

IBM System x IBM ToolsCenter Suite User's Guide

Version 9.40



IBM System x IBM ToolsCenter Suite User's Guide

Version 9.40

Note

Before using this information and the product it supports, read the information in "Notices" on page 61.

Edition notice

This edition applies to version 9.40 of ToolsCenter Suite and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this publication

This publication provides information about how to download and use IBM[®] ToolsCenter Suite.

Conventions and terminology

In this book, when you are instructed to enter a command, type the command and press Enter.

These notices are designed to highlight key information.

Note: These notices provide important tips, guidance, or advice.

Important: These notices provide information or advice that might help you avoid inconvenient or difficult situations.

Attention: These notices indicate possible damage to programs, devices, or data. An attention notice appears before the instruction or situation in which damage can occur.

The following table provides a description of commonly used acronyms in the *IBM ToolsCenter Suite User's Guide* and graphical user interface.

Acronym	Definition
BIOS	Basic Input Output System
CNA	Converged Network Adapter
DIMM	Dual Inline Memory Modules
FoD	Features on Demand
FTP	File Transfer Protocol
НВА	Host Bus Adapter
HTTP	Hypertext Transfer Protocol
iSCSI	Internet Small Computer System Interface
IPMI	Intelligent Platform Management Interface
IPMI SEL	Intelligent Platform Management Interface System Event Log
IMM	Integrated Management Module
KCS	Keyboard Controller StyleKeyboard
KMS	Key Management System
LED	Light Emitting Diode
MAC	Media Access Control
PCIE	Peripheral Component Interconnect Express
PXE	Preboot Execute Environment
uEFI	Unified Extensible Firmware Interface
UTF8	8-bit Unicode Transformation Format

Table 1. Acronyms

Table 1. Acronyms (continued)

Acronym	Definition
UXSP	UpdateXpress System Pack
VPD	Vital Product Data
WoL	Wake on LAN

Publications and related information

You can view the same content in the IBM ToolsCenter Suite topic collection in the IBM ToolsCenter for System $x^{\text{(B)}}$ and BladeCenter^(B) information center as a PDF document. To view a PDF file, you need Adobe Acrobat Reader, which can be downloaded for free from the Adobe website at www.adobe.com/products/acrobat/readstep.html.

Information centers and topic collections

• IBM ToolsCenter for System x and BladeCenter information center

http://publib.boulder.ibm.com/infocenter/toolsctr/v1r0/index.jsp

IBM ToolsCenter for System x and BladeCenter information center provides integrated information for multiple IBM Systems x and BladeCenter tools, including ToolsCenter Suite.

IBM ToolsCenter Suite

http://publib.boulder.ibm.com/infocenter/toolsctr/v1r0/topic/itsc/ itcs_main.html

The ToolsCenter Suite topic collection provides information about how to download and use ToolsCenter Suite to collect and diagnose system health, inventory and other information; configure the server frequently used settings and full settings; and update the server firmware and driver.

Publications

User's Guide

This publication provides information about how to download and use IBM ToolsCenter Suite to collect system information, configure firmware settings, and update firmware.

Readme

This publication provides downloading information, limitations, and workarounds for IBM ToolsCenter Suite.

Web resources

The following websites and information center topics relate to ToolsCenter Suite.

Websites

• IBM ToolsCenter for System x and BladeCenter

www.ibm.com/systems/support/supportsite.wss/docdisplay?lndocid=TOOL-CENTER&brandind=5000016

View this website to download tools that support IBM System x and IBM BladeCenter products.

• IBM ToolsCenter Suite

http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-TCSUITE

View this website to download the IBM ToolsCenter Suite tool and documentation.

• IBM PureSystems Redbooks[®]

http://www.redbooks.ibm.com/portals/puresystems/

View this website to find published Redbooks on IBM Flex Systems.

• Using IBM System x Features on Demand Redbook

http://www.redbooks.ibm.com/redbooks.nsf/RedpieceAbstracts/ redp4895.html?Open

View this website to download the *Using IBM System x Features on Demand* publication.

• IBM Flex Systems Information Center

http://www-947.ibm.com/support/entry/portal/ Overview?brandind=Hardware~Systems~System_x

View this IBM Flex System Information Center page for additional information on IBM Flex System x440 Compute Node Types 7917 and 2584.

• Support for IBM BladeCenter

www-304.ibm.com/systems/support/supportsite.wss/ brandmain?brandind=5000020

View this website to find information about online technical support, downloads and drivers, and RETAIN[®] tips, and to provide feedback about IBM BladeCenter products.

• Support for IBM System x

http://www-947.ibm.com/support/entry/portal/ Overview?brandind=Hardware~Systems~System_x

View this website to find information about online technical support, downloads and drivers, and RETAIN tips, and to provide feedback about IBM System x products.

• IBM ServerProven[®]

www.ibm.com/servers/eserver/serverproven/compat/us/

View this website to learn about hardware compatibility of IBM System x and IBM BladeCenter systems with IBM applications and middleware.

Forums

• IBM System x Forum

www.ibm.com/developerworks/forums/forum.jspa?forumID=740

View this website on ibm.com[®] to learn about various forums that are available to discuss technology-related and product-related issues pertaining to IBM System x hardware and software products. This website includes a link for obtaining the forum using a Rich Site Summary (RSS) feed.

IBM BladeCenter Forum

www.ibm.com/developerworks/forums/forum.jspa?forumID=819

View this website on ibm.com to learn about various forums that are available to discuss technology-related and product-related issues pertaining to IBM BladeCenter hardware and software products. This website includes a link for accessing the forum using a Rich Site Summary (RSS) feed.

How to send your comments

Your feedback is important in helping to provide the most accurate and highest quality information.

If you have any comments about this publication or any other IBM ToolsCenter for System x and BladeCenter publication:

- Go to the IBM ToolsCenter for System x and BladeCenter information center information center website at http://publib.boulder.ibm.com/infocenter/ toolsctr/v1r0/index.jsp. There you will find the feedback page where you can enter and submit comments.
- Complete one of the forms at the back of any IBM ToolsCenter for System x and BladeCenter publication and return it by mail, by fax, or by giving it to an IBM representative.

New in this release

New system support

None

New operating system support

The following operating systems are now supported by IBM ToolsCenter Suite 9.40:

- Red Hat Enterprise Linux 5 Update 9 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 9 Server with Xen (x86 & x64) Editions
- Red Hat Enterprise Linux 6 Update 4 Server (x86 & x64) Editions
- SUSE Linux Enterprise Server 11 (x86 & x64) SP3
- SUSE Linux Enterprise Server 11 with Xen (x86 & x64) SP3

For complete operating system support information, see "Supported operating systems" on page 4.

New server options support

None

Problem(s) fixed

The following problems have been fixed in IBM ToolsCenter Suite 9.40:

- On Windows OS and Internet Explorer v8, for Updates, the compare result grid title has a format error.
- In System Information, for the Light path and Detailed LEDs table, the click **Status** to sort command, the character is hidden.

Enhancement(s)

None

Known limitations

The following limitation is new for IBM ToolsCenter Suite 9.40:

Unzipping the downloaded ToolsCenter Suite package to the ToolsCenter Suite working directory causes the system to crash

Unzipping the downloaded ToolsCenter Suite package to the ToolsCenter Suite working directory causes the system to crash because the ToolsCenter Suite working directory name is too long. Unzip the downloaded ToolsCenter Suite package under the system root directory.

Workarounds

None

Warnings

None

Dependencies

None

Chapter 1. Technical overview

IBM ToolsCenter Suite is a collection of server management tools that help manage your IBM System x, IBM BladeCenter, and IBM Flex System environment.

The three main functions of ToolsCenter Suite are:

System Information:

The System Information function collects full system information, catalogs this information, and enables you to send the collected information to an IBM support team or customer site FTP server. This function also provides system health status, including the IPMI SEL log and Light Path information.

ToolsCenter Suite collects full system information about the following aspects of a system:

- Hardware
- Software (including Operating Systems)
- Logs
- Basic analysis and highlights

Configuration:

The Configuration function allows you to modify firmware settings. You can change frequently used settings or change an individual configuration in full settings.

Frequently Used Settings:

- Boot Order
- IMM User Accounts
- Activation Key Management (For Features on Demand)
- System Contact
- Energy and Performance

Full settings:

- SYSTEM_PROD_DATA
- IMM
- iSCSI
- uEFI
- Network
- BootOrder
- PXE

Update:

The Update function allows you to update the UpdateXpress System Pack firmware and driver and individual firmware and drivers by connecting to the IBM website or a local repository. There are three methods for updating:

- Recommended Updates
- Individual Updates
- Download Updates

Prerequisites

ToolsCenter Suite requires the following prerequisites.

- You must have administrator or root-equivalent operating-system privileges to use ToolsCenter Suite.
- An Internet connection is required to download updates from the IBM website, or to send the collected system information file to the IBM website or the customer site FTP server.
- A browser supported by ToolsCenter Suite. For a complete list of supported browsers, refer to the Support web browsers topic of the *IBM ToolsCenter Suite User's Guide*.
- To ensure ToolsCenter Suite works correctly, verify that Java script and CSS are enabled in your browser settings.
- If you want to run ToolsCenter Suite on Windows Server 2003, you need to install the IPMI KCS driver, otherwise critical information such as LED status and events are missing and many functions do not work.

Chapter 2. ToolsCenter Suite Support List

Before you begin using ToolsCenter Suite, review the hardware, software, and operating system support sections.

