ascending alphabetical, or alphanumerical order.

To change the direction of sorting within a field:

Procedure

1. Open the View Builder.
2. Select a view from the **Available views** list. The page updates with the view properties.
3. Click the **Sort Columns** tab.
4. Select a field in the **Sorted by** list within the **Sort Columns** area.
5. Set the sort direction by selecting **Ascending** or **Descending** from the **Sort** list.
6. Repeat steps 4 and 5 for other columns that need a different sort order.
7. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

If you click **Save**, wait for your changes to be applied to the event list before continuing to customize the view.

Copying global views

As a read write user or an administrator, you can copy global views and system views to the **My Views** group.

About this task

To copy views from the **Global** view list to the **My Views** group:

Procedure

1. Open the View Builder.
2. From the **Available Views** list, select either **Global Views** or **System Views**.
3. From the view list, select the view you want to copy.
The page updates with the view properties.
4. Click **Copy View**.
5. From the **Users** list, select your user name.
6. Click **OK**.

The copy of the view is displayed. By default, the view name is set to "CopyOfviewname."

7. Edit the view as required.

8. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

If you click **Save**, wait for your changes to be applied to the event list before continuing to customize the view.

Results

The view is saved in your user profile. In the Active Event List (AEL), when you select the view from the **Views** list, the view is applied to the AEL.

Chapter 12. Monitoring events in the Web GUI

You can monitor and manage Tivoli Netcool/OMNIBus by using the Web GUI.

Monitoring events on mobile devices

You can view events on mobile devices, or in a Web browser, by either scanning the QR Code on the Event Dashboard or using the URL sent by the Web GUI administrator.

To view any of the following displays on your mobile device or Web browser, either scan the associated QR Code on the Event Dashboard or use the URL sent previously by the Web GUI administrator. For more information, see “Displaying summary event data on mobile devices” on page 296 or “Publishing Gauges pages to mobile devices” on page 297.

The Event Dashboard

To display an event list on your mobile device, or in a Web browser, tap the associated monitor box.

The Event List

A maximum of 100 events are displayed at any one time. To display any additional events, scroll down to the bottom of the event list and tap **Show more events** Each time you tap **Show more events ...** an additional 100 events are displayed.

To display full information for an event, tap the event, and then tap the **Fields**, **Details**, or **Journal** tabs.

Note: Telephone numbers containing a maximum 15 digits and prefixed with a plus sign (+) are recognized telephone numbers, and can be dialed.

To filter by a particular severity, tap the required severity on the severity filter tabs. For example, to see only those events with a severity level of minor, tap the associated tab on the severity filter tabs. The event list refreshes to display only alerts with a severity level of minor. To remove severity filtering and restore the event list to its original view of all events, tap the **All** tab on the severity filter tabs.

The Gauges page

The Gauges page provides a high-level overview of Tivoli Netcool/OMNIBus data.

Tapping a gauge may provide further information about the metric. For example, the Web GUI may display a Lightweight Event List (LEL) for the events that the metric measures.

Monitoring events in the AEL

Use the Active Event List (AEL) to interactively monitor and manage events.

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

Related tasks:

Chapter 4, “Administering users, roles, and groups,” on page 95

You can create different kinds of Web GUI users, assign them roles and add them to groups to determine their ability to perform tasks. You can also modify the preferences of a Web GUI user.

Event management in Active Event Lists

The Active Event List (AEL) is an interactive table that displays network alert data from an ObjectServer. Use the AEL to monitor alert data and manage information relating to faults in your network.

Interactive alert management is characterized by two-way communication with the ObjectServer. Alerts are viewed by operators, and are then addressed. When connected to the Web GUI, all interactive alert management activities take place from within the AEL window. From here you can monitor, prioritize, and address network alerts.

To use SQL tools in an AEL, you must be ObjectServer-validated with appropriate privileges on the corresponding ObjectServer.

An alert is created when the ObjectServer receives an event, alarm, message, or data item. Each alert is made up of several fields from a particular row in the ObjectServer alerts.status table.

The manner in which alert data is displayed in the AEL is controlled by predefined *filters* and *views*. You can use filters to choose which rows from the ObjectServer alerts.status table to display, and you can use views to choose which fields within a row to display.

Read-write users have access to Filter Builder and View Builder components. These tools can be used to apply defined filters and views to the AEL, either other predefined filters and views, or user-defined filters and views. Administrators can provide all read-write clients with publicly-accessible filters and views for them to use if they require.

After alert information is presented within the AEL display area, you can conduct various administrative actions on the table entries. Network event information can be examined, and alerts acknowledged and assigned to the appropriate network management personnel. In addition, journals attached to alerts can be modified to record these actions, and administrative tools within the AEL can be run based on alert data.

Accessing Active Event Lists

You can access AELs in several ways to monitor and manage event data.

About this task

To access an AEL:

Procedure

- Open the AEL in the navigation. To open the default AEL portlet, click **Availability > Events > Active Event List**.
- Open the AEL from an Event Dashboard portlet by clicking the distribution indicator of a monitor box. To open the default Event Dashboard portlet, click **Availability > Events > Event Dashboard**. AEL opening must be specified as a single-click action in the Event Dashboard portlet preferences.
- Open the AEL from a linked active object in a map.
- Click a hyperlink containing a correctly-constructed AEL query string.

Related tasks:

“Visualizing event information on maps” on page 317

You can use maps to graphically represent the status of a network.

“Setting Event Dashboard portlet preferences and defaults” on page 176

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

Related reference:

Appendix G, “URLs for opening Web GUI pages,” on page 417

Use the URL to open Web GUI portlets and applets from a map, from a link on an HTML page, or through a link generated by script tool or a CGI tool.

“insert:AEL command” on page 380

The **insert:AEL** command inserts an AEL applet into a Web page.

Acknowledging and deacknowledging events

You can acknowledge and deacknowledge events in the event list.

About this task

Note: You can acknowledge and deacknowledge only the events that are assigned to you, your group, or the nobody user.

To acknowledge an alert:

Procedure

1. Open an AEL and select the events you want to acknowledge.
2. Select **Alerts > Acknowledge** or use Ctrl+A.

Note: If configured by your administrator, you are required to enter a journal entry whenever you acknowledge an event.

Results

You can also deacknowledge a previously acknowledged event:

1. Open an AEL and select an event that has already been acknowledged.

2. Select **Alerts > Deacknowledge** or use Ctrl+D.

Related concepts:

“Prompt types” on page 209

When you create or edit a tool, you can include a prompt to which a user must respond, for example by typing in information or selecting a value from a list.

Assigning ownership to events

When an event arrives from a probe, the event is owned by the nobody user unless ownership of the event has been assigned to a specific user. Web GUI users with appropriate privileges can take ownership of events throughout the problem lifecycle, or assign events to a specific user or group.

About this task

The OwnerUID and OwnerGID columns provide this capability to work as an individual or as a member of a team. The OwnerUID column holds the user ID of the owner of the event, and the OwnerGID column holds the group ID.

As soon as an event is owned by a user, only that user or a user with higher privileges can modify the event. If an event is assigned to a group, the OwnerUID is reassigned to the nobody user. After an event is assigned to a group, only a member of that group or a user with higher privileges can modify the event.

Note: The users or groups to which you can assign events depends on your security permissions. If you are a normal user, you can assign only the events assigned to you, your group, or the nobody user.

To assign ownership of events:

Procedure

1. From the event list, select one or more events.
2. Assign the events to another user, another group, or yourself, as follows:
 - To assign selected events to a particular user, click **Alerts > User Assign**, and then select a user from the submenu.

Note: If there are a large number of names to choose from, the menu structure may include submenus that contain names within alphabetical ranges (for example, A to G, H to M, and so on). If the name you want is grouped in a submenu (for example, A to G), open the submenu, then select the user's name.

- To assign selected events to another group, click **Alerts > Group Assign**, and then select a group from the submenu (for example, **Network Support**).

Note: When an event is assigned to a group, the OwnerUID does not change, meaning that it is not reassigned to the nobody user.

- To assign selected events to yourself, click **Alerts > Take ownership**. You take ownership of an event when it has been assigned to you for action, or if you are in a position to resolve it.

Changing the event information displayed

You can set what event information is displayed from the available event data by editing the event list view, or by selecting and applying a different view. You can also edit the filter criteria used by the current event list, or select a different filter to apply to the event list.

About this task

From the event list, perform any of the following actions:

Procedure

- To edit the current view within the current event list and change the columns displayed from the available data, click **Edit > Views**. The View Builder opens, which you can use to edit the view.
- To select a different view to apply to the event list, click the drop-down list of views on the toolbar and select an item from the list. After being selected, the event list columns update according to the view settings.
- To edit the current filter, click **Edit > Filters**. The Filter Builder opens, which you can use to edit the filter.
- To select a different filter to apply to the event list, select a filter from the Filter list. After being selected, the event list rows update with the filter settings.

Related tasks:

“Setting up filters for event data” on page 252

Use the Filter Builder to apply filters to an event list or Event Dashboard portlet. Administrators and read-write users can create and edit filters.

“Setting up views for event lists” on page 265

Use the View Builder, which is an HTML utility, to build views for applying to an Active Event List (AEL). Administrators and read-write users can create and edit views.

Copying data from the event list

You can copy event data from the event list to the clipboard for use in other applications.

About this task

To copy event data:

Procedure

1. From the event list, select an event field.
2. Click **Edit > Copy** or press Ctrl+C.
3. Paste this information into another application as required.

Results

Tip: You can also copy alert information from the Event Information window.

Related tasks:

“Displaying event information in full”

From the event list, you can view full details of any selected events. Event information that is stored in the alerts.status, alerts.details, and alerts.journal database tables is shown.

Deleting events

You can remove events from the event list.

About this task

To delete one or more events in the event list, select the events and click **Alerts > Delete**.

Note: Any user with access to SQL tools can access the Delete tool. However, your administrator can restrict the use of the **Delete** function by assigning you to a group that has no access.

Related concepts:

“Access criteria for tools” on page 208

You can define access criteria for any SQL, CGI, URL, script or command-line tool based on the groups that a user belongs to and the class of an event. If the access criteria are satisfied for a given tool, user, and event, the tool is displayed.

Displaying event information in full

From the event list, you can view full details of any selected events. Event information that is stored in the alerts.status, alerts.details, and alerts.journal database tables is shown.

About this task

Access to the information in the tabs is determined on an individual user basis. For a non-administrative user to be able to access the information in the **Fields** tab, the permissions for **Show basic event information** must be selected in their user profile.

For a non-administrative user to be able to view the **Detail** tab, the permissions for both the **Show basic event information** and **Show event details** must be selected in their user profile.

For a non-administrative user to be able to view the **Journal** tab, the permissions for both the **Show basic event information** and **Show journals** must be selected in their user profile.

Procedure

1. From the event list, perform one of the following actions:
 - To view information for a single event, double-click the event, or select the event and then click **Alerts > Information**.
 - To view information for multiple events, select the events and then click **Alerts > Information**.

The Event Information window opens.

2. Use this window as follows:

Fields Click this tab to view a list of all the columns and their corresponding

values for a selected event. This information is stored in the ObjectServer alerts.status table. You can click any column in the list to see the complete text for its value in the field below the list of columns.

Details

Click this tab to view alert details that are stored in the ObjectServer alerts.details table.

Journal

Click this tab to view the journal entries for the event, as stored in the ObjectServer alerts.journal table.

You can enter additional journal entries by clicking **Add To Journal** to open the full Journal window for the event. On completion, close this window to return to the Event Information window.

Previous

If you selected multiple events from the event list, click this button to display detailed information for the previous event in your selection. This action can fail if events have been deleted elsewhere in the system.

Next

If you selected multiple events from the event list, click this button to display detailed information for the next event in your selection. This action can fail if events have been deleted elsewhere in the system.

Close Click this button to close this window.

Results

Related tasks:

“Modifying the preferences of a Web GUI user” on page 101

Edit the user profile settings and event list options for Web GUI users.

“Maintaining a journal for an event” on page 280

You can add and save your own event history information. You can maintain a journal for any event in the event list.

Freezing the event data

You can freeze any open event list so that updates from the ObjectServer are not displayed.

About this task

Freezing the alerts enables you to take a snapshot of the alert status before it is changed by further updates from the ObjectServer. Although alert freezing does not prevent you from making changes using the tools in the **Alerts** menu, the updates conferred are not displayed until the display is unfrozen.

To freeze the contents of an AEL, click **View > Freeze** or press Ctrl-Z,. A check is displayed against the **Freeze** menu item to indicate that the option has been selected.

To restart automatic updates from the ObjectServer, click **View > Freeze** or press Ctrl-Z.

You can also freeze all open event lists and take snapshots of any AELs you have open on your browser.

To freeze the contents of all AELs open in your browser, click **View > Freeze All** or press Ctrl+Shift+Z. A check is displayed against the **Freeze All** menu item to indicate that the option has been selected.

To restart automatic updates from the ObjectServer, click **View > Freeze All** or press Ctrl+Shift+Z.

Maintaining a journal for an event

You can add and save your own event history information. You can maintain a journal for any event in the event list.

About this task

Procedure

1. From the event list, select the event, and then click **Alerts > Journal**. The Journal window opens.

Tip: You can also access the Journal window while within the Event Information window for a selected event. From the **Journal** tab, click the **Add to Journal** button.

2. Complete this window as follows:

Journal information list boxes

The upper list box is read-only and displays the existing journal history text. For each entry, the name of the user who entered the information, and the date and time when they entered this information, are shown. You can use the **Alerts** menu while within this window by right-clicking within this list box.

Use the lower list box to add a text entry to the journal. There is a limit of 4096 characters for each journal entry. When you have completed the text entry, click **Apply** to save the text within the upper list box. The new text is saved as the last entry, and your user name, and the date and time, are automatically added.

Note: To be able to add text entries to the journal, you must be an ObjectServer user, you must have the Web GUI read-write user role (netcool_rw) assigned, and you must have the **Edit journals (read write role)** check box selected on the **User Preferences for Tivoli Netcool/OMNIBus Web GUI** page.

Apply to All Selected

Select this check box if you want to add the newly-entered text to all events that are selected in the event list, and not just to the event whose serial number is displayed at the top of the window. To save the text entry to the journal for each selected event, click **Apply**.

OK Click this button to save the newly-entered text and close the window.

Previous

If you selected multiple events in the event list, click this button to move to the journal entry for the previous event in your selection.

Next If you selected multiple events in the event list, click this button to move to the journal entry for the next event in your selection.

Apply Click this button to save newly-entered text to the journal. The Journal

window remains open for further entries. This button is useful if you have selected multiple events and want to add different journal entries for them.

Close Click this button to close this window. You are prompted to save any unsaved changes before the window closes.

Prioritizing events

You can prioritize events in the AEL by changing the event severity. Each event in the event list has an associated severity, which is indicated by the color of the severity in the display.

About this task

The following severity states are used to categorize events:

- Critical
- Major
- Minor
- Warning
- Intermediate
- Clear

You can change the severity of events only if you have permission to do so, and you can change only the severity of events assigned to you, your group, or the nobody user.

To change the priority of an event:

Procedure

1. Open an AEL.
2. Select the events for which you want to change priority.
3. Click **Alerts > Prioritize** and select a priority setting from the submenu.

The status line displays the number of events that have had their severity set, and the number of events whose severity could not be set because they are not assigned to you.

Refreshing the event data

The event list refreshes automatically at regular intervals to show all incoming alerts from the ObjectServer. You can choose to refresh the event list manually between the configured intervals to view all the latest alerts at the current point in time.

About this task

To refresh the AEL manually between automatic refresh updates, click **View > Refresh**, or use Ctrl-R.

Note: In order to enable manual refreshing of the AEL, you must turn off row data caching.

Related tasks:

“Changing the AEL refresh rate” on page 195

You can change the time period in seconds after which the AEL is automatically refreshed on a regular basis by the Web GUI server.

“Turning data row caching on or off” on page 196

When the AEL is refreshed, event data in its rows is loaded from the cache if the refresh interval is less than 60 seconds. To have the event list refreshed from the database, turn data row caching off.

Running predictive eventing tools in the Web GUI

You can use the Active Event List (AEL) to monitor predictive events generated within IBM Tivoli Monitoring if your installation has been set up to support predictive eventing.

Before you begin

Before you can run predictive eventing tools, the following prerequisites must be met:

- IBM Tivoli Monitoring V6.2.2 must be installed and configured for predictive eventing
- Tivoli Netcool/OMNIBus must be configured for predictive eventing.
- The Web GUI setup for predictive eventing must be configured.
- If you want to launch from the AEL directly into Tivoli Enterprise Portal without having to log in, single sign-on must be configured.

For more information about configuring single sign-on and configuring the setup for predictive eventing, see the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

About this task

A default filter and view are provided for use with predictive events:

- The default filter contains the following SQL WHERE clause: `where Class = 89300`.
- The default view contains the following fields, which are displayed in the following order, from left to right: Node, TrendDirection, Summary, FirstOccurrence, LastOccurrence, Count, PredictionTime. The sorting order of the view is as follows:
 - The Severity column is sorted in descending order
 - The LastOccurrence column is sorted in ascending order
 - The PredictionTime column is sorted in ascending order

In an AEL, you can restrict the events displayed to predictive events by selecting **PredictiveEvents** from the **Filters** list. To display the predictive eventing fields, select **PredictiveEventsView** from the **Views** list. Alternatively, you can sort the AEL by using either the **Summary** column or the **Class** column. The summary text for predictive events is always prefixed with Prediction from. The default entry in the **Class** column for a predictive event is always Predictive Event, although this value can be changed by an administrator.

Restriction: You can run predictive eventing tools against only one event at a time.

To run the predictive eventing tools in the AEL:

Procedure

- For all events: To display predictive events that meet a certain level of confidence:
 1. Right click any event and click **Alerts > Show Prediction Confidence**.
 2. In the Internal Command Parameters window, select an operator and type a value between 0 and 100. The confidence level is expressed as a percentage. The default operator and confidence level are >80.

A new AEL window opens displaying predictive events that match the specified confidence threshold.

- For predictive events only: To display critical threshold events, right-click a predictive event and click **Alerts > Show Predictive Events Threshold**.
- For predictive events only: To display extended predictive attributes, right-click a predictive event and click **Alerts > Show Extended Attributes**.

A new window opens displaying the following extended attributes of the predictive event in table form, for example:

- Confidence
- Number of samples
- Strength

- For predictive events only: To show the details of a predictive event in the default workspace of Tivoli Enterprise Portal:
 1. Right click a predictive event and click **Alerts > Show Details in TEP**
 2. Optional: If single sign-on has not be configured, log into Tivoli Enterprise Portal

Monitoring TADDM events in the Web GUI

TADDM events are generated within IBM Tivoli Application Dependency Discovery Manager when a configuration change is detected in your IT environment. You can monitor TADDM events from the Web GUI if your system is configured to support this feature.

About this task

A **TADDM** filter is available in your Active Event List for filtering TADDM events; to use this filter, select **TADDM** from the **Filters** list. You can also identify TADDM events in the Active Event List by sorting on the Class column, if this column is available in your current view. By default, the entry is *Tivoli Application Dependency Discovery Manager*, although this can be changed by your system administrator.

TADDM events have an Indeterminate severity level by default.

From the Active Event List, you can launch across to the TADDM Java console or Web client to view further details about the configuration items for which alerts have been raised:

Procedure

- To view all the attribute details for a configuration item from within the TADDM Java console, right-click a TADDM event in the Active Event List, and then click **TADDM > Config Item Details (console)** from the pop-up menu.

- To view all the attribute details for a configuration item from within the TADDM Web client, right-click a TADDM event in the Active Event List, and then click **TADDM > Config Item Details (web)** from the pop-up menu.
 - To view a change history report for a configuration item from within the TADDM Java console, right-click a TADDM event in the Active Event List, and then click **TADDM > Change History (console)** from the pop-up menu.
 - To view a change history report for a configuration item from within the TADDM Web client, right-click a TADDM event in the Active Event List, and then click **TADDM > Change History (web)** from the pop-up menu.
- You can double-click an event to view its complete set of details in the Event Information window.

Searching for event list data

You can search for event list data in a number of ways. You can enter specific text to search for, use a filtering facility to quickly find matching occurrences of data, and filter event list data by severity.

Filtering events by severity

You can filter the event list data to display only those events that match a particular severity.

About this task

To filter by a particular severity, click the required severity color on the event list distribution status bar.

For example, to see only those events with a severity level of minor, click the yellow button on the distribution status bar. The event list refreshes to display only alerts with a severity level of minor.

To remove severity filtering and restore the event list to its original view of all events, click the **All Events** button on the distribution status bar.

Quickly filtering events

You can use the quick filtering facility as a fast way of displaying events in the event list that match a selected criteria. You can filter for event data and display events that correspond to the value of a specific cell. For example, you can quickly display only those events that occurred at the same time as the selected event, or before the selected event.

About this task

To use the quick filter:

Procedure

1. From the event list, select a cell that contains a value on which to base the quick filter.
2. Click **Alerts > Quick Filter**, and then select one of the following options from the submenu:
 - **Equals** shows all rows with the same field value as the selected cell.
 - **Not Equals** shows all rows with a different field value from the selected cell.
 - **Greater Than** shows all rows with a greater field value than selected cell.

- **Greater Than or Equals** shows all rows with a field value greater than or equal to the selected cell.
- **Less Than** shows all rows with a lesser field value than selected cell.
- **Less Than or Equals** shows all rows with a field value less than or equal to the selected cell.
- **Like** shows all rows that contain the same string as the selected cell.
- **Not Like** shows all rows that do not contain the same string as the selected cell.

The event list refreshes to display only those alerts that match the specified filter criteria.

3. To remove quick filtering and restore the event list to its original view of all events, click **Alerts > Quick Filter > Off**. Alternatively, click the **All Events** button on the distribution status bar.

Searching for text in the event list

You can search the event list for event data that matches a specific value that you enter. You can search for data within a specific column and specify options to narrow down the search.

About this task

Procedure

1. From the event list, click **View > Find**. The Find window opens.
2. Complete this window as follows:

Column

Select the column to search.

Value Type the search value that you want to match. You can enter an exact value to search for or a regular expression.

Options

Specify the type of match required by selecting one of the following:

- **Exact Match** to find rows where the data in the selected column exactly matches the specified search value.
- **Regular Expression** to find rows where the data in the selected column matches the specified regular expression.
- **Sub String** to find rows where the data in the selected column contains the specified value somewhere within it.

Find Click this button to find the first matching occurrence. If a matching row is found in the event list, any currently-selected rows are deselected, and the matching row is selected. The Find window remains open so that you can view any additional matching occurrences.

Next Click this button to show the next match, and subsequent matches, in the event list.

Close Click this button to close this window.

Selecting and deselecting events

To work with one or more event in the AEL, you must first select the events. You can then use the options in the **Alerts** menu to manipulate the events. You can also deselect one or more events from a list of selected events.

About this task

Note: You can right-click an event to access an **Alerts** pop-up menu. The **Alerts** menu is configured by your system administrator.

To select one or more events:

Procedure

1. Open an AEL.
2. Select single or multiple events in the following ways:
 - To select one event and deselect all other events, click the event row.
 - To select multiple, nonsequential events, hold down the Ctrl key and click each event.
 - To select multiple, sequential events, click an event row to be the first selected. Then hold down the Shift key and then click the last event row to select all in between on the list.
 - To select all events, click **Edit > Select all** or use Ctrl+S.
 - To select all events that match the value in a particular field (smart matching) hold down the Shift key (Ctrl+Alt on Windows) and click the right mouse button over the field you want to match.

Results

You can also deselect one or more events:

1. Open an AEL.
2. Deselect single or multiple events in the following ways:
 - To deselect all events in the event list, click **Edit > Deselect all** or use Ctrl+E.
 - To deselect an event in a selection of multiple rows, hold down the Ctrl key and click the event.

Sorting columns

To organize the data displayed in the Active Event List (AEL), use the sorting functions.

About this task

Sorted columns are denoted by an upwards-pointing arrow or downwards-pointing arrow in the column header, depending on whether the column is sorted in ascending or descending order.

The data is sorted only by the fields contained in the alerts.status table; conversions are not sorted.

To sort columns:

Procedure

1. Open an AEL. If you open the AEL with a view in which a sorting order is specified, the sorting order is applied, but not indicated on the column headers.
2. Sort single columns as follows:
 - a. To sort a column, click the column header once. The rows are sorted in ascending order.
 - b. To sort in descending order, click the column header again.
 - c. To unsort the column, click the column header a third time.
3. Sort multiple columns as follows:
 - a. To sort multiple columns, press Ctrl and click the required column headers. The sorting importance of the columns is indicated in square brackets ([]) in the column header.
 - b. To alternate the sorting of individual columns within the selection between ascending and descending order, keep Ctrl pressed and click the column headers.
 - c. To unsort the columns, release Ctrl and click any header from among the sorted columns. The previously-sorted columns are unsorted; the column that you clicked is sorted in ascending order.
 - d. To unsort the column that you clicked in step 3c, click the column another two times.

What to do next

If you opened the AEL with a view, after all columns are unsorted, the sorting order specified in the view is reapplied.

Related tasks:

“Creating views” on page 265

Create views that are dynamically applied to Active Event List data. The views determine what information is displayed from the available event data.

“Changing the sort order in a column” on page 271

Set the sorting order of the event data within a column to ascending or descending.

Using tools to manage events

Use the tools in the event list to run SQL commands against events from one or more data sources, or to run external commands, for example, a local application batch file or script. Default tools include the Ping tool, Telnet tool, and Tracepath tool.

Before you begin

If you want to run a tool against events from more than one data source, note the following criteria:

- The tool must be valid against the ObjectServer from which the events originate. If you select events from multiple ObjectServers, the tool must be valid against all the ObjectServers. For example, if the tool is configured to run against fields that are not contained in one ObjectServer, the tool cannot be run against the entire selection of events.
- You must have write permission against all the ObjectServers from which the selected events originate. If you select events from multiple ObjectServers, and you do not have write permission in all the ObjectServers, the tool runs against only the ObjectServers that you are permitted to modify.

- If you run a tool containing a prompt against events from multiple ObjectServers, the prompt permits you to select only fields or field values that are common to all ObjectServers.

About this task

To run a tool:

Procedure

1. Select one or more events in the AEL and right-click the selection.
2. Run a tool against the selected event or events by selecting the appropriate tool in the **Tools** menu.

Managing events in the Event Viewer

You can use the Event Viewer to monitor and manage events.

Accessing the Event Viewer

Accessing Event Viewers.

Procedure

To access a Event Viewer do any of the following, as appropriate:

- Open the Event Viewer in the navigation by clicking **Availability > Events > Event Viewer**.
- Open a custom page that contains an Event Viewer.

Displaying full event information in the Event Viewer

From the Event Viewer list, you can view full details of any selected event.

Procedure

1. To display full information for an event do one of the following:
 - Double click the entry for the event.
 - Right click on the entry for the event and choose **Information** from the pop-up menu.

Event information appears in a separate window that has the following tabs:

Fields This tab contains the event details from the alerts.status table in the ObjectServer. This tab contains all the fields associated with the event and their values, not just those selected by the view. Clicking the **Field** column header sorts the rows in either ascending or descending order.

Details

This tab contains details of the event from the alerts.details table in the ObjectServer. Clicking the **Field** column header sorts the rows in either ascending or descending order.

Journal

This tab contains journal entries for the event from the alerts.journal table in the ObjectServer. When you have finished reading the journal details, click **Close**.

2. Click **Close** to close the event information window.

Changing the event information displayed

You can set what event information is displayed from the available event data by editing the event list view, or by selecting and applying a different view. You can also edit the filter criteria used by the current event list, or select a different filter to apply to the event list.

Procedure

From the event list, carry out any of the following actions:

- To select a different view, edit the Event Viewer and choose a different view. On saving the preferences, the event list columns update according to the settings of the view.
- To select a different filter, click the drop-down list of filters on the toolbar and select an item from the list. After being selected, the event list rows update according to the filter settings.

Tip: To locate a filter more quickly, you can type its name, or the first few characters of the name, in the filter drop-down box. This is useful when there are large number of filters and the one you require is towards the end of the list.

Copying data

You can copy data from the event list or the event details window to the clipboard for use in other applications.

Procedure

To copy data:

1. Select a row in the event list or the event details window.
2. Right-click on the selected item and choose **Copy** from the pop-up menu.
3. If a confirmation dialog is displayed, click **OK** to complete the copying of the data.
4. Paste this information into another application as required.

Refreshing the event data

The event list refreshes automatically at regular intervals to show all incoming alerts from the ObjectServer. You can choose to refresh the event list manually between the configured intervals to view all the latest alerts at the current point in time.

About this task

To refresh the Event Viewer between automatic updates, click **Refresh** . The time it takes for the event list to reload depends on the number of events received from the ObjectServer. During the refresh, a progress indicator is displayed in the events area.

Freezing the event data

You can freeze any open event list so that updates from the ObjectServer are not displayed.

About this task

Freezing the alerts enables you to take a snapshot of the alert status before it is changed by further updates from the ObjectServer.

To freeze the contents of a Event Viewer, do any other the following:

- Click 

To restart automatic updates from the ObjectServer, repeat any of these actions.

Note: While the content of a Event Viewer is frozen you can still use the **Refresh** button () to carry out a one-off update of the event list.

Searching for event list data

You can enter text to search for and filter the list by severity; that is, display only events that have a specific severity.

Filtering events by severity

Filter the event list to display only the events that have a specific severity.

About this task

To filter by a specific severity, click the required severity icon in the summary bar of the event list.

For example, to see only minor severity events, click the yellow icon in the summary bar. The event list refreshes to display only the events with that severity.

To remove severity filtering, click the severity icon again to restore the event list to its original view.

You can select multiple severities if required. For example to view all major and critical events, click the orange and red icons. To return to the full display, click the icons once more.

Sorting columns

To organize the data displayed in the Event Viewer, use the sorting functions.

About this task

Initially, the order of the rows in the Event Viewer event area are determined by the view that is applied. You can change the order of the rows by using the columns to sort the data.

Note: When data is sorted by a field that has conversions in the data source, the sorting is done by the conversion value of the field (that is, the display value) and not the underlying integer field value. Examples of such fields are Acknowledged, Class, and OwnerUID.

Procedure

To sort the rows using a single column:

- Click the column header to sort the rows in ascending order of that column.
- Click the column header twice to sort the rows in descending order of that column.

Event groupings

When the administrator has defined the necessary facilities you can group the events on an event list.

Grouping events in the Event Viewer

You can apply a view that groups the events on a list.