Hardware and software support lists

ToolsCenter Suite has specific hardware, operating system, and browser support lists. If you attempt to run ToolsCenter Suite on a server, browser, or operating system that is not on the list, this will be at your own risk with no functional guarantee.

Supported hardware

IBM ToolsCenter Suite supports the IBM systems listed in Table 1.

Server	Machine type
IBM BladeCenter HS22	7870, 1936, 7809, 1911
IBM BladeCenter HS22V	7871, 1949
IBM BladeCenter HS23	7875, 1929
IBM BladeCenter HS23E	8038, 8039
IBM BladeCenter HX5	1909, 1910, 7872, 7873
Flex System x220 Compute Node	7906, 2585
Flex System x240 Compute Node	8737, 8738, 7863
Flex System x440 Compute Node	7917
System x iDataPlex [®] Direct Water Cooled dx360 M4 server	7918, 7919
IBM System x iDataPlex dx360 M2 server	7321, 6380, 7323
IBM System x iDataPlex dx360 M3	6391
IBM System x iDataPlex dx360 M4	7912, 7913
IBM System x3100 M4	2582
IBM System x3200 M3	7327, 7328
IBM System x3250 M3	4251, 4252, 4261
IBM System x3250 M4	2583
IBM System x3300 M4	7382
IBM System x3400 M2	7836, 7837
IBM System x3400 M3	7378, 7379
IBM System x3500 M2	7839
IBM System x3500 M3	7380
IBM System x3500 M4	7383
IBM System x3530 M4	7160
IBM System x3550 M2	7946, 4198
IBM System x3550 M3	7944, 4254

Table 2. Supported IBM systems

Table 2. Supported IBM systems (continued)

Server	Machine type
IBM System x3550 M4	7914
IBM System x3620 M3	7376
IBM System x3630 M3	7377
IBM System x3630 M4	7158
IBM System x3650 M2	7947, 4199
IBM System x3650 M3	7945, 4255, 5454
IBM System x3650 M4	7915
IBM System x3690 X5	7147, 7192
IBM System x3690 X5	7148, 7149
IBM System x3750 M4	8722, 8733
IBM System x3850 X5 and x3950 X5	7143, 7191
IBM System x3850 X5 and x3950 X5	7145, 7146

Supported software

This topic describes the supported software and web browsers for ToolsCenter Suite.

Supported web browsers

To view the information that is collected by ToolsCenter Suite, you must use one of these web browsers.

- Firefox 3.6 or later
- Google Chrome 19.0 or later
- Internet Explorer 8.0 Service Pack 1 or later

ToolsCenter Suite uses the OS default browser. If you want to use a specific browser, using the browser configuration, configure it as the default browser.

Supported operating systems

Use the information in this section to identify operating systems that are supported by ToolsCenter Suite:

Windows

ToolsCenter Suite supports the following Windows operating systems.

Windows Server 2012 Edition

Microsoft Windows Server 2012

Windows Server 2011 Editions

- Microsoft Windows Small Business Server 2011
- Microsoft Windows Small Business Server 2011 Essentials

Windows Server 2008 Editions

- Microsoft Windows Server 2008 R2
- Microsoft Windows Server 2008 R2 SP1
- Microsoft Windows Server 2008 R2 HPC Edition (x64, Reseller Option Kit)
- Microsoft Windows Server 2008, Datacenter Edition (x86, x64)

- Microsoft Windows Server 2008, Enterprise Edition (x86, x64)
- Microsoft Windows Server 2008 Foundation
- Microsoft Windows Server 2008 HPC Edition
- Microsoft Windows Server 2008, Standard Edition (x86, x64)
- Microsoft Windows Server 2008, Web Edition (x86, x64)
- Windows Essential Business Server 2008 Premium Edition
- Windows Essential Business Server 2008 Standard Edition

Windows Server 2003 Editions

- Microsoft Windows Server 2003/2003 R2, Datacenter Edition (x86, x64)
- Microsoft Windows Server 2003/2003 R2, Enterprise Edition (x86, x64)
- Microsoft Windows Server 2003/2003 R2, Enterprise Edition with Microsoft Cluster Service (MSCS) (x86, x64)
- MicrosoftWindows Server 2003, Enterprise Edition with Microsoft Cluster Service (MSCS) (x86, x64)
- Microsoft Windows Server 2003/2003 R2, Standard Edition (x86, x64)
- Microsoft Windows Server 2003 Web Edition

Linux

ToolsCenter Suite supports the following Linux operating systems.

Red Hat

- Red Hat Enterprise Linux 6 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 6 Update 1 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 6 Update 2 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 6 Update 3 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 6 Update 4 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Server (x86 & x64) Editions, (up to U6)
- Red Hat Enterprise Linux 5 Server with Xen (x86 & x64) Editions, (up to U6)
- Red Hat Enterprise Linux 5 Update 7 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 7 Server with Xen (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 8 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 8 Server with Xen (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 9 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 9 Server with Xen (x86 & x64) Editions

SUSE

- SUSE Linux Enterprise Server 11 (x86 & x64) (up to SP1)
- SUSE Linux Enterprise Server 11 with Xen (x86 & x64) (up to SP1)
- SUSE Linux Enterprise Server 11 (x86 & x64) SP2
- SUSE Linux Enterprise Server 11 with Xen (x86 & x64) SP2
- SUSE Linux Enterprise Server 11 (x86 & x64) SP3
- SUSE Linux Enterprise Server 11 with Xen (x86 & x64) SP3
- SUSE Linux Enterprise Real Time 10 AMD64/EM64T
- SUSE Linux Enterprise Server 10 (x86 & x64) (up to SP4)
- SUSE Linux Enterprise Server 10 with Xen (x86 & x64) (up to SP4)

Chapter 3. Downloading IBM ToolsCenter Suite

This section provides information about downloading ToolsCenter Suite.

Instructions for downloading IBM ToolsCenter Suite

ToolsCenter Suite is a self-extracting application that does not need to be installed.

About this task

You can download ToolsCenter Suite from the IBM ToolsCenter Suite website at http://www.ibm.com/support/entry/portal/docdisplay?lndocid=TOOL-TCSUITE .

Procedure

- 1. Select one of the following shipment packages:
 - ibm_utl_tcsuite_9.40_winsrvr_i386.zip
 - ibm_utl_tcsuite_9.40_winsrvr_x86-64.zip
 - ibm_utl_tcsuite_9.40_rhel5_i386.tgz
 - ibm_utl_tcsuite_9.40_rhel5_x86-64.tgz
 - ibm_utl_tcsuite_9.40_rhel6_i386.tgz
 - ibm_utl_tcsuite_9.40_rhel6_x86-64.tgz
 - ibm_utl_tcsuite_9.40_sles10_i386.tgz
 - ibm_utl_tcsuite_9.40_sles10_x86-64.tgz
 - ibm_utl_tcsuite_9.40_sles11_i386.tgz
 - ibm_utl_tcsuite_9.40_sles11_x86-64.tgz
- **2**. After downloading the appropriate ToolsCenter Suite zip file, extract the downloaded file.

Chapter 4. Using IBM ToolsCenter Suite

This section provides information about using IBM ToolsCenter Suite.

Starting IBM ToolsCenter Suite

After you have downloaded and copied the appropriate ToolsCenter Suite zip file for the target server and extracted the files, you can start the IBM ToolsCenter Suite program. ToolsCenter Suite must be run on the target server.

About this task

For Windows, perform step 1, and for Linux, perform step 2.

Note: ToolsCenter Suite does not support running concurrent sessions of ToolsCenter Suite. For more information, refer to the Known Limitations topic.

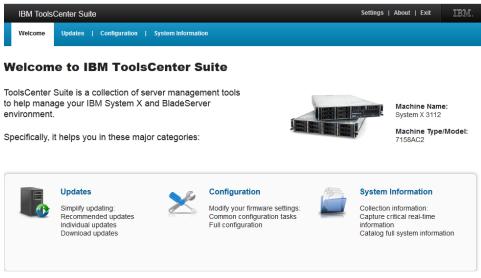
Procedure

 For Windows, double click run.bat. The ToolsCenter Suite script file launches the Tomcat server and starts the default browser using http://localhost:8483/ tcsuite.html. The ToolsCenter Suite License Agreement page is displayed.

icense	IBM Notice	Non-IBM Licenses	Upgrades and downlo	ad terms	E	nglish
Interna	ational Li	cense Agreen	nent for Non-Wai	rranted Prog	ams	
Part 1	- General	Terms				
			LLING, COPYIN			
			HERWISE USING 7 THIS AGREEM			
			F OF LICENSEE.			
			HORITY TO BIN			
YOU D	O NOT A	GREE TO TH	IESE TERMS,			
		NLOAD, INS SE THE PRO	TALL, COPY, AC GRAM: AND	CESS, CLICE	C ON AN "AC	CEPT"
			,			
			UNUSED MEDI			
			S OBTAINED FO AS DOWNLOADE			
PROGI			15 DOWINLOADI	D, DESTROI	ALL COLLS	, OI IIIL
the lic	ense agree	ement carefully	and click I Accept t	o continue.		

Figure 1. License Agreement

 For Linux, double click run.sh. The ToolsCenter Suite script file launches the Tomcat server and starts the default browser pointing to http:// localhost:8483/tcsuite.html. The ToolsCenter Suite License Agreement page is displayed as shown above. **3**. Read the license agreement and click **I accept**. The IBM ToolsCenter Suite Welcome page is displayed.