Procedure

To select a view that includes the definition of event groupings:

1. Click **Administration > Event Management Tools > Views** to open the View Builder and modify the view to include event grouping.
2. Select a view from the **Available views** list. The page updates with the view properties.
3. Click the **Group Columns** tab.
4. In the **Available fields** list, select the name of the field that acts as the primary way to group events in the Event Viewer. The field name moves to the **Grouped by** list.
5. If required, add further levels of grouping in the same manner. There is a maximum number of levels that you can define. This can be set by an administrator and the default maximum number is 3.
6. Click **Save** to save the view and continue customizing the view, or click **Save and Close** to save the view and close the View Builder.

Add the view to the Event Viewer:

7. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options . > Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options . > Edit shared settings**.
8. From the **View** drop down list, select the event grouping option to apply to the Event Viewer.
9. Click **OK**.

Results

A grouping panel appears next to the events area on the Event Viewer window showing the events grouped by the selected view

Appearance of the Event Viewer

Grouping is a way of organizing events according to the value of up to three columns in the ObjectServer database. When you have selected a view that contains event grouping, a grouping panel appears next to the events area on the Event Viewer window. This panel lists the values of the top-level group (for example, a list of locations). For each group, the panel shows the number of events in the group and the icon for the highest severity event in the group.

Using a list that contains groupings

The organization of an event list that includes groupings changes the appearance of the list, providing you with extra visual and interactive capabilities.

Using a multi-level list

The Web GUI administrator can define up to three levels of grouping for the Event Viewer. For example, at the top level events can be grouped by their location. Then the events can be further grouped by their severity in each location. This produces a multi-level list.

Procedure

To use the grouping panel in a multi-level list:

- There is a plus sign (+) next to each top-level group. Click the plus sign to reveal the groups on the second level. As at the top level, these groups show you the number of events they contain and the highest severity in the group. Also, the plus sign changes to a minus sign (-).

If the second-level groups have plus signs next to their names, there is a further level of grouping. Use the plus sign in the same way to reveal the third-level groups, the number of events each contains, and the highest severity in each group.

- To collapse any group, click the minus sign next to its name.
- To return to the top-level list of groups, click **All**.
- You can use all other functions of the Event Viewer, such as viewing event details, in the normal way.

Viewing events in a group

To view the events in a group, click its name in the grouping panel. The contents of the events area now shows only the events in the selected group.

Viewing the properties of a group

To view the properties of any group in the tree of groups, hover the mouse pointer over the group displayed in the list.

Event relationships

If relationships between events are defined, you can organize the event list in an Event Viewer based on those relationships.

Related tasks:

“Defining event relationships” on page 246

Use event relationships to organize an Event Viewer. Event relationships group events in the list by the relationships between them.

Organizing an event list by relationships

You can apply a view that defines a relationship to reorganize an event list

Procedure

To select a view that contains an event relationship to reorganize the event list.

Edit the portlet preferences:

1. Click **Edit Options** . > **Personalize**.
2. Select a view that includes a relationship in **View**.
3. Click **OK**.

Related tasks:

“Setting up views for event lists” on page 265

Use the View Builder, which is an HTML utility, to build views for applying to an Active Event List (AEL). Administrators and read-write users can create and edit views.

Using a list organized by relationships

The organization of an event list by relationships changes the appearance of the list, providing you with extra visual and interactive capabilities.

About this task

When relationships are applied, the event area of a list has a tree-like appearance, with events shown in a hierarchical fashion. At the top level, there are the main events determined by the relationship. For example, if the relationship is root cause and symptoms, this top level contains all the root cause events. Events beneath those top-level events are the subsidiary ones. Continuing the root cause example, these subsidiary events are the symptoms, with one or more associated with each root cause.

Procedure

To use an event list organized by relationships:

- There is a plus sign (+) next to each top-level event indicating that it has subsidiary events. Click the plus sign to reveal the subsidiary events; the plus sign changes to a minus sign (-). To close the list of subsidiary events, click the minus sign.
- You can use all other functions of the Event Viewer, such as viewing event details, in the normal way.

Monitoring events in the LEL

You can use the Lightweight Event List (LEL) to monitor and manage alerts.

About this task

Note: The Lightweight Event List (LEL) is deprecated from V7.4.0 of the Web GUI. Use the Event Viewer instead.

The JavaScript LEL provides users with a similar list of events as the AEL. However, the LEL does not possess a SmartPage tag and therefore cannot be embedded into a Web page. While you can access all the event information stored in the alerts.status, alerts.details, and alerts.journal database tables, the LEL does

not provide you with the additional AEL functionality accessed through the AEL menus. In addition, the LEL displays alerts from the default data source only.

You can use any of the following methods to access an LEL:

Procedure

- Open the LEL from the navigation. To open the default LEL, click **Availability > Events > Lightweight Event List (LEL)**
- Launch an LEL from a linked active object in a map.
- Click a hyperlink containing a correctly-constructed LEL query-string.

Viewing events in the Lightweight Event List

Use the functions of the Lightweight Event List (LEL) to control what events are displayed and how the event information is displayed.

About this task

Note: The Lightweight Event List (LEL) is deprecated from V7.4.0 of the Web GUI. Use the Event Viewer instead.

The number of alert rows in each page is determined by the `lel.pagesize.default` property in the `server.init` file. The default is 500.

To view event data in the LEL:

Procedure

1. Open an LEL.
2. Use the Lightweight Event List (LEL) window as follows:

Refresh event data

Manually refreshes the LEL display area.

The LEL is refreshed automatically at predefined intervals to show all incoming alerts from the ObjectServer.

Freeze updates to this window

Freezes the contents of the LEL display area so no further updates take place.

Select/deselect all rows

Selects or deselects all rows in the LEL display area.

Page Slider Buttons

Use the page slider to step backwards or forwards through the alert table pages, skip to the first or last alerts, and move to a specific page displaying a block of alerts (the screen page range is constrained to blocks of five).

Displaying full event information in the Lightweight Event List

From the Lightweight Event List (LEL) list, you can view full details of any selected event. All information stored in the following database tables is shown: alerts.status, alerts.details, and alerts.journal.

About this task

Note: The Lightweight Event List (LEL) is deprecated from V7.4.0 of the Web GUI. Use the Event Viewer instead.

To display full information about one or more events:

Procedure

1. From the LEL, double-click an event row. The Event Information window opens and the **Fields** tab is displayed by default.
2. Use this window as follows:

Fields Click this tab to view a list of all the columns and their corresponding values for a selected event. This information is stored in the ObjectServer alerts.status table.

Details Click this tab to view alert details that are stored in the ObjectServer alerts.details table.

Journal Click this tab to view the journal entries for the event, as stored in the ObjectServer alerts.journal table.

Previous If you selected multiple events from the event list, click this button to display detailed information for the previous event in your selection. This action can fail if events have been deleted elsewhere in the system.

Next If you selected multiple events from the event list, click this button to display detailed information for the next event in your selection. This action can fail if events have been deleted elsewhere in the system.

Close Click this button to close this window.

Monitoring events in the Table View

You can view alert data in a tabular format in the Table View. The tables are static, and they present all available events from the default data source. The Table View can be embedded in a Web page using a SmartPage tag.

About this task

Note: The Table View portlet is deprecated from V7.4.0 of the Web GUI. Use the Event Viewer instead.

You can use any of the following methods to view events in a static table format:

Procedure

- Open a page containing a Table View. To open the default Table View, click **Availability > Events > Table View**.
- Open the Table View from a linked active object in a map.

- Click a hyperlink that contains a Table View query string

Related reference:

Appendix D, “SmartPage commands and templates,” on page 379

You can use SmartPage commands to populate Web pages that are served by the Web GUI. You can also use variables in SmartPage commands to dynamically populate predefined template files.

“insert:TABLEVIEW command” on page 387

The **insert:TABLEVIEW** command inserts a Table View into a Web page.

Appendix G, “URLs for opening Web GUI pages,” on page 417

Use the URL to open Web GUI portlets and applets from a map, from a link on an HTML page, or through a link generated by script tool or a CGI tool.

Visualizing high-level event information

In environments that deal with very high numbers of alerts, use the event visualization components to give you an overview of the available data.

About this task

While the Active Event List, Lightweight Event List, and the Table View give detailed and interactive representations of alert status within a network, use the following event visualization components for a comparative and high-level view of the alerts:

Charts Use charts to represent event information against scales that indicate the values of the information.

Event Dashboards

Use Event Dashboards to represent multiple SQL queries against the alerts tables of the ObjectSever.

Gauges

Use gauges to display the values of metrics.

Maps Use maps to obtain an interactive representation of a network.

Displaying event data on mobile devices

The Web GUI includes versions of the Event Dashboard and the Gauges page that can be displayed on mobile devices. Ensure that the selected mobile device is supported.

Displaying summary event data on mobile devices

You can make the summary event data displayed on the Event Dashboard available to Web GUI users on mobile devices, or in a Web browser.

About this task

To publish the summary event data displayed on the Event Dashboard to a mobile device:

Procedure

1. Open the Event Dashboard page that you want to publish.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.

- To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. Optional: Change any other properties of the Event Dashboard page as required.
 4. Copy the URL and send it to users of mobile devices in an e-mail or SMS message. You can also send the URL to any other user of a browser who needs access to the page. Alternatively, scan the QR Code using the camera and QR Code reader on your mobile device. Once the QR Code is recognized, your Web browser launches automatically to display the associated URL.

Tip: Ensure that each recipient bookmarks the URL so that they can return to the page at any time.

Publishing Gauges pages to mobile devices

You can make the gauges displayed on a Gauges page available to Web GUI users on mobile devices, or in a Web browser.

About this task

To publish a Gauges page to a mobile device, generate an HTML file of the page, and then either send its URL to a mobile device or scan the QR Code using your mobile device:

Procedure

1. Open the gauge page that you want to publish.
2. Edit your portlet preferences, or, as an administrator, edit the portlet defaults:
 - To edit your portlet preferences, click **Edit Options** . > **Personalize**.
 - To edit the portlet defaults of all users, click **Edit Options** . > **Edit shared settings**.
3. Select the **HTML for mobile devices** check box if it is cleared.
4. Optional: Change any other properties of the page or the gauges as required.
5. Click **OK**.

The Web GUI generates the HTML page and displays its URL and associated QR Code.

6. Open the portlet preferences or portlet defaults again.
7. Optional: To preview the page, click the URL.
8. Copy the URL and send it to users of mobile devices in an e-mail or SMS message. You can also send the URL to any other user of a browser who needs access to the page. Alternatively, scan the QR Code using the camera and QR Code reader on your mobile device. Once the QR Code is recognized, your Web browser launches automatically to display the associated URL.
 - Before they can view the page, each recipient needs to log in to the Web GUI as a user with the `ncw_gauges_viewer` role.
 - Ensure that each recipient bookmarks the URL so that they can return to the page at any time.
 - Repeat this step each time you change any properties of the Gauges page or its gauges.

Related tasks:

“Setting Gauge portlet preferences” on page 182

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

Visualizing event information on gauges

You can graphically represent the values of various metrics on gauges.

Procedure

To open the supplied pages of gauges click **Availability > Events > Key Performance Indicators (KPIs)**.

Gauges and metrics

The Gauges page displays the values of selected metrics as a set of gauges. Each gauge has a number of properties.

- The metric that the gauge displays
- The appearance of the gauge
- Text labels
- Thresholds
- The actions taken when you click a gauge

In addition, the Web GUI is supplied with two pages of gauges.

Metric

A metric is a type of measurement that is used to determine a quantifiable value from tables or properties in the ObjectServer. Examples of metrics are:

- The current number of client connections to a server
- The number of unresolved network events
- The number of escalated network events

The Web GUI has a number of pre-defined metrics that cover many of the commonly-used scenarios in network monitoring. However a site can define its own collection of metrics in addition to the supplied ones.

Appearance of a gauge

Each gauge can have any of six appearances:

Table 28. Gauge icons

Name	Examples
Dial	

Table 28. Gauge icons (continued)

Name	Examples
Thermometer	
Traffic lights	
Weather symbol	
Emoticon	
Status button	

The dial and thermometer indicate the value of the metric through the pointer and the height of the indicator. For example, on a dial, the needle moves up and down the scale as the value of the metric changes. The remaining icons show whether the value of the metric is low, medium, or high, as determined by the thresholds of the gauge.

Each gauge can use any of these appearances. This enables a site to choose the type of gauge most suitable for each metric.

Text labels

Each gauge has three text labels that identify it:

- **Label:** The name of the gauge that appears on the Gauges page.
- **Unit label:** Which indicates the units of the gauge's value. For example, the number of connections, or the number of faults.
- **Description:** A more detailed description of the gauge and what it shows. The Web GUI displays this text when the user hovers the mouse pointer over the gauge.

Thresholds

The set of values for each gauge is divided into three ranges: low, medium, and high. There are two thresholds that determine the transition from one range to another. Each threshold is expressed as a percentage of the gauges complete value range. For example, the threshold between low and medium may be 50% and the one between medium and high may be 90%.

The administrator can set the values of the thresholds for any gauge. This enables the displays to be tailored to the importance of the metric.

Click actions

When the user clicks a gauge, the system can:

- Display a page associated with a fully-qualified URL, such as a map or a Lightweight Event List (LEL).
- Run JavaScript code

A gauge can also have no click action.

The URL and JavaScript capabilities mean that a wide range of actions can occur when a user clicks the gauge. For example, the system could display list of event associated with the gauge's metric, or launch another Web GUI application, or even applications from other parts of Tivoli that are based on Tivoli Integrated Portal.

Working with gauges

A user accesses the Gauges to monitor conditions on the network. They can use the gauge values and the low, medium, and high ranges to identify conditions that need immediate attention. If a gauge has an associated click action, the user can get more detail of the gauge's metric.

A user with suitable user roles, such as the Web GUI administrator, can customize the page and its gauges. The user can:

- Change the title of the page.
- Set the display size for the gauges.
- Set the refresh rate for the gauges.
- Select the data sources and ObjectServers that supply the page with data.
- Modify the properties of any gauge.
- Add and remove gauges.
- Change the order of the gauges on a page.
- Set the thresholds for any gauge's low, medium, and high ranges.
- Create new metrics.
- Change the internationalization settings for the page, such as text direction.

Administrators can also set the default appearance and content of the page for all users. So, the administrator can define the initial page for the site. Then an individual can tailor their copy of the page to suit their needs, if they have the necessary user roles.

Supplied gauges

As supplied the Web GUI includes two pages of gauges:

- Performance: which shows key performance metrics for the gateway and the Web GUI such as the number of connections to the Web GUI.
- Details and Journals: which shows key event metrics such as the number of unresolved events and the number of acknowledged events.

To open the supplied pages of gauges click **Availability > Events > Key Performance Indicators (KPIs)**.

Related tasks:

“Setting the thresholds for a gauge” on page 305

A gauge has three display levels: low, medium, and high. This task shows how to set the thresholds for each display level.

“Setting Gauge portlet preferences” on page 182

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

Related reference:

“Using the gauge page”

A Gauges page provides a high-level overview of Tivoli Netcool/OMNIBus data.

Using the gauge page

A Gauges page provides a high-level overview of Tivoli Netcool/OMNIBus data.

The page displays data retrieved from the ObjectServer using *metrics*. Examples of metrics are the number of clients connected to a server, the total number of escalated events, or the time taken to process a trigger.

The Web GUI presents the data on the page as a number of gauges, one for each metric. The number of gauges on the page and the metrics they display are site-specific. Your Web GUI administrator can customize the page to show only the metrics that are relevant to you, and display each metric in the most appropriate way. The administrator can also create additional Gauges pages for specific types of user and/or specific functional purposes. If you have suitable user roles, you can:

- Customize your copy of a page still further.
- Create an HTML representation of a page that you can either send to mobile devices or scan using mobile devices.

This allows people to monitor the data from almost anywhere.

Using the Gauges page

When you open the Gauges page it displays the gauges and sets each to the current value of its associated metric using data from the ObjectServer. The gauges periodically update to show the latest information. The frequency of these updates is 10 seconds, as supplied, but your administrator can specify any value between 10 and 99000 seconds.

Clicking a gauge may provide further information about the metric. For example, the Web GUI may display a Lightweight Event List (LEL) for the events that the metric measures.

What happens when you click a gauge is site-specific. Your Web GUI administrator can associate any URL or JavaScript program with a gauge. Typically, however, actions launch other Web GUI or Tivoli applications.

User Roles

To use a Gauges page you need the following user roles:

- To use a page to monitor metrics you need to have the `ncw_user` role.
- To customize gauges you need to have either the `ncw_gauges_editor` and `ncw_user` roles, or the `ncw_admin` role.

To view gauges on a mobile device, you need to have the `ncw_gauges_viewer` role.

A user without administration rights can customize their own copy of the page only. Administrators can customize their own copy of a page and customize the default page, and its contents, for all users.

Related concepts:

“Gauges and metrics” on page 298

The Gauges page displays the values of selected metrics as a set of gauges. Each gauge has a number of properties.

Related tasks:

“Setting Gauge portlet preferences” on page 182

Change the properties of the individual gauges displayed on a Gauges page; add, remove and rearrange gauges; and customize the page itself.

“Publishing Gauges pages to mobile devices” on page 297

You can make the gauges displayed on a Gauges page available to Web GUI users on mobile devices, or in a Web browser.

Creating and managing metrics for gauges

Use the WAAPI capabilities to create and manage metrics for gauges.

WAAPI contains methods, elements and attributes that you use to manage metrics:

- Create a metric
- Replace a metric, or create it if it does not exist
- Modify a metric
- Delete a metric
- Obtain a list of the existing metrics

WAAPI methods, elements, and attributes

Use the following WAAPI methods to manage metrics for gauges:

Table 29. WAAPI elements for gauge metrics

Task	WAAPI method name
Create a metric	metric.createMetric
Replace or create a metric	metric.createOrReplaceMetric
Modify a metric	metric.modifyMetric
Delete a metric	metric.deleteMetric
List the existing metrics	metric.getList

For operations on metrics, the <method> element contains the <metric:metric> element. This element contains attributes that identify the metric and its characteristics. It also contains the <metric:command> element that defines the query to obtain the required data from the ObjectServer. In addition, there are two modes for creating, replacing, or modifying a metric: basic and advanced. Basic mode ensures that any restriction filters placed on the referenced ObjectServer tables are applied and so the user receives only the data that they are entitled to see. Advanced mode does not apply any restriction filters and the user sees all the data returned by the query. The examples show the use of these modes, attributes and the child element.

Examples

The following examples show how to use WAAPI to manage metrics for gauges. The `samlerequest_metric.xml` and `samlerequest_metric_basic.xml` files in `webgui-home/waapi/etc/samples` contains these examples.

Create a metric

The following WAAPI command creates a metric named `metricsample1` that displays the count of all critical events in the `ObjectServer`. It uses advanced mode, the default mode, and so does not apply any restriction filters that may be defined.

```
<methodCall xmlns:metric="http://www.ibm.com/tivoli/netcool/webtop/metrics/7.4.0">
  <method methodName="metric.createMetric">
    <metric:metric name="metricsample1"
      displayName="MetricSample1"
      description="Shows count of all Critical events. Created using WAAPI."
      units="events"
      maxValue="10000"
      minValue="0"
      threshold1="30"
      threshold2="70">
      <metric:command type="sql">
        <metric:text data="select sum(Tally) from alerts.status where Severity=5;"/>
      </metric:command>
    </metric:metric>
  </method>
</methodCall>
```

The following example creates the same metric but uses basic mode that applies any restriction filters defined for the user.

```
<methodCall xmlns:metric="http://www.ibm.com/tivoli/netcool/webtop/metrics/7.4.0">
  <method methodName="metric.createMetric">
    <metric:metric name="metricsample1"
      displayName="MetricSample1"
      description="Shows count of all Critical events. Created using WAAPI."
      units="events"
      maxValue="10000"
      minValue="0"
      threshold1="30"
      threshold2="70">
      <metric:command type="sql" mode="basic">
        <metric:text selectField="sum(Tally)" whereClause="Severity=5"
          databaseName="alerts" tableName="status"/>
      </metric:command>
    </metric:metric>
  </method>
</methodCall>
```

Replace or create a metric

The following WAAPI command creates or replaces a metric named `metricsample2` that shows the count of all major events in the `ObjectServer`.

```
<methodCall xmlns:metric="http://www.ibm.com/tivoli/netcool/webtop/metrics/7.4.0">
  <method methodName="metric.createOrReplaceMetric">
    <metric:metric name="metricsample2"
      displayName="MetricSample2"
      description="Shows count of all Major events. Created using WAAPI."
      units="events"
      maxValue="100"
      minValue="0"
      threshold1="40"
      threshold2="80">
    </metric:metric>
  </method>
</methodCall>
```

```

    <metric:command type="sql">
      <metric:text data="select sum(Tally) from alerts.status where Severity=4;"/>
    </metric:command>
  </metric:metric>
</method>
</methodCall>

```

To ensure any restriction filters are applied, use the same form of the `<metric:text>` element as shown in the basic mode example of creating a metric. The sample file `samplerrequest_metric_basic.xml` has an example of creating and replacing a metric in basic mode.

Modify a metric

The following WAAPI command makes three modifications to the metric named `metricsample1`:

- A new maximum value
- New thresholds for the transitions between the low, medium, and high ranges of the metric
- A modified description

```

<methodCall xmlns:metric="http://www.ibm.com/tivoli/netcool/webtop/metrics/7.4.0">
  <method methodName="metric.modifyMetric">
    <metric:metric name="metricsample1"
      displayName="MetricSample1"
      description="Shows count of all Critical events. Modified using WAAPI."
      units="events"
      maxvalue="250"
      minvalue="0"
      threshold1="40"
      threshold2="90">
      <metric:command type="sql">
        <metric:text data="select sum(Tally) from alerts.status where Severity=5;"/>
      </metric:command>
    </metric:metric>
  </method>
</methodCall>

```

To ensure any restriction filters are applied, use the same form of the `<metric:text>` element as shown in the basic mode example of creating a metric. The sample file `samplerrequest_metric_basic.xml` has an example of modifying a metric in basic mode.

Delete a metric

The following WAAPI command deletes the metric named `metricsample2`.

```

<methodCall xmlns:metric="http://www.ibm.com/tivoli/netcool/webtop/metrics/7.4.0">
  <method methodName="metric.deleteMetric">
    <metric:metric name="metricsample2"/>
  </method>
</methodCall>

```

List the existing metrics

The following WAAPI command returns a list of the available metrics.

```

<methodCall xmlns:metric="http://www.ibm.com/tivoli/netcool/webtop/metrics/7.4.0">
  <method methodName="metric.getList" />
</methodCall>

```

Setting the thresholds for a gauge

A gauge has three display levels: low, medium, and high. This task shows how to set the thresholds for each display level.

Before you begin

First note the following for each gauge you want to modify:

- The name of the gauge
The name appears beneath each gauge on the Gauges page.
- The value of the thresholds for transitions from low to medium and from medium to high.

You express each threshold as a percentage of the gauge's range (maximum value minus minimum value). Use the following method to determine the percentage value of each threshold:

1. Decide on the actual values on the gauge that are to be the threshold points.
2. Calculate the percentage equivalent of each point as follows:

$$\text{threshold}(\%) = (\text{threshold} - G_{\min}) / (G_{\max} - G_{\min}) * 100$$

where:

threshold(%)

is the threshold expressed as a percentage.

threshold

is the threshold point on the gauge.

G_{min} is the minimum value of the gauge.

G_{max} is the maximum value of the gauge.

About this task

To change the thresholds for one or more gauges:

Procedure

1. Log in to the Web GUI server using a command-line interface.
2. Go to the directory: `webgui-home/etc/configstore/ncwMetrics`.
3. Open the XML file for a gauge using a text editor. The name of the file is based on the name of the gauge on the Web GUI.
4. Locate the `<metric>` element and:
 - a. Set the value of the `threshold1` attribute to the percentage value for the low to medium transition.
 - b. Set the value of the `threshold2` attribute to the percentage value for the medium to high transition.
5. Save the file.
6. Repeat steps 3 to 5 for the other gauges you want to change.
7. Exit from the text editor.
8. Depending on the configuration of your site, you might need to restart the server.

Example

The characteristics and requirements for a gauge are:

- The gauge has a minimum value of 5 and a maximum of 55.
- The threshold points are 10 and 50.

The thresholds, expressed as percentages, are:

- Lower threshold:
 $(10 - 5)/(55 - 5) * 100 = 10\%$
- Upper threshold:
 $(50 - 5)/(55 - 5) * 100 = 90\%$

The **<metric>** element for this gauge is:

```
<metric name="adminconnections"
  displayName="Administrator"
  displayNameKey="ncw.metric.adminconnections.displayName"
  description="Number of Administration client connections"
  descriptionKey="ncw.metric.adminconnections.description"
  units="clients"
  unitsKey="ncw.metric.adminconnections.units"
  maxValue="55"
  minValue="5"
  threshold1="10"
  threshold2="90">
```

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Visualizing event information on Event Dashboards

Use the Event Dashboard portlet to maintain a high-level overview of events that match SQL queries. From the Event Dashboard dashboard, you can open an Active Event List (AEL) to investigate events in depth.

Procedure

To open the default Event Dashboard, click **Availability > Events > Event Dashboard**.

Event Dashboard overview

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

About monitor boxes

A monitor box contains the following buttons and fields:

Filter name

Displays the name of the filter that is associated with this monitor box.

To edit the filter, click **Edit Filters**  next to the filter name. The Filter Builder is opened, and the data and SQL query associated with the filter are loaded.

Total This value represents the total number of events that match the filter.

Highest

This value represents the highest severity among the alerts that match the filter.

Lowest

This value represents the lowest severity among the alerts that match the filter.

Metric This value represents a calculation that is applied to the alerts that match the filter. This derived value shows the average, sum, lowest, or highest value of a selected column in the alerts database table that is being queried by the filter.

Distribution meter

This area shows the severity distribution of the alerts that match the filter. The colors used in the bars are preconfigured to identify the different severity levels.

In the portlet preferences, you can configure the Event Dashboard to perform actions when you click the distribution meter. In the Preferences window, you can specify how the distribution meter is displayed: as a histogram or in a lava lamp format. You can also switch off the distribution meter.

You must make sure that the data sources specified in the filter and the data sources selected in the Event Dashboard contain identical fields; if this is not the case, an error message is displayed in the affected monitor boxes instead of event data.

Related concepts:

“The Web GUI in a load balancing environment” on page 133
Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Setting up filters for event data” on page 252

Use the Filter Builder to apply filters to an event list or Event Dashboard portlet. Administrators and read-write users can create and edit filters.

“Setting Event Dashboard portlet preferences and defaults” on page 176

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

“Adding monitor boxes to Event Dashboard portlets”

To add a new monitor box to an Event Dashboard portlet, use the Filter Builder to add a new filter.

“Deleting monitor boxes from Event Dashboards” on page 309

To delete a monitor box from an Event Dashboard portlet, delete the filter that corresponds to the monitor box.

“Customizing monitor box information” on page 310

To change the information that is displayed on a monitor box on an Event Dashboard portlet, edit the filter that controls the monitor box.

“Changing the event information displayed on monitor boxes” on page 311

To specify the type of information displayed in the monitor boxes, and the format of that information, use the Event Dashboard preferences.

“Customizing the monitor boxes on Event Dashboards” on page 312

Use the portlet preferences of the Event Dashboard portlet to control how the monitor boxes are arranged, and which monitor boxes are displayed.

“Freezing and unfreezing Event Dashboards” on page 313

To take a snapshot of the alert information before it is changed by updates from the ObjectServer, you can freeze all the monitor boxes on the Event Dashboard.

“Monitoring events in the AEL” on page 274

Use the Active Event List (AEL) to interactively monitor and manage events.

Adding monitor boxes to Event Dashboard portlets

To add a new monitor box to an Event Dashboard portlet, use the Filter Builder to add a new filter.

About this task

As a read-write user you can add filters to the My Filters list. The filters in this list are assigned to your user profile.

You can add filters to the My Filters list, and to the user profiles of read-write users. You can also add global filters.

To add monitor boxes to an Event Dashboard portlet:

Procedure

1. Open an Event Dashboard portlet.
2. To open the Filter Builder, click **Edit Filters** .
3. From the **Available Filters** list, select **My Filters**.

4. Select the level of access for the filter:
 - To make the filter available to all users, select **Global Filters**.
 - To assign the filter to a specific user, select the required user name.
5. Click **Add Filter**.
6. Use the Filter Builder to create the required filter.
7. Click **Save** to save the filter, or click **Save and Close** to save the filter and close the Filter Builder.

Results

A new monitor box that displays the events matching the filter is added to the Event Dashboard portlet.

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

“Filter Builder overview” on page 252

The Filter Builder is an HTML utility that you use to construct filters that are dynamically applied to event data.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Deleting monitor boxes from Event Dashboards

To delete a monitor box from an Event Dashboard portlet, delete the filter that corresponds to the monitor box.

Before you begin

As a read-write user, you can delete filters that are assigned to your user. In the Filter Builder, these filters are contained in the **My Filters** list.

You can delete filters assigned to your user, filters that are assigned to other users, and global and system filters.

About this task

To delete monitor boxes from an Event Dashboard portlet:

Procedure

1. Open an Event Dashboard portlet and note the name of the filter that you want to delete.
2. To open the Filter Builder, on the tool bar, click **Edit Filters** .
3. In the Filter Builder, from the **Available Filters** list, select the list that contains the required filter:
 - To delete a filter associated with your user, select **My Filters**.
 - Select **Global Filters**, **System Filters**, or the user name associated with the required filter.
4. From the list, select the filter that you want to delete and click **Delete**.
5. Click **OK**.

Results

The monitor box that corresponded to the deleted filter is no longer displayed on the Event Dashboard portlet.

If you delete a global filter, the monitor box is immediately removed from the Event Dashboard.

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Customizing monitor box information

To change the information that is displayed on a monitor box on an Event Dashboard portlet, edit the filter that controls the monitor box.

About this task

As a read-write user, you can edit only filters that are assigned to your user. In the Filter Builder, these filters are contained in the **My Filters** list.

You can delete filters assigned to your user, filters that are assigned to other users, and global and system filters.

Procedure

1. On an Event Dashboard portlet, next to the filter name of the required monitor box, click **Edit Filters**  .
The Filter Builder opens, and the selected filter is loaded.
2. Edit the general properties of the filter.
3. Edit the SQL query of the filter by using either Basic mode or Advanced mode.
4. If the filter is a dependent filter, edit the dependencies.
5. To save your changes, click **Save and Close**.

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

“Filter Builder overview” on page 252

The Filter Builder is an HTML utility that you use to construct filters that are dynamically applied to event data.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Changing the event information displayed on monitor boxes

To specify the type of information displayed in the monitor boxes, and the format of that information, use the Event Dashboard preferences.

About this task

To change the information on the monitor boxes:

Procedure

1. On an Event Dashboard portlet, click **Edit Preferences** .
2. On the Preferences window, click **Monitor Boxes** and complete the fields as follows:

Show Number of Alerts

Displays the number of alerts that match the filter.

Show Highest Severity

Displays the highest severity of the alerts that match the filter.

Show Lowest Severity

Displays the lowest severity of the alerts that match the filter.

Show Highest Severity Border

Displays a border around the monitor box in the color of the highest-severity alert that matches the filter.

Show Metric

Displays the selected filter metric value.

Show Highest Color

Applicable only if you selected the **Show Highest Severity** option:
Displays the highest-severity alert indicator in the color of the alert, for example, in red if the highest-severity alert is critical.

Show Lowest Color

Applicable only if you selected the **Show Lowest Severity** option:
Displays the lowest-severity alert indicator in the color of the alert.

Font Select the font and the font size for the text on the monitor boxes.

Distribution meter

Specify the format for the distribution meter:

- **Show Lava Lamp:** Displays the distribution meter as a series of horizontal bars.
 - **Show Histogram:** Displays the distribution meter as a bar graph.
 - **Show None:** Switches off the distribution meter.
3. Save the settings for use in the current session, or for future sessions:
 - To use these preferences in the current session only, click **Apply**.
 - To use these preferences in future sessions, click **Save**.
 4. Optional: If the Event Dashboard is configured to open an Active Event List (AEL), click the other tabs and change the AEL settings.
 5. To exit the Preferences window, click **Close**.

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Changing the AEL refresh rate” on page 195

You can change the time period in seconds after which the AEL is automatically refreshed on a regular basis by the Web GUI server.

“Enabling notifications and setting notification criteria” on page 198

You can set the AEL to inform you about changes in alert status. You can also specify the conditions which must be met before you receive a notification.

“Enabling flashing and setting flash speed and brightness” on page 199

You can specify flashing in the AEL for alerts where the Flash field in the alerts.status table has been set to 1, or converted to Yes. Also, you can adjust the interval between each flash and the brightness of the flash in the window.

“Modifying the AEL font and window settings” on page 200

You can set the AEL font type, and specify the color and toolbar preferences for AELs.

“Modifying the AEL date and time format” on page 200

You can specify the date and time format used on the AEL.

“Changing how event severity is depicted in the AEL” on page 203

You can specify how the severity of events is displayed in the AEL: as icons, as text, or as a combination of both icons and text.

“Customizing the monitor boxes on Event Dashboards”

Use the portlet preferences of the Event Dashboard portlet to control how the monitor boxes are arranged, and which monitor boxes are displayed.

Customizing the monitor boxes on Event Dashboards

Use the portlet preferences of the Event Dashboard portlet to control how the monitor boxes are arranged, and which monitor boxes are displayed.

Before you begin

To change the portlet preferences of an Event Dashboard portlet, your user must be assigned the `ncw_dashboard_editor` role.

About this task

You control the layout of the monitor boxes in the **Dashboard Layout** area of the Edit Event Dashboard Portlet Preferences window.

Procedure

1. On an Event Dashboard portlet, click **Edit** .
2. To remove monitor boxes from the layout, use the following options:
 - To remove a single monitor box, on the monitor box, click **Remove Monitor Box**  .
 - To remove all monitor boxes, click **Remove All Monitor Boxes**  .

3. To add a new filter, and a new monitor box, click **Edit Filters**  and use the Filter Builder to specify the properties of the filter and the SQL query.

Tip: If you want all new filters to be automatically added as monitor boxes to the Event Dashboard, select **Show Assigned Filters**.

4. To restore a previously-removed monitor box, or add a new filter as a monitor box, click **Add Monitor Box**  and, from the list, select the required monitor box. The monitor boxes are listed by filter name.
5. To show all filters on the layout (that is, all global filters and all filters assigned to your user in the **My Filters** list) select **Show Assigned Filters**.

Tip: To display only a subset of the available filters:

- a. Select **Show Assigned Filters** to display all the available filters.
 - b. Clear **Show Assigned Filters**.
 - c. Remove the monitor boxes that you do not require.
6. To change the appearance of the Event Dashboard, click **Edit Preferences**  and change the settings under **Monitor Boxes**.
 7. To change the arrangement of the monitor boxes on the Event Dashboard, proceed as follows:
 - a. To change the number of columns in which the monitor boxes are arranged, in the **Columns** list, select or type the required number.
 - b. Drag the monitor boxes into the required arrangement.
 8. To save and apply your settings to the portlet, click **OK**.
 9. To restore the default settings for the portlet, as specified by the administrator, click **Reset to Defaults**.

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

“Filter Builder overview” on page 252

The Filter Builder is an HTML utility that you use to construct filters that are dynamically applied to event data.

Related tasks:

“Changing the event information displayed on monitor boxes” on page 311

To specify the type of information displayed in the monitor boxes, and the format of that information, use the Event Dashboard preferences.

Freezing and unfreezing Event Dashboards

To take a snapshot of the alert information before it is changed by updates from the ObjectServer, you can freeze all the monitor boxes on the Event Dashboard.

Procedure

- To freeze the monitor boxes, click **Freeze/Unfreeze**  .
The updates from the ObjectServer are suppressed. On the status bar of the portlet, the **Auto refresh in** countdown is paused.
- To unfreeze the monitor boxes and obtain the updates from the ObjectServer, click **Freeze/Unfreeze** .

On the status bar of the portlet, the **Auto refresh in** countdown resumes.

- Optional: To force a refresh of the monitor boxes independently of the refresh rate, click **Refresh** .

Related concepts:

“Event Dashboard overview” on page 306

Use this window to view one or more categories of alert information. Each alert category is depicted by a *monitor box*, which represents a filter.

Customizing Active Event List actions on Event Dashboards

To customize the actions that you can execute from an Event Dashboard portlet, and from an Active Event List (AEL) that is opened from the Event Dashboard, use the portlet preferences.

Before you begin

To change the portlet preferences of an Event Dashboard portlet, your user must be assigned the `ncw_dashboard_editor` role.

Procedure

1. On an Event Dashboard portlet, click **Edit**.
2. In the **Single-click** list, select the action that you want to be performed when you click the distribution meter.
 - **Update Event List (using wires)**: Sets the filter and view of the event list to match those on the monitor box.
 - **Open AEL in New Window**: Opens a new AEL applet with the filter and default view associated with the clicked monitor box. If you select this option, you can specify what actions are executed when you click or double-click a row in the AEL. This is the default action.
 - **Open Event Viewer in New Window**: Opens a new Event Viewer window with the filter and default view associated with the clicked monitor box.
 - **Script**: Executes a custom JavaScript when you click the monitor box.
3. Optional: If you selected the **Script** option, type a Java script in the **Script** field. You can use the following tokens in the script:

\$(FILTER)

The name of the filter associated with the monitor box that is clicked.

\$(FILTERCATEGORY)

The category of the filter associated with the monitor box.

\$(FILTEROWNER)

The owner of the filter (required when **\$(FILTERCATEGORY)** represents a user or group filter).

\$(VIEW)

The name of the view associated with the monitor box that was clicked.

\$(VIEWCATEGORY)

The category of the view associated with the monitor box that was clicked.

\$(DATASOURCES)

The datasource(s) associated with the monitor box that was clicked

\$(PORTLETNAMESPACE)

The portlet namespace of the Event Dashboard portlet.

For sample scripts, see the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

4. Optional: If you selected the **Open AEL in New Window** option, select the actions that you want to be performed when you click or double-click a row in the AEL.
 - **Event list single-click action:** Select the action to perform when you click an event in the AEL once. You can select default actions, such as opening the information window for the selected event, or you can select tools to be run on event data. You can create tools in the Tool Creation editor.
 - **Event list double-click action:** Select the action to perform when you double-click an event in the AEL. You can select default actions, such as opening the information window for the selected event, or you can select tools to be run on event data. You can create tools in the Tool Creation editor.
5. Under **AEL Appearance**, specify the areas of the AEL that you want to be displayed. Make these settings only if you selected **Open AEL in New Window** from the **Single-Click Action** list.
6. To save and apply your settings to the portlet, click **OK**.

Example

The following example shows the script used to send a TIP launchPage event to launch an Event Viewer page with context when you click the monitor box:

```
var event = {
  "name" : "http://ibm.com/isclite#launchPage",
  "NavigationNode":
  "item.desktop.navigationElement.EventViewer",
  "filterName" : "${FILTER}",
  "filterType" : "${FILTERCATEGORY}",
  "filterOwner" : "${FILTEROWNER}",
  "viewName" : "${VIEW}",
  "viewType" : "${VIEWCATEGORY}",
  "dataSource" : "${DATASOURCES}",
  "switchPage": "true"
};

${PORTLETNAMESPACE}sendPortletEvent(event);
```

For more information about creating scripts that run from the Event Dashboard, see the *IBM Tivoli Netcool/OMNIBus Web GUI Administration and User's Guide*.

Related concepts:

"The Web GUI in a load balancing environment" on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Creating a page with an Event Dashboard and Active Event List

To obtain a high-level overview of events and be able to jump to an in-depth view of specific events, create a page that contains the Event Dashboard portlet and the Active Event List (AEL) applet, and customize the Event Dashboard to refresh the AEL when you click a monitor box.

Before you begin

To create pages in Tivoli Integrated Portal, your user requires the iscadmins role.

Procedure

1. From the navigation, click **Settings > Pages**.
2. On the Page Management page, click **New Page**.
3. Provide a descriptive name for the page and choose its location in the navigation tree. Then Click **OK**.
4. On the Choose a Portlet page, select **Event Dashboard** and click **OK**.
5. Click **Horizontal Split**  .
6. On the Choose a Portlet page that is displayed below the Event Dashboard portlet, select **Active Event List (AEL)** and click **OK**.
7. Click **Save**.
8. To specify user access to the page:
 - a. Click **Roles with Access to this Page** and click **Add**.
 - b. From the **Available Roles** list, select the required roles and click **Add**.
9. Optional: If you have defined Tivoli Integrated Portal views, add the page to a view:
 - a. Click **View Membership** and click **Add**.
 - b. From the **Available Views** list, select the required views and click **Add**.
10. Click **Save**.
11. To customize the Event Dashboard to refresh the AEL:
 - a. On the Event Dashboard portlet toolbar, click **Edit options > Edit Preferences**.

Tip: To set the portlet preferences for all users, click **Edit options > Personalize** or **Edit options > Edit Shared Settings**.
 - b. From the **Single-Click Action** list, select **Update Event List (using wires)**.
 - c. Click **OK**.
12. To test the interaction between the Event Dashboard portlet and the AEL applet, in the Event Dashboard, click the distribution indicator of one of the monitor boxes.

Results

On the page, the AEL is updated and now contains only the events that are captured by the filter specified for the monitor box.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Setting Event Dashboard portlet preferences and defaults” on page 176

To customize the appearance and setup of the Event Dashboard portlet, and the actions that can be executed from the monitor boxes, edit the preferences of the portlet.

Visualizing event information on maps

You can use maps to graphically represent the status of a network.

Related concepts:

“About maps”

Maps are Web applets that you use to create a view of a network, for example of a network topology or a geographical overview. You can overlay a background image with interactive widgets, called *map objects*, that can be configured to display alert data, and to open event lists for a detailed view of the network.

About maps

Maps are Web applets that you use to create a view of a network, for example of a network topology or a geographical overview. You can overlay a background image with interactive widgets, called *map objects*, that can be configured to display alert data, and to open event lists for a detailed view of the network.

Map resources

Map resources are the background graphic for the map or any icons that you want to use as map objects. The background typically represents a network topology or a geography, although you do not have to specify a background image. Default graphics and icons are provided; alternatively, you can upload additional background images and icons as map resources. Map resources can be .gif files, .jpeg files, or .png files.

Map objects

Map objects are items that you can put on a map, to represent part of a network topology, for example. Map objects include buttons, lines, or icons.

After you have put an object on a map, you can customize the appearance and behavior of the map object, which are determined by the type of map object. The types of map object are as follows:

Active objects

Map objects that can display alert severity information. You associate an active object with a filter; when the map is displayed, the color of an active object changes to show the highest severity status alert that is captured by the filter. You can also turn on hover help for the object, which displays information from the filter.

Inactive objects

Map objects that do not display alert severity information, and can be associated only with the URL of another Web page, for example, a page that contains another map.

Monitor boxes

Use monitor boxes to display detailed alert severity information on a map. You associate a monitor box with a filter; when the map is displayed, the distribution meter of the monitor box displays the range of events captured by the filter. You can customize the distribution meter to be a histogram or lavalamp; you can also customize the appearance of the monitor box.

Text Use a text object to write text directly onto a map.

Active map objects, monitor boxes and text objects can be associated with the following applets and pages:

- Active Event List (AEL)

- Lightweight Event List (LEL)
- Table View
- URL of a Web page, for example, a page that contains another map

Map preferences

Each map has a number of preferences, that determine its overall appearance. You can adjust these preferences to suit your needs and the use that the map is put to.

Map name

The identity of the displayed map. You can choose from a number in a drop-down list.

Sound URL

The URL of a sound file to play when the map is updated due to a refresh operation.

Refresh rate

the time (in seconds) between refresh operation on the map.

Hover help for active objects

Determines whether to display hover help for active objects on the map that are associated with filters. This can help users determine what action is associated with an object.

Status bar

Determines whether to display a status bar with the map. The bar includes a countdown timer until the next refresh operation.

Use Customiser

Determines whether to use the height specified in the map or the value specified in the **Height** preference.

Height

Specifies the height to use when displaying the map. This value works in conjunction with the **Use Customiser** preference. When in use this value overrides the height specified in the map definition.

Map editors

To add map objects to a map, and customize the map objects, use the Java Map Editor, which provides a graphical interface for customizing maps, or the HTML Map Editor, in which you customize the map by writing HTML code in a text field.

Publishing maps

To make maps visible to other users, add the maps to the navigation in Tivoli Integrated Portal.

First, you create a page in the Tivoli Integrated Portal. Then, you add either of the following portlets to the page:

- Map
- Web widget

Finally, you reference the map by editing the portlet preferences.

Related tasks:

Chapter 11, “Filtering event information,” on page 249

Network events typically create many alerts that are not of immediate importance to the personnel monitoring the system. Use filters and views to control the event information that is displayed to users.

“Visualizing event information on maps” on page 317

You can use maps to graphically represent the status of a network.

Previewing maps

As an administrator, after Tivoli Netcool/OMNIbus is installed, to familiarize yourself with maps, you can view sample maps that are deployed within the Web GUI.

About this task

The Web GUI provides three default maps that communicate with a simnet probe. The simnet probe sends simulated events to the ObjectServer; the probe is provided with Tivoli Netcool/OMNIbus. After you start the simnet probe, the maps are populated with events.

To preview maps:

Procedure

1. Run the simnet probe by entering the command for your operating system. For example: `$NCHOME/omnibus/probes/nco_p_simnet -server NETCOOLPRI`
2. In Tivoli Integrated Portal, click **Administration** > **Event Management Tools** > **Example Maps**.
 - To view a sample eCommerce map that uses active icons, represented by the default graphics, click **eCommerce**
 - To view a sample network on a geographical map that uses active buttons to open monitor boxes, click **Geographic**

Creating maps

After you have added the resources that you want to use in your map, you can create the map itself.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Creating maps using the Java Map Editor:

Use the Java Map Editor to create and edit maps.

About this task

To create a map using the Java Map Editor:

Procedure

1. Click **Administration** > **Event Management Tools** > **Maps** > **Map Creation**.
2. To open the Java Map Editor, click **Java** > **New**.
3. In the Java Map Editor applet, type a name for your map in the **Input** field. The map name must be alphanumeric and cannot contain spaces.

4. Click **OK**.

What to do next

You can now customize the map properties using the Java Map Editor.

Related tasks:

“Customizing maps using the Java Map Editor” on page 321

After you have created a map, use the Java Map Editor to add active or inactive objects to the map, and configure the properties of the objects. Also customize the properties of the map, such as the access permissions, size, and background image.

Creating maps using the HTML Map Editor:

Use the HTML Map Editor to create and edit maps.

About this task

To create a map by using the HTML Map Editor:

Procedure

1. Click **Administration > Event Management Tools > Maps > Map Creation**.
2. Click **HTML** and then click **New**.
3. In the HTML Map Editor, use the following fields and buttons to provide the map settings:

Map name

Type a name for the map. The map name must be alphanumeric and cannot contain spaces.

Group name

Select the group for which you want to grant access to the map. The * group grants access to all users including any new users you create.

Background image

Type the name of a background image, for example `background.gif`. The image must be in either GIF or JPEG format and must be uploaded as a map resource.

Background color

Type the color for the background.

Height

Type the height of the page in pixels.

Width Type width of the page in pixels.

4. Click **Submit**.

What to do next

You can now specify the details of the new map by using HTML map editing commands in a text editor.

Related tasks:

“Customizing maps in HTML” on page 332

As an alternative to the Java interface, you can use the HTML Map Editor to customize maps. Enter the HTML map editing commands in the map display text field to configure maps.

Customizing maps

After you have created your map, you can customize it by adding map objects to the map, and editing the properties of the map objects.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Customizing maps using the Java Map Editor:

After you have created a map, use the Java Map Editor to add active or inactive objects to the map, and configure the properties of the objects. Also customize the properties of the map, such as the access permissions, size, and background image.

About this task

To customize a map using the Java Map Editor:

Procedure

1. Click **Administration > Event Management Tools > Maps > Map Creation**.
2. Select the map that you want to customize.
3. Click **Java** and then click **Modify**.

Results

The Java Map Editor is launched with the properties of the selected map loaded.

What to do next

Now use the Java Map Editor to customize the map properties and the map objects.

Setting access to a map:

You can define which user group has access to a map.

Procedure

To restrict access to a map to a specific user group:

1. Open the Java Map Editor with the map you want to modify.
2. In the **Access Control** pane, select the user group that has access to the map.
To specify unrestricted access to a map, choose the entry *****.

Note: Users with the `ncw_admin` role can edit any map on the system. However, they can view only unrestricted maps or maps available to groups that the users are members of.

3. Click **File > Save** to save the settings of the map.

Setting map size and background:

Use the Java Map Editor to set the background image for your map. Use the Color Picker to set the background color for your map.

About this task

To set the size and background of the map:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. Use the following fields and buttons to set the size and the background properties of the map:

Map Size

Set the width and height of the map in pixels.

Background

Set the background color for the map using the **Open a color picker** button.

Select a background image for the map from the list. The image overlays the background color. When you select a background image, the size of the map in pixels is automatically resized to the size of the background image.

Tip: Images that have been saved as resources for the current map appear in this list, and a number of generic images are provided by default.

3. Select **Server > Resync** to update the available images for the map. After adding a new resource, you must always update the Java Map Editor to include the new resource in the list of available items to be used in maps.
4. Click **File > Save** to save the settings of the map.

Related concepts:

"Color picker" on page 331

The color picker is used to select the color of the map background, inactive buttons, lines, and text.

Related tasks:

"Previewing map resources" on page 342

Use the Map Resources portlet to preview images and icons for your maps.

Setting the map grid for assistance:

Map items can be moved within the map by using either the mouse or the cursor keys. Use the grid feature to assist you in positioning and aligning these items.

About this task

To turn on the grid feature:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. Click **View** and select the **Show Grid** check box. Alternatively, you can use Ctrl+G to switch on (and off) the map grid.

3. If it is not already selected, select the **Snap to Grid** check box in the **View** menu. When this feature is turned on, it causes all items on the map to snap to the nearest adjacent top and left-side grid lines.

If the **Snap to Grid** check box is not selected, you can also select the **Autolayout** option from the **View** menu to initiate an automatic adjustment of all objects on the map to the nearest adjacent top and left-side grid lines.

4. Resize the cell spacing of the map grid by selecting **Grid Size** from the **View** menu, and entering the desired cell space (in pixels).

Results

The placement of map items is now controlled by their proximity to the adjacent top and left-side grid lines.

Adding map objects and resources:

Use the Java Map Editor to add map resources, such as the background graphic for the map and graphics that you want to use as map objects, and also to add the map objects.

About this task

Map resources can be .gif files, .jpeg files, or .png files.

To add map resources and map objects:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. To add map resources:
 - a. Click **File > Import Image**.
 - b. Select the required image and click **Open**.
 - c. Click **OK**.
 - d. Repeat until you have added all the required map resources.
3. To set the background for the map, select an option from the **Background** area:
 - To add a background color, click the Color Picker, or type a color in the field.
 - To use a map resource for the background image, for example, a geographical map, select a resource from the list.

If you select a map resource, the size of the map snaps to the size of the resource.

4. Add the required map objects:
 - To add an active button, click **Active rectangle button** . Optionally, specify the shape of the button: rectangle, rounded rectangle or circle.
 - To add an inactive button, click **Rectangle button** . Optionally, specify the shape of the button: rectangle, rounded rectangle or circle.
 - To add an active icon, click **New active icon** . Icons are added with a default placeholder graphic; you specify the graphic when you edit the properties of the map object.

- To add an inactive icon, click **New icon** 

Icons are added with a default placeholder graphic; you specify the graphic when you edit the properties of the map object.
 - To add an active line, click **New active line** 
 - To add an inactive line, click **New line** 
 - To add a monitor box, click **Lavalamp Monitor** 

Optionally, specify the format of the distribution indicator: Lavalamp or histogram.
 - To add a text object, click **New text** 
5. Position the mouse pointer where you want to add the object on the map and click the map.

The new object is placed on the map.
 6. To add all the required map objects, repeat steps 4 on page 323 and 5.

What to do next

You can now edit the properties of the map objects.

Setting map object properties:

The properties of a map object control the appearance of the object and the information associated with it; the properties also include the name and the label. Depending on the type of object, the properties that you can set are displayed automatically.

Before you begin

In the case of image objects, if you want to add a new image to an object, you must have added the image as a map resource. After you have added a new resource, you must refresh the Java Map Editor window.

About this task

In the case of monitor box objects, if you select extra information to be displayed on an monitor box (step 9b on page 325), you must make sure that the dimensions of the monitor box are large enough to accommodate the information. If the dimensions are too small, none of these details can be displayed and the monitor box might resemble a button on the map.

To configure the properties of a map object:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. To open the Properties window, double-click the required object on the map.
3. Click **Properties**.
4. In the **Name** field, type the name of the object. Each object on a map must have a unique name.
5. In the **Label** field, type the label that you want to be displayed in the status bar of the Web browser when the mouse pointer is hovered over the object.

6. In the **Translucency** field, type a percentage value to control the level of translucency. 100% means that the object is completely translucent.

Tip: For active map objects: To use the glowing background effect for event severity, set a low translucency value.

7. To enable a shadow for the map object, select **Show Shadow**.
8. If the object is a button, set the following additional properties:
 - a. Under **Type**, select the shape of the button.

Tip: If you selected a rounded rectangle or elliptical button, to specify the corner radius of the button, click **Size & Position** and type a value in the **Arc Diameter** field.

- b. From the **Legend** list, select the text or value that you want displayed on the button.

None No text or value is displayed on the button.

Label Displays the text entered in the **Label** field.

Count For active buttons only: Displays the total number of alerts for the filter.

Metric For active buttons only: displays the metric measurement.

9. If the object is a monitor box, set the following additional properties
 - a. Under **Type**, specify how you want the distribution indicator to be displayed.
 - b. Specify which information about alert distribution you want to be displayed on the monitor box:

Show Label

Displays the label of monitor box, as entered in the **Label** field

Show Total

Displays the total number of alerts in the distribution.

Show Highest

Displays the highest severity recorded for the alert distribution.

Show Lowest

Displays the lowest severity recorded for the alert distribution.

Show Metric

Displays the metric measurement.

Show Severity Border

Displays a color border around the monitor box border showing the highest alert severity.

Tip: Select this option if the alert distribution is large and the total number of alerts at the highest severity level is too small to appear in the distribution indicator.

Show Lowest Color

Displays the lowest-severity alert indicator in the color of the alert.

10. If the object is an icon, set the following additional properties:
 - a. Active icons only: Under **Type**, select the shape of the highlight bar that displays the event severity color.

Tip: If you selected a rounded rectangle or elliptical button, to specify the corner radius of the button, click **Size & Position** and type a value in the **Arc Diameter** field.

- b. Active icons only: From the **Legend** list, select the text or value that you want to be displayed on the icon.

None No text or value is displayed on the icon.

Count Displays the total number of alerts for the filter.

Metric Displays the metric measurement.

- c. From the **Image** list, select the image that you want to be displayed on the icon.

11. To save the settings, click **OK**.

12. To resynchronize the Java Map Editor with the Web GUI server, click **Server > Resync**.

Linking map objects with URLs:

You can associate a map object with a URL. In the map, when the object is clicked, the URL is opened. The URL can point to a SmartPage template or other resource, such as a CGI script.

Before you begin

CGI scripts must be registered before you can link a map object to the script.

About this task

If you link an active map object with a URL, you do not have to assign a filter.

Restriction: You cannot associate inactive icons or inactive lines with a URL.

To link a active map object to a URL:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. To open the Properties window, double-click the required object on the map.
3. Click **Associations**.
4. From the **Action** list, select **Open URL**.
5. To link the object with a resource on the Web GUI server, in the **URL** field, type the URL of the resource.

To open an Active Event List (AEL), type a URL as shown in the following example:

```
$(SERVER)/AELView?filtertype=type&filtername=filtername&view=viewname&datasource=datasourcename
```

Where the parameters are as follows:

\$(SERVER)

Resolves to *protocol://server:port/context-root/webtop*. This enables maps to be transported to other Web GUI servers. The value *context-root* refers to the context root of the Web GUI. This can be configured during installation and the default value is *ibm/console*.

datasource

A data source defined in the `ncwDataSourceDefinitions.xml` data source configuration file. If you do not specify this parameter, the default data source is used. For more information about the default data source, see the *IBM Tivoli Netcool/OMNIbus Installation and Deployment Guide*.

Tip: If you have defined multiple data sources, you can specify them in the string by using a comma-separated list, as shown in the following example:

```
datasource=datasource1,datasource2
```

If you specify multiple data sources, make sure that the filter, either a predefined filter or a transient filter, queries fields that are contained in all data sources. If you select a data source that is not defined in the filter, an error message is displayed in the AEL instead of event data.

6. To link the object to a SmartPage template:

- a. Click **Open the Template builder dialog**  .
- b. In the URL Build Tool window, select a SmartPage template type from the list.
- c. Enter the value of any variables contained in the template SmartPage tag source code.
For example, in the `table.html` template, you must provide a map name that corresponds to the `Map_Name` variable, and an entity name that corresponds to the `Filter_Name` and `Filter_Type` variable.
- d. Click **OK**.

In the **URL** field, the template address and SmartPage tag variable details are displayed as a query string, for example:

```
$(SERVER)/Template/table.html?Map_Name=Summary&Filter_Name=AllEvents&FilterType=Global
```

7. In the **Target** field, specify how you want the resource to be displayed:
 - To display the resource in a named IFrame portlet, type the name of the IFrame
 - To display the resource in same frame as the map, replacing the map, select **_self**.
 - To display the resource in new Web browser window, select **_blank**.
 - To display the resource in the parent frame set containing the source link, select **_parent**.
 - To display the resource in the frame containing the source link, select **_top**.
8. From the **Data Source** list, select a data source.
The default is the default data source specified in the `ncwDataSourceDefinitions.xml` data source configuration file.
9. Active icons only: From the **Feedback** list, specify how event information is displayed in the icon:
 - **Fill Background:** The icon background changes color to denote event severity. If you select this option, the icon must have transparent areas for the feedback color to be visible in the map.
 - **Highlight Bar:** A bar is displayed below the map object. The bar changes color to denote event severity. To select the shape of the highlight bar, change the Type setting on the **Properties** tab.

- **Glow Background:** The background of the icon changes color to denote event severity. If you select this option, change the Translucency setting on the **Properties** tab so that you can see the severity color behind the icon.

10. To save the settings, click **OK**.

Related tasks:

Chapter 11, “Filtering event information,” on page 249

Network events typically create many alerts that are not of immediate importance to the personnel monitoring the system. Use filters and views to control the event information that is displayed to users.

“Registering CGI scripts” on page 213

After you have installed a CGI script on the server, for security purposes, the script must be registered. CGI scripts cannot be used as tools until they are registered.

Related reference:

“Template overview” on page 388

The Web GUI supports dynamically-processed generic Web pages called *templates*. Templates contain SmartPage tag instances that are composed of attribute variables rather than hard-coded attribute data entries.

Appendix G, “URLs for opening Web GUI pages,” on page 417

Use the URL to open Web GUI portlets and applets from a map, from a link on an HTML page, or through a link generated by script tool or a CGI tool.

Linking map objects with event lists:

You can associate an active map object with an Active Event List (AEL), the Event Viewer, Lightweight Event List (LEL), or Table View. When you click the object, the specified event list is opened.

About this task

To link an active map object with an event list, you must assign a filter to the object. If you do not assign a filter to an active button or an active line, the button or line is not displayed correctly on the published map. In the Java Map Editor, active buttons or lines to which no filters are assigned are yellow.

Restriction: You can assign only global filters and system filters to an active map object. You cannot assign user filters.

To link an active map object with an event list:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. To open the Properties window, double-click the required object on the map.
3. Click **Associations**.
4. From the **Actions** list, select the event list that you want to be opened when you click the map object:
 - To open an AEL, click **Active Event List (AEL)**
 - To open the Event Viewer, click **Event Viewer**
 - To open an LEL, click **Lightweight Event List (LEL)**
 - To open a Table View, click **Event Table**
 - To update an Event List using wires, click **Update Event List (using wires)**. For this option, a system or custom wire must be configured to an Event

Viewer or Active Event List. A system wire is created by default when a map and Event Viewer or AEL are placed on the same portlet page.