Advanced user complete tool listing (command line enabled)

Figure 2. Welcome page

The Welcome page displays your Machine Name and Machine Type/Model and provides access to the IBM ToolsCenter Suite functions and menu items.

4. Click **Advanced user complete tool listing** to view a list of Command Line Tools and Deployment Tools.

leicom	e to ll	BM ToolsCenter Suite		
oolsCenter s help mana nvironment.	ge your	Advanced User Complete Tool Listing	9	achine Name:
pecifically, if	t helps y	Command Line Tools Scriptable tool for configuration Advanced Settings Utility 	Deployment Tools Create custom bootable firmware media Bootable Media Creator 	achine Type/Model 58AC2
	Update Simplify Recomr Individua	 Scriptable tool for update UpdateXpress System Packs Installer Scriptable tool for inventory/diagnostic Dynamic System Analysis 	Customize operating system installation ServerGuide Scripting Toolkit Install windows operating system ServerGuide	ormation ormation: al real-time

Figure 3. Advanced User Complete Tool Listing

This page provides links to IBM support pages for each of these tools.

The IBM ToolsCenter Suite Menu

This section provides an overview of the IBM ToolsCenter Suite Menu.

Menu items

The ToolsCenter Suite graphical user interface has the following menu options:

- Settings: Use Settings to configure the internet connection setting and miscellaneous settings, consisting of exit options and timeout settings. For more information, see "Internet Connection settings" and "Miscellaneous settings" on page 12
- **About**: About provides the ToolsCenter Suite version, the IBM ToolsCenter Suite website link, and the License and Agreement link.
- Exit: Closes the ToolsCenter Suite program. There are two options for exiting the application. For more information, see "Exit options" on page 13.

Internet Connection settings

This topic describes how to view and configure your internet connection. The proxy settings can be used for the **Send to IBM** and **Send to FTP** options of the System Information function, and for the "update" via proxy. The proxy should be an HTTP proxy. IBM ToolsCenter Suite uses the **HTTP/1.1 CONNECT** method with UTF-8 encoding and passive ftp mode to connect with HTTP proxy.

Procedure

- 1. Click the **Settings** menu option located in the top right section of the IBM ToolsCenter Suite screen. The Settings dialog box is displayed.
- 2. Click the Internet Connection tab.
- 3. Click to select one of following internet access options:
 - a. The management server can access the internet without a proxy setting: The IP address or host name, Port, Username, and Password fields will be greyed out.
 - b. **The management server will require a proxy server to access the internet**: For this option, complete the following steps:
 - 1) Enter the IP address or host name.
 - 2) Enter the **Port**. The default port is 21.
 - **3)** Click **Require authentication**. This enables the authentication fields. Enter the following information:
 - Enter the Username.
 - Enter the **Password**.
- 4. Click **Test Internet Connection**. This operation will verify that the internet connection is working.

IBM ToolsCenter Suite		Setting	s About Exit	
Welcome Updates C	Settings			
Welcome to IBN	Internet Connection Miscellaneous Configure your Internet connection method.			
ToolsCenter Suite is a coll to help manage your IBM environment.	The management server can access the Internet without a proxy server. The management server requires a proxy server to access the Internet. IP address or host name: Port:		Machine Nam System X 3112	
Specifically, it helps you ir	9.119.41.10 8080		Machine Type 7158AC2	/Model:
Updates	Username: s _w resting the connection, please wait ibmer Password:		n Information	
Simplify updat Recommender Individual upda Download upd	Test Internet Connection		on information: e critical real-time tion) full system informa	ation
Advanced user complete tool	ОК	Cancel		

Figure 4. Menu Settings - Internet Connection Test

5. Click **OK** to save and exit Settings or **Cancel**.

Miscellaneous settings

This topic describes how to view and change the Exit options and Timeout settings.

Procedure

- 1. Click the **Settings** menu option located in the top right section of the IBM ToolsCenter Suite screen.
- 2. Click the **Miscellaneous** tab. On this tab, the Exit options and the Timeout settings are displayed. You can choose to use the default settings or change them. For more information, see "Exit options" on page 13 and "Timeout settings" on page 13.

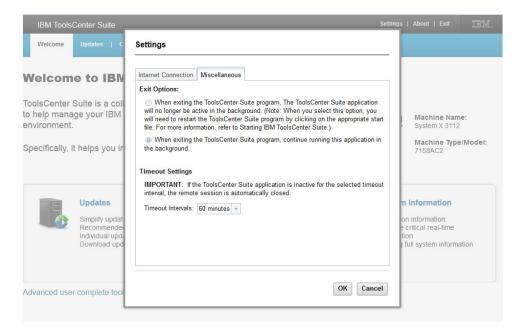


Figure 5. Menu Settings - Miscellaneous settings

3. When you have finished making changes to these settings, click **OK** to save and exit Settings or **Cancel**.

Exit options: About this task

There are two exit options for IBM ToolsCenter Suite. By default, the second option is selected.

- 1. Click to select one of the following two exit options:
 - When exiting the ToolsCenter Suite program, continue running the application in background.
 - When exiting the ToolsCenter Suite program, the ToolsCenter Suite application will no longer be active in the background.

Note: When you select this option, you will need to restart the ToolsCenter Suite program by clicking on the appropriate start file. For more information, refer to "Starting IBM ToolsCenter Suite" on page 9.

2. Click **OK** to save the exit option change or **Cancel**.

Timeout settings: About this task

There are several timeout options for IBM ToolsCenter Suite. The default timeout setting is 60 minutes.

- 1. Click to select one of the following timeout interval options from the drop-down menu:
 - no timeout
 - 10 minutes
 - 20 minutes
 - 40 minutes
 - 60 minutes

- 90 minutes
- 120 minutes
- 2. Click **OK** to save the timeout settings change or **Cancel**.

Important: If the ToolsCenter Suite application is inactive for the selected timeout interval, the running session is automatically closed.

Using the Updates function

You can update firmware, device drivers, and add support for new systems using the Updates function. This section describes how to check the compliance of firmware and drivers, and how to download and install the updates.

Procedure

1. On the Welcome page or from the ToolsCenter Suite menu, click to select **Updates**.

The Firmware and Driver Updates page is displayed.

IBM ToolsC	enter Suit	Э		Settings About Exit	IBM.
Welcome	Updates	Configuration	System Information		
Firmware	and Driv	ver Updates			
Check the com	pliance of cu	rrent firmware and	driver, and update accordingly.		
	Recom	mended Updat	es		
(Check firmwa	are and driver level	and apply the UXSP updates. 🥥		
	Indiv	vidual Updates			
,	Apply individu	al firmware and dr	iver updates. 🥥		
	Dow	nload Updates			
ſ	Download U>	(SP or individual up	odate package from IBM website.		

Figure 6. Firmware and Driver Updates page

Note: If you hover the mouse over the question mark, additional information for that update is displayed.

- 2. Click to select one of the update options:
 - **Recommended Updates**: Check firmware and driver levels of the latest UpdateXpress System Pack and compare them with the local machine installed firmware and driver levels, from the IBM website or in a local directory. You can selectively download and apply firmware and driver updates from the IBM website or selectively apply firmware and driver updates from a local directory.
 - **Individual Updates**: Check firmware and driver levels and compare the currently installed firmware and drivers to individual updates on the IBM website or in a local directory. You can selectively download and apply firmware and driver updates from the IBM website or selectively apply firmware and driver updates from a local directory.

• **Download Updates**: Download UpdateXpress System Pack or an individual update package for a specific machine type and operating system. Updates are downloaded to the specified directory and can be applied at any time.

Tip: You can download Updates that can be applied when a lab machine A needs to update the firmware or driver, but does not have internet access. You can use a lab machine B with internet access, to download the update packages for lab machine A. Use one of the following two methods; the first method is easier and recommended.

- a. Copy the entire ToolsCenter Suite working directory on lab machine B to lab machine A. Launch ToolsCenter Suite in lab machine A. The updates can be done from the local directory.
- b. If lab machine A has ToolsCenter Suite software, copy the downloaded update packages under the ToolsCenter Suite working directory on lab machine B to ToolsCenter Suite working directory on lab machine A. Launch ToolsCenter Suite in lab machine A. The updates can be done from the local directory.

Recommended Updates

This option checks the firmware and driver levels and applies the package of updates. This option is the preferred method for obtaining firmware and driver updates for the server. The UpdateXpress System Pack consists of an integration-tested software bundle of updatable firmware and device driver updates for each IBM System x and IBM BladeCenter server.

Procedure

- 1. Click **Recommended Updates** on the Firmware and Drive Updates page. The Check Current Firmware and Levels dialog box is displayed.
- 2. Select one of the following Recommended Updates options.

Using the latest UXSP updates package from the IBM website

Use this option to download and apply UpdateXpress System Pack updates from the IBM website.

Procedure

1. Click **Recommended Updates** on the Firmware and Driver Updates page. The Check Current Firmware and Driver Levels dialog box is displayed.

Co	mpare the current	nstalled firmv	vare and dri	iver to:		
) The latest UXS	P updates pa	ickage from	the IBM we	bsite	
) The latest UXS	P updates pa	ickage in lo	cal directory	0	
			lenage in to	car an ectory		
					ОК	Cancel

Figure 7. Check current firmware and driver levels from IBM site

2. Click **The latest UXSP updates package from the IBM website** and **OK** to proceed or **Cancel** to exit this operation. The current machine's UXSP firmware and driver levels are acquired from the IBM website.