5. In the **Target** field, specify how the resource will be displayed:
If you selected the option to **Update Event List (using wires)**, this field is disabled.
 - To display the event list in a named IFrame, type the name of the IFrame
 - To display the event list in the full current browser window, replacing the map, select **_self**
 - To display the event list in a new browser window, select **_blank**
 - To display the event list in the parent frame set containing the source link, select **_parent**
 - To display the event list in the frame containing the source link, select **_top**
6. From the **Filters** list, select the required filter.
7. From the **Data Source** list, select one or more data sources.
The default corresponds to the default data source specified in the `ncwDataSourceDefinitions.xml` data source configuration file.
If you select a data source that is not defined in the selected filter, or if the data source contains fields that are not defined in the filter, an error message is displayed. You must select a filter in which the required data source is defined.
8. Active icons only: From the **Feedback** list, specify how event information is displayed in the icon:
 - **Fill Background:** The icon background changes color to denote event severity. If you select this option, the icon must have transparent areas for the feedback color to be visible in the map.
 - **Highlight Bar:** A bar is displayed below the map object. The bar changes color to denote event severity. To select the shape of the highlight bar, change the Type setting on the **Properties** tab.
 - **Glow Background:** The background of the icon changes color to denote event severity. If you select this option, change the Translucency setting on the **Properties** tab so that you can see the severity color behind the icon.
9. To save the settings, click **OK**.

Setting the size and positions of map objects:

You can set the size of a map object, and you can specify the position of a map object within your map.

About this task

To configure the size and position of a map object:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. Open the map object Properties window using one of the following methods:
 - Double-click the object on the map.
 - Select the map object and click **Edit > Properties**.
 - Right-click an object and selecting **Properties** from the context menu.
3. Click the **Size & Position** tab.
4. Enter the distance in pixels from the left of the object to the left of the page in the **X** field. If the object is a line, enter a line-end coordinate in the **X2** field.

5. Enter the distance in pixels from the top of the object to the top of the page in the **Y** field. If the object is a line, enter a line-end coordinate in the **Y2** field.
6. Enter the width of the object in pixels in the **Width** field (buttons, monitor boxes, and active icons only).
7. Enter the height of the object in pixels in the **Height** field (buttons, monitor boxes, and active icons only).
8. If the map object is a **Rounded Rectangle** button or icon, you can change the arc of the corners by entering the diameter, in pixels, in the **Arc Diameter** field.

Tip: If **Feedback** is set to **Fill Background** in the **Associations** tab of an active icon, and the shape setting on the **Properties** tab is set to **Rounded rectangle**, you can modify the shape of the background color swatch by entering the diameter in the **Arc Diameter** field.

9. If the map object is a line, enter the thickness of the line in pixels in the **Thickness** field. The default thickness is 1.
10. Click **OK** to save the settings.

Setting the color and font of map objects:

You can set the color and font of active map objects.

About this task

To specify color, you have the following options:

- Click **Color picker** to select a color.
- Type a permitted color name. Permitted entries are as follows:
 - black
 - blue
 - cyan
 - darkGray
 - green
 - lightGray
 - magenta
 - orange
 - pink
 - red
 - white
 - yellow
- Type the RGB hexadecimal value of a color (for example #FFFFCC).

Restriction: You cannot set the color of the following objects:

- Active buttons
- Active icons
- Inactive icons
- Active lines

You cannot set fonts for the following objects:

- Inactive icons
- Active lines

- Inactive lines

To configure the color and font of a map object:

Procedure

1. Open the Java Map Editor with the map you want to modify.
2. On the map, right-click the required object and click **Properties**.
3. Click **Colors & Font**.
4. For inactive buttons:
 - a. In the **Color** field, specify the required color.
 - b. To make the button translucent, select the **Transparent** check box. For example, you might want to display only the text on the button, and no background.

Tip: If you create a translucent button that is the full size of the map and then place objects on top of it, the background behind the objects becomes clickable. You can make part of a .gif file clickable by drawing a translucent rectangle button over the required part of the .gif file.
5. To change the appearance of the legend, select a font, a font size, and font color.
6. For active buttons: To change the appearance of the legend, select a font, a font size, font color, and font style.
7. For monitor boxes:
 - a. In the **Foreground** field and **Background** field, specify the required color.
 - b. To change the appearance of the label, select a font, a font size, and font style.
8. For active icons: To change the appearance of the label, select a font, a font size, font color, and font style.
9. For inactive lines: In the color field, specify the required color.
10. For text:
 - a. Select a font, a font size, font style, justification, and font color.
 - b. To rotate the text, in the **Rotation** field, type the required value in degrees. The text rotates counter clockwise by the specified angle.
11. To save the settings, click **OK**.
12. To resynchronize the Java Map Editor with the Web GUI server, click **Server > Resync**.

Color picker:

The color picker is used to select the color of the map background, inactive buttons, lines, and text.

- When used to change the map background color, the **Color Picker** button is located to the right of the **Background** drop-down menu. The button displays the current background color.
- When used to change the color of inactive buttons, lines, or text, the **Color Picker** button is located on the **Color & Font** tab in the Properties window for the selected map object. The button displays the current color of the button, line, or text object.

When you click the **Color Picker** button, the *Select a Color* window is displayed.

The Select a Color window contains the following tabs:

- The **Swatches** tab shows a selection of predefined colors. Click a color to select it. The selected color is displayed in the sample color box. Click **OK** to apply the color to the background or to an item on the map.
- From the **HSL** and **HSV** tabs you can choose the hue, saturation, value, or lightness of the color. Select the color from the chart, or enter the numerical values. The selected color appears in the sample color box. Click **OK** to apply the color to the background or to an item on the map.
- From the **RGB** tab you can specify the red, green, and blue color scales either by using the slider controls or by entering the numerical values. The selected color appears in the sample color box. Click **OK** to apply the color to the background or to an item on the map.
- The **Severity** tab shows the colors used for severity in the event list. The available options are:
 - Clear (green)
 - Indeterminate (purple)
 - Warning (light blue)
 - Minor (yellow)
 - Major (orange)
 - Critical (red)Click a color to select it. The selected color appears in the sample color box. Click **OK** to apply the color to the background or to an item on the map.
- From the **Gray Scale** tab you can select any shade of gray between black and white by moving the slider control. Click **OK** to apply the color to the background or to an item on the map.

Related tasks:

“Setting map size and background” on page 322

Use the Java Map Editor to set the background image for your map. Use the Color Picker to set the background color for your map.

Customizing maps in HTML:

As an alternative to the Java interface, you can use the HTML Map Editor to customize maps. Enter the HTML map editing commands in the map display text field to configure maps.

About this task

To configure a map using the HTML Map Editor:

Procedure

1. Click **Administration > Event Management Tools**.
2. Click **Maps > Map Creation**.
3. Select **HTML** and click **Modify**.
4. To specify the general properties of the map, use the following fields:

Map name

Type a name for the map. The map name must be alphanumeric and cannot contain spaces.

Group name

Select the group for which you want to grant access to the map. The * group grants access to all users including any new users you create.

Background image

Type the name of a background image, for example `background.gif`. The image must be in either GIF or JPEG format and must be uploaded as a map resource.

Background color

Type the color for the background.

Height

Type the height of the page in pixels.

Width Type width of the page in pixels.

5. In the text entry field, type the map properties in HTML code.

Tip: For orientation, open an existing map in the HTML Map Editor.

6. Click **Save**.

Adding and configuring buttons:

Use the map editing commands of the HTML Map Editor to add buttons to your maps.

About this task

You can add two types of buttons to a map:

Inactive buttons

Inactive buttons can only be used to link to a URL.

Active buttons

Active buttons can also be used to show status color, and to open a Table View.

To add buttons to a map:

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following button instruction:

```
button(name="button",label="example",x=12,y=34,w=56,h=78
```

In these instructions, `button` is the unique name of the button, `example` is the label for the button, and the numeric values for `x`, `y`, `w` and `h` are in pixels. All button instructions start using this format, and each button has the following common properties:

- A name, which must be unique.
- A label, which appears in the status bar of the Web browser when the mouse pointer is over it.
- A position, which is defined by the coordinates of the top left corner of the button relative to the top left corner of the page.
- A button size, which is defined by the height and width.

Note: The variable *BSI* (Button Start Instruction) is used to represent this initial part of the instruction.

3. Click **Save**.

Results

Linking an inactive button to a URL:

Use the map editing commands of the HTML Map Editor to link an inactive button on your map to a URL.

About this task

To link a button to a URL:

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following button instruction:

```
BSI,action="go",url="$(SERVER)/newpage")
```

In this instruction, *BSI* is the first part of the button instruction and *newpage* is the destination HTML page.

The button appears gray.

3. Click **Save**.

Related tasks:

“Specifying a target” on page 339

For all map entries that have a link to a URL, you can also specify the target.

When the target is omitted, the URL replaces the map in the current Web browser window.

Linking an active button to a URL and displaying status:

Use the map editing commands of the HTML Map Editor to link an active button on your map to a URL, and display the event status as the button color.

About this task

To link a button to a URL and display the status as the button color:

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following button instruction:

```
BSI,filter="example",filtertype="type",action="go",url="$(SERVER)/newpage.html")
```

BSI is the first part of the button instruction, *example* is the name of a filter, *type* denotes the type of filter, which can be “system” or “global”, and *newpage* is the destination HTML page. The color of the highest-severity event from the alerts.status table, as captured by the filter, is used as the color of the button.

3. Click **Save**.

Related tasks:

“Specifying a target” on page 339

For all map entries that have a link to a URL, you can also specify the target.

When the target is omitted, the URL replaces the map in the current Web browser window.

Associating a Table View with an active button and displaying status:

Use the map editing commands of the HTML Map Editor to associate an active button with a Table View.

About this task

To associate a Table View with a button and display the status as the button color

Procedure

1. Open the HTML Map Editor with the map you want to modify.

2. In the text editor area, add the following button instruction:

```
BSI,filter=example,filtertype=type,action="table")
```

BSI is the first part of the button instruction, *example* is the name of a filter, *type* denotes the type of filter, which can be "system" or "global", and *table* defines that a Table View is opened when the button is clicked.

The color of the highest-severity event from the alerts.status table, as captured by the filter, is used as the color of the button.

The default view associated with the filter defines the columns in the Table View that are displayed.

3. Click **Save**.

Adding and configuring icons:

Use the map editing commands of the HTML Map Editor to add icons to your maps.

About this task

You can add two types of icons to a map:

Inactive icons

Inactive icons have no function on the map.

Active icons

Active icons can link to a URL.

All icon instructions start using the format described in step two. Each icon has the following common properties:

- A name, which must be unique.
- A label, which appears in the status bar of the Web browser when the mouse pointer is over the icon.
- A position, which is defined by the coordinates of the top left corner of the icon relative to the top left corner of the page.
- An icon size, which is defined by the height and width.
- All icons must be in either GIF or JPEG format, and must be entered as resources on the map.

To add icons to a map:

Procedure

1. Open the HTML Map Editor with the map you want to modify.

2. In the text editor area, add the following icon instruction:

```
icon(name="icon",label="example",x=12,y=34,image="image"
```

In these instructions, *icon* is the unique name of the icon, *example* is the label for the icon, the numeric values for *x* and *y* are in pixels, and *image* is the image file name.

Note: The variable *ISI* (Icon Start Instruction) is used to represent this initial part of the instruction.

3. To add an inactive icon, complete the instruction by adding a close parenthesis. This instruction adds an *inactive* icon.
4. Click **Save**.

Linking an active icon to a URL:

Use the HTML Map Editor and the HTML map editing commands to link an active icon on your map to a URL.

About this task

To link an icon to a URL:

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following icon instruction:

```
ISI,action="go",url="$(SERVER)/newpage"
```

ISI is the first part of the icon instruction, and *newpage* is the destination HTML page.
3. Click **Save**.

Related tasks:

"Specifying a target" on page 339

For all map entries that have a link to a URL, you can also specify the target. When the target is omitted, the URL replaces the map in the current Web browser window.

Adding and configuring lines:

Use the map editing commands of the HTML Map Editor to add lines to your maps.

About this task

You can add two types of lines to a map:

Inactive lines

Inactive lines can only be used to link to a URL.

Active lines

Active lines can also be used to show status color, and to open a Table View.

All line instructions start using the format described in step two, and each line has the following common properties:

- A name, which must be unique.
- A label, which appears in the status bar of the Web browser when the mouse pointer is over the line.

- A position for each end of the line, which is defined by the coordinates relative to the top left corner of the page.
- A thickness can also be applied to the line. The default line thickness is 1 pixel.

To add lines to a map:

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following line instruction:

```
line(name="line",label="example",x=12,y=34,x2=56,y2=78,thickness=9
```

line is the unique name of the line, example is the label for the line, the numeric values for x, y, x2, y2, and thickness are in pixels.

Note: The variable *LSI* (Line Start Instruction) is used to represent this initial part of the instruction.

3. Click **Save**.

Setting the color for an inactive line:

Use the map editing commands of the HTML Map Editor to set the color of an inactive line.

About this task

To complete the line instruction for an inactive line and set the color of the line:

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following line instruction:

```
LSI,color=black)
```

LSI is the first part of the line instruction.
The value of color can be the name of a system color (for example, black) or its hexadecimal equivalent (for example, #Ff1dC4).
3. Click **Save**.

Linking an inactive line to a URL:

Use the HTML Map Editor and the HTML map editing commands to link an inactive line on your map to a URL.

About this task

To link a line to a URL:

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following line instruction:

```
LSI,action="go",url="$(SERVER)/newpage"
```

LSI is the first part of the line instruction and newpage is the destination HTML page.
The line appears gray.
3. Click **Save**.

Related tasks:

“Specifying a target” on page 339

For all map entries that have a link to a URL, you can also specify the target. When the target is omitted, the URL replaces the map in the current Web browser window.

Associating a Table View with an active line and displaying status:

Use the HTML Map Editor and the HTML map editing commands to associate an active line with a Table View.

About this task

To associate a Table View with a line and display the status as the line color

Procedure

1. Open the HTML Map Editor with the map you want to modify.
2. In the text editor area, add the following line instruction:

```
LSI,filter="example",filtertype="type",action="table")
```

LSI is the first part of the line instruction, *example* is the name of a filter, *type* denotes the type of filter, which can be “system” or “global”, and *table* defines that a Table View is opened when the line is clicked.

The color of the highest-severity event from the alerts.status table, as captured by the filter, is used as the color of the line.

The view associated with the filter defines the columns in the Table View that are displayed.

3. Click **Save**.

Adding text to a map:

Use the map editing commands of the HTML Map Editor to add text to the map background image.

About this task

The text is unable to perform any special function, such as link to a URL.

All text instructions use the format described in step two, and have the following common properties:

- A name, which must be unique.
- A label, which appears as the required text.
- A position, which is defined relative to the top left corner of the page.
- A font (default helvetica).
- A size (default 10 point).
- A style (default plain).

To add text to a map:

Procedure

1. Open the HTML Map Editor with the map you want to modify.

2. In the text editor area, add the following text instruction:
`text(name="text",label="example ",x=12,y=34,font="font",size=12,
style="style", color="color")`
text is the unique name for the text, example is the text you want to enter, the numeric values for x and y are in pixels, font is the new font, the numeric value for size is in points, style can be plain, bold or italic, and the value of color can be either the name of the color (such as black), or the RGB numeric value of the color (for example #ffffcc).
3. Click **Save**.

Specifying a target:

For all map entries that have a link to a URL, you can also specify the target. When the target is omitted, the URL replaces the map in the current Web browser window.

About this task

The target option is in the format:

target="string"

In this example, string is the destination where the URL appears.

Where frames have been defined in the HTML page, you can specify the target as the name of the frame. For example UpperFrame or LowerFrame.

Linking maps:

You can transfer maps from one Web GUI server to another.

Procedure

- To link from one map page to another, use a URL, for example:
`protocol://server:port/webtop/mappage`

Where the parameters are as follows:

server

The name of the host on which the Web GUI server is located.

port

The port number of the Web GUI server.

mappage

The destination HTML map page.

- To export map pages to a Web GUI server on another computer, construct the URL as follows:

`$(SERVER)/mappage`

Where the parameters are as follows:

\$(SERVER)

Resolves to `protocol://server:port/webtop`.

mappage

The destination HTML map page.

Changing the color of map elements that have no associated events:

To denote active elements on maps that have no associated events, assign a color that is applied to these elements. When users display a map, such active elements are displayed in the specified color.

About this task

By default, the active elements that have no associated events are displayed in the same color that is used for events with severity 0 (clear).

Tip: After you have edited the Web GUI `server.init` file, you must restart the Tivoli Integrated Portal server.

Procedure

1. Open the `install_dir/profiles/TIPProfile/etc/webtop/server.init` file.
2. Uncomment the `maplet.noeventcolor` parameter.
3. Specify a hexadecimal color value. The `maplet.noeventcolor` has no default, so you must specify a value. For example:
 - To specify gray, type: `0xDDDDDD`
 - To specify white, type: `0xFFFFFFFF`
4. Save and close the file.
5. Restart the server.

Related tasks:

“Restarting the server” on page 1

After customization and configuration activities you might need to restart the Web GUI server.

Publishing maps

After your map is completed, you can publish it by adding it to the navigation in Tivoli Integrated Portal. You have two ways to publish a map.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Publishing maps on a Map portlet:

To make a map available to Web GUI users, create a new page in Tivoli Integrated Portal, add the Map portlet to the page, and select the map that you want to display on the portlet.

About this task

To add a map to a page:

Procedure

1. Click **Settings > Page**.
2. On the Page Management page, click **New Page**.
3. On the Page Settings window, edit the general properties of the page:
 - a. Type a name for the page.

- b. Specify the location of the page in the navigation, either by accepting the default or by clicking **Location** and navigating to the required location.
 - c. Select either the classic or freeform page layout.
4. To specify user access to the page:
 - a. Click **Optional setting** and click **Add**.
 - b. From the **Available Roles** list, select the required roles and click **Add**.
5. Click **OK**.
6. On the Choose a Portlet page, select **Map** and click **OK**.
The new page is displayed with the map portlet; currently the map portlet is blank, except for a message telling you how to add a map to the page.
7. Add a map to the page:
 - a. On the title bar of the newly created page, click **Edit Options** . > **Edit shared settings**.
 - b. Select the map from the list and set its characteristics as required.
 - c. Click **OK**.
8. Click **Save**.
9. Optional: To add further portlets to the page, proceed as follows:
 - To split the page vertically, click **Vertical Split**.
 - To split the page horizontally, click **Horizontal Split**.

Then, select the portlet that you require for the new section of the page, and customize the portlet as appropriate.
10. Optional: If you have defined Tivoli Integrated Portal views, to add the page to a view:
 - a. Click **View Membership** and click **Add**.
 - b. From the **Available Views** list, select the required views and click **Add**.

Publishing maps on a Web widget portlet:

To make a map available to Web GUI users, create a new page in Tivoli Integrated Portal, add the Web widget portlet to the page, and specify the URL of the map that you want to display on the portlet.

Procedure

To add a map to a Web widget portlet:

1. Click **Settings** > **Pages**.
2. On the Page Management page, click **New Page**.
3. On the Page Settings window, edit the general properties of the page:
 - a. Type a name for the page.
 - b. Specify the location of the page in the navigation, either by accepting the default or by clicking **Location** and navigating to the required location.
 - c. Select either the classic or freeform page layout.
4. To specify user access to the page:
 - a. Click **Optional setting** and click **Add**.
 - b. From the **Available Roles** list, select the required roles and click **Add**.
5. Click **OK**.
6. On the Choose a Portlet page, select **Web Widget** and click **OK**.
7. Add the map to the page:

- a. On the title bar of the newly created page, click **Edit Options** > **Edit shared settings**.
- b. Set the properties of the Web widget:

Widget title

Type a title for the map page.

Home page

Type the location of the map relative to the root context of the Web GUI:

`webtop/Map/mapname`

Replace the *mapname* with the name you supplied when creating the map.

HTML iFrame name

Type a name for the iFrame that contains the map on the portlet. Make sure that the name is unique among all other iFrame names for all Web widgets.

- c. Optional: Clear **Show a browser control toolbar** if you do not want the toolbar to appear on the page.
- d. Set the check boxes for the items that non-administrative users can personalize. Use any combination of the following:

Widget title

Home page

Help page

Browser control toolbar

- e. Click **Save**.
8. On the title bar of the page click **Save**.
9. Optional: To add further portlets to the page, proceed as follows:
 - To split the page vertically, click **Vertical Split**.
 - To split the page horizontally, click **Horizontal Split**.

Then, select the portlet that you require for the new section of the page, and customize the portlet as appropriate.
10. Optional: If you have defined Tivoli Integrated Portal views, to add the page to a view:
 - a. Click **View Membership** and click **Add**.
 - b. From the **Available Views** list, select the required views and click **Add**.

Previewing map resources

Use the Map Resources portlet to preview images and icons for your maps.

About this task

To preview resources for a map:

Procedure

1. Click **Administration** > **Event Management Tools** > **Maps** > **Map Resources**.
2. Select the map and click **Preview**. A list of all image resources available to the selected map is displayed.
3. Click **View** next to the image you want to preview. Images are listed by file name and file size, in bytes. The resource is opened in the next page.

4. To return to the list of images, click **Cancel** on your browser.
5. To return to the Map Resources portlet, click **Cancel**.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related tasks:

“Setting map size and background” on page 322

Use the Java Map Editor to set the background image for your map. Use the Color Picker to set the background color for your map.

Deleting map resources

Use the Map Resources portlet to delete images and icons from the list of available resources.

About this task

To remove a resource:

Procedure

1. Click **Administration > Event Management Tools > Maps > Map Resources**.
2. In the Map Resources portlet, select the map that contains the image you want to delete and click **Delete**.
3. From the **Available resources** list, select the image that you want to delete and click **Remove**. The image is removed from the Web GUI server.
4. To return to the Map Resources portlet, click **Cancel**.

Related concepts:

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Visualizing high-level event information on charts

To help you visualize and compare large amounts of alert information, create charts based on event data

Tivoli Netcool/OMNIBus Web GUI charts

Web GUI charts represent information graphically in different forms, and with scales that are added to indicate the values of the displayed data.

Chart types:

The Web GUI supports several different types of chart.

The following types of chart are supported:

Bar charts

Consist of a set of elongated rectangles, the length of which indicate the number or frequency of a measured variable.

Stacked-bar charts

The bar is subdivided so that you can see different subcategories within each category of a measured variable.

Line graphs

Use connected lines to represent data, with each point on the line representing a value in the data range for a measured variable.

Pie charts

Represent quantities in proportion to other quantities, for example, to show percentages of a whole.

The data displayed by these charts is drawn directly from a single ObjectServer table, and is unfiltered. To refine the appearance of the charts or constrain the breadth of data returned, SQL aggregate functions and comparison operators can be included in the data retrieval criteria.

How charts are generated:

Chart configuration and layout instructions are contained within a properly constructed XML-based definition file, and are processed by the Web GUI when a page containing a chart image tag is accessed.

For performance purposes, the Web GUI reads the chart definition file and stores configuration data in memory. During a page refresh, the server examines the chart configuration file timestamp. If the definition file is newer than the information stored in memory, the data is reloaded and the chart is re-rendered.

After the configuration data has been read, an image of the chart is rendered and placed on the page.

The process by which a chart is generated is as follows:

1. A client connected to the Web GUI requests a page containing one or more chart images.
2. The Web GUI server locates the requested chart page HTML file, and initiates the processing instructions contained within the chart `` element or elements.
3. The `` element contains a query string that provides details of the chart configuration XML file, image output format, image size and so forth. This information is sent to the chart renderer component.
4. The chart renderer component draws the data retrieval and presentation instructions from the specified XML file, and obtains the appropriate field information from the specified ObjectServer.
5. A chart image is rendered.
6. The chart image is returned to the Web GUI server for insertion into the Web page.
7. The chart page is processed.
8. The processed page is returned to the client.

The chart definition file:

The chart definition file contains all the configuration instructions that control how a chart obtains ObjectServer data, and how that data is presented in a graphical format.

A number of generic chart templates are provided with the Web GUI, and are located in *install_dir/profiles/TIPProfile/etc/webtop/charts/definitions*:

- *BAR_eventsbylocation.xml* for bar charts
- *LINE_eventsbylocation.xml* for line graphs
- *PIE_eventsbyseverity.xml* for pie charts
- *SBAR_eventsbyseverity.xml* for stacked bar charts

Each chart schema begins with an element called `<chartdata>` that holds one child-element called `<ncchart>`. The `<ncchart>` element contains all the high-level chart component elements.

High-level component elements are those that govern the display or ObjectServer data-retrieval criteria for the chart. For example, the `<header>` element determines the content of the header above the chart display area, the `<background>` element controls the appearance of the chart background, and so forth.

The following syntax shows the structure of the chart definition file.

Chart definition file

```
<chartdata>
  <ncchart>
    <header>
    </header>
    <footer>
    </footer>
    <chart3Dview>
    </chart3Dview>
    <background>
    </background>
    <antialias text value>
    <antialias value>
    <legend>
    </legend>
    <projector reversed value>
    <chartarea>
    </chartarea>
    <xaxis>
    </xaxis>
    <yaxis>
    </yaxis>
    <xscale>
    </xscale>
    <yscale>
    </yscale>
    <xgrid>
    </xgrid>
    <ygrid>
    </ygrid>
    <chartelement>
    ...
    </chartelement>
  </ncchart>
</chartdata>
```

Tip: The order of the high-level elements under <ncchart> is not strictly enforced. If you want, you can reorder the element structure when configuring your chart file.

An element reference is available for each of the elements and their child-elements, and an attribute reference is available for their associated attributes, and the attributes of their child-elements.

Related tasks:

“Creating a chart definition file” on page 349

Create an XML chart definition file to specify the layout and display of your chart, and specify the event data on which to base your chart.

Related reference:

“Element reference” on page 351

Read about the elements defined within the chart schema.

“Attribute reference” on page 360

Read about the attribute types and values used within the chart schema.

<chartelement> syntax:

The <chartelement> element determines what ObjectServer field data is retrieved when a chart is rendered, and the type of chart and legend to be displayed. It is important to configure this element and associated child-elements correctly or your chart may not display properly.

The following example shows a code fragment containing the default contents of the <chartelement> element , with each line number displayed in brackets. The example uses the SBAR_eventsbylocationseverity.xml as the basis for the example.

Chart Schema

```
1 <chartelement>
2   <charttype basetype="Cartesian">
3     <chartrenderer useAlertColors="true" type="BarChart"
4       mode="BarChartStacked">
5     </chartrenderer>
6   </charttype>
7   <dataconfig>
8     <query type="StackedSQL" datatype="ObjectServer">
9       <query_element action="select" fieldName="Location" fieldType="string"
10         tableName="alerts.status" where="" orderBy="Location Asc">
11         <constraint type="dataSetBeginCount" operator="equals" operand="5"
12           />
13         <constraint type="dataSetEndCount" operator="equals" operand="12"
14           />
15       </query_element>
16       <query_element action="select" fieldName="Severity"
17         fieldType="integer" tableName="alerts.status" where=""
18       </>
19       <query_element action="count" fieldName="Severity"
20         fieldType="integer" tableName="alerts.status" where=""
21       </>
22     </query>
23     <datasetlegend match="5" display="Critical" showValue="true"
24       showStart=" (total: " showEnd=)"
25     </>
26     <datasetlegend match="4" display="Major" showValue="true" showStart="
27       (total: " showEnd=)"
28     </>
29     <datasetlegend match="3" display="Minor" showValue="true" showStart="
30       (total: " showEnd=)"
31     </>
```

```

32     <datasetlegend match="2" display="Warning" showValue="true" showStart="
33     (total: " showEnd=" )"
34     />
35     <datasetlegend match="1" display="Indeterminate" showValue="true"
36     showStart=" (total: " showEnd=")"
37     />
38     <datasetlegend match="0" display="Clear" showValue="true" showStart="
39     (total: " showEnd=")"
40     />
41     <datasetlegend match="'*_'" display="Unspecified" showValue="true"
42     showStart=" ( total: " showEnd=")"
43     />
44     <datasource/>
45 </dataconfig>
46 </chartelement>

```

Note: The line numbers in the code fragment do not directly correspond to the lines in the SBAR_eventsbyseverity.xml file.

The following subsections contain a line-by-line description of the element tags in the example XML code fragment.

Lines 1-2

Line 1 opens the <chartelement> section of the chart configuration file. Line 2 contains the <charttype> element tag. The <charttype> element determines the type of chart created by the chart renderer. It has the attribute basetype which can be either “Pie” or “Cartesian”.

Note: Cartesian charts can have different data configuration requirements than pie charts; where applicable these differences will be pointed out.

Lines 3-5

This line contains the <chartrenderer> element which establishes the image rendering mechanism employed and the type of chart created. If the basetype attribute in line 1 is set to “Cartesian”, then the type attribute for this element must be either “LineChart” or “BarChart.” If the basetype attribute is set to “Pie”, then the type attribute must be “PieChart.”

The <chartrenderer> element has an additional attribute called mode. If you decide to create a cartesian bar chart, you can specify whether you want it to contain stacked data or not. Leave this attribute blank if you want to create an unstacked chart. In this example the bar chart is stacked, and mode is set to “BarChartStacked.”

Line 6

This line closes the <charttype> element tag.

Line 7

This line contains the <dataconfig> element tag, which represents the start of the XML statements that control how data is obtained from the ObjectServer.

Line 8

This line contains the <query> element tag. The type attribute for this element must be either "StackedSQL" or "StackedSQLGrouped" for stacked cartesian charts, or "BasicSQL" or "BasicSQLGrouped" for all other types of chart.

A <query> element containing the "BasicSQLGrouped" or "StackedSQLGrouped" statement uses the ObjectServer SQL GROUP BY clause when selecting data. This selection method enables Web GUI to instruct the ObjectServer to group into a single row all rows that have identical values in a specified column or combination of columns.

Used with aggregate functions, Web GUI can find the aggregate value for each group of column values. Because the data aggregation is taking place within the ObjectServer, fewer queries are sent by Web GUI and performance is enhanced.

The datatype attribute contains the name of the ObjectServer data source, for example NCOMS.

Lines 9-20

These lines contain <query_element> element tags, which are child-elements of query. If your chart is an unstacked cartesian chart or a pie chart, you require two <query_element> entries under <query>. If the chart is a stacked cartesian chart, you require three (or more) entries.

The <query_element> tag contains a number of SQL compliant attributes that perform data interrogation functions. The action attribute is used within the <query_element> element to determine the ObjectServer SQL action exerted on a specified dataset. For example, enter select to select the data located in the field specified by the subsequent fieldName attribute.

In addition to the select attribute, the action attribute can contain ObjectServer SQL aggregate functions such as count, max, min, avg, sum, and dist.

For more information about ObjectServer SQL syntax, see the *IBM Tivoli Netcool/OMNIBus Administration Guide*.