IBM Tools	Center Suite	9	Settings About Exit	IBM.			
Welcome	Updates	Configuration System Information					
Firmware and Driver Updates							
Check the co	mpliance of cu	rrent firmware and driver, and update accordingly.					
		Center Suite acquires your firmware and driver levels. Cancel , ToolsCenter Suite will help you download and apply the firmware and driver updates.					

Figure 8. Acquire current machine's UXSP firmware and driver levels

During the acquire operation, the progress icon is displayed and the Updates page is locked, **Cancel** is enabled, and the following message is displayed: Please wait while ToolsCenter Suite acquires your firmware and driver levels. After the acquire operation completes, the checking compliance operation begins.

IBM ToolsCenter Suite					Settings	About Exit	IBM.		
Welcome	Updates	Configuration	System Infor	mation					
Firmwar	e and Driv	ver Updates							
Check the compliance of current firmware and driver, and update accordingly.									
🎇 Please w	ait while Tools	Center Suite check	s your firmware	and driver levels.		Cancel			

Figure 9. Check current machine's UXSP firmware and driver levels

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message is displayed: Please wait while ToolsCenter Suite checks your firmware and driver levels.

Note: If you are not connected to the Internet, the Configure Internet Connection dialog box is displayed. Check your configuration or try again, otherwise, click **Ok** to continue or **Cancel**. For more information, see "Internet Connection settings" on page 11.

When compliance checking is complete, the number of items with new versions is displayed in the firmware and driver updates table.

irm	ware and Driver Updates					
neck	the compliance of current firmware and driver, a	nd update accordin	ngly.		Back to updates m	ain page
Cor	npliance checking completes.					
	nue Update					
5 ite	ems have new versions. Click Continue Update	e to update these it	tems.			
	Name	Severity	New Version	Installed Version	Reboot Required	
	: ibm_fw_uefi_mle175b- 1.75_windows_32-64	Critical	1.75 (MLE175B)	1.00 (MLE103W)	Yes	
	ibm_fw_dsa_dsyta1n-9.21_windows_32-64	Suggested	9.21 (DSYTA1N)	4.00 (DSYT91N)	Yes	
	brcm_fw_nic_2.1.8d_windows_32-64	Suggested			Yes	
	i b9x1 (#1)		6.2.0	5.2.2		
0 H	BA/CNA and any non-IBM updates require the s	System Administra	tor to verify that the update	e(s) are compatible befor	re applying them.	
	Name	Severity	New Version	Installed Version	Reboot Required	
	2					

Figure 10. Recommended Updates UXSP firmware and driver updates table

All updates listed in the table are checked and preselected for updating. By default, each update is checked and can be deselected. The table provides the following information for each update listed in the table:

- Name: update name
- Severity: suggested, critical, or not required
- New Version: new version identifier
- · Installed Version: current version identifier or undetected
- Reboot Required: Yes rebooting is necessary for the update or No rebooting is not necessary for the update

The HBA/CNA updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Suggested, Critical, or Not Required
- New Version: new version identifier
- · Installed Version: current version identifier or undetected
- Reboot Required: Yes rebooting is necessary for the update or No rebooting is not necessary for the update
- **3**. Click **Continue Update** to download the UXSP updates from the IBM website and apply the downloaded firmware and driver, or click **Cancel** to return to the updates primary page. During the download operation, the status is Not Started, Downloading, or Downloaded. The item being downloaded displays a progress bar, indicating its total bytes, downloaded bytes, and downloaded percentage. Another progress bar displays the overall progress of all download items. Click **Stop** to stop the current downloading item.

IBM ToolsCenter Suite		Settings About Exit	IBM.
Welcome Updates Configuration System Information			
Firmware and Driver Updates			
Check the compliance of current firmware and driver, and update accordingly.			
Ca	ncel		
Items	Status		
ibm_fw_sraidmr_m1000-20.10.1-0101_windows_32-64	in progress		

Figure 11. Recommended Updates UXSP downloading from the IBM website

When the download operation completes, the update operation begins. The following message is displayed:

Updating is in progress. x of y items have been updated. Do not close your browser while the update is in progress. During the update operation, a progress icon is displayed When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

4. Click **Back to updates primary page** to return to updates primary page.

Using UXSP updates package in local directory

Use this option if you have UXSP or individual updates in a local directory and want to apply them.

Procedure

- 1. Click Recommended Updates on the Firmware and Driver Updates page.
- 2. Click A UXSP updates package in a local directory and OK to proceed or Cancel to quit this operation.

Important: If you hover the mouse over the question mark, the following message is displayed:

If you already have local uxsp (or individual) updates, copy them to folder %ToolsCenterSuite%\apache-tomcat-7.0.26\webapps \tcsuite\WEB-INF\depot\Update\%MachineType%\ %OperatingSystem%\uxsp (or individual) manually. Where %ToolsCenterSuite% is ToolsCenter Suite's working directory.

%MachineType% is the four-digit machine type of the server and represents the machine type selected; %OperatingSystem% is the server operating system. For example, it could be %ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\depot\Update\1936\windows\uxsp.

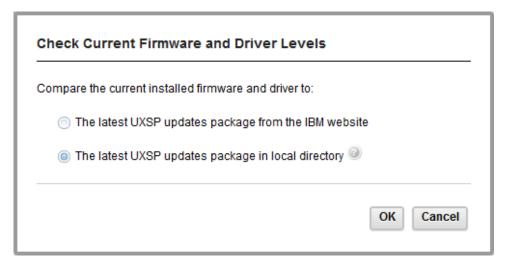


Figure 12. Check current firmware and driver levels using latest UXSP updates package in local directory

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message is displayed:

Please wait while ToolsCenter Suite checks your firmware and driver levels.

When the operation is complete, a table containing firmware and drive updates is displayed. By default, each update is checked and can be deselected.

The firmware and driver updates table provides the following information for each update listed in the table:

• Name: update name

- Severity: Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or undetected
- Reboot Required: Yes rebooting is necessary for the update or No rebooting is not necessary for the update

The HBA/CNA updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Suggested, Critical, or Not Required
- · New Version: new version identifier
- · Installed Version: current version identifier or undetected
- Reboot Required: Yes rebooting is necessary for the update or No rebooting is not necessary for the update
- **3.** Click **Continue Update** to install the UXSP from a local directory, or click **Cancel** to return to updates primary page.

During the update operation, a progress icon is displayed.

Updating is in progress. x of y items have been updated. Do not close your browser while the update is in progress.

The status for each update is displayed as: Pending, Updating, Updated, or Failed.

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

4. Click Back to updates primary page to return to the updates primary page.

Individual Updates

Use this option to get the latest version of each firmware and device driver package. This method can be used if you want to install individual updates or when IBM support instructs you to install individual updates. The Individual Updates option may download newer updates and hotfixes, if available, than the UpdateXpress System Pack/Recommended Updates option. You can check and compare the currently installed firmware and driver to individual updates from the IBM website or install individual updates from a local directory.

Procedure

- 1. Click **Individual Updates** on the Firmware and Driver Updates page. The Check Current Firmware and Driver Levels dialog box is displayed.
- 2. Select one of the following Individual Updates options.

Using Individual updates from the IBM website

Use this option to download and apply individual firmware and driver updates from the IBM website.

Procedure

1. Click **Individual Updates** on the Firmware and Driver Updates page. The Check Current Firmware and Driver Levels dialog box is displayed.

Check Current Firmware and Driver Levels	
Compare the current installed firmware and driver to:	
Individual updates from the IBM website	
Individual updates in a local directory	
	OK Cancel

Figure 13. Individual updates check of current firmware and driver levels from IBM website

2. Click **Individual updates from the IBM website** and **OK** to proceed or **Cancel** to quit this operation.

The current machine's individual firmware and driver levels are acquired from the IBM website. During the acquire operation, **Cancel** is enabled, and the following message is displayed:

Please wait while ToolsCenter Suite acquires your firmware and driver levels.

After the acquire operation completes, the checking compliance operation begins. While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message is displayed:

Please wait while ToolsCenter Suite checks your firmware and driver levels.

When compliance checking is complete, the number of items with new versions is displayed above the firmware and driver updates table.

ЗМ Т	FoolsCenter Suite				Settings About Exit	IBN
/elcor	me Updates Configuration Sys	tem Information				
heck f	ware and Driver Updates the compliance of current firmware and driver, a mpliance checking completes. nue Update mpliance checking completes.3 items have ne		ıly.		Back to updates m	ain page
	Name	Severity	New Version	Installed Version	Reboot Required	
	ibm_dd_mpt2sas_10.30.00.00_sles11_32- 64	Suggested			Yes	
	i mpt2sas.ko		10.30.00.00	09.100.00.00		
	ibm_dd_sraidmr_00.00.06.15.01_sles11_3 2-64	Suggested			Yes	
	megaraid_sas.ko		00.00.06.15	00.00.05.38-rc1		
	ibm_fw_sraidmr_m1000-20.10.1-0101_linu x_32-64	Suggested			Yes	
	i ServeRAID M1115 SAS/SATA Controller Firmware		20.10.1-0101	20.10.1-0091		
	brcm_dd_nic_nx2-2.1.12c- 1.70.40_sles11_32-64	Not Required			Yes	
	bnx2.ko (stopped)		2 1 120	2111		

Figure 14. Individual Updates firmware and driver updates table

The table provides the following information for each update listed in the table:

- Name: update name
- Severity: Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or undetected
- Reboot Required: Yes rebooting is necessary for the update or No rebooting is not necessary for the update
- **3**. Click to select an update in the left column and click **Continue Update** to continue the updates process and download the updates or click **Cancel** to return to updates primary page.