The orderBy attribute determines how selected data is ordered on the chart axis. The options are Asc (ascending) or Desc (descending), prefixed with a field name against which the ordering index is established. The orderBy attribute applies only to values on the x-axis.

The <query_element> tag positions and their corresponding behaviors as follows:

First The first <query_element> entry selects a field from the ObjectServer. In this example, the selected field is Location. In cartesian charts this entry is used to populate the x-axis. In pie charts, this entry represents the whole dataset (or the pie itself). Lines 11-14 contain range constraint criteria.

The <constraint> child-element is optional, but allows you to control how much data is returned from the selected field. This is useful as very large selection results often cannot be displayed in the available width of the chart. You can create a range of different chart configuration files where the only difference is the data constraint range.

Last The last <query_element> entry measures the incidences of another

ObjectServer field for each value returned by the first <query_element>. In this example, the field name is Severity and the severity value is counted for each entry in the Location field.

In Cartesian charts this entry is used to populate the y-axis. In pie charts, this entry represents subsets of the whole dataset (or slices of the pie).

Intervening

Intervening <query_element> entries are only used by stacked cartesian charts. Their purpose is to further break down the data obtained by the first <query_element> into smaller groups, which are then displayed as stacks within the major group.

In this example, the subset selected is the Severity field. The different levels of alert severity present within the major group—in this case, Location—are displayed as colored stacks within the chart.

Line 22

This line concludes the <query> element section of the <chartelement> element.

Lines 23-43

These lines contain the element tag <datasetlegend>. This element and its associated attributes establish the legend label conversion criteria for information received from a data source. For example, the if value 5 is matched in data returned from the ObjectServer, in this example the display attribute specifies a legend label conversion of Critical.

The showValue, showStart, and showEnd attributes provide the information that accompanies the label in the legend. The showStart and showEnd attributes act as a prefix ((total:) and suffix ()) to the value returned by showValue. In the previous example, the literal output is:

```
Critical (total: number of critical alerts )
```

Lines 44-46

These lines contain the tags that close the <datasource>, <dataconfig>, and <chartelement> elements.

Related reference:

“Attribute reference” on page 360

Read about the attribute types and values used within the chart schema.

Creating a chart definition file

Create an XML chart definition file to specify the layout and display of your chart, and specify the event data on which to base your chart.

About this task

To help you create a valid chart, the following templates are located in the *webgui-home/etc/charts/definitions* directory.

- *BAR_eventsbylocation.xml*: Template for bar charts
- *LINE_eventsbylocation.xml*: Template for line graphs
- *PIE_eventsbyseverity.xml*: Template for pie charts
- *PIE_eventsbyseverity.xml*: Template for stacked bar charts

To create a chart definition file:

Procedure

1. Create an XML chart schema file to create a chart that displays high-level event data. To ensure that the charts you create are valid, use these template files as the basis for creating new charts.

Tip: If you are creating a pie chart, you can omit the following elements from the file: `projectorreversed`, `chartarea`, `xaxis`, `yaxis`, `xscale`, `yscale`, `xgrid`, and `ygrid`. Because these elements relate to Cartesian chart layout, they are ignored.

2. Configure your chart schema file, and save the file with a unique name.
3. Upload the file to the following directory on the Web GUI server:

`webgui-home/etc/charts/definitions`

Related concepts:

“The chart definition file” on page 345

The chart definition file contains all the configuration instructions that control how a chart obtains ObjectServer data, and how that data is presented in a graphical format.

“The Web GUI in a load balancing environment” on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Publishing charts

After you have created the chart definition file, reference the file in HTML to add your Web GUI charts to Web pages.

About this task

To display your charts on Web pages, use one of the following methods:

Procedure

- After you have created the chart definition file, you create an HTML file to display the chart. The HTML page must contain an `` element that possesses the appropriate chart rendering attributes.

For a sample HTML page that contains an `` element, see “Example.”

- Create a page in Tivoli Integrated Portal and add the **Chart View** portlet.

Example

The following example shows a chart `` element within an HTML file.

```
<html>
  <head>
    <title>Demonstration Chart</title>
    <meta http-equiv="Content-Type" content="text/html;
      charset=iso-8859-1"
    >
  </head>
  <body>
    
  </body>
</html>
```

The attributes of the `` element are as follows.

template

This attribute specifies which XML configuration file is used by the chart renderer. In this example, the file is called `barchart`. Do not include the file suffix (if any) when you set this attribute.

format

This attribute specifies the image type created by the chart renderer component. In this, example, the image type is a `.png` file. Do not modify this attribute

request

System attribute. Do not modify.

width

The first width attribute, which is within the double-quotes (" "), determines the width of the image produced by the chart renderer component. The second width attribute determines how the rendered image is resized. if at all, on the page. Set both attributes to the same value

height

The first height attribute, which is within the double-quotes (" "), determines the height of the image produced by the chart renderer component. The second height attribute determines how the rendered image is resized (if at all) on the page. Set both attributes to the same value.

alt

Use this attribute to enter a text equivalent for a graph image. This text is displayed when the cursor is placed above the image in the client browser.

Related concepts:

"The Web GUI in a load balancing environment" on page 133

Information on how the Web GUI can operate in a load balancing environment and the implications for administering and using the product.

Related information:

Creating pages

Chart configuration reference

Read about the data contained within the Web GUI chart schema. It provides a comprehensive reference for the elements, attributes, and attribute values defined within the schema.

Element reference:

Read about the elements defined within the chart schema.

Elements often have one or more associated attributes, for which a value may be required.

The following table describes each element defined within the chart schema.

Table 30. Chart element definitions

Element	Description	Attribute(s)	Child Element(s)
annotation	<p>This element controls the text displayed for annotation values on the x-axis or the y-axis. If this element is not defined, the axes annotations are derived from field data.</p> <p>To specify a new annotation you must replace an existing field data annotation. For example, to replace host1 with New York, the annotation element is defined as:</p> <pre><annotation match="host1" text="New York"></pre> <p>To select integer indices, use the value attribute instead of the match attribute.</p>	text value match	None
annotations	This element contains the elements that control the text and display characteristics of the labels on the x-axis or the y-axis.	None	labelrenderer annotation
antialias	This element smoothens the line rendering within the chart.	value	None
antialiastext	This element smoothens the text rendering within the chart.	value	None
background	This element determines the background color of the whole chart area.	value	None
border	This element contains the child-elements that control the appearance of the border (if any) around the legend area.	None	title
chartarea	This element controls the color or color gradient (if any), and margin positions of the area behind the chart itself.	None	plotareabackground margin

Table 30. Chart element definitions (continued)

Element	Description	Attribute(s)	Child Element(s)
chartdata	The chartdata element is the root element. The root element is the top-level element in the XML document hierarchy, and contains all other elements in your XML file. Each document can have only one root element, and all other elements must be nested within it.	None	ncchart datasetlegend
chartelement	The chartelement element contains the all elements that govern chart rendering (that is, the type of chart created) and data presentation criteria (using SQL selection syntax).	None	charttype dataconfig
chartrenderer	The chartrenderer element governs the appearance and behavior of each type of chart. It contains the style element which determines how colors are associated with chart data. In addition, this element controls which types of cartesian chart are displayed (bar or line) and whether cartesian charts are stacked.	useAlertColors type mode	style
charttype	The charttype element determines the category of chart produced by the chart renderer. It has the attribute basetype that establishes which type of chart is created (Pie or Cartesian). In addition, this element contains the chartrenderer element that can further refine the appearance of the chart.	basetype	chartrenderer

Table 30. Chart element definitions (continued)

Element	Description	Attribute(s)	Child Element(s)
color	This element provides the values used to create a solid swatch of color (one element entry) or a color gradient (more than one element entry) behind the chart.	value	None
constraint	This element contains attributes that can be used to restrict the range of data displayed on the x-axis or the y-axis. This element is optional.	type operator operand	None
dataconfig	This element contains a cluster of child-elements that are used to retrieve ObjectServer field data, and to create and populate the legend area of the chart.	None	query datasetlegend datasource
datasetlegend	<p>This element is used to associate an appropriate legend label to matched information returned from the ObjectServer.</p> <p>For example:</p> <pre><datasetlegend match="5" display="Critical" showValue="true" showStart="(total: " showEnd=")" /></pre> <p>The previous element tag matches returned severity data with the value 5 with the label Critical in the legend area of the chart.</p>	match display showValue showStart showEnd	None
font	This element contains the child-elements that govern font size and appearance. Note: Specify a font that supports all characters in the language you want to use for the chart.	fontStyle fontName fontSize	None

Table 30. Chart element definitions (continued)

Element	Description	Attribute(s)	Child Element(s)
footer	This element contains the elements that determine the content of the footer below the chart display area. The footer typically displays additional useful information about the chart.	None	text foreground background font
foreground	This element is used by the header, footer, and legend border chart components to determine the color of text entries.	value	None
gridline	This element determines whether major or minor gridlines on the x-axis or the y-axis of the chart are visible. In addition, gridline also contains the elements that determine line color.	type visible	paint
header	This element contains the elements that determine the content of the header above the chart display area. The header typically displays the title of the chart.	None	text foreground background font
label	This element governs the appearance of the label (if any) displayed on the x-axis or y-axis of a cartesian chart.	color offset rotation visible	font
labelrenderer	This element governs the appearance of the text, background, and orientation of annotations on the x-axis or y-axis of a cartesian chart.	color background rotation	font

Table 30. Chart element definitions (continued)

Element	Description	Attribute(s)	Child Element(s)
legend	<p>This element is used to determine the appearance and position of the legend area of a chart.</p> <p>The legend area contains interpretative information (for example, a color key) and quantitative information (for example, an event total) that further explains the contents of a pie chart or bar chart.</p>	visible position background foreground	border symbol font antialiastext antialias
margin	<p>This element is used to determine the space (in pixels) around the chart data area. This margin area must be wide enough to accommodate axis data labels in cartesian charts.</p>	top bottom left right	None
ncchart	<p>This is the second-level element in the schema, and encapsulates all of the different component areas of the chart.</p> <p>Each ncchart child element is described in more detail elsewhere within this table.</p>	name	header footer background antialiastext antialias legend projectorreversed chartarea xaxis yaxis xscale yscale xgrid ygrid chartelement
paint	<p>This element defines the type of system used to present gridlines.</p>	type	None

Table 30. Chart element definitions (continued)

Element	Description	Attribute(s)	Child Element(s)
plotareabackground	This element is used to create the background color or color gradient behind the chart data area.	orientation	color
projectorreversed	This element determines whether the chart data projection is reversed. When the associated value attribute is set to true, the datasets for the x-axis and y-axis are swapped. Note that the background also rotates.	value	None
query	This element contains the attributes and child-elements that determine what SQL data is obtained from which ObjectServer, and the manner in which it is retrieved.	type datasource	query_element
query_element	The query_element tag contains a number of SQL-compliant attributes that perform data interrogation functions.	action fieldName fieldType tableName where	constraint
style	This element contains the child elements that define the border color and fill color of the pie or bar segments on a chart.	strokepaint fillpaint match	None
symbol	This element specifies the size and position (relative to adjacent text) of the color symbols used in the legend area of the chart.	height width textSpacing	None
text	This element is used by many other elements to determine the textual content of headers, footers, and so forth.	value	None
title	This element is used to control the position of the title in the legend area of the chart. It also contains the elements that control the text content and color.	position	text foreground font

Table 30. Chart element definitions (continued)

Element	Description	Attribute(s)	Child Element(s)
xaxis	See xaxiselement.	None	xaxiselement
xaxiselement	This element controls how data is displayed on the x-axis, and covers presentation aspects such as axis orientation and data range parameters.	reversed autoDataMin autoDataMax autoDataRange dataMin dataMax visibleMin visibleMax	None
xgrid	This element contains the xgridelement element that controls how gridlines appear on the x-axis of the chart.	None	xgridelement
xgridelement	This element determines the color of the gridlines on the x-axis, and contains the xgridelement element that controls what type of gridlines appear on the x-axis of the chart.	None	gridline
xscale	See xscaleelement.	None	xscaleelement
xscaleelement	This element allows you to control how chart components are arranged. This covers such features as the color of the foreground, the point at which the x-axis intersects with the y-axis, whether the data is logarithmically transformed, the axis title position, and so forth.	axisVisible crossingValue foreground logarithmic majorTickSize minorTickSize title titleRotation titlePlacement visible	annotations
yaxis	See yaxiselement.	None	yaxiselement

Table 30. Chart element definitions (continued)

Element	Description	Attribute(s)	Child Element(s)
yaxiselement	This element controls how data is displayed on the y-axis, and covers presentation aspects such as axis orientation and axis data range parameters.	reversed autoDataMin autoDataMax autoDataRange dataMin dataMax visibleMin visibleMax	None
ygrid	This element contains the ygridelement element that controls how gridlines appear on the y-axis of the chart.	None	ygridelement
ygridelement	This element determines the color of the gridlines on the y-axis, and contains the ygridelement element that controls what type of gridlines appear on the y-axis of the chart.	None	gridline
yscale	See yscaleelement.	None	yscaleelement
yscaleelement	This element allows you to control how chart components are arranged. This covers such features as the color of the foreground, the point at which the y-axis intersects with the x-axis, whether the data is logarithmically transformed, the axis title position, and so forth.	axisVisible crossingValue foreground logarithmic majorTickSize minorTickSize title titleRotation titlePlacement visible	annotations label

Related concepts:

“The chart definition file” on page 345

The chart definition file contains all the configuration instructions that control how a chart obtains ObjectServer data, and how that data is presented in a graphical format.

Attribute reference:

Read about the attribute types and values used within the chart schema.

Some attributes are enumerated and the values of these attributes are constrained to a list of predefined text strings. When enumerated attributes are used within the XML command file, they must be set to one of the values shown in the list. Default values (if any) are provided in the description.

The following table describes each attribute defined within the chart schema.

Table 31. Chart attribute definitions

Attribute	Constrained Values	Description
action	select count min max	<p>The attribute is used within the <code>query_element</code> element to specify the ObjectServer SQL action performed on a dataset. For example, <code>select</code> to select the data located in the field specified by the subsequent <code>fieldName</code> attribute.</p> <p>A value must be provided for this attribute.</p>
autoDataMax	true false	<p>This attribute is used by the <code>xaxis_element</code> and <code>yaxis_element</code> elements to specify whether you want the highest value in a dataset displayed as the highest value on the x-axis or y-axis of a graph.</p> <p>If you do not provide a value for this attribute, the default is false.</p>
autoDataMin	true false	<p>This attribute is used by the <code>xaxis_element</code> and <code>yaxis_element</code> elements to specify whether you want to the lowest value in a dataset displayed as the lowest value on the x-axis or y-axis of a graph.</p> <p>If you do not provide a value for this attribute, the default is false.</p>
autoDataRange	true false	<p>This attribute is used by the <code>xaxis</code> and <code>yaxis</code> elements, and specifies whether or not the data ranges on the axes are created automatically.</p> <p>If you set <code>autoDataRange</code> to false you can specify your own data ranges by populating the <code>dataMin</code> and <code>dataMax</code> attributes.</p> <p>If you do not provide a value for this attribute, the default is false.</p>
axisVisible	true false	<p>This attribute is used by the <code>xscale_element</code> element and <code>yscale_element</code> element to specify if the x-axis or y-axis lines and labels are displayed.</p> <p>If you do not provide a value for this attribute, the default is false.</p>
background	None	<p>This attribute is used to specify the color for the background of a chart component. The attribute value is a base 16 hexadecimal color code and must be prefixed with a # symbol.</p> <p>If you do not provide a value for this attribute, a system default is used.</p>

Table 31. Chart attribute definitions (continued)

Attribute	Constrained Values	Description
basetype	Cartesian Pie	This attribute specifies the basic type of chart style. Note that bar charts, stacked-bar charts, and line graphs are all Cartesian. A value must be provided for this attribute.
bottom	None	This attribute is used within the margin element to specify the margin space at the bottom of the chart. The unit of measurement is in pixels. If you do not provide a value for this attribute, a system default is used.
color	None	This attribute is used within the label and label-renderer elements to specify the color of label or annotative text on a chart. The attribute value is a base 16 hexadecimal color code and must be prefixed with a # symbol. A value must be provided for this attribute.
crossingValue	-9218868437227405311 +9218868437227405311 IEEE754 Standard for Double Precision for Floating-Point Numbers. Values beyond these ranges incur rounding.	This attribute is used by the xaxis-element and yaxis-element elements to determine where one chart axis crosses the other. If you do not provide a value for this attribute, the x-axis and y-axis intersect at 0.
dataMax	-9218868437227405311 +9218868437227405311 IEEE754 Standard for Double Precision for Floating-Point Numbers. Values beyond these ranges incur rounding.	This attribute is used by the xaxis-element and yaxis-element elements to specify the highest value on the x-axis or y-axis of a graph. This attribute is ignored when autoDataMax is set to true.
dataMin	-9218868437227405311 +9218868437227405311 IEEE754 Standard for Double Precision for Floating-Point Numbers. Values beyond these ranges incur rounding.	This attribute is used by the xaxis-element and yaxis-element elements to specify the lowest value on the x-axis or y-axis of a graph. This attribute is ignored when autoDataMin is set to true.
datasource	None	This attribute is used by the query element and specifies the ObjectServer data source used to create the chart.
defaultGridColor	None	This attribute is used by the xgrid-element and ygrid-element elements to specify the color of the chart grid (if any). The attribute value is a base 16 hexadecimal color code and must be prefixed with a # symbol.
display	None	This attribute is used by the dataset-legend element to specify the text in the legend panel that accompanies the values returned by the match attribute. The attribute entry is a string.
fieldName	None	This attribute is used by the dataset-legend element to specify an ObjectServer field. For example, Severity.

Table 31. Chart attribute definitions (continued)

Attribute	Constrained Values	Description
fieldType	string integer	This attribute is used by the datasetLegend element to describe the ObjectServer field-data characteristics.
fillpaint	#000000#FFFFFF	This attribute defines the fill color of the pie or bar segments on a chart. The attribute value is a base 16 hexadecimal color code and must be prefixed with a # symbol. A value must be provided for this attribute.
fontName	None	This attribute is used by the font element and specifies the name of the font used in a text entry. The attribute entry is a string, and must correspond to a font located on the Web GUI server. A value must be provided for this attribute.
fontSize	None	This attribute is used by the font element and specifies the size of the font used in a text entry. The attribute entry is in points, rounded to the integer. A value must be provided for this attribute.
fontStyle	plain bold	This attribute is used by the font element and specifies the style of the font used in a text entry. The attribute entry is a string, and must be supported by the font specified in the corresponding fontName attribute. A value must be provided for this attribute.
foreground	#000000 → #FFFFFF	This attribute is used to specify the color for the foreground of a chart component and often refers to the text entry. The attribute value is a base 16 hexadecimal color code and must be prefixed with a # symbol. A value must be provided for this attribute.
height	0→2 ³¹ -1	This attribute is used by the symbol component to specify the height of the symbol or symbols used in the legend panel. The attribute entry is in points, rounded to the integer. The default value corresponds to a system-calculated best fit.
left	0→2 ³¹ -1	This attribute is used by the margin element to specify the margin space at the left of the chart. The unit of measurement is in pixels and is an integer. The default value corresponds to a system-calculated best fit.
logarithmic	true false	This attribute is used by the xscaleelement and yscaleelement elements and specifies whether the scale data is logarithmically transformed. If you do not provide a value for this attribute, the default is false.
majorTickSize	None	This attribute is used by the xscaleelement and yscaleelement elements and controls the size of the large ticks on the x-axis or the y-axis. The unit of measurement is in pixels and is an integer.

Table 31. Chart attribute definitions (continued)

Attribute	Constrained Values	Description
match (annotation)	None	This attribute is used by the annotation element to establish the string election criteria for annotations displayed on the x-axis or the y-axis. To select an integer, use the value attribute instead.
match (datasetlegend)	None	This attribute is used by the datasetlegend element to establish the selection criteria for the information displayed in the legend panel. This attribute works in combination with the display attribute.
minorTickSize	$0 \rightarrow 2^{31} - 1$	This attribute is used by the xscaleelement and yscaleelement and controls the size of the small ticks on the x-axis or the y-axis. The unit of measurement is in pixels and is an integer. The default value corresponds to a system-calculated best fit.
mode	BarChartStacked	This attribute is used by the chartrenderer element to specify if a barchart is stacked. The corresponding type attribute must be set to BarChart for this attribute to be enabled. If you do not provide a value for this attribute, no value is used and the renderer uses its default mode.
name	Must exactly correspond to the chart file name. Do not including the .xml file extension.	This attribute provides a name for the chart. For example, if the schema is called mychart.xml, the name attribute must be set to mychart.
operand		This attribute is used by the constraint element to provide an upper or lower limit (as determined by the accompanying type attribute) on the x-axis data returned by a query_element selection.
operator		System attribute—do not modify.
orderBy	<i>fieldname Asc</i> <i>fieldname Desc</i>	This attribute determines how selected data is ordered on the chart axis. The options are Asc (ascending) or Desc (descending), prefixed with a fieldname against which the ordering index is established. For example: <pre><query_element action="select" fieldName="Location" fieldType="string" tableName="alerts.status" where="" orderBy="Location Asc"></pre> In this example, the Location field data is arranged in ascending order.
orientation	xaxis yaxis	This attribute is used by the plotareabackground element to specify the color gradient direction for the chart background. If you do not provide a value for this attribute, the default is xaxis.

Table 31. Chart attribute definitions (continued)

Attribute	Constrained Values	Description
position (legend)	NorthBottom NorthEast SouthTop	This attribute is used by the legend element to specify where the chart legend area is displayed on the chart. The anchor positions are defined relative to the chart. If you do not provide a value for this attribute, the default is NorthBottom.
position (title)	AboveBottom AboveTop BelowBottom BelowTop Bottom Center Leading Left Right Trailing Top	This attribute is used by the title element to specify where the title is displayed in the legend. The anchor positions are defined relative to the chart. If you do not provide a value for this attribute, the default is Top.
reversed	true false	This attribute is used by the xaxis element and yaxiselement elements to specify the orientation order of the axis. For example, when set to true for the xaxis element, the x-axis appears to the left-hand side of the origin of the y-axis. If you do not provide a value for this attribute, the default is false.
right	0->2 ³¹ -1	This attribute is used by the margin element to specify the margin space at the right of the chart. The unit of measurement is in pixels and is an integer. The default value corresponds to a system-calculated best fit.
rotation	0->360	This attribute is used by the label and labelrenderer elements to specify the clockwise rotation angle for labels and annotations. The angle value is expressed in degrees and is an integer. If you do not provide a value for this attribute, the default is 0.
showEnd	None	This attribute is used by the datasetlegend element to specify a suffix to any count data displayed in the legend.
showStart	None	This attribute is used by the datasetlegend element to specify a prefix to any count data displayed in the legend.
showValue	true false	This attribute is used by the datasetlegend element to specify whether count data is displayed in the legend. If you do not provide a value for this attribute, the default is false.
strokepaint	#000000#FFFFFF	This attribute defines the border color of the pie or bar segments on a chart. The attribute value is a base 16 hexadecimal color code and must be prefixed with a # symbol. A value must be provided for this attribute.
tableName	None	This attribute is used by query_element to specify which ObjectServer data table is used. For example, alerts.status.
text	None	This attribute is typically used to provide textual information within the chart configuration file.

Table 31. Chart attribute definitions (continued)

Attribute	Constrained Values	Description
textSpacing	0->2 ³¹ -1	This attribute is used by the <code>symbol</code> element to specify the distance between symbols used in the legend area and their associated text. The unit of measurement is in pixels and is an integer. The default value corresponds to a system-calculated best fit.
title	None	This attribute is used by the <code>xcscaleelement</code> and <code>yscaleelement</code> elements to specify the title (if any) associated with the x-axis or y-axis.
titlePlacement	0->100	This attribute is used by the <code>xcscaleelement</code> and <code>yscaleelement</code> elements to determine the placement of an axis title. The measurement is a percentage of the entire width of the chart. For example, a value of 50 centers the title under the x-axis. If you do not provide a value for this attribute, the default is 50.
titleRotation	0->360	This attribute is used to specify the clockwise rotation angle for the title (if any) displayed on the x-axis or the y-axis. The angle value is expressed in degrees and is an integer. If you do not provide a value for this attribute, the default is 0.
top	0->2 ³¹ -1	This attribute is used by the <code>margin</code> element to specify the margin space at the top of the chart. The unit of measurement is in pixels and is an integer. The default value corresponds to a system-calculated best fit.
type (chartrenderer)	LineChart PieChart BarChart	This attribute is used by the <code>chartrenderer</code> element to specify the type of chart to graphically render. Note that if you enter <code>LineChart</code> or <code>BarChart</code> , the <code>basetype</code> attribute of the <code>charttype</code> element must be set to <code>Cartesian</code> . If you enter <code>PieChart</code> , the <code>basetype</code> attribute of the <code>charttype</code> element must be set to <code>Pie</code> .

Table 31. Chart attribute definitions (continued)

Attribute	Constrained Values	Description
type (constraint)	dataSetBeginCount dataSetEndCount	<p>This attribute is used by the constraint element to restrict the range of data returned from a selected field. These attributes work in combination with the operator and operand attributes to specify a data startpoint and endpoint.</p> <p>For the dataSetBeginCount the operand indicates the start point. For the dataSetEndCount the operand indicates the end point. Consider the following example query_element:</p> <pre><query_element action="select" fieldName="Location" fieldType="string" tableName="alerts.status" where="" orderBy="Location Asc"</pre> <p>To return a range of locations starting at the 5th returned and ending at the 12th, set constraint as follows:</p> <pre><constraint type="dataSetBeginCount" operator="equals" operand="5" /><constraint type="dataSetEndCount" operator="equals" operand="12" /></pre> <p>By default, returned data has no default constraints. To return the first 8 locations, set constraint as follows:</p> <pre><constraint type="dataSetEndCount" operator="equalss" operand="8" /></pre>
type (gridline)	major minor	This attribute is used by the gridline element to specify the type of chart gridline to configure. All subsequent gridline attributes then perform actions on this selection.
type (paint)	color	System attribute—do not modify.
type (query)	BasicSQL BasicSQLGrouped StackedSQL StackedSQLGrouped	This attribute is used by the query element to specify the type of SQL query to use. If you create a stacked chart you must use StackedSQL or StackedSQLGrouped, otherwise use BasicSQL or BasicSQLGrouped.
useAlertColors	true false	<p>This attribute allows you to use the alert status colors provided by the alerts.colors table in the ObjectServer.</p> <p>If you do not provide a value for this attribute, the default is false.</p>
value	Various	This attribute is typically used to populate or define text, color, or boolean information within the chart configuration file.

Table 31. Chart attribute definitions (continued)

Attribute	Constrained Values	Description
visible	true false	This attribute is used to specify whether an associated chart feature is displayed. For example, the legend element uses <code>visible</code> to specify whether a legend displaying information about the drawn data is associated with a chart. When enabled, all the graphical representations displayed within the chart have a corresponding legend item.
visibleMax	-9218868437227405311+ 9218868437227405311 IEEE754 Standard for Double Precision for Floating-Point Numbers. Values beyond these ranges incur rounding.	This attribute is used by the <code>xaxis</code> element and the <code>yaxis</code> element to impose a visible constraint on the data range presented in a chart. The <code>visibleMax</code> attribute specifies the highest number displayed. If you do not provide a value for this attribute, the default is the highest data entry on the chart.
visibleMin	-9218868437227405311+ 9218868437227405311 IEEE754 Standard for Double Precision for Floating-Point Numbers. Values beyond these ranges incur rounding.	This attribute is used by the <code>xaxis</code> element and the <code>yaxis</code> element to impose a visible constraint on the data range presented in a chart. The <code>visibleMin</code> attribute specifies the lowest figure displayed. If you do not provide a value for this attribute, the default is the lowest data entry on the chart.
where	None	This attribute is used by the <code>query_element</code> query to specify any SQL search constraints you want applied to the selected data source.
width	0->2 ³¹ -1	This attribute is used by the <code>symbol</code> component to specify the width of the symbol or symbols used in the legend panel. The attribute entry is in points, rounded to the integer.

Related concepts:

“The chart definition file” on page 345

The chart definition file contains all the configuration instructions that control how a chart obtains ObjectServer data, and how that data is presented in a graphical format.

Related reference:

“<chartelement> syntax” on page 346

The <chartelement> element determines what ObjectServer field data is retrieved when a chart is rendered, and the type of chart and legend to be displayed. It is important to configure this element and associated child-elements correctly or your chart may not display properly.

Appendix A. Accessibility features for the Web GUI

Accessibility features help users who have a disability, such as restricted mobility or limited vision, to use information technology products successfully.

The following list includes the major accessibility features in the Tivoli Netcool/OMNIBus Web GUI:

- The Active Event List (AEL) supports keyboard-only operation.
- The Web GUI administrative screens are readable by screen readers.

Keyboard navigation

The navigation functions of the Web GUI can be accessed using the keyboard.

This product uses standard Microsoft Windows navigation keys.

The AEL and the Java Map Editor menu functions can also be accessed using accelerator keys. Accelerator keys or mnemonics refer to the underlined characters in menus and dialogs such as F for File.

Alternative text

All non-text content used in the Web GUI has associated alternative text.

Appendix B. ncwDataSourceDefinitions.xml reference

To change the configurations that control how the Web GUI receives events from data sources, modify the `ncwDataSourceDefinitions.xml` configuration file that is in `webgui-home/etc/datasources`. The file structure must conform to the content of the Web GUI configuration Document Type Definition (DTD). The elements and attributes that are in the DTD are described here.

The term *data source* refers to any source of data from which the Web GUI can obtain event information. It includes, but is not restricted to, ObjectServers.

Data types and legends

The data types and legends that accompany the Web GUI DTD elements and attributes are as follows:

NM Indicates that the attribute types are names consisting of XML NMTOKEN character (letters, periods, numbers, underscores, dashes, and colons). NM often also indicates that the attribute contains a list of predefined choices.

CDATA

Indicates that the attribute contains unparsed character data.

IMP Indicates that the presence of the attribute is implied (optional).

REQ Indicates that the presence of the attribute is required.

**** MISSING FILE ****

This file was generated during the publishing process

**** MISSING FILE ****

This file was generated during the publishing process

Elements of the Web GUI configuration DTD

The elements that are specified in the Web GUI configuration DTD.

The elements defined within the configuration DTD are as follows.

<chart>

This element is a child element of the `<results-cache>` element. This element specifies caching options for chart results. If caching is enabled, the `maxAge` attribute specifies the expiry time, in seconds, for the cache. The `cleantime` attribute specifies the time interval, in seconds, at which cache entries are checked and removed. Cache data that exceeds the time imposed by the `maxAge` attribute is removed.

<config>

This element is a child element of the `<results-cache>` element. This element specifies whether data caching is enabled. If caching is enabled, the `maxAge` attribute specifies the expiry time, in seconds, for the cache. For example:

```
<config maxAge="60" enabled="true">
```

<eventList>

This element is a child element of the <results-cache> element. This element specifies caching for results in the event lists. If caching is enabled, the maxAge attribute specifies the expiry time, in seconds, for the cache. The cleantime attribute specifies the time interval, in seconds, at which cache entries are checked and removed. Cache data that exceeds the time imposed by the maxAge attribute is removed.

<eventSummary>

This element is a child element of the <results-cache> element. This element specifies caching for event summary results, such as maps and Event Dashboards. If caching is enabled, the maxAge attribute specifies the expiry time, in seconds, for the cache. The cleantime attribute specifies the time interval, in seconds, at which cache entries are checked and removed. Cache data that exceeds the time imposed by the maxAge attribute is removed.

<metric>

This element is a child element of the <results-cache> element. This element specifies caching for results in Gauges pages. If caching is enabled, the maxAge attribute specifies the expiry time, in seconds, for the cache. The cleantime attribute specifies the time interval, in seconds, at which cache entries are checked and removed. Cache data that exceeds the time imposed by the maxAge attribute is removed.

<ncwBackUpServer>

This element is a child element of <ncwDefaultDataSourceList> and contains the ncwOSConnection element specifying host and port of the failover ObjectServer. For example:

```
<ncwBackUpServer>
  <ncwOSConnection
    host="192.168.0.3"
    port="4141"
  />
</ncwBackUpServer>
```

<ncwConnectionParameters>

This element is a child element of <ncwDataSourceDefinition> and contains elements that control the connection to a data source.

<ncwDataSourceCredentials>

This element is a child element of <ncwDataSourceDefinition> and holds the login information required by the Web GUI to access the data source. If the encrypted attribute is set to true, a password encrypted using the Tivoli Netcool/OMNIBus **nco_g_crypt** encryption utility can be used. For example:

```
<ncwDataSourceCredentials
  password=""
  userName="root"
  encrypted="false"
/>
```

<ncwDataSourceDefinition>

This element is a child element of the <ncwDataSourceDefinitions> element and contains the tags that define configuration and communication parameters for an individual data source.

<ncwDataSourceDefinitions>

This is the root element of the DTD.

<ncwDataSourceEntry>

This element is a child element of <ncwDefaultDataSourceList> and contains the names of the default data sources that communicate with the Web GUI.

These entries are subsequently defined in the configuration file by corresponding `<ncwDataSourceDefinition>` tags. The first entry in the list is the default data source used by the Web GUI for client authentication. If this data source is not present, the next entry in the list is used as a default. For example:

```
<ncwDefaultDataSourceList>
  <ncwDataSourceEntry name="NCOMS"/>
  <ncwDataSourceEntry name="NILKA"/>
</ncwDefaultDataSourceList>
```

Note: The name of each data source can contain up to 29 characters.

<ncwDataSourcePollingParameters>

This element is a child element of `<ncwDataSourceDefinition>` and contains the elements that control failover and data source heartbeat polling.

<ncwDefaultDataSourceList>

See `<ncwDataSourceEntry>`.

<ncwFailOverPairDefinition>

This element is a child element of `<ncwDataSourceDefinition>` and contains the tags that specify the primary and backup ObjectServers. The inclusion of a backup ObjectServer is optional, but only one is permitted per data source. For example:

```
<ncwFailOverPairDefinition>
  <ncwPrimaryServer>
    <ncwOSConnection
      host="192.168.0.7"
      port="4545"
    />
  </ncwPrimaryServer>
  <ncwBackUpServer>
    <ncwOSConnection
      host="192.168.0.8"
      port="4646"
    />
  </ncwBackUpServer>
</ncwFailOverPairDefinition>
```

<ncwFailOverPollingParameters>

This element specifies the time interval at which the data source is polled in the event of a failover. This element is used only when there is a failover server available, as defined by the `<ncwBackUpServer>` element. For example:

```
<ncwFailOverPollingParameters backOffMultiplier="2" basePollingTime="10"/>
```

<ncwHeartBeatParameters>

This element is a child element of `<ncwDataSourcePollingParameters>` and specifies the time interval, in seconds, for the Web GUI to poll an active data source. For example:

```
<ncwHeartBeatParameters basePollingTime="15"/>
```

<ncwOSConnection>

This element is a child element of both `<ncwPrimaryServer>` and `<ncwBackUpServer>` and specifies the communication criteria for a primary or failover data source. For example:

```
<ncwOSConnection host="192.168.0.3" port="4141"/>
```

<ncwPrimaryServer>

This element is a child element of `<ncwDefaultDataSourceList>` and contains the `ncwOSConnection` element specifying host and port of the primary ObjectServer. For example:

```

<ncwPrimaryServer>
  <ncwOSConnection
    host="192.168.0.3"
    port="4141"
  />
</ncwPrimaryServer>

```

<ncwQueryTimeout>

This element is a child element of <ncwStatementParameters> and defines the time out period, in seconds, for SQL statements sent to a data source. For example:

```
<ncwQueryTimeout baseTime="60" />
```

<ncwReadCloudDefinition>

This element is a child element of <ncwDataSourceDefinition> and holds the addresses of all the display servers you want to use with this master ObjectServer. One <ncwReadCloudDefinition> element permitted per data source. You cannot have multiple display server clouds communicating with a single master ObjectServer. For example:

```

<ncwReadCloudDefinition>
  <ncwOSConnection
    host="192.168.0.9"
    port="4747"
  />
  <ncwOSConnection
    host="192.168.0.10"
    port="4848"
  />
  <ncwOSConnection
    host="192.168.0.11"
    port="4949"
  />
</ncwReadCloudDefinition>

```

<ncwStatementParameters>

This element is a child element of <ncwConnectionParameters> and contains elements that control the exchange of SQL statements with a data source.

<results-cache>

The <results-cache> element is a child element of the <ncwDataSourceDefinition> element. It contains the child elements <chart>, <config>, <eventList>, <eventSummary>, and <metric>.

Attributes of the Web GUI configuration DTD

Use this information to understand the attributes used in the Web GUI configuration DTD. Some attributes are enumerated and the values of these attributes are constrained to a list of predefined text strings. When enumerated attributes are used within the XML command file, they must use one of the values shown in the list.

The following table describes each attribute defined within the configuration DTD. Default values (if any) are provided in the description.

Table 32. Configuration DTD attribute definitions

Attribute	Constrained values	Description
algorithm	DES AES	Specifies whether a DES or an AES algorithm is used.

Table 32. Configuration DTD attribute definitions (continued)

Attribute	Constrained values	Description
backOffMultiplier	None	The multiplier for the backoff algorithm used to calculate the polling backoff time during a failover. The default value is 1.
basePollingTime	None	The seed time, in seconds, for the algorithm used to calculate the polling backoff time during a failover. The default value is 20 seconds for the <ncwFailoverPollingParameters> element or 15 seconds for the <ncwHeartbeatParameters> element.
baseTime	None	The timeout period, in seconds, for a query statement sent to the data source. If the Web GUI receives no response within this time, it attempts to reconnect to the data source. The default value is 30 seconds.
cleantime	None	The time interval, in seconds, the Web GUI server waits before checking for how long each user session has been inactive. When this check takes place, cache data that exceeds the time imposed by the maxAge attribute is removed. The default value is 120 seconds for the <chart> and <eventList> elements or 20 seconds for the <eventSummary> and <metric> elements.
enabled	true false	Specifies if page caching is turned on or off. The default value is true for the <ncwDataSourceDefinition>, <eventSummary>, and <metric> elements or false for the <chart> and <eventList> elements.
encrypted	true false	Specifies whether the user password is encrypted. The default value is false.
host	None	The host name or IP address of a specified data source.
maxAge	None	The cache expiry time limit in seconds. The default value is 10 seconds for the <eventSummary> and <metric> elements, 60 seconds for the <chart> and <eventList> elements, or 3600 seconds for the <config> element.

Table 32. Configuration DTD attribute definitions (continued)

Attribute	Constrained values	Description
maxPoolSize	Maximum value: 1024	The maximum number of pooled connections to an ObjectServer data source that can exist at any one time. The default value is 10.
minPoolSize	None	The minimum number of pooled connections to an ObjectServer data source to maintain. The default value is 5.
name	None	The name given to an ObjectServer data source displayed within the Web GUI during administrative activities. The name can contain up to 29 characters. This value also links each data source definition that is listed at the start of the configuration file to its subsequent definition.
password	None	The password used to log in to the ObjectServer. The default is a blank password.
port	None	The port number of a specified data source. The default value is 8080.
ssl	true false	Specifies whether to use a SSL connection to an ObjectServer. The default value is false.
type	singleServerOS DataSource multipleServerOS DataSource	The type of data source configuration required for the specified data source. The required types are as follows: singleServerOSDataSource Use this type for a single primary data source configuration, or for a backup data source configuration. multipleServerOSDataSource Use this type for a dual-server desktop configuration. The default value is singleServerOSDataSource.
userName	None	The user name of the user connecting to the ObjectServer. The user must have root privileges on the ObjectServer. The default value is root.

Appendix C. Invalid characters in filters, views, and tools

You cannot use certain characters in the names of any Web GUI objects, such as filters, views, or tools. You also cannot create filters, views, or tools with spaces in the name.

The invalid characters are defined in the following file.

`webgui-home/etc/illegalChar.prop`

Attention: Only change the invalid characters as directed in the documentation or by IBM Support.

This file contains the following properties:

INVALID_NAME_CHARS

This property defines characters that are not permitted in any user-defined names. The default characters listed in this property are as follows:

`$! £ % ^ & * () + = - ` ~ # @ ' : ; < > { } [] ? / \ \ | , "`

INVALID_NAME_START_CHARS

This property defines characters that are not permitted as the initial character of any user-defined names. The default characters listed in this property are as follows:

`/ \ \ * ? " < > | & .`

Appendix D. SmartPage commands and templates

You can use SmartPage commands to populate Web pages that are served by the Web GUI. You can also use variables in SmartPage commands to dynamically populate predefined template files.

Related reference:

“Map SmartPage administration” on page 384

SmartPage commands are special extensions to the HTML language that control user validation, and allow the placement of generated components in Tivoli Integrated Portal pages. SmartPage commands are expressed in HTML as comment tags.

SmartPage commands overview

SmartPage commands are single-line HTML instructions that can be used to validate user access, and to allow Web GUI components such as applets to be added to a Web page.

You can use SmartPage commands in your Web pages to perform the following tasks:

- Enable a Web page for SmartPage command processing.
- Validate user access to a Web page against a group.
- Insert an AEL applet.
- Insert an AEL applet for each filter in a map.
- Insert a map applet.
- Insert a map applet containing a grid of filters that are associated with a user.
- Insert a hyperlinked list of accessible maps that are associated with a user.
- Insert a Table View.
- Insert the name of the user who is currently logged in.
- Insert the home URL that is associated with a user.

SmartPage code example

This example shows the source code for a Web page that contains SmartPage commands.

```
<!-- enable:SMARTPAGE -->
<!-- Validate: [*,redirect.html] -->
<html>
  <head>
    <title>SmartPage FilterPage Command</title>
  </head>
  <body>
    <p>
      <center>
        <table border =1>
          <tr><td>
            <!-- insert:FILTERPAGE[bgcolor="gray"] -->
          </td></tr>
        </table>
      </center>
    </p>
  </body>
</html>
```

SmartPage command reference

When you create a Web page, you can include SmartPage commands to dynamically provide a page with the data display components that are generated by the Web GUI.

Take note of the following conventions when using SmartPage commands:

- Do not add any spaces within SmartPage commands.
- To insert an object into a page, you must place the insert command on its own in a line with no other commands or characters on that line.

enable:Smartpage command

The **enable:Smartpage** command instructs the Web GUI server to use SmartPage commands.

You must enter this command as the first line in the HTML source file of any page that uses other SmartPage commands.

The following example shows the **enable:Smartpage** command.

```
<!-- enable:Smartpage -->
```

Validate command

The **Validate** command opens a login window before displaying the requested page. The user name is checked against groups associated with the page.

You must enter this command as the second line in the HTML source file.

The following example shows the **Validate** command.

```
<!-- Validate: [group,where.html] -->
```

In this line, *group* is the name of the group to check against, and *where.html* is the alternative page to display if the user does not have permission to open the current page.

insert:AEL command

The **insert:AEL** command inserts an AEL applet into a Web page.

- “Examples”
- “Parameters” on page 381
- “Compatibility of parameters” on page 382

Examples

The following example shows a sample **insert:AEL** command in which the AEL is launched with a predefined filter.

```
<!--insert:AEL[filtertype=filtertype,filtername=filtername,metric=metric,
metricof=metricof,showinframe=true|false,width=width,height=height,
transientname=name,debuglevel] -->
```

The following example shows a sample **insert:AEL** command in which the AEL is launched with a transient filter.

```
<!--insert:AEL[sql=sql,transientname=name,showinframe=true|false,cols=numcols,
width=width,height=height,debuglevel] -->
```

Parameters

The parameters are as follows. If you use a deprecated parameter, an entry is recorded in the following location: `tip_home_dir/profiles/TIPProfile/logs/`.

cols

The number of columns. The default value is 4.

datasource

A data source defined in the `ncwDataSourceDefinitions.xml` data source configuration file. If you do not specify this parameter, the default data source is used. For more information about the default data source, see the *IBM Tivoli Netcool/OMNIbus Installation and Deployment Guide*.

Tip: If you have defined multiple data sources, you can specify them in the string by using a comma-separated list, as shown in the following example:

```
datasource=datasource1,datasource2
```

debuglevel

Shows debug information in the Java plug-in console. The level can be set from 0 to 9.

entity | entities

Deprecated: Specifies the name of the entity that is associated with the AEL. A single AEL applet is created for this entity. No special layout is provided. The **entities** property specifies an entity list. An applet is created for each entity and presented in a table. Omit either property if you are using the **filter** and **view** properties.

entityviewname

Deprecated: The name of the view that you want to apply to the AEL. This view is defined within the View Builder.

filter

Deprecated: The SQL syntax that is used to create a filter. When the filter string is applied to an AEL, only the rows that meet the criteria set by the filter are displayed. Omit this property if you are using the **entity** property.

filtername

The name of the filter that you want to apply to the AEL. This filter is defined in the Filter Builder. If you do not specify the **filtertype** parameter, the command searches the filter types to find a filter with a matching name.

filtertype

The type the filter that you want to apply to the AEL. Possible values are as follows:

- user
- global
- system
- user_transient

height

The height of the applets. The default value is 165.

metric

The metric value for a transient filter. This can be any of Average, Count, Sum, Minimum or Maximum.

metricof

The metric value for a transient filter. This is a field type; for example Tally.

showinframe

If true, a monitor box is displayed and the AEL window opens. If false, the AEL applet is embedded in a Web page. The default is true.

sql

The SQL syntax that is used to create a transient filter. Do not use this parameter in combination with the deprecated **entity** or **filter** parameters. If you do not specify the **transientname** parameter, the text entered in the **sql** is also used as the filter name in the AEL.

transientname

The transient filter name. Requires the **filter** parameter, which is deprecated, or the **sql** parameter. This is the name of the transient filter and is used as the title for the associated AEL monitor box.

view

The view that is applied to the AEL, as defined in the View Builder. When a view is applied to an AEL, only the columns that are contained within the view are displayed. Omit this property if you are using the deprecated **entity** or **entities** properties.

width

The width of the applets. The default value is 130.

Compatibility of parameters

The following list shows the compatibility of the parameters, indicating whether a parameter can be used in combination with another parameter. If a parameter is listed for a parameter, then they can be used in combination.

cols data source; entities; height; monitortitle; showinframe; width

datasource

cols; entities; entity; filter; filename; height; metric; metricof; monitortitle; showinframe; view; viewname; width

entities

Deprecated: cols; data; source; height; monitortitle; showinframe; width

entity Deprecated: data source; height; monitortitle; showinframe; width

entityviewname

data source; filter; filename; height; monitortitle; showinframe; width

filter data source; height; metric; metricof; monitortitle; showinframe; view; viewname; width

filename

data source; filtertype height; monitortitle; showinframe; view; viewname; width

filtertype

data source; filename height; monitortitle; showinframe; view; viewname; width

height cols; data source; entities; entity; filter; filename; metric; metricof; monitortitle; showinframe; view; viewname; width

metric data source; filter; height; metricof; monitortitle; showinframe; view; viewname; width

metricof

data source; filter; height; metric; monitortitle; showinframe; view;
viewname; width

monitortitle

cols; data source; entities; entity; filter; filename; height; metric; metricof;
showinframe; view; viewname; width

showinframe

cols; data source; entities; entity; filter; filename; height; metric; metricof;
monitortitle; view; viewname; width

sql

data source; transientname; height; monitortitle; showinframe; view;
viewname; width

transientname

data source; sql; height; monitortitle; showinframe; view; viewname; width

view

data source; filter; filename; height; monitortitle; showinframe; width

width

cols; data source; entities; entity; filter; filename; height; metric; metricof;
monitortitle; showinframe; view; viewname; width

insert:AELMAPVIEW command

The **insert:AELMAPVIEW** command inserts an AEL applet for each filter in a map, into a Web page.

```
<!-- insert:AELMAPVIEW[map=map,showinframe=showinframe,cols=cols,width=width,
height=height,debuglevel=debuglevel] -->
```

The properties used in this command are as follows:

cols

The number of columns to use in the table when displaying multiple applets.
The default value is 4.

debuglevel

Shows debug information in the plug-in console. The level can be set from 0 - 9.

height

The height of the applets. The default value is 165.

map

The map name.

showinframe

If true, a monitor box is displayed and the Active Event List (AEL) window opens. If false, the AEL is embedded in a Web page. The default is true.

width

The width of the applets. The default value is 130.

insert:MAPLET command

The **insert:MAPLET** command inserts a map into a Web page.

The following command can be entered in the HTML source file:

```
<!-- insert:MAPLET[map=map,soundurl=soundurl,refresh=n, enabletooltips=true] -->
```

The parameters of this command are as follows:

map

Required: Specifies the name of the map to be displayed.

soundurl

Optional: Specifies the URL of an audio .au file. This file is played when the maximum severity of any of the filters on a map increases. The URL must be specified in the following format:

```
protocol://host:port/path/filename.fileextension
```

refresh

Optional: Specifies the refresh rate, in seconds, for the map.

enabletooltips

Optional: Enables hover help for active map objects that are associated with a filter. The hover help displays information from the filter.

Related reference:

“Map SmartPage administration”

SmartPage commands are special extensions to the HTML language that control user validation, and allow the placement of generated components in Tivoli Integrated Portal pages. SmartPage commands are expressed in HTML as comment tags.

Map SmartPage administration

SmartPage commands are special extensions to the HTML language that control user validation, and allow the placement of generated components in Tivoli Integrated Portal pages. SmartPage commands are expressed in HTML as comment tags.

To display a map you must create or edit an existing HTML file, add an **insert:MAPLET** SmartPage tag to the content, and upload the HTML file to the Web GUI server.

Map SmartPage

The following example shows the contents of a simple HTML file.

```
[1] <!-- enable:smartpage -->
[2] <html>
[3]   <head>
[4]     <title>Demonstration Map</title>
[5]     <meta http-equiv="Content-Type" content="text/html;
[6]       charset=iso-8859-1">
[7]   </head>
[8]   <body>
[9]     <!-- insert:MAPLET[mapname] -->
[10]   </body>
[11] </html>
```

An explanation of the lines in this example is as follows:

Line 1 This must be the first line of text in any HTML page that contains a SmartPage tag. This line instructs the Web GUI server that this page is enabled for SmartPage commands.

Lines 2 to 8

Contain generic HTML heading information and the body tag that indicates the start of the body of the Web page.

Line 9 Contains the **insert:MAPLET** SmartPage tag that instructs the Web GUI to place a map applet on the Web page. The name of the map you want to display—*mapname* in this example—is enclosed within the square brackets in the tag. The **insert:MAPLET** tag is valid anywhere within the body of an HTML document.

Lines 10 to 11

Contain the tags which close the <body> and <html> elements and conclude the file.

Related reference:

Appendix D, “SmartPage commands and templates,” on page 379

You can use SmartPage commands to populate Web pages that are served by the Web GUI. You can also use variables in SmartPage commands to dynamically populate predefined template files.

“insert:MAPLET command” on page 384

The **insert:MAPLET** command inserts a map into a Web page.

insert:FILTERPAGE command

The **insert:FILTERPAGE** command inserts a map applet into a Web page that displays either all filters that are associated with a read-write user, or specific filters for a read-write user.

Parameters are optional. All user filters are displayed by default. The map arranges rows of monitor boxes, using user preferences where appropriate. The following command can be entered in the HTML source file:

```
<!-- insert:FILTERPAGE[filters="filter1,filter2...",bgcolor="color",bgimage="image",  
monitorwidth="width",monitorheight="height",action="action",url="url",  
target="target",soundurl="soundurl",datasource="name"] -->
```

The properties used in this command are as follows.

action

Specifies the hyperlink action that takes place when a monitor box is clicked.

Use any of the following statements to define the action:

- go to link to a URL.
- ael to link to an embedded AEL in a Web page.
- lel to link to an embedded LEL in a Web page.
- table to link to a Table View.

bgcolor

Sets the background color of the map.

bgimage

Sets the background image of the map. The background image is uploaded using the Resource Manager and is stored as a resource in:

install_dir/profiles/TIPProfile/etc/webtop/resources/__common

datasource

Highlights the ObjectServer used.

filters

Constrains the map to a set of predefined filters that are specified using a comma-separated list. If you omit this property, all filters that are associated with the read-write user are displayed.

monitorheight

Sets the height of the monitor box applets on the map.

monitorwidth

Sets the width of the monitor box applets on the map.

soundurl

Specifies the URL of an audio .au file that is played when the maximum severity of the filters in a filter page increases. The URL must be specified in the following format:

protocol://host:port/path/filename.fileextension

target

Specifies where in the browser window a linked target page is displayed when a monitor box is clicked. For example:

- `_self` indicates the same frame as the map, so that the target page replaces the map.
- `_blank` indicates a new Web browser window.
- `_parent` indicates the parent frame set containing the source link.
- `_top` indicates the frame containing the source link.

url

The destination URL if you specified `go` as the value for the **action** property.

insert:USERMAPLIST command

The **insert:USERMAPLIST** command inserts a list of hyperlinked maps, for a specific user, into a Web page. The list displays all the maps on the server that the presently logged-in user can access.

You can insert the name of each map as a hypertext link, which can be clicked to show the map. The list of maps is validated against the ACLs to which the user belongs. The following command can be entered in the HTML source file:

```
<!-- insert:USERMAPLIST[type=type,target=target] -->
```

Where the parameters are as follows:

type

Specifies the type of list, which can be unordered or displayed in a table.

target

Specifies the target frame.

insert:TABLEVIEW command

The **insert:TABLEVIEW** command inserts a Table View into a Web page.

```
<!-- insert:TABLEVIEW[filtername/filtertype/datasource/maxrows=n] -->
```

The parameters are as follows. If you use a deprecated parameter, an entry is recorded in the following location: *tip_home_dir/profiles/TIPProfile/logs/*.

datasource

A data source defined in the *ncwDataSourceDefinitions.xml* data source configuration file. If you do not specify this parameter, the default data source is used. For more information about the default data source, see the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

Tip: If you have defined multiple data sources, you can specify them in the string by using a comma-separated list, as shown in the following example:

```
datasource=datasource1,datasource2
```

If you specify multiple data sources, make sure that the filter, either a predefined filter or a transient filter, queries fields that are contained in all data sources. If you select a data source that is not defined in the filter, an error message is displayed in the AEL instead of event data.

entity

Deprecated: The name of an entity. Use the **filtername** and **filtertype** parameters instead.

filtername

The name of a filter. The default view that is associated with the filter is applied to the Table View.

If you do not specify a filter type, the system searches the filter types for a filter with a name that matches the **filtername** parameter.

filtertype

The type of filter. Possible values are as follows:

- user
- global
- system
- user_transient

maxrows

Optional: The number of rows returned in the view.

insert:USERNAME command

The **insert:USERNAME** command inserts the name of the user who is logged in to the Web GUI, into a Web page:

```
<!-- insert:USERNAME[example] -->
```

In this line, *example* is the name of the user who is logged in.

insert:USERSHOMEURL command

The **insert:USERSHOMEURL** command inserts the Web GUI home page URL for the user who is currently logged in, into a Web page.

You can use this command to create a link to the home page of the user.

The following example shows the **insert:USERSHOMEURL** command.

```
<!-- insert:USERSHOMEURL -->
```

Template overview

The Web GUI supports dynamically-processed generic Web pages called *templates*. Templates contain SmartPage tag instances that are composed of attribute variables rather than hard-coded attribute data entries.

When a template page is displayed, information in the query string of the URL is passed to a corresponding variable placeholder that dynamically populates the SmartPage attribute.

By using templates, you can avoid creating new Web pages or source code entries to accommodate functionally similar page components. Instead, you can create generic pages where the SmartPage component attributes are governed by information that is stored in a hyperlink to the page URL.

Basic templates are supplied with the Web GUI , which you can customize for your own use. The default templates are located in the following directory:

```
webgui-home/etc/templates
```

Template example

This example shows one of the default templates, `table.html`, that is supplied with Tivoli Netcool/OMNIBus.

Each line number is displayed in square brackets:

```
<!-- ENABLE:SMARTPAGE -->
<!-- Validate: [all,redirect.html] -->
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML//EN">
<html>
  <head>
  </head>
  <body>
    <!-- INSERT:TABLEVIEW[<NCO_V type="str" default="">Map_Name</NCO_V>
      /<NCO_V type="str" default="">
System_Filter</NCO_V>] -->
  </body>
</html>
```

The **insert:TABLEVIEW** command cannot include carriage returns.

In this example, the template file contains a SmartPage command for displaying a Table View. The **insert:TABLEVIEW** command has two attributes: **Map_Name** and **System_Filter** . Instead of a static data entry for each attribute value, the source contains an `<NCO_V>` element, the attributes of which are as follows.

type="type"

This entry specifies the type of variable data that the `<NCO_V>` tag can receive from the URL. The data types are as follows:

str A text string that can include any text except quotation marks.

BOOLEAN

Used for attribute entries such as `showinframe` in the **insert:AEL** SmartPage tag. Permitted values are "true" or "false".

number

Any whole integer. Used for attribute entries such as `monitorwidth` in the **insert:FILTERPAGE** tag.

default="value"

This entry specifies the default variable value that is used if one is not provided by the URL.

In the case of the **insert:TABLEVIEW** command, the attributes are names, and therefore strings. The expected variable data for both `<NCO_V>` instances is set to "str". No default attributes are provided, so both default entries are empty.

The text between the opening and closing `<NCO_V>` tags establishes the variable name that the URL uses to establish a name-value pair. When you specify a variable name, the text must be alphanumeric and multiple words must be separated by an underscore. For example, `Map_Name`. Variable entries must be separated by a comma.

The URL of template pages containing variable data must be in the following format:

```
$(SERVER)/path/filename?variable1=variabledata1&variable2=variabledata2
```

Where *path* is the path to the template location, *filename* is the name of the template Web page, *variable* is the variable enclosed within the `<NCO_V>` element, and *variabledata* is the string, Boolean, or numeric entry that you want to populate the variable. For example:

```
$(SERVER)/Template/table.html?Map_Name=Example_Europe&System_Filter=Example_All
```

Guidelines for using SmartPage templates

When you create a new Web page that is to be used as a template, you must consider a number of guidelines.

These guidelines are as follows:

- You must include a `<!-- ENABLE:SMARTPAGE -->` tag at the top of the template page.
- You must ensure that the template page is valid and opens correctly in a Web browser.
- Choose sections of the page that you want to make variable and use `<NCO_V>` and `</NCO_V>` container elements to specify the required variable.

Creating SmartPage templates

You can create your own template that is either based on a template in the default directory, or that is based on a Web page.

To create a template that is based on a default template:

1. Navigate to the directory that holds the default templates:
`webgui-home/etc/templates`
2. Copy and paste one of the templates in this directory. For example, `table.html`.
3. Rename the copy, ensuring that you retain the `.html` file extension.
4. Customize the HTML template heading as required.
5. Define the variables that you require by inserting them between the `<NCO_V>` and `</NCO_V>` tag containers.
6. Save the changes.

To create your own template that is based on a Web page:

1. Create a Web page as normal, by using smart tags.
2. Check that the Web page displays correctly without errors.
3. Replace the smart tags with `<NCO_V>` and `</NCO_V>` tags as appropriate.

Appendix E. tipcli command reference

Use the Tivoli Integrated Portal command line interface *tipcli* commands for writing scripts for passing information between applications.

The *tipcli* commands are entered in the *tip_home_dir*/profiles/TIPProfile/bin directory, for example, C:\IBM\tivoli\tip\profiles\TIPProfile\bin\tipcli.bat on Windows or /opt/IBM/tivoli/tip/profiles/TIPProfile/bin/tipcli.sh on Linux or UNIX.

The *tipcli* component provides help for its various commands:

Help [--command *command_name*]

Access help for all commands or optionally you can use the command argument to return detailed help for a specific command.

The following returns help for the AddUpdatePreferenceProfile command:

```
tipcli.bat Help --command AddUpdatePreferenceProfile
Help
----
AddUpdatePreferenceProfile --username <TIPusername> --password <passwordForUser>
--profileName <profileName> [--newProfileName <newProfileName>] [--themeDir <th
emeDir>] [--showNavTree <true|false>] [--componentDir <default|ltr|rtl>] [--text
Dir <default|contextual|ltr|rtl>] [--views <viewList>] [--roles <roleList>] [--d
efaultView <defaultView>]
where
  <TIPusername> is the username on TIP that has iscadmins role.
  <passwordForUser> is the password for the user.
  <profileName> is profile name which will be created or updated.
  <newProfileName> is the new name for the existing preference profile.
  <themeDir> is the directory name of the installed theme. Example: TIPLight
  <showNavTree> specify if show navigation tree by default after login the conso
le.
  <componentDir> specify component direction for the console.
  <textDir> specify text direction for the console.
  <viewList> is views assignment for the preference profile.
  <roleList> is roles assignment for the preference profile.
  <defaultView> specify which view is displayed by default after login the conso
le.
CTGWA4017I The command completed successfully.
```

Working with roles

Use these *tipcli* commands for to manipulate roles.