During the download operation, a progress bar is displayed to show the progress of the current downloading item, indicating its total bytes, downloaded bytes, and downloaded percentage. Another progress bar displays the overall progress of all download items. The updates listed in the table display status as Not Started, Downloading, and Downloaded. Click **Stop** to stop the current downloading item.

Check the compliance of current firmware and driver, and update acc	ordinaly		
Downloading [brcm_dd_nic_tg3-3.1220_rhel6_32-64] : 4144 of	4969 KB		
Overall process : 2 of 6 downloads : 21757 of 415706 KB			
5%		Stop	
ibm_fw_uefi_bee120c-1.20_anyos_32-64 mlnx_fw_nic_1.5.3-3.1.0_rhel6_x86-64	Downloaded	%)	
ibm_fw_sraidmr_m1000-20.10.1-0101_linux_32-64	Downloaded		
ibm_fw_imm2_1aoo32s-1.75_anyos_noarch	Downloading (5	%)	
brcm_dd_nic_nx2-2.2.1j-1.72.18_rhel6_32-64	💥 Downloading (11	96)	
	Downloading (8	3 96 1	
brcm_dd_nic_tg3-3.1220_rhel6_32-64	200	5 76 7	
	200		

Figure 15. Individual updates downloading from the IBM website

When all of the firmware and drivers have been downloaded, the update begins.

During the update operation, a progress icon is displayed.

Updating is in progress.

x of y items have been updated. Do not close your browser while the update is in progress.

The status for each update is displayed.

come Updates Configuration mware and Driver Updates ck the compliance of current firmware an is selected ifems have been undated 1 se			Back to updates main page
- ck the compliance of current firmware an			A Back to undates main name
- ck the compliance of current firmware an			Back to undates main name
	d driver, and update accordingly.		Back to undates main nage
selected items have been undated 1 se			
	ected items update failed. Finished at 12:58	27	
ms	Status		
n_dd_sraidmr_00.00.06.15_rhel6_32-64	🔕 Fail	ed	
n_fw_sraidmr_m1000-20.10.1-0101_linu	x_32-64 🔽 Upd	lated	
n_fw_tape_dds-1.1_linux_32-64	🔽 Upd	lated	
n_fw_tape_lto-1.4_linux_32-64	🔽 Upd	lated	
n_fw_tape_rd-1.2_linux_32-64	🔽 Upd	lated	

Figure 16. Individual updates updating from the IBM website progress

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

4. Click **Back to updates primary page** to return to updates primary page.

Using individual updates in a local directory

Use this option if you already have updates (UXSP or individual) in a local directory and want to apply them.

Procedure

 Click Individual Updates on the Firmware and Driver Updates page. The Check Current Firmware and Driver Levels dialog box is displayed.

Check Current Firmware and Driver Levels	
Compare the current installed firmware and driver to:	
Individual updates from the IBM website	
Individual updates in a local directory	
	OK Cancel

Figure 17. Individual updates in a local directory option

2. Click **Individual updates in a local directory** and **OK** to proceed or **Cancel** to quit this operation.

Important: If you hover the mouse over the question mark, the following message is displayed:

If you already have local uxsp (or individual updates), copy them to folder %ToolsCenterSuite%\apache-tomcat-7.0.26\webapps \tcsuite\WEB-INF\depot\Update\%MachineType%\ %OperatingSystem%\uxsp (or individual) manually. Where %ToolsCenterSuite% is ToolsCenter Suite's working directory.

%MachineType% is the four-digit machine type of the server and represents the machine type selected; %OperatingSystem% is the server operating system. For example, it could be %ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\depot\Update\1936\windows\individual.

While compliance check is being performed the Updates page is locked, the **Cancel** button is disabled, and the following message is displayed:

Please wait while ToolsCenter Suite checks your firmware and driver levels.

When compliance checking is complete, the number of items with new versions is displayed above the firmware and driver updates table. The table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- · Installed Version: current version identifier or undetected
- Reboot Required: Yes rebooting is necessary for the update or No rebooting is not necessary for the update
- **3**. Click to select an update in the left column and click **Continue Update** to continue the updates process or click **Back to updates main page** to not proceed with applying updates.

During the update operation, a progress icon is displayed. Under the update icon the status for each update is displayed as: Pending, Updating, Updated, or Failed.

Do not close your browser while the update is in progress. Updating is in progress, x of y selected items have been updated.

When the update operation is complete, the number of items updated and when the update finished is displayed.

4. Click **Back to updates main page** or select one of the other IBM ToolsCenter Suite functions or menu options.

Using Download Updates

Use this option to download an UpdateXpress System Pack or an individual update package for a specific machine type and operating system. The updates are downloaded to the ToolsCenter Suite's working directory, where they are stored until you are ready to apply the updates, using the **Recommended updates in a local directory** option or the **Individual updates in a local directory** option.

Using the Configuration function

You can view and change one or multiple settings on your system using the Configuration function. This section describes how to display and configure individual and frequently used settings or perform a full configuration. Using the Configuration function, you can change the settings for IBM System x IMM-based and a uEFI-based server. IMM replaces the Remote Supervisor Adapter and baseboard management controller functions on IMM-based servers. uEFI replaces the basic input/output system (BIOS) and defines a standard interface among the operating system, platform firmware, and external devices.

Procedure

1. On the Welcome page or from the ToolsCenter Suite menu, click to select **Configuration**. The Configuration Overview page is displayed.

IBM ToolsCenter Suite			Settings About Exit	IBM.
Welcome Updates	Configuration	n System Information		
▼ Configuration	(Configuration Overview		
Machine Name: System X 3112 Machine Type/Model: 7158AC2	Ţ	The system configuration settings can be exported to and imported from an external fine to Factory Defaults v	le.	
▼ General	F	Frequently Used Settings		
Overview	E	Boot Order Red Hat Enterprise Linux > IMM User Accounts 3 Users created	Activation Key Management	
▼ Frequently Used Settings		UEFI Shell > USB Storage >	1 keys installed	
Boot Order IMM User Accounts Activation Key Management System Contact		System Contact Contact : d111 Location : d11		
Energy and Performance		Full Settings To view more configuration settings, in the left panel, click all configuration.		
▼ Full Settings				
All SYSTEM_PROD_DATA IMM				
ISCSI				
BootModes	-			

Figure 18. Configuration Overview

Click to select one of the configuration options on the Configuration Overview page.

The right pane contains the following sections:

- Frequently Used Settings
 - Boot Order
 - IMM User Account
 - Activation Key Management
 - System Contact
 - Energy and Performance
- Actions
 - Export
 - Import
 - Reset to Factory Defaults

• **Full Settings**: To view more configuration settings, click **Full Settings** > **All** You can also click to select one of the configuration options from the navigation menu:

- Frequently Used Settings
 - Boot Order

- IMM User Accounts
- Activation Key Management
- System Contact
- Energy and Performance
- **Full Settings**: The full settings displayed vary for different machine types. The following list provides all of the full settings:
 - All
 - System_PROD_DATA
 - IMM
 - iSCSI
 - uEFI
 - NetworkConnection: NetworkConnection is determined by machine type and installed hardware and software.
 - BootOrder
 - PXE

Frequently used settings

Use this option to view and change frequently used settings. On the Configuration Overview page, an abbreviated current status for each of these settings is displayed.

Procedure

On the Configuration Overview page or from the navigation menu, click to select one of the following frequently used settings:

- Boot Order
- IMM User Accounts
- Activation Key Management
- System Contact
- Energy and Performance

Boot Order

Use this option to view and change the Boot Order and Wake on LAN Boot Order sequences of the system devices. The boot order sequence is stored in the IMM and used by the server firmware during the startup process.

Procedure

1. Click **Boot Order**. The Configuration - Boot Order page is displayed.

IBM ToolsCenter Suite)	3		Se	ettings About Exit	IBM.
Welcome Updates	Configuration	System Information				
▼ Configuration	Co	nfiguration - Boot	Order			
Machine Name: System X 3112	Spe	cify the boot device order.				
Machine Type/Model: 7158AC2	A	Reset				
▼ General		ot Order WoL Boot Ord	der			
Overview		vailable devices: D/DVD Rom		Current Boot Order: Red Hat Enterprise Linux		
▼ Frequently Used Settings	F	XE Network ard Disk 2 SCSI		UEFI Shell USB Storage Diagnostics		
Boot Order		SCSI Critical		Hard Disk 0		
IMM User Accounts		egacy Only SBO	Add >	Hard Disk 4 Hard Disk 3	Move Up	
Activation Key Management	Ŭ	SB1		Hard Disk 1		
System Contact		SB8 SB10	< Remove	Embedded Hypervisor USB Port3 FRONT PANEL 2	Move Down	
Energy and Performance	U	SB11 SB12		USB Port5 Remote Media Tr SUSE Linux Enterprise Ser		
▼ Full Settings	N	n Board SCU IC1 IC2		USB9 USB2 Floppy Disk		
E All		IC3 IC4				
SYSTEM_PROD_DATA	D	SA dd Om SAS	+		+	
IMM						
ISCSI						
UEFI						
BootModes	-					

Figure 19. Configuration - Boot Order

- 2. Click to select the boot order tab that you want to view or make changes to:
 - Boot Order
 - WoL Boot Order

In the right pane, the Current Boot Order is listed on the right side and the Available devices is listed on the left side.