ListRoles

List all roles.

AddRole --username *tip_username* --password *tip_user_password* --roleName *role_name*

Add the specified role. Console users are granted access to resources based on the role to which they have been assigned. All roles that are created have a resource type of Custom.

Note: Arguments to the *role_name* parameter should not include spaces.

UpdateRole --username *tip_username* --password *tip_user_password* --roleName *role_name* --newRoleName *new_role_name*

Change the name of a specified role to the supplied new role name.

Note: Arguments to the *role_name* and *newRoleName* parameters should not include spaces.

DelRole --username *tip_username* --password *tip_user_password* --roleName *role_name*

Delete the specified role.

Note: Arguments to the *role_name* parameter should not include spaces.

ListRolesFromGroup --username *tip_username* --password *tip_user_password* --groupID *group_ID*

List all roles associated with a specified user group.

MapRolesToGroup --username *tip_username* --password *tip_user_password* --groupID *group_ID* --rolesList *role_name1, role_name2*

Associate a comma separated list of roles with a particular user group.

RemoveRolesFromGroup --username *tip_username* --password *tip_user_password* --groupID *group_ID* --rolesList *role_name1, role_name2*

Disassociate a comma separated list of roles from a particular user group.

ListRolesForPage --pageUniqueName *page_unique_name*

List all roles associated with a specified page.

MapRolesToPage --username *tip_username* --password *tip_user_password* --pageUniqueName *page_unique_name* --rolesList *role_name1, role_name2* --accessLevelList *level1, level2*

Associate a comma separated list of roles with a particular page and set the access level to the page for each role.

RemoveRolesFromPage --username *tip_username* --password *tip_user_password* --pageUniqueName *page_unique_name* --rolesList *role_name1, role_name2*

Disassociate a comma separated list of roles from a particular page.

ListRolesForPortletEntity --portletEntityUniqueName *portlet_entity_unique_name*

List all roles associated with a specified portlet.

MapRolesToPortletEntity --username *tip_username* --password *tip_user_password* --portletEntityUniqueName *portlet_entity_unique_name* --rolesList *role_name1, role_name2* --accessLevelList *level1, level2*

Associate a comma separated list of roles with a particular portlet and set the access level to the portlet for each role.

RemoveRolesFromPortletEntity --username *tip_username* --password *tip_user_password* --portletEntityUniqueName *portlet_entity_unique_name* --rolesList *role_name1, role_name2*

Disassociate a comma separated list of roles from a particular portlet.

ListRolesFromUser --username *tip_username* --password *tip_user_password* --userID *user_ID*

List all roles associated with a specified user ID.

MapRolesToUser --username *tip_username* --password *tip_user_password* --userID *user_ID* --rolesList *role_name1, role_name2*

Associate a comma separated list of roles with a particular user ID.

RemoveRolesFromUser `--username tip_username --password tip_user_password --userID user_ID --rolesList role_name1, role_name2`
Disassociate a comma separated list of roles from a particular user ID.

ListRolesForView `--viewUniqueName view_name`
List all roles associated with a specified view.

MapRolesToView `--username tip_username --password tip_user_password --viewUniqueName view_name --rolesList role_name1, role_name2 --accessLevelList level1, level2`
Associate a comma separated list of roles with a particular view and set the access level for the view for each role.

RemoveRolesFromView `--username tip_username --password tip_user_password --viewUniqueName view_name --rolesList role_name1, role_name2`
Disassociate a comma separated list of roles from a particular view.

ListRoles

Use the **ListRoles** command to list all roles configured for a portal instance.

Syntax

This command has the following syntax:

- `UNIX Linux tipcli.sh ListRoles`
- `Windows tipcli.bat ListRoles`

Example

`Linux UNIX` For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListRoles
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance that you want to query.

AddRole

Use the **AddRole** command to add a specified role to the portal instance. Portal users are granted access to resources based on the role to which they are assigned. All roles created with this command have a resource type of Custom.

Syntax

This command has the following syntax:

- `UNIX Linux tipcli.sh AddRole --username tip_username --password tip_user_password --roleName role_name`
- `Windows tipcli.bat AddRole --username tip_username --password tip_user_password --roleName role_name`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

role_name is the name of the role to be added.

Note: Arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh AddRole --username  
tip_username --password tip_user_password --roleName role_name
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance involved.

UpdateRole

Use the **UpdateRole** command to change the name of a custom role.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh UpdateRole --username tip_username
--password tip_user_password --roleName role_name --newRoleName
new_role_name`
- **Windows** `tipcli.bat UpdateRole --username tip_username --password
tip_user_password --roleName role_name --newRoleName new_role_name`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

role_name is the name of the role to be modified.

new_role_name is the new name you want for the specified role.

Note: Arguments to the **role_name** and **newRoleName** parameters must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh UpdateRole --username  
tip_username --password tip_user_password --roleName role_name  
--newRoleName new_role_name
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance involved.

DelRole

Use the **DelRole** command to delete a custom role.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh DelRole --username tip_username --password tip_user_password --roleName role_name`
- **Windows** `tipcli.bat DelRole --username tip_username --password tip_user_password --roleName role_name`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

role_name is the name of the role to be modified.

Note: Arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh DelRole --username tip_username --password tip_user_password --roleName role_name
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance involved.

ListRolesFromGroup

Use the **ListRolesFromGroup** command to list all roles associated with a specified user group.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh ListRolesFromGroup --username tip_username --password tip_user_password --groupID group_ID`
- **Windows** `tipcli.bat ListRolesFromGroup --username tip_username --password tip_user_password --groupID group_ID`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

group_ID is the name of the user group associated with the roles that you want to list.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListRolesFromGroup  
--username tip_username --password tip_user_password --groupID group_ID
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance involved.

MapRolesToGroup

Use the **MapRolesToGroup** command to associate a comma-separated list of roles to a specified user group.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh MapRolesToGroup --username tip_username --password tip_user_password --groupID group_ID --rolesList role_name1, role_name2`
- **Windows** `tipcli.bat MapRolesToGroup --username tip_username --password tip_user_password --groupID group_ID --rolesList role_name1, role_name2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

group_ID is the name of the user group associated with the roles that you want to map.

role_name1, *role_name2* is a comma-separated list of roles that are to be associated with the specified user group.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh MapRolesToGroup --username  
tip_username --password tip_user_password --groupID group_ID --rolesList  
role_name1, role_name2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

RemoveRolesFromGroup

Use the **RemoveRolesFromGroup** command to disassociate a comma-separated list of roles from a specified user group.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh RemoveRolesFromGroup --username tip_username --password tip_user_password --groupID group_ID --rolesList role_name1, role_name2`
- **Windows** `tipcli.bat RemoveRolesFromGroup --username tip_username --password tip_user_password --groupID group_ID --rolesList role_name1, role_name2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

group_ID is the name of the user group associated with the roles that you want to list.

role_name1, *role_name2* is a comma-separated list of roles that are to be associated with the specified user group.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh RemoveRolesFromGroup
--username tip_username --password tip_user_password --groupID group_ID
--rolesList role_name1, role_name2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance involved.

ListRolesForPage

Use the **ListRolesForPage** command to list all roles associated with a specified page.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh ListRolesForPage --pageUniqueName page_unique_name`
- **Windows** `tipcli.bat ListRolesForPage --pageUniqueName page_unique_name`

Where:

page_unique_name is the unique ID for the page.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListRolesForPage  
--pageUniqueName page_unique_name
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

MapRolesToPage

Use the **MapRolesToPage** command to associate a comma-separated list of roles with a specified page and set an access level for each role.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh MapRolesToPage --username tip_username --password tip_user_password --pageUniqueName page_unique_name --rolesList role_name1, role_name2 --accessLevelList level1, level2`
- **Windows** `tipcli.bat MapRolesToPage --username tip_username --password tip_user_password --pageUniqueName page_unique_name --rolesList role_name1, role_name2 --accessLevelList level1, level2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

page_unique_name is the page ID with which to associate with the list of roles.

role_name1, role_name2 is a comma-separated list of roles that are to be associated with the page.

level1, level2 is a comma-separated list of page access levels that relate to the list of specified roles. Each of the listed roles is assigned the access level that corresponds to its position in each list. For example, the second argument in the list associated with **rolesList** is assigned to the second argument associated **accessLevelList**.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh MapRolesToPage --username  
tip_username --password tip_user_password --pageUniqueName page_unique_name  
--rolesList role_name1, role_name2 --accessLevelList level1, level2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

RemoveRolesFromPage

Use the **RemoveRolesFromPage** command to disassociate a comma-separated list of roles with a specified page.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh RemoveRolesFromPage --username tip_username --password tip_user_password --pageUniqueName page_unique_name --rolesList role_name1, role_name2`
- **Windows** `tipcli.bat RemoveRolesFromPage --username tip_username --password tip_user_password --pageUniqueName page_unique_name --rolesList role_name1, role_name2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

page_unique_name is the page ID associated with the roles that you want to remove.

role_name1, role_name2 is a comma-separated list of roles that are to be disassociated with the page.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh MapRolesToPage --username tip_username --password tip_user_password --pageUniqueName page_unique_name --rolesList role_name1, role_name2 --accessLevelList level1, level2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

ListRolesForPortletEntity

Use the **ListRolesForPortletEntity** command to list all roles associated with a specified portlet.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh ListRolesForPortletEntity --portletEntityUniqueName portlet_entity_unique_name`
- **Windows** `tipcli.bat ListRolesForPortletEntity --portletEntityUniqueName portlet_entity_unique_name`

Where:

portlet_entity_unique_name is the unique ID for the portlet.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListRolesForPage
--pageUniqueName page_unique_name
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

MapRolesToPortletEntity

Use the **MapRolesToPortletEntity** command to associate a comma-separated list of roles with a specified portlet.

Syntax

This command has the following syntax:

- UNIX** **Linux**

```
tipcli.sh MapRolesToPortletEntity --username tip_username --password tip_user_password --portletEntityUniqueName portlet_entity_unique_name --rolesList role_name1, role__name2 --accessLevelList level1, level2
```
- Windows**

```
tipcli.bat MapRolesToPortletEntity --username tip_username --password tip_user_password --portletEntityUniqueName portlet_entity_unique_name --rolesList role_name1, role__name2 --accessLevelList level1, level2
```

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

portlet_entity_unique_name is the unique portlet ID with which to associate with the list of roles.

role_name1, role__name2 is a comma-separated list of roles that are to be associated with the portlet.

level1, level2 is a comma-separated list of access levels that relate to the list of specified roles. Each of the listed roles is assigned the access level that corresponds to its position in each list. For example, the second argument in the list associated with **rolesList** is assigned to the second argument associated **accessLevelList**.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh MapRolesToPortletEntity
--username tip_username --password tip_user_password
--portletEntityUniqueName portlet_entity_unique_name --rolesList
role_name1, role__name2 --accessLevelList level1, level2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

RemoveRolesFromPortletEntity

Use the **RemoveRolesFromPortletEntity** command to disassociate a comma-separated list of roles with a specified portlet.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh RemoveRolesFromPortletEntity --username tip_username --password tip_user_password --portletEntityUniqueName portlet_entity_unique_name --rolesList role_name1, role_name2`
- **Windows** `tipcli.bat RemoveRolesFromPortletEntity --username tip_username --password tip_user_password --portletEntityUniqueName portlet_entity_unique_name --rolesList role_name1, role_name2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

portlet_entity_unique_name is the portlet ID associated with the roles that you want to remove.

role_name1, role_name2 is a comma-separated list of roles that are to be disassociated with the portlet.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh RemoveRolesFromPortletEntity
--username tip_username --password tip_user_password
--portletEntityUniqueName portlet_entity_unique_name --rolesList
role_name1, role_name2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

ListRolesFromUser

Use the **ListRolesFromUser** command to list all roles associated with a specified user.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh ListRolesFromUser --username tip_username --password tip_user_password --userID user_ID`
- **Windows** `tipcli.bat ListRolesFromUser --username tip_username --password tip_user_password --userID user_ID`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

user_ID is the unique ID for the user.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListRolesFromUser --username tip_username --password tip_user_password --userID user_ID
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

MapRolesToUser

Use the **MapRolesToUser** command to associate a comma-separated list of roles with a specified user ID.

Syntax

This command has the following syntax:

- UNIX** **Linux** `tipcli.sh MapRolesToUser --username tip_username --password tip_user_password --userID user_ID --rolesList role_name1, role_name2`
- Windows** `tipcli.bat MapRolesToUser --username tip_username --password tip_user_password --userID user_ID --rolesList role_name1, role_name2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

user_ID is the unique user ID with which to associate with the list of roles.

role_name1, *role_name2* is a comma-separated list of roles that are to be associated with the user.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh MapRolesToUser --username tip_username --password tip_user_password --userID user_ID --rolesList role_name1, role_name2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

RemoveRolesFromUser

Use the **RemoveRolesFromUser** command to disassociate a comma-separated list of roles with a specified user ID.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh RemoveRolesFromUser --username tip_username --password tip_user_password --userID user_ID --rolesList role_name1, role_name2`
- **Windows** `tipcli.bat RemoveRolesFromUser --username tip_username --password tip_user_password --userID user_ID --rolesList role_name1, role_name2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

user_ID is the user ID associated with the roles that you want to remove.

role_name1, *role_name2* is a comma-separated list of roles that are to be disassociated with the specified user ID.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh RemoveRolesFromUser  
--username tip_username --password tip_user_password --userID user_ID  
--rolesList role_name1, role_name2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

ListRolesForView

Use the **ListRolesForView** command to list all roles associated with a specified view.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh ListRolesForView --viewUniqueName view_name`
- **Windows** `tipcli.bat ListRolesForView --viewUniqueName view_name`

Where:

view_name is the unique name for the view.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh ListRolesForView  
--viewUniqueName view_name
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

MapRolesToView

Use the **MapRolesToView** command to associate a comma-separated list of roles with a specified view and set an access level for each role.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh MapRolesToView --username tip_username --password tip_user_password --viewUniqueName view_name --rolesList role_name1, role_name2 --accessLevelList level1, level2`
- **Windows** `tipcli.bat MapRolesToView --username tip_username --password tip_user_password --viewUniqueName view_name --rolesList role_name1, role_name2 --accessLevelList level1, level2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

view_name is the unique view name with which to associate with the list of roles.

role_name1, *role_name2* is a comma-separated list of roles that are to be associated with the view.

level1, *level2* is a comma-separated list of page access levels that relate to the list of specified roles. Each of the listed roles is assigned the access level that corresponds to its position in each list. For example, the second argument in the list associated with **rolesList** is assigned to the second argument associated **accessLevelList**.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh MapRolesToView --username  
tip_username --password tip_user_password --viewUniqueName view_name  
--rolesList role_name1, role_name2 --accessLevelList level1, level2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

RemoveRolesFromView

Use the **RemoveRolesFromView** command to disassociate a comma-separated list of roles with a specified view.

Syntax

This command has the following syntax:

- **UNIX** **Linux** `tipcli.sh RemoveRolesFromView --username tip_username --password tip_user_password --viewUniqueName view_name --rolesList role_name1, role_name2`
- **Windows** `tipcli.bat RemoveRolesFromView --username tip_username --password tip_user_password --viewUniqueName view_name --rolesList role_name1, role_name2`

Where:

tip_username is the portal administrator user ID.

tip_user_password is the password associated with the portal administrator user ID.

view_name is the unique view name associated with the roles that you want to remove.

role_name1, role_name2 is a comma-separated list of roles that are to be disassociated with the specified view.

Note: Individual role name arguments to the **rolesList** parameter must not include spaces.

Example

Linux **UNIX** For example, in a UNIX or Linux environment, use the following command:

```
tip_home_dir/profiles/TIPProfile/bin/tipcli.sh RemoveRolesFromView
--username tip_username --password tip_user_password --viewUniqueName
view_name --rolesList role_name1, role_name2
```

Where *tip_home_dir* is location of the Tivoli Integrated Portal instance.

Working with views

tipcli commands for working with views.

The tipcli commands are entered in the *tip_home_dir*/profiles/TIPProfile/bin directory, for example, C:\IBM\tivoli\tip\profiles\TIPProfile\bin\tipcli.bat on Windows or /opt/IBM/tivoli/tip/profiles/TIPProfile/bin/tipcli.sh on Linux or UNIX.

ListViews

List all views.

AddViewMembers --username *tip_username* --password *tip_user_password* --view *view_unique_name* [--members *members1, member2*] [--launchMembers *launch_member1, launch_member2*]

Add members or launch members for a specified view.

Important: When you add members to a view at the command line, your updates are not reflected in the portal until the next time that you log in.

ListViewsForRole *--roleName role_name*

List the views associated with a specified role.

MapViewToRole *--username tip_username --password tip_user_password
--roleName role_name --viewList view_unique_name1, view_unique_name2
--accessLevelList level1, level2*

Associate a comma separated list of views with a particular role and set the access level for the role for each view.

RemoveViewsFromRole *--username tip_username --password tip_user_password
--roleName role_name --viewList view_unique_name1, view_unique_name2*

Disassociate a comma separated list of views from a particular role.

Working with users

tipcli commands for working with users.

ListUsersFromRole *--roleName role_name*

List the users associated with a specified role.

MapUsersToRole *--username tip_username --password tip_user_password
--roleName role_name --usersList user_ID1:user_ID2*

Associate a colon (:) separated list of user IDs with a particular role.

Note: Arguments to the usersList parameter should not include a colon (:).

RemoveUsersFromRole *--username tip_username --password tip_user_password
--roleName role_name --usersList user_ID1:user_ID2*

Disassociate a colon (:) separated list of user IDs from a particular role.

Working with preference profiles

tipcli commands for working with preference profiles.

DeletePreferenceProfile *--username tip_username --password tip_user_password
--profileName profile_name*

Delete the specified preference profile.

ListPreferenceProfiles *[--name profile_name]*

Return a list of console preference profiles. Optionally, you can specify a comma separated lists of preference profiles, to return their unique names.

ShowPreferenceProfile *--uniqueName profile_unique_name*

List all the attributes for a specified profile preference.

AddUpdatePreferenceProfile *--username tip_username --password tip_user_password
--profileName profile_name [--newProfileName new_profile_name] [--themeDir theme_dir] [--showNavTree true|false]
[--componentDir default|ltr|rtl] [--textDir default|contextual|ltr|rtl]
[--views view_unique_name1, view_unique_name2] --roles role_name1, role_name2
[--defaultView view_unique_name]*

Use the AddUpdatePreferenceProfile command to create a new profile preference or update an existing profile.

Table 33. AddUpdatePreferenceProfile command arguments

Parameter and arguments	Description
<code>--username tip_username</code>	Mandatory parameter. A user with the <code>iscadmins</code> role.
<code>--password tip_user_password</code>	Mandatory parameter. The password for the user with the <code>iscadmins</code> role.
<code>--profileName profile_name</code>	Mandatory parameter. The name of the profile that is to be created or modified.
<code>[--newProfileName new_profile_name]</code>	Optional parameter. The new name for the specified profile.
<code>[--themeDir theme_dir]</code>	Optional parameter. Used to specify the directory for the theme that you want to apply.
<code>[--showNavTree true false]</code>	Optional parameter. Used to specify whether or not you want the navigation pane to be displayed for preference profile.
<code>[--componentDir default ltr rtl]</code>	Optional parameter. Used to specify component display direction, that is, whether you want items to display left-to-right, right-to-left, or to use the default browser settings.
<code>[--textDir default ltr rtl]</code>	Optional parameter. Used to specify text direction, that is, whether you want text to display left-to-right, right-to-left, or to use the default browser settings.
<code>[--views view_unique_name1, view_unique_name2]</code>	Optional parameter. Used to specify the views that you want to assign to the preference profile. Comma separated list.
<code>--roles role_name1, role_name2]</code>	Optional parameter. Used to specify the roles that you want to assign to the preference profile. Comma separated list.
<code>[--defaultView view_unique_name]</code>	Optional parameter. Used to specify the view that you want displayed when a user logs into the portal.

Working with pages

`tipcli` commands for working with pages.

ListPages `[--viewList view_unique_name1, view_unique_name2]`
`[--customizePages true|false]`

List all pages. You can optionally filter the list by using the `viewlist` parameter and providing a comma separated list of views. You can also use the `customizePages` (set to `true`) to return a list of custom pages only.

ListPagesForRole `--roleName role_name`

List the pages associated with a specified role.

MapPagesToRole `--username tip_username --password tip_user_password`
`--roleName role_name --pageList page_unique_name1, page_unique_name2`
`--accessLevelList level1, level2`

Associate a comma separated list of pages with a particular role and set the access level for the role for each page.

RemovePagesFromRole --username *tip_username* --password *tip_user_password*
--roleName *role_name* --pageList *page_unique_name1, page_unique_name2*
Disassociate a comma separated list of pages from a particular role.

Working with portlets

tipcli commands for working with portlets.

The tipcli commands are entered in the *tip_home_dir*/profiles/TIPProfile/bin directory, for example, C:\IBM\tivoli\tip\profiles\TIPProfile\bin\tipcli.bat on Windows or /opt/IBM/tivoli/tip/profiles/TIPProfile/bin/tipcli.sh on Linux or UNIX.

ListPortletEntitiesForRole --roleName *role_name*
List the portlets entities associated with a specified role.

MapPortletEntitiesToRole --username *tip_username* --password *tip_user_password* --roleName *role_name* --portletEntityList *portletEntity_unique_name1, portletEntity_unique_name2* --accessLevelList *level1, level2*
Associate a comma separated list of portlets with a particular role and set the access level for the role for each portlet.

RemovePortletEntitiesFromRole --username *tip_username* --password *tip_user_password* --roleName *role_name* --portletEntityList *portletEntity_unique_name1, portletEntity_unique_name2*
Disassociate a comma separated list of portlets with from particular role.

Working with user groups

tipcli commands for working with user groups.

The tipcli commands are entered in the *tip_home_dir*/profiles/TIPProfile/bin directory, for example, C:\IBM\tivoli\tip\profiles\TIPProfile\bin\tipcli.bat on Windows or /opt/IBM/tivoli/tip/profiles/TIPProfile/bin/tipcli.sh on Linux or UNIX.

ListGroupsFromRole --roleName *role_name*
List the user groups associated with a specified role.

MapGroupsToRole --username *tip_username* --password *tip_user_password* --roleName *role_name* --groupsList *group_name1: group_name2*
Associate a colon (:) separated list of groups with a particular role.

Note: Arguments to the groupsList parameter should not include a colon (:).

RemoveGroupsFromRole --username *tip_username* --password *tip_user_password* --roleName *role_name* --groupsList *group_name1: group_name2*
Disassociate a colon (:) separated list of groups from a particular role.

Tivoli Integrated Portal Export commands

Use these `tipcli` commands for to export Tivoli Integrated Portal customized data.

`tipcli` - Export plugins

Use the `Export` command to export customization data for an instance of Tivoli Integrated Portal. Use the `ListExportPlugins` command to list plugins that are available for export.

Syntax

`ListExportPlugins`

Use the `ListExportPlugins` command to list all plugins that can be exported. Use the list of returned plugins to assist you when you are specifying plugins to be exported.

Export `[--includePlugins|--excludePlugins plugin1,plugin2] [--settingFile setting_file] --username tip_username --password tip_user_password`

Parameters

If you provide no parameters to the `Export` command, all custom data is exported by default.

Note: If you specify additional parameters for the `tipcli.bat|.sh Export` and make a typing error, that is, if you type a parameter incorrectly, or use the incorrect case, then the commands runs as if no parameters were specified and no warning message is displayed.

Table 34. Export parameters and arguments

Parameter and arguments	Description
<code>[--includePlugins --excludePlugins plugin1,plugin2]</code>	Optional parameter. You can choose to include or exclude a list of plugins when you run the <code>Export</code> command.
<code>[--settingFile setting_file]</code>	Optional parameter. You can specify your export requirements in properties file instead of specifying your requirements using separate parameters at the command line. Provide a path to the settings file as the argument to the <code>settingFile</code> parameter. On systems running Windows you must use double backslashes characters (\\) when specifying the path to your settings file, for example, <code>C:\\tmp\\export.properties</code> . Command line parameters take precedence over entries in the settings file.
<code>--username tip_username</code>	Mandatory parameter. The user name for a user with the <code>iscadmin</code> role.
<code>--password tip_user_password</code>	Mandatory parameter. The password for the specified user name.

Example 1 - Return a list of plugins available for exporting

The following example returns a list of plugins that can be exported: Windows

```
C:\IBM\tivoli\tipv22\profiles\TIPProfile\bin>tipcli.bat ListExportPlugins
```

Example 2 - Export a subset of available plugins

The following example exports the CMS plugin only: Windows

```
C:\IBM\tivoli\tipv22TWLa\profiles\TIPProfile\bin>tipcli.bat Export
--includePlugins com.ibm.tivoli.tip.cli.cms.CmsExportPlugin
--username tipadmins --password tippassword
```

tipcli - Advanced Export options

Use the ExportPagePlugin tipcli command to export specific Tivoli Integrated Portal data.

Note: If you specify additional parameters for the tipcli.bat|.sh Export and make a typing error, that is, if you type a parameter incorrectly, or use the incorrect case, then the commands runs as if no parameters were specified and no warning message is displayed.

```
Export [--exportFile export_file] [--pages ALL|NONE|page1,page2] [--views
ALL|NONE|view1,view2] [--roles ALL|NONE|REQUIRED|role1,role2]
[--exportPagesInViews true|false] [--userPreferences
ALL|NONE|REQUIRED|user_ID1,user_ID2] [--consolePreferenceProfiles
ALL|NONE|pref_ID1,pref_ID2] [--includeEntitiesFromApp war1,war2]
[--includeCustomData true|false] [--includeCredentialData true|false]
[--includeMytasks true|false] [--includeMyStartupPages true|false]
[--includeTransformations true|false] --username tip_username --password
tip_user_password
```

Table 35. ExportPagePlugin command arguments

Parameter and arguments	Description
<code>--exportFile <i>export_file</i></code>	Optional parameter. Specifies the path and file name for the exported data, for example, <code>c:/tmp/extest.zip</code> .
<code>--pages ALL NONE <i>page1,page2</i></code>	Optional parameter. If you do not use the pages parameter, the default setting is ALL unless either exportPagesInViews or includeEntitiesFromApp is defined, then the default setting is NONE. You can also provide a list of pages that you want to export.
<code>--views ALL NONE <i>view1,view2</i></code> <code>--exportpageinviews [true false]</code>	Optional parameter. If you do not use the views parameter, the default setting is ALL. You can also provide a list of views that you want to export and optionally specify that you want to export all pages associated with the specified views. Note: Whether the optional parameter exportpageinviews is set to true or false, if a view has a default node in the navigation pane associated with it, then the page associated with the node is always exported. This is also true, even if you specify NONE as the argument to the --pages parameter.
<code>--roles ALL NONE REQUIRED <i>role1,role2</i></code>	Optional parameter. You can export no roles, all roles, or a specific list of roles. The default setting is ALL unless the pages parameter or the includeEntitiesFromApp parameter is specified. Then, the default setting is set to REQUIRED.

Table 35. *ExportPagePlugin* command arguments (continued)

Parameter and arguments	Description
<code>[--exportPagesInView true false]</code>	Optional parameter. Use this parameter, set to true, to export the pages associated with an exported view . The default value is false.
<code>[--userPreferences ALL NONE REQUIRED <i>user_ID1</i>,<i>user_ID2</i>]</code>	Optional parameter. You can export preferences for all users, no users, or for a specified list of users by user ID. The default setting is ALL. This parameter overrides the <code>includeMytasks</code> and <code>includeMyStartupPages</code> parameters.
<code>[--consolePreferenceProfiles ALL NONE <i>pref_ID1</i>,<i>pref_ID2</i>]</code>	Optional parameter. You can export no preference profile data, all preference profile data, or data for a specific list of preference profiles. The default setting is ALL. Note: If a console preference profile has a custom view as its default view, then that view is automatically exported. If the exported view has a default node in the navigation pane, then the associated page is automatically exported with the view.
<code>[--includeEntitiesFromApp <i>war1</i>,<i>war2</i>]</code>	Optional parameter. You can provide a list of WARs to export pages that contain portlets associated with the listed WARs.
<code>[--includeCustomData true false]</code>	Optional parameter. The default value is true. If is set to false, no customization data is exported.
<code>[--includeCredentialData true false]</code>	Optional parameter. The default value is true. If is set to false, no credential data is exported.
<code>[--includeMytasks true false]</code>	Optional parameter. The default setting is true. This parameter only applies when the <code>includeEntitiesFromApp</code> parameter is also specified.
<code>[--includeMyStartupPages true false]</code>	Optional parameter. The default setting is true. This parameter only applies when the <code>includeEntitiesFromApp</code> parameter is also specified.
<code>[--includeTransformations true false]</code>	Optional parameter. The default setting is true.
<code>--username <i>tip_username</i></code>	Mandatory parameter. The user name for a user with the <code>iscadmins</code> role.
<code>--password <i>tip_user_password</i></code>	Mandatory parameter. The password for the specified user name.

Import tipcli commands

tipcli commands for importing Tivoli Integrated Portal data.

Note: If you specify additional parameters for the tipcli.bat|.sh Import and make a typing error, that is, if you type a parameter incorrectly, or use the incorrect case, then the commands runs as if no parameters were specified and no warning message is displayed.

ListImportPlugins

Use the ListImportPlugins command to list all plugins that are available to be imported.

Import [--includePlugins|--excludePlugins *plugin1,plugin2*] [--settingFile *setting_file*] [--backupDir *backup_dir*] --username *tip_username* --password *tip_user_password*

Use the Import command to import customization data into a Tivoli Integrated Portal environment. If you provide no parameters to the Import command, all custom data is imported by default.

Table 36. Import command arguments

Parameter and arguments	Description
<code>--includePlugins --excludePlugins <i>plugin1,plugin2</i></code>	Optional parameter. You can choose to include or exclude a list of plugins when you run the Import command.
<code>--settingFile <i>setting_file</i></code>	Optional parameter. You can specify your import requirements in a properties file instead of specifying your requirements using separate parameters at the command line. Provide a path to the settings file as the argument to the settingFile parameter. On systems running Windows you must use double backslashes characters (\\) when specifying the path to your settings file, for example, C:\\tmp\\import.properties. Command line parameters take precedence over entries in the settings file.
<code>--backupDir <i>backup_dir</i></code>	You can specify a directory to save the backup data during an import operation so that if it is required you can subsequently restore settings.
<code>--username <i>tip_username</i></code>	Mandatory parameter. The user name for a user with the iscadmin role.
<code>--password <i>tip_user_password</i></code>	Mandatory parameter. The password for the specified user name.