- **3**. To make changes to the Current Boot Order list, perform the following applicable steps:
 - a. To change only the current boot order sequence of the devices listed in the Current Boot Order list, click to select the device and click either the Move Up or Move Down or < Remove button.</p>
 - b. To add devices to the Current Boot Order list, click the device to be added from the Available devices list, and click **Add** >.
- 4. To cancel the action selected, click **Reset**.
- 5. Click Apply to save the new boot order sequence changes.

IMM User Account

Use this option to create, delete, or edit an IMM user account.

Procedure

1. Click **IMM UserAccount** on the Configuration Overview page. The Configuration - IMM User Accounts page is displayed.

IBM ToolsCenter Suite				Settings About Exit	IBM
Welcome Updates C	Configuration	n System Information			
Configuration	Â.	Configuration - IMM	User Accounts		
Machine Name: System X 3112	c	Click Create User to create a ne	ew IMM User Account. Select a User and the	n click to Edit User or Delete User.	
Machine Type/Model: 7158AC2	(Create User Delete Use	er Edit User		
		User Name	Access	Password Expiration	
General		O USERID	Supervisor	No Expiration	
Overview	E	test	Custom	No Expiration	
Overview		testt	Supervisor	No Expiration	
Boot Order IMM User Accounts Activation Key Management System Contact Energy and Performance					
▼ Full Settings					
Ali SYSTEM_PROD_DATA IMM ISCSI UEFI					

Figure 20. Configuration - IMM User Accounts

Existing IMM users are shown in the IMM User Account List. The list provides the following information for each user:

- User Name
- Access
- Password Expiration
- 2. To create a new user, click **Create User**. The Create User dialog box is displayed.
 - a. Enter the following user information and then click **OK** or click **Cancel** to exit the Create User dialog box.
 - User Name
 - Password
 - Confirm password

Note: The user name rules and password rules will be checked automatically after entering the information in each field, verifying whether it satisfies these rules.

When the new user has been created, it will be added to the IMM User Accounts List.

- **3**. To delete an existing user from the IMM User Account List, click the **User Name** and click **Delete User**. In the Delete IMM User dialog box, click **OK** to confirm the IMM User deletion or click **Cancel** to exit.
- 4. To edit an existing user, click to select the **User Name** and click **Edit User**. The Edit User dialog box is displayed. You can change the following IMM User options.
 - Click the User Credentials tab to change your User Name and Password.
 - Click the **Authority** tab to select one of the follow user access levels:

- Supervisor: Has no restrictions.
- Read-only: Has only read-only access, and cannot perform any save, modify, clear, or state affecting operations.
- Custom: User may or may not have any restrictions, depending on which custom authority level is assigned to the user.
- 5. When you have finished editing the user information, click **OK** or click **Cancel** to exit the Edit User dialog box.

Activation Key Management

Features on Demand provides the capability to activate a feature on a server or an option with a software key that is referred to as the Features on Demand activation key. Use this option to view the currently installed keys list and install keys from the IBM KMS website, export local installed keys, and delete installed key files. For more information about Features on Demand, see the Using IBM System x Features on Demand Redbook.

Procedure

1. Click Activation Key Management on the Configuration Overview page. The Configuration - Activation Key Management page is displayed.

IBM ToolsCenter Suite				Settings About Exit	IBM.
Welcome Updates	Configuration	System Information			
Configuration Machine Name:		onfiguration - Activation Key Managem		ort local key files.	
System X 3112 Machine Type/Model: 7158AC2	2	I Install Selected Keys from IBM KMS V	Website Install	from the Local Files	
▼ General		Feature Description	Constraints	Status	
Overview	=	IBM Integrated Management Module Advanced Upgrade		valid	
Frequently Used Settings					
Boot Order IMM User Accounts					
Activation Key Management					
System Contact Energy and Performance					
▼ Full Settings					
- All					
SYSTEM_PROD_DATA					
IMM					
iSCSI		For keys with status as "Not installed", you may go to IBM we	ebsite to purchase.		
10001					
UEFI					

Figure 21. Configuration - Activation Key Management

The installed feature activation keys are displayed in the current installed keys list. If there is a live internet connection, the available activation keys for the current system can be purchased from the IBM KMS website.

- **2.** You can click to select one of the following options or proceed to the next step.
 - Refresh

Note: When you click **Refresh**, the installed feature activation keys for the current system and the available activation keys for that system, which can be purchased from the IBM website, are displayed in the activation key list.

- Export
- Delete
- Install Selected Keys from IBM KMS Website
- Install from the Local Files
- **3**. Click **Export** to open the key file in a browser window. The Open Key File dialog box is displayed. Click **OK** to continue or **Cancel** to exit and return to the Activation Key Management page.
- 4. Click **Delete** to remove keys. The Confirm to remove keys dialog box is displayed. Click **OK** to remove the keys or click **Cancel** to keep them.
- 5. In the activation key list, select the key with the status displayed as "Not installed" and click **Install from IBM KMS Website**. The Install Activation Key from IBM KMS Website dialog box is displayed.
 - a. Enter the information in the Install Activation Key from IBM KMS Website dialog box:
 - IBM ID
 - Password
 - Details for each key
 - b. Click Install Now to install activation keys from the IBM KMS website.

If there is an IBM ID error or if the password is not recognized, the following error message dialog is shown:

The IBM ID or password is not recognized.

If there is an FOD ID error, the following error message dialog is displayed:

The Feature-On Demand IDs for the indicated license are not recognized. Note that an authorization code and Feature-On-Demand ID are required.

- 6. Click **Install from local files** to install one or more keys from local files. A File Upload dialog box is displayed.
- 7. Click to select the File Upload directory location and click Open.
- 8. Click to select the activation key files to upload to the server. The Activation Keys Installation dialog box opens. A progress bar provides the key installation percentage and a table lists the installed activation key information.
- 9. Click to select any local activation key from the list and click OK.
- **10**. Click **Refresh** at any time to refresh the current installed keys list and the available keys list.

System Contact

System Contact information is used to identify a system to operations and support personnel. Use this option to add or modify the system contact information.

Procedure

Click System Contact on the Configuration Overview page. The Configuration

 System Contact page is displayed.

IBM ToolsCenter Suite			Settings About Exit	IBM.
Welcome Updates	Configurat	on System Information		
▼ Configuration	Â	Configuration - System Contact		
Machine Name: System X 3112		Provide a description to identify this system to operations and support personnel.		
Machine Type/Model: 7158AC2		Apply Reset		
▼ General		Machine Name: @ System X 3112		
Overview	E	System descriptive name: 🥥 fasfasfd1111		
▼ Frequently Used Settings		Contact person: 🥥		
Boot Order		d111		
IMM User Accounts	1	Location(site, geographical coordinates): 🥥		
Activation Key Management		d11		
System Contact				
Energy and Performance				
▼ Full Settings				
I AII				
SYSTEM_PROD_DATA				
IMM				
iSCSI				
UEFI				
BootModes	-			

Figure 22. Configuration - System Contact

- **2**. Enter the following applicable information for the Machine Name that is displayed.
 - Machine name
 - System descriptive name
 - Contact person
 - Location (site, geographical coordinates, etc.)
- **3**. Click **Apply** to apply and save the new system contact information or click **Reset** to restore the original System Contact information.

Energy and Performance

Energy and Performance settings are determined by the machine type. Use the applicable option to change the values of the Energy and Performance settings. The performance and power tuning is based on a best estimation. Due circumstantial differences, the results may not be the same as the best estimation.

Energy and Performance settings for M4 machine types:

Use this procedure to change the values of the Energy and Performance settings for M4 machine types. M4 machines have four energy and performance options. The default state for M4 is Efficiency.

Procedure

1. Click **Energy and Performance** on the Configuration Overview page. The Configuration - Energy and Performance page is displayed.

IBM ToolsCenter Suite		Settings About Exit IBM.
Welcome Updates	Configuration	System Information
▼ Configuration	Ć Co	onfiguration - Energy and Performance
Machine Name: System X 3112	Sele	ect Energy and Performance settings to balance performance and power consumption.
Machine Type/Model: 7158AC2	A	pply Reset
▼ General		Efficiency -Favor Performance
Overview	E	"Efficiency -Favor Performance" mode optimizes performance/wait efficiency with a bias towards performance. This is the favored mode for Energy Star compliance.
▼ Frequently Used Settings		Maximum Performance "Maximum Performance" mode maximizes the absolute performance of the system with less emphasis on power conservation. Fan speed and heat output may increase in addition to power consumption.
Boot Order		
IMM User Accounts	0	Efficiency -Favor Power
Activation Key Management		"Efficiency -Favor Power" optimizes performance/watt efficiency with a bias towards power savings.
System Contact		Minimal Power
Energy and Performance		"Minimal Power" minimizes power consumption of the system while it is operating and when a power cap is not used.
▼ Full Settings		
E All		
SYSTEM_PROD_DATA		
IMM		
ISCSI		
UEFI		
BootModes	-	

Figure 23. Configuration - Energy and Performance

- 2. Click to select one of the following options for your system:
 - Efficiency Favor Performance: This mode optimizes performance/watt efficiency with a bias towards performance. This is the favored mode for Energy Star compliance.
 - **Maximum Performance**: This mode maximizes the absolute performance of the system with less emphasis on power conservation. Fan speed and heat output may increase in addition to power consumption.
 - Efficiency Favor Power: This mode optimizes performance/watt efficiency with a bias towards power savings. This setting is applicable for M4 machine types only.
 - **Minimal Power**: This mode minimizes power consumption of the system while it is operating and when a power cap is not used.
- **3**. Click **Apply** to apply and save the Energy and Performance setting change or click **Reset** to return to the previous Energy and Performance settings. If no changes are made to the selected options, the **Apply** and **Reset** buttons are not available.

Energy and Performance settings for pre-M4 machine types:

Use this procedure to change the values of the Energy and Performance settings for machine types older than M4. For these machines types, there are three energy and performance options.

Procedure

- 1. Click **Energy and Performance** on the Configuration Overview page. The Configuration Energy and Performance page is displayed.
- 2. Click to select one of the following options for your system:

- **Efficiency**: This mode optimizes performance/watt efficiency. This is the favored mode for Energy Star compliance.
- **Maximum Performance**: This mode maximizes the absolute performance of the system with less emphasis on power conservation. Fan speed and heat output may increase in addition to power consumption.
- **Minimal Power**: This mode minimizes power consumption of the system while it is operating and when a power cap is not set.
- **3**. Click **Apply** to apply and save the Energy and Performance setting change or click **Reset** to return to the previous Energy and Performance setting. If no changes are made to the selected options, the **Apply** and **Reset** buttons are not available.

Actions

The Actions section provides quick access to the export, import, and reset to factory defaults options.

About this task

Use the export, import and reset to factory defaults options described in this procedure as it applies to your specific situation.

- **Export**: Use to export the current machine settings before making a configuration changes or installing updates.
- **Import**: Use to restore or replicate configuration settings to machine after exporting the settings.
- **Reset to Factory Defaults**: Use to restore the machine settings before configuration changes or updates were applied.

Procedure

On the Configuration Overview page, click to select one of the following Actions:

• Export: The Opening saveall.out dialog box is displayed.

IBM ToolsCenter Suite	Э		Settings About Exit	ĪBM.
Welcome Updates	Configuration	System Information		
▼ Configuration	Co	nfiguration Overview		
Machine Name: System X 3112 Machine Type/Model:		ystem configuration settings can be exported to and imported from an external fi	ile.	
7158AC2 General	-	Opening saveall.out	1	
Overview	=	saveall.out which is a: 360 Chrome HTML Document (9.5 KB)	Activation Key Management 1 keys installed	
▼ Frequently Used Settings		from: http://9.125.90.65:8483 What should Firefox do with this file?		
Boot Order IMM User Accounts Activation Key Management System Contact		Qpen with Firefox Save File Do this automatically for files like this from now on.		
Energy and Performance	Fu			
▼ Full Settings	Τον	OK Cancel		
- All				
SYSTEM_PROD_DATA				
IMM				
iscsi				
UEFI				
BootModes	-			

Figure 24. Configuration - Export Action

Select one of the following options:

- Click **Open with** a browser selected from the drop-down menu.
- Click Save File and OK.
- Click **Do this automatically for files like this from now on** to save the export options created in this dialog box.
- Click **Cancel** to exit this operation.
- Import: The Import Configuration File dialog box is displayed.

Select the configuration f	file to import.		
Select Configuration I	File		

Figure 25. Configuration - Import Action

Select one of the following options:

- Click **Select a Configuration File** and browse to select the file from the File Upload dialog box or click **Cancel** to exit this operation.

If you have chosen to import the configuration file exported from the same server, the Confirm to Restore Configuration Settings dialog box is displayed.

ck OK to apply all of the settings for this machine, or click Cancel t	~	Are you sure you want to apply all the settings from the imported configuration file?
		Click OK to apply all of the settings for this machine, or click Cancel to the original configuration settings.
		the original configuration settings.

Figure 26. Configuration - Import Action - Restore Configuration Settings

- Click **OK** to apply all of the setting for this machine or click **Cancel** to keep the original configuration settings.
- If you have chosen to import the configuration file exported from another machine, the Confirm to Replicate Configuration Settings dialog box is displayed.

configuration settings.	< Cancel to keep the origina

Figure 27. Configuration - Import Action - Replicate Configuration Settings

Click **OK** to apply all of the setting for this machine or click **Cancel** to keep the original configuration settings.

- **Reset to Factory Defaults**: Using the drop-down menu, select one of the following reset options:
 - Reset All Settings to Factory Defaults
 - Reset to IMM Factory Defaults
 - Reset to uEFI Factory Defaults

Full Settings

Use the Full Settings option to view all of the system settings. This includes: SYSTEM_PROD_DATA, IMM, iSCI, uEFI NetworkConnection, BootOrder, and PXE. Full settings is not a fixed group of settings and varies depending on the machine type and model.

Procedure

1. Using the navigation menu, click **Full Settings** > **All**. The Configuration - All Configuration page is displayed. This page provides a table listing for all of the settings, their group name and the current value. If you hover the mouse over each entry in the table, a definition of the setting is displayed.

IBM ToolsCenter Suite				Settings About Exit	ÌΜ.
Welcome Updates	Configuration	System Information			
Configuration	<u> </u>	nfiguration - All Configuratio	on		
Machine Name: System X 3112		k a row to edit the setting.	511		
Machine Type/Model: 7158AC2	A	Reset to All Factory Defaults			
General					
Overview		Q			
Frequently Used Settings	Se	tting Name	Group Name	Value	
	SY	STEM_PROD_DATA.SysInfoProdName	SYSTEM_PROD_DATA	7158AC2	-
Boot Order	SY	STEM_PROD_DATA.SysInfoProdIdentifier	SYSTEM_PROD_DATA	System X 3112	
IMM User Accounts Activation Key Management	SY	STEM_PROD_DATA.SysInfoSerialNum	SYSTEM_PROD_DATA	06Ngtdr	
System Contact	SY	STEM_PROD_DATA.SysInfoUUID	SYSTEM_PROD_DATA	7B23D58E279311E1BBEC5CF:	
Energy and Performance	SY	STEM_PROD_DATA.SysInfoUDI	SYSTEM_PROD_DATA		
	SY	STEM_PROD_DATA.SysEncloseAssetTag	SYSTEM_PROD_DATA		
Full Settings	IMN	I.PowerRestorePolicy	IMM	Restore 👻	
E All	IMN	I.ThermalModePolicy	IMM	Normal 👻	
SYSTEM_PROD_DATA	IMN	I.PowerOnAtSpecifiedTime	IMM	0:0:0:0:0	
IMM	IMN	I.ShutdownAndPowerOff	IMM	WD:HH:MM	
iSCSI	IMN	I.PowerOnServer	IMM	WD:HH:MM	
UEFI	IMN	I.ShutdownAndRestart	IMM	WD:HH:MM	
BootModes	-				-

Figure 28. Configuration - All settings

- 2. On this page you have several options for viewing or changing settings.
 - To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displayed in the first line of the table.
 - To change the value of a setting, in the Value column, click the drop-down menu and select a value.
 - To apply a setting change, click **Apply**. The Apply the settings changes? dialog box is displayed. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait... Update the Settings successfully.

Click **OK** to load the settings. The following message is displayed: Loading, please wait...

- To reset the settings, click **Reset to All Factory Defaults**. The Reset to Factory Default dialog box is displayed. Click **OK** to proceed with resetting the values or click **Cancel**.
- **3**. To view individual settings, in the navigation menu, click **All** and click the setting you want to view. The individual setting information is displayed in the right pane, providing the group name and current value for this setting.

SYSTEM_PROD_DATA settings

Use this option to view the SYSTEM_PROD_DATA settings and to make changes to the value of these settings. SYSTEM_PROD_DATA is user-configurable VPD settings.

Procedure

 Using the navigation menu, click Full Settings > All > SYSTEM_PROD_DATA. The Configuration - SYSTEM_PROD_DATA Configuration page is displayed.

IBM ToolsCenter Suite				Settings About Exit
Welcome Updates	Configuration	System Information		
Configuration				
Machine Name: System X 3112 Machine Type/Model: 7158AC2	Clic	nfiguration - SYSTEM_PROD k a row to edit the setting.		
General		heset to statism_rhob_balariad	tory belduits	
Overview	E	٩		
Frequently Used Settings	Se	tting Name	Group Name	Value
	SY	STEM_PROD_DATA.SysInfoProdName	SYSTEM_PROD_DATA	7158AC2
Boot Order	SY	STEM_PROD_DATA.SysInfoProdIdentifier	SYSTEM_PROD_DATA	System X 3112
IMM User Accounts	SY	STEM_PROD_DATA.SysInfoSerialNum	SYSTEM_PROD_DATA	06Ngtdr
Activation Key Management System Contact	SY	STEM_PROD_DATA.SysInfoUUID	SYSTEM_PROD_DATA	7B23D58E279311E1BBEC5CF(
Energy and Performance	SY	STEM_PROD_DATA.SysInfoUDI	SYSTEM_PROD_DATA	
	SY	STEM_PROD_DATA.SysEncloseAssetTag	SYSTEM_PROD_DATA	
Full Settings				
E All				
SYSTEM_PROD_DATA				
IMM				
iSCSI				
UEFI				
BootModes				

Figure 29. Configuration - SYSTEM_PROD_DATA

This page provides a table listing all of the SYSTEM_PROD_DATA settings, their group name and the current value. If you hover the mouse over each entry in the table, a definition of the setting is displayed.