Additional commands

Additional `tipcli` commands.

cmsUpdateRemoteEntries [--username *username* --password *password*] (-toremove | -fromremote | -deleteremote) [-force]

Save system information in the file specified.

Table 37. `cmsUpdateRemoteEntries` command arguments

Parameter and arguments	Description
[--username <i>username</i> --password <i>password</i>]	Optional parameters. User name and password for a Tivoli Integrated Portal user. If you do not provide user name and password details at the command line, you must enter the user name and password in an interactive mode.
-toremove	Optional parameter. Indicates that the update is to occur to the remote data store, that is, the local information is to be written to the remote database.
-fromremote	Optional parameter. Indicates that the update is to occur from the remote data store. Any information saved locally is downloaded and updated from the remote database.
-deleteremote	Optional parameter. Indicates that the launch entries provided by this Tivoli Integrated Portal instance to the remote database is to be deleted from the database. Additionally, this command prevents any further updates from being sent to the remote database. On execution, the <code>cmsUpdateRemoteEntries</code> command with the <code>toremove</code> and <code>force</code> options updates the database and re-enables automatic updates to the remote database. Note: There is no difference between <code>deleteremote</code> with the <code>force</code> option and <code>deleteremote</code> without the <code>force</code> option.
-force	Optional parameter. Indicates that any caching or optimization mechanisms for the data should be ignored and that the data should be updated regardless of the state. Any existing cached information is discarded. All data in the database is refreshed for the <code>toremove</code> case, including the resource bundles.

Version

List the versions of the products and components installed in the environment.

SystemInfo [--outputFile *outputFile*]

Save system information in the file specified.

ITMLogin --hostname *hostname* --port *port* --username *username* --password *password* [--servicename]

ITMLogin is used to configure the ITM Web Service to connect to the Tivoli

Enterprise Portal Server. For example, this command in Windows configures the username and password for a new ITM Web Service to be added to the application server instance.

```
C:\IBM\tivoli\tip\bin\tipcli.bat ITMLogin --hostname
localhost --port 1920 --username sysadmin --password
sysadmIn --servicename ITMWebService2
```

You can use the ITMLogin command to change the hostname, port, username, and password of an existing Tivoli Enterprise Portal Server instance. Changing a configured ITM Web Service to a different Tivoli Enterprise Portal Server is not supported, because the two portal servers may have different configurations. If you need to use a different portal server, you can install another instance of the ITM Web Service and use this command (along with the `-serviceName` option) to configure.

TADDMLogin `--hostname` *hostname* [`--port` *port*] `--username` *username* `--password` *password*

Log in to the Tivoli Application Dependency Discovery Manager.

Appendix F. Web GUI database tables

When operating in a load balancing cluster, a database holds the configuration information for propagating to all nodes in the cluster.

Attention: Do not modify the contents of these tables manually as this can adversely affect the operation of the cluster.

OMNIBUS_WEB_GUI.CONFIG_ITEMS table

The OMNIBUS_WEB_GUI.CONFIG_ITEMS table contains the items of Web GUI configuration data to be replicated across a load balancing cluster.

Table 38. Columns in the OMNIBUS_WEB_GUI.CONFIG_ITEMS table

Column name	Data type	Description
CONFIG_ITEM_ID	bigint	A unique identifier for this entry in the table. This column is the primary key for the table.
CHECKSUM	char(20)	A checksum for the entry.
KEY	varchar(128)	A key for the entry.
LAST_UPDATED	timestamp	The date and time when this item of data was last updated.
NAMESPACE	varchar(64)	The namespace for this item of data.
PATH	varchar(256)	The path name for this item of data in the Web GUI directory tree.
TYPE	varchar(12)	The type of this data item.
VALUE	blob(10485760)	The content of the data item.

OMNIBUS_WEB_GUI.NODES

The OMNIBUS_WEB_GUI.NODES table contains details of the nodes that make up the load balancing cluster. There is one entry for each of the nodes in the cluster.

Table 39. Columns in the OMNIBUS_WEB_GUI.NODES table

Column name	Data type	Description
NODE_ID	bigint	A unique identifier for this entry in the table.
URI	varchar(512)	The URI of a node in the cluster.

OMNIBUS_WEB_GUI.NODES_CONFIG_ITEMS

The OMNIBUS_WEB_GUI.NODES_CONFIG_ITEMS table contains information on when each node in the cluster last updated each item of configuration data defined in the OMNIBUS_WEB_GUI.CONFIG_ITEMS table. There is one entry in the table for each combination of an item of configuration data and cluster node.

Table 40. Columns in the OMNIBUS_WEB_GUI.NODE_CONFIG_ITEMS table

Column name	Data type	Description
CONFIG_ITEM_ID	bigint	The identifier for an item of configuration data held in the OMNIBUS_WEB_GUI.CONFIG_ITEMS table.
NODE_ID	bigint	The identifier of a node in the OMNIBUS_WEB_GUI.NODES table.
LAST_UPDATED	timestamp	The date and time when the data item was last updated on the node.

Appendix G. URLs for opening Web GUI pages

Use the URL to open Web GUI portlets and applets from a map, from a link on an HTML page, or through a link generated by script tool or a CGI tool.

You can use URLs to open the following Web GUI pages:

- “Active Event List”
- “Filter Builder” on page 419
- “Lightweight Event List” on page 419
- “Map pages” on page 420
- “Table View” on page 420
- “Event Viewer” on page 421

The parameters are as follows. In each URL, *context-root* refers to the context root of the Web GUI. This can be configured during installation of the product and its default value is `ibm/console`.

If you use a deprecated parameter, an entry is recorded in the following location:
`tip_home_dir/profiles/TIPProfile/logs/`.

Active Event List

To open the Active Event List (AEL), use a URL of the following format:

```
protocol://server.domain:portcontext-root/webtop/AELView?filtertype=typeoffilter  
&filtername=filtername&viewname=viewname&viewtype=viewtype&  
datasource=datasourcename
```

To use a transient filter, use a URL of the following format:

```
protocol://server.domain:portcontext-root/webtop/AELView?sql=string&  
transientname=filtername&viewname=viewname&viewtype=viewtype&  
datasource=datasourcename
```

The possible parameters are as follows:

datasource

A data source defined in the `ncwDataSourceDefinitions.xml` data source configuration file. If you do not specify this parameter, the default data source is used. For more information about the default data source, see the *IBM Tivoli Netcool/OMNibus Installation and Deployment Guide*.

Tip: If you have defined multiple data sources, you can specify them in the string by using a comma-separated list, as shown in the following example:

```
datasource=datasource1,datasource2
```

If you specify multiple data sources, make sure that the filter, either a predefined filter or a transient filter, queries fields that are contained in all data sources. If you select a data source that is not defined in the filter, an error message is displayed in the AEL instead of event data.

entity|entities

Deprecated: Use the **filtertype** and **filtername** parameters instead.

Tip: If your installation of the Web GUI was migrated or upgraded from IBM Tivoli Netcool/Webtop, and you have custom pages that open with the **entity** parameter, the Web GUI interprets the parameter as follows:

```
filtertype=system&filtername=filtername
```

Where *filtername* is the entity; entities are migrated to system filters.

filtername

The name of the filter that you want to apply.

If you do not specify a **filtertype** parameter, all filter types are searched to identify a matching filter.

filterowner

The owner of the filter. This parameter is required if the **filtertype** is set to group. This parameter is ignored if the **filtertype** is set to either global, system, or user.

filtertype

The type of filter that you want to apply. Use this parameter together with the **filtername** parameter. Possible values are as follows:

- global
- group
- system
- user
- user_transient

showmenubar

Optional: Use this parameter to control whether the displayed AEL contains a menu bar. Possible values are:

- true
- false

showtitlebar

Optional: Use this parameter to control whether the displayed AEL contains a title bar. Possible values are:

- true
- false

sql

Optional: An SQL filter string. This filter is transient, and does not persist beyond your current session.

transientname

Optional: Use this parameter to specify a filter name if you specify a filter string by using the **sql** parameter. The value of this parameter is used to populate the **Filters** list of the AEL.

viewname

A view that overrides the default view associated with the filter. If you do not specify this parameter, the default view associated with the filter is used.

viewtype

The type of view that you want to apply. Use this parameter together with the **viewname** parameter. Possible values are as follows:

- global
- system
- user

Filter Builder

To open the Filter Builder, use a URL of the following format:

```
protocol://server.domain:portcontext-root/webtop/startFB.do
```

Lightweight Event List

To open the Lightweight Event List (LEL), use a URL of the following format:

```
protocol://server.domain:portcontext-root/webtop/lwsel/lwsel.jsp?  
filtertype=typeoffilter&filtername=filtername&viewname=viewname  
&viewtype=viewtype&datasource=datasourcename
```

The parameters are as follows:

datasource

A data source defined in the `ncwDataSourceDefinitions.xml` data source configuration file. If you do not specify this parameter, the default data source is used. For more information about the default data source, see the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

entity|entities

Deprecated: Use the **filtertype** and **filtername** parameters instead.

Tip: If your installation of the Web GUI was migrated or upgraded from IBM Tivoli Netcool/Webtop, and you have custom pages that open with the **entity** parameter, the Web GUI interprets the parameter as follows:

```
filtertype=system&filtername=filtername
```

Where *filtername* is the entity; entities are migrated to system filters.

filtername

The name of the filter that you want to apply.

If you do not specify a **filtertype** parameter, all filter types are searched to identify a matching filter.

filterowner

The owner of the filter. This parameter is required if the **filtertype** is set to group. This parameter is ignored if the **filtertype** is set to either global, system, or user.

filtertype

The type of filter that you want to apply. Use this parameter together with the **filtername** parameter. Possible values are as follows:

- global
- group
- system
- user
- user_transient

viewname

A view that overrides the default view associated with the filter. If you do not specify this parameter, the default view associated with the filter is used.

viewtype

The type of view that you want to apply. Use this parameter together with the **viewname** parameter. Possible values are as follows:

- global

- system
- user

Map pages

To open a map page, use a URL of the following format:

protocol://server.domain:portcontext-root/webtop/Map/map

The parameters are as follows:

map

Required: The name of a map.

Table View

To open the Table View, use a URL of the following format:

*protocol://server.domain:portcontext-root/webtop/TableView/?
filtertype=typeoffilter&filtername=filtername&viewname=viewname&viewtype=viewtype&
datasource=datasource&maxrows=n*

The parameters are as follows:

datasource

A data source defined in the `ncwDataSourceDefinitions.xml` data source configuration file. If you do not specify this parameter, the default data source is used. For more information about the default data source, see the *IBM Tivoli Netcool/OMNIBus Installation and Deployment Guide*.

entity|entities

Deprecated: Use the **filtertype** and **filtername** parameters instead.

Tip: If your installation of the Web GUI was migrated or upgraded from IBM Tivoli Netcool/Webtop, and you have custom pages that open with the **entity** parameter, the Web GUI interprets the parameter as follows:

filtertype=system&filtername=filtername

Where *filtername* is the entity; entities are migrated to system filters.

filtername

The name of the filter that you want to apply.

If you do not specify a **filtertype** parameter, all filter types are searched to identify a matching filter.

filterowner

The owner of the filter. This parameter is required if the **filtertype** is set to group. This parameter is ignored if the **filtertype** is set to either global, system, or user.

filtertype

The type of filter that you want to apply. Use this parameter together with the **filtername** parameter. Possible values are as follows:

- global
- group
- system
- user
- user_transient

maxrows

Optional: Specifies the number of rows returned in the Table View.

viewname

A view that overrides the default view associated with the filter. If you do not specify this parameter, the default view associated with the filter is used.

viewtype

The type of view that you want to apply. Use this parameter together with the **viewname** parameter. Possible values are as follows:

- global
- system
- user

Event Viewer

To open the Event Viewer, use a URL of the following format:

```
protocol://server.domain:portcontext-root/webtop/eventviewer/eventviewer.jsp?
filtertype=typeoffilter&filtername=filtername&viewname=viewname&
viewtype=viewtype
&datasource=datasourcename
```

To use a transient filter, use a URL of the following format:

```
protocol://server.domain:portcontext-root/webtop/eventviewer/eventviewer.jsp
?sql=string&
transientname=filtername&viewname=viewname&viewtype=viewtype&
datasource=datasourcename
```

The parameters are as follows:

datasource

A data source defined in the `ncwDataSourceDefinitions.xml` data source configuration file. If you do not specify this parameter, the default data source is used. For more information about the default data source, see the *IBM Tivoli Netcool/OMNIbus Installation and Deployment Guide*.

doubleclickaction

The action to perform when you double-click an event in the Event Viewer. Possible options are as follows:

- none - Nothing happens.
- Show Information - Opens the information window for a selected event. This is the default action.
- Open AEL in New Window - Opens the AEL in a new window.

filtername

The name of the filter that you want to apply.

filterowner

The owner of the filter. This parameter is required if the **filtertype** is set to group. This parameter is ignored if the **filtertype** is set to either global, system, or user.

filtertype

The type of filter that you want to apply. Use this parameter together with the **filtername** parameter. Possible values are as follows:

- global
- group
- system

- user
- user_transient

forceoverwrite

Optional: Defines whether an existing transient filter is overwritten if it has the same name as the specified **filtername** parameter. Possible values are as follows:

- true
- false

If **true**, an existing transient filter is overwritten. If **false**, and a transient filter with the same name currently exists, a warning message is displayed, and the events for the existing transient filter are displayed.

sql

Optional: An SQL filter string. This filter is transient, and does not persist beyond your current session.

transientname

Optional: Use this parameter to specify a filter name if you specify a filter string by using the **sql** parameter. The value of this parameter is used to populate the **Filters** list of the Event Viewer.

viewname

A view that overrides the default view associated with the filter. If you do not specify this parameter, the default view associated with the filter is used.

viewtype

The type of view that you want to apply. Use this parameter together with the **viewname** parameter. Possible values are as follows:

- global
- system
- user

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan, Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
958/NH04
IBM Centre, St Leonards
601 Pacific Hwy
St Leonards, NSW, 2069
Australia

IBM Corporation
896471/H128B
76 Upper Ground
London SE1 9PZ
United Kingdom

IBM Corporation
JBFA/SOM1
294 Route 100
Somers, NY, 10589-0100
United States of America

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Portions of this product include software developed by Daniel Veillard.

- libxml2-2.7.8

The libxml2-2.7.8 software is distributed according to the following license agreement:

© Copyright 1998-2003 Daniel Veillard.

All Rights Reserved. Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE DANIEL VEILLARD BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of Daniel Veillard shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from him.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, ibm.com[®], Netcool, Netcool/OMNIBus, Tivoli, and WebSphere are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both

Adobe, Acrobat, Portable Document Format (PDF), PostScript, and all Adobe-based trademarks are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, other countries, or both.



Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, or service names may be trademarks or service marks of others.

Index

Special characters

 tag attributes
charts 350

A

about this profile 2
accessibility x, 369
Active Event List
 accessing 275
 acknowledging events 275
 adding sound files 205
 appearance and behavior 195
 assigning ownership to events 276
 brightness 199
 changing the displayed event
 data 277
 colors 200, 205
 copying data to the clipboard 277
 data row caching 196
 date and time formats 200, 202
 deacknowledging events 275
 defaults 173
 deleting events 278
 deselecting events 286
 displaying full event information 278
 event severity
 icons 203
 event severity icons 196
 filtering 284
 filtering by severity 284
 flashing 199
 fonts 200, 205
 freezing event data 279
 linking with map object 328
 maintaining an event journal 280
 monitoring TADDM events 283
 notifications 198
 prioritizing events 281
 refresh rate 195
 refreshing event data 281
 restricting rows 197
 running predictive eventing
 tools 282
 searching for text 285
 selecting events 286
 sorting columns 286
 toolbars 200
 tools 287
adding a user to groups 109
adding more groups as members of a
 group 129
adding more users as members of a
 group 113
adding tools to menu 238
adding users to a group 112
administration
 Tivoli Integrated Portal 98
 user tasks 98
 Web GUI 98

advanced commands 74
AEL
 event management overview 274
Alert menu 237
application server
 ports 3
 profile 2
attributes
 charts 360
 configuration files 374
audience vii
authentication
 client messages 150

B

back up 22, 23
 server settings 169
basic commands 71

C

CGI scripts
 environment variables 211
CGI support 213
changing display options for a
 group 124
changing display options for a user 107
changing user information 110, 126
Chart portlet
 defaults 175
charts
 <chartelement> syntax 346
 tag attributes 350
 attribute reference 360
 definition file 345
 definition file, creating 349
 element reference 351
 generation 344
 overview 343
 presenting 350
 schema 346
 types 343
cloning
 server settings 169
cloning data between servers 18
 exporting data 18
 importing data 20
 overview 10
command-line 207
command-line tools
 creating 221
commands 380
 confvmm4ncos 6
 nco_p_simnet 319
 SmartPage
 conventions 380
 enable:Smartpage 380
 insert:AELMAPVIEW 383
 insert:FILTERPAGE 385

commands (*continued*)
 SmartPage (*continued*)
 insert:MAPLET 384
 insert:TABLEVIEW 387
 insert:USERMAPLIST 386
 insert:USERNAME 387
 insert:USERSHOMEURL 388
 templates 388
 Validate 380
configuration files
 attributes 374
 elements 371
 structure 371
conventions, typeface xi
copying data between servers 10
 cloning all data 18
 defining the data to export 11
 defining the data to import 15
 exporting data from the source
 server 11
 exporting the data 14
 importing data to the target
 server 15
 importing the data 16
 overview 10
 setting the log level 22
 verifying the exported data 15
 verifying the imported data 17
creating filters 106, 123
creating users 108
CTGES1504E and CTGES1505E 150
customizing
 adding tools to menu 238

D

data row caching 196
database schema 415, 416
database tables 415, 416
date and time formats 200, 202
defaults
 Relationship Definitions 192
 setting
 Active Event List 173
 Chart portlet 175
 Event Dashboard 176
 Event Viewer 180
 Inline Frame portlet 188
 Lightweight Event List 189
 Map portlet 190
 Table View portlet 192
 Web widget portlet 193
definition file
 chart, creating 349
 charts 345
 syntax 345
deleting groups 130
deleting users 114
dependent filters 249
 creating 258

- Deployment Engine
 - managing 23
- duplicating group assignments for groups 130
- duplicating group assignments for users 114

E

- editing
 - properties files 148
- education
 - see Tivoli technical training x
- elements
 - charts 351
 - configuration files 371
- environment variables
 - CGI scripts 211
- environment variables, notation xi
- Event Dashboard 306
- Event Dashboarddefaults 176
- Event Dashboards
 - freezing 313
 - interaction with Active Event List 314, 315
 - monitor boxes
 - adding 308
 - arranging 312
 - customizing 310
 - removing 309
 - preferences 311
 - troubleshooting 165
- event relationships 246
 - preferences 192
- event severity icons 196
- Event Viewer
 - accessing 288
 - appearance and behavior 245
 - changing the displayed event data 289
 - connecting an Event Viewer to an Active Event List 88
 - copying data 289
 - defaults 180
 - displaying full information 288
 - event groupings 291
 - event relationships 246, 292
 - freezing event data 290
 - refreshing event data 289
 - sorting columns 290
- Event Viewercustomizing 245
- events
 - displaying
 - Event Dashboards 296
 - filtering 284, 290
 - managing
 - tools 287
 - managing in the AEL 274
 - maps
 - changing color 340
 - monitoring
 - Active Event List 274
 - Event Viewer 288
 - Lightweight Event List 293
 - querying 9
 - searching for text 285

- events (*continued*)
 - severity
 - icons 203
 - severity icons 196
 - top n 197
 - visualizing
 - charts 343
 - Event Dashboards 306
 - gauges 298
 - maps 317
- export 10
 - defining the data to export 11
 - exporting data from a server 11
 - exporting the data 14
 - overview 10
 - setting the log level 22
 - verifying the exported data 15
- exporting 70, 71, 74
 - basic export console preference profiles 73
 - basic export pages 72
 - basic export views 73
 - export all 74
 - export pages 76
 - export views 77
 - rules 78, 81
 - settings file 75
- ExportPagePlugin tipcli command export 410

F

- files
 - deployment.xml 3
 - ncwDataSourceDefinitions.xml 6
 - server.init 197, 340
- Filter Builder
 - accessing 252
 - comparators 261
 - overview 252
- filter collections 249
 - editing 260
- filtering a list of groups 123
- filtering a list of users 106
- filters
 - categories 249
 - collections 249
 - editing 260
 - copying 263
 - creating
 - advanced mode 256
 - basic mode 254
 - dependent 258
 - deleting 264
 - dependent 249
 - Event Dashboards 310
 - invalid characters 377
 - regular expressions 261
 - transient 249
- flashing
 - AEL 199
- fonts
 - Active Event List 200, 205

G

- gauges
 - changing 182
 - metrics 302
 - publishing 297
 - setting thresholds 305
- Gauges
 - interaction with Active Event List or Event Viewer 90
- global filters 249
- global views 251
- groups 97
 - adding more as members of a group 129
 - changing information about 126
 - changing viewing options 124
 - creating filters 123
 - deleting 130
 - duplicating group assignments 130
 - filtering a list of 123
 - managing 121
 - removing members from 129
 - searching for 122, 126, 130
 - supplied 97
 - viewing group information 126
 - viewing membership of 127

H

- HTML Map Editor 332
 - buttons 333
 - creating maps 320
 - icons 335
 - lines 336
 - Table View 335
- HTML Map Editortext 338

I

- icons
 - Active Event List 203
- import 10
 - defining the data to import 15
 - importing data to a server 15
 - importing the data 16
 - overview 10
 - setting the log level 22
 - verifying the imported data 17
- importing 70, 79
 - import data 79
 - rollback 80
- Inline Frame portlet
 - defaults 188
- invalid characters
 - when defining filters, views, and tools 377
- iscadmin role 39
- iscadmins role 100

J

- Java Map Editor 321, 331
 - access control to maps 321
 - adding objects 323
 - colors 330

- Java Map Editor *(continued)*
 - creating maps 319
 - event lists 328
 - fonts 330
 - setting background 322
 - setting grid 322
 - setting object position 329
 - setting object size 329
 - setting object URLs 326
 - setting size 322
- Java Map Editor setting object properties 324
- Java Runtime Environment 143
- JavaScript
 - tools 208
- JavaScript Event List
 - filtering by severity 290

L

- Lightweight Event List
 - accessing 293
 - defaults 189
 - displaying full information 295
 - linking with map object 328
 - viewing events 294
- load balancing 415, 416
 - best practices 139
 - maintain list of files to replicate 137
 - recovering from database corruption 141
 - resynchronize a node with the cluster 141
 - troubleshooting 140
- load balancing cluster
 - administering 133
- log files
 - creating a performance log 145
 - location 147
 - setting the log level 143
- login
 - product roles 161
 - slow response 164
 - troubleshooting 148
 - users 161

M

- managing groups 121
- managing users 104
- manuals viii
- Map portlet
 - defaults 190
 - preferences 190
 - publishing maps 340
- maps
 - colors picker 331
 - configuring in HTML 332
 - configuring with the Java Map Editor 321
 - creating
 - HTML Map Editor 320
 - Java Map Editor 319
 - customizing
 - access control 321
 - adding objects 323

- maps *(continued)*
 - customizing *(continued)*
 - background 322
 - buttons 333
 - event lists 328
 - grid 322
 - icons 335
 - lines 336
 - map object URLs 326
 - object position 329
 - object properties 324
 - object size 329
 - size 322
 - text 338
 - customizing colors 330
 - customizing fonts 330
 - customizing Table View 335
 - deleting resource 343
 - linking 339
 - overview 317
 - previewing 319
 - previewing resources 342
 - publishing Web widget portlet 341
 - publishing Map portlet 340
 - samples 319
 - specifying a URL target 339
 - Table View 338
 - troubleshooting 166
- memory usage 143
- menus
 - Alert 237
 - changing the order of items 242
 - removing items 241
 - renaming items 242
 - submenus 240, 241
 - creating 239
 - Tools 237

N

- navigation pane
 - changing access 39
- ncw_admin role 96
 - assigning to user 100
- ncw_dashboard_editor role 96
- ncw_gauges_editor 96
- ncw_gauges_viewer role 96
- ncw_user role 96
- netcool_ro role 96
- netcool_rw role 96
- notifications 198
 - adding sound files 205

O

- ObjectServer
 - password
 - changing 6
 - querying 9
- ObjectServer properties 143
- online publications viii
- operating system information 143
- ordering publications viii
- overview 246

P

- pages 407
- password
 - change 99
 - SSL 99
- performance tuning 170
 - restricting rows in the Active Event List 197
 - Web GUI 169
- port
 - numbers 2
- port assignments 3
- portlet
 - custom 48
- predictive events 282
- preferences
 - Active Event List 173
 - Chart portlet 175
 - Event Dashboard 176
 - Event Viewer 180
 - Inline Frame portlet 188
 - Lightweight Event List 189
 - modifying 101
 - Relationship Definitions 192
 - setting
 - Active Event List 173
 - Chart portlet 175
 - Event Dashboard 176
 - Event Viewer 180
 - Inline Frame portlet 188
 - Lightweight Event List 189
 - Map portlet 190
 - Table View portlet 192
 - Web widget portlet 193
 - Web widget portlet 193
- prompts 209
- properties
 - editing files 148
- publications viii

R

- refresh rate 195
- regular expressions
 - filters 261
- Relationship Definitions
 - defaults 192
 - preferences 192
- removing members of a group 129
- removing users from a group 112, 128
- roles 95, 96
 - iscadmins 39, 100
 - ncw_admin 100
 - of supplied groups 97
- runtime parameters
 - script tools 234

S

- samples
 - maps 319
 - ObjectServer query 9
 - script tools 225
- script tools
 - creating 224

- scripts
 - CGI
 - creating 211
 - registering 213
 - searching for groups 122, 126, 130
 - searching for users 105, 110, 111, 112, 114, 125, 128
 - server 23
 - back up 22
 - ObjectServer connection 6
 - set a trace 145
 - server settings
 - cloning 169
 - server version and properties 143
 - SmartPage
 - code sample 379
 - commands
 - enable:Smartpage 380
 - insert:AEL 380
 - insert:AELMAPVIEW 383
 - insert:FILTERPAGE 385
 - insert:MAPLET 384
 - insert:TABLEVIEW 387
 - insert:USERMAPLIST 386
 - insert:USERNAME 387
 - insert:USERSHOMEURL 388
 - Validate 380
 - commands overview 379
 - conventions 380
 - creating templates 390
 - insert:AEL 380
 - templates
 - example 388
 - guidelines 388, 389
 - location on server 388
 - SmartPage commands
 - insert:MAPLET 384
 - SQL
 - filters 254, 256
 - query
 - sample 9
 - startup pages 39
 - submenus
 - adding to menu 240
 - creating 239
 - deleting 241
 - support information x
 - system filters 249
 - system information
 - checking 143
 - system views 251

T

- Table View
 - linking with map object 328
 - maps 335, 338
 - viewing events 295
- Table View portlet
 - defaults 192
 - preferences 192
- TADDM events
 - monitoring 283
- tipcli
 - AddRole 393
 - DelRole 395
 - exporting plugins 82, 409

- tipcli (*continued*)
 - ListRoles 393
 - ListRolesForPage 397
 - ListRolesForPortletEntity 399
 - ListRolesForView 403
 - ListRolesFromGroup 395
 - ListRolesFromUser 401
 - MapRolesToGroup 396
 - MapRolesToPage 398
 - MapRolesToPortletEntity 400
 - MapRolesToUser 402
 - MapRolesToView 404
 - RemoveRolesFromGroup 397
 - RemoveRolesFromPage 399
 - RemoveRolesFromPortletEntity 401
 - RemoveRolesFromUser 403
 - RemoveRolesFromView 405
 - UpdateRole 394
- tipcli command 391, 407
 - additional commands 413
 - import 83, 412
 - ITMLogin command 413
 - portlets 408
 - preference profiles 406
 - roles 391
 - SystemInfo command 413
 - TADDMLogin 413
 - user groups 408
 - users 406
 - views 405
- Tivoli software information center viii
- Tivoli technical training x
- tools 207
 - access criteria 208
 - adding to menu 238
 - CGI 206, 211
 - creating 214
 - examples 214
 - registering 213
 - scripting 211
 - copying 231
 - deleting 234
 - environment variables 211
 - invalid characters 377
 - managing events 287
 - modifying 227, 239
 - multiple data sources 205
 - overview 206
 - prerequisites 205
 - prompts 209
 - renaming 230
 - script 208
 - runtime parameters 234
 - samples 225
 - SQL 207
 - creating 218
- Tools menu 237
- trace 145
- training, Tivoli technical x
- transient filters 249
- trouble-shooting
 - log files 147
- troubleshooting 143
 - auditing the usage of objects 146
 - creating a performance log 145
 - Event Dashboard 165
 - load balancing cluster 140

- troubleshooting (*continued*)
 - login errors 148
 - maps 166
 - query timeout 165
 - recovering from database
 - corruption 141
 - resynchronize a node with the cluster 141
 - setting the log level 143
 - typeface conventions xi

U

- user filters 249
- user timeout
 - changing 3
- user views 251
- users
 - adding a user to groups 112
 - adding more as members of a group 113
 - adding to groups 109
 - administration 98
 - changing display options 107
 - changing information about 110
 - creating 108
 - creating filters 106
 - creating Web GUI administrator user 100
 - deleting 114
 - duplicating group assignments 114
 - filtering a list of 106
 - groups 97
 - removing from groups 109
 - managing 104
 - modifying preferences 101
 - removing a group from groups 109
 - removing from a group 112, 128
 - roles 95, 96
 - searching for 105, 110, 111, 112, 114, 125, 128
 - supplied 97
 - viewing group information 111
 - viewing information about 110, 125
- utilities
 - acknowledge 207
 - nco_ping 206
 - ping 207

V

- variables, notation for xi
- View Builder
 - accessing 265
- viewing group information for a group 126
- viewing group information for a user 111
- viewing the members of a group 127
- viewing user information 110, 125
- views
 - adding columns 266
 - categories 251
 - column order 268
 - column sort order 271
 - column titles 267

views (*continued*)
column width 267
copying 271
creating 265
invalid characters 377
locking columns 269
removing columns 266
sorting precedence 270
View Builder 265

W

Web widget portlet
defaults 193
publishing maps 341



Printed in the Republic of Ireland

SC14-7528-00