2. On this page you have several options for viewing or changing SYSTEM_PROD_DATA settings.

Note: The SYS_PROD_DATA_SysInfoProdName setting's values cannot be changed.

- To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displayed in the first line of the table.
- To add or change the value of a setting, in the Value column, enter a value.
- To apply a setting change, click **Apply**. The Apply the settings changes? dialog box is displayed. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait... Update the Settings successfully. Click **OK** to load the settings. The following message is displayed: Loading, please wait...

• To reset the settings, click **Reset to SYSTEM_PROD_DATA Factory Defaults**. The Reset to factory default dialog box is displayed. Click **OK** to proceed with resetting the values or click **Cancel**.

IMM settings

Use this option to view the IMM settings and to make changes to these settings.

Procedure

 Using the navigation menu, click Full Settings > All > IMM. The Configuration - IMM Configuration page is displayed.

IBM ToolsCenter Suite	Э			Settings About Exit	IBM.
Welcome Updates	Configuration	System Information			
Configuration Machine Name: System X 3112 Machine Type/Model: 7158AC2	Clic	nfiguration - IMM Confi k a row to edit the setting.			
General					
Overview		٩			
Frequently Used Settings	Se	tting Name	Group Name	Value	
	IMI	I.PowerRestorePolicy	IMM	Restore 👻	
Boot Order MM User Accounts	IMI	I.ThermalModePolicy	IMM	Normal	
Activation Key Management	IMI	I.PowerOnAtSpecifiedTime	IMM	0:0:0:0:0	
System Contact	IMI	I.ShutdownAndPowerOff	IMM	WD:HH:MM	
Energy and Performance	IMI	1.PowerOnServer	IMM	WD:HH:MM	
Full Settings	IMI	I.ShutdownAndRestart	IMM	WD:HH:MM	
	IMI	I.PXE_NextBootEnabled	IMM	Disabled 👻	
- All	IMI	1.TimeZone	IMM	GMT+0:00 -	
SYSTEM_PROD_DATA	IM	1.DST	IMM	No -	
IMM		I.IMMInfo_Name	IMM	fasfasfd1111	_
ISCSI		I.IMMInfo_Contact	IMM	d111	
UEFI		I IMMInfo Location	IMM	d11	
BootModes		CRAWING T OCSUIDE			

Figure 30. Configuration - IMM settings

This page provides a table listing all of the IMM settings, their group name, and the current value. If you hover the mouse over each entry in the table, a definition of the setting is displayed.

- 2. On this page you have several options for viewing or changing IMM settings.
 - To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displayed in the first line of the table.
 - To change the value of a setting, in the Value column, click the drop-down menu and select a value.
 - To apply a setting change, click **Apply**. The Apply the settings changes? dialog box is displayed. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait... Update the Settings successfully. Click **OK** to load the settings. The following message is displayed: Loading, please wait...

• To reset the settings, click **Reset to IMM Factory Defaults**. The Reset to factory default? dialog box is displayed. Click **OK** to proceed with resetting the values or click **Cancel**.

iSCSI settings

Use this option to view the iSCSI settings or individual settings and to make changes to these settings. The iSCSI settings are grouped into a record. The record key for the record is the **iSCSI.AttemptName** setting. Each record represents an attempt. The term attempt is equivalent to the term instance. More than one attempt can be defined. If more that one attempt is defined, the same setting names that define the attempt group are used, but each attempt contains the next sequential instance number. For example, **iSCSI.MacAddress.1** and **iSCSI.MacAddress.2** belong to the "first" attempt and the "second" attempt respectively. The only parameter that is defined as a global iSCSI setting to all attempts and that does not require an instance index is the **iSCSI.InitiatorName**.

Procedure

1. Using the navigation menu, click **Full Settings** > **All** > **iSCSI** . The Configuration - iSCSI Configuration page is displayed.

IBM ToolsCenter Suite			Sett	ngs About Exit	IBM.
Welcome Updates <mark>Co</mark>	onfiguration	System Information			
▼ Configuration	С с	onfiguration - iSCSI Configurat	ion		
Machine Name: System X 3112 Machine Type/Model: 7158AC2	Clic	k a row to edit the setting.			
▼ General					
Overview		Q			
▼ Frequently Used Settings		tting Name	Group Name	Value	
Boot Order IMM User Accounts Activation Key Management System Contact Energy and Performance	iso	SI InitiatorName	ISCSI		
▼ Full Settings					
All SYSTEM_PROD_DATA IMM ISCSI UEFI BootModes					

Figure 31. Configuration - iSCSI

This page provides a table listing all of the iSCSI settings, their group name and the current value. If you hover the mouse over each entry in the table, a definition of the setting is displayed.

- 2. On this page you have several options for viewing or changing iSCSI settings.
 - To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displayed in the first line of the table.

- To change the value of a setting, in the Value column, enter the new value.
- To apply a setting change, click **Apply**. If an incorrect value was entered, a dialog box displays this information. Click **Close**. If a correct value was entered, The Apply the setting changes? dialog box is displayed. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait... Update the Settings successfully.

Click **OK** to load the settings. The following message is displayed: Loading, please wait...

- To reset the settings, click **Reset to iSCSI factory defaults**. The Reset to factory default dialog box is displayed. Click **OK** to proceed with resetting the values or click **Cancel**.
- To view individual settings, in the navigation menu, click All > iSCSI and click the setting you want to view. The individual setting information is displayed in the right pane, providing the group name and the current value for this setting.

uEFI settings

Use this option to view and make changes to the uEFI settings.

Procedure

 Using the navigation menu, click Full Settings > All > uEFI. The Configuration - uEFI Configuration page is displayed.

IBM ToolsCenter Suite			Settings About Exit	IBM.
Welcome Updates Conf	iguration System Information			
Configuration				
lachine Name: System X 3112	Configuration - UEFI (Click a row to edit the setting.You	CONTIGURATION must restart the system to make the chang	ges take effect.	
Machine Type/Model: 158AC2	Apply Reset to UEFI Factor	y Defaults		
General				
Dverview	ΞQ]		
Frequently Used Settings	Setting Name	Group Name	Value	
	BootModes.SystemBootMode	UEFI	UEFI and Legacy 👻	(
Boot Order MM User Accounts	BootModes.QuietBoot	UEFI	Disable 💌	
ctivation Key Management	BootModes.DriverHealthCheck	UEFI	All 👻	
System Contact Energy and Performance	Devices and IOP orts. Configure the orts as	onboardSATAp UEFI	IDE 🔻	
	DevicesandIOPorts.ConfigureIDE	Emode UEFI	Native mode 👻	
Full Settings	DevicesandIOPorts.ActiveVideo	UEFI	Add-in Device 👻	
= All	DevicesandlOPorts.PCIExpressN	lativeControl UEFI	Enable 👻	
SYSTEM_PROD_DATA	Devices and IOP orts. PCI64- Bit Resource Allocation	UEFI	Enable	
IMM	DevicesandIOPorts.COMPort1	UEFI	Enable 👻	
UEFI	DevicesandlOPorts.COMPort2	UEFI	Enable -	

Figure 32. Configuration - uEFI settings

This page provides a table listing all of the uEFI settings, their group name and the current value. If you hover the mouse over each entry in the table, a definition of the setting is displayed.

- 2. On this page you have several options for viewing or changing uEFI settings.
 - To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displayed in the first line of the table.
 - To change the value of a setting, in the Value column, click **Value** to display the drop-down menu and select a value.
 - To apply a setting change, click **Apply**. The Apply the settings changes? dialog box is displayed. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait... Update the Settings successfully.

Click **OK** to load the settings. The following message is displayed: Loading, please wait...

- To reset the settings, click **Reset to uEFI Factory Defaults**. The Reset to factory default dialog box is displayed. Click **OK** to proceed with resetting the values or click **Cancel**.
- **3**. To view individual settings, in the navigation menu, click **All** > **uEFI** and click the setting you want to view. The individual setting information is displayed in the right pane, providing the group name and the current value for this setting.

BootOrder settings

Use this option to configure the BootOrder settings. Changes to BootOrder will take affect after reboot.

Procedure

 Using the navigation menu, click Full Settings > All > BootOrder or perform a search on boot order. The Configuration - BootOrder Configuration page is displayed.

IBM ToolsCenter Suite			Settings About Exit	IBM.
Welcome Updates Configuration	System Information			
SYSTEM PROD DATA	Configuration - BootOrder lick a row to edit the setting. Apply Reset to BootOrder Factory			
	Setting Name	Group Name	Value	
	BootOrder.BootOrder	BootOrder	Boot Order	
	BootOrder.WolBootOrder	BootOrder	Boot Order	
POSTAttempts Power Processors SystemRecovery SystemSecurity IntelRI350GlgabitNetworkConte IntelRI350GlgabitNetworkCo IntelRI350GlgabitNetworkCo BootOrder PXE				

Figure 33. Configuration - BootOrder

To view more information about each type of BootOrder, hover the mouse over each line and information is displayed explaining what that particular BootOrder does.

- 2. Select one of the following options:
 - To reset the settings, click **Reset to BootOrder Factory Defaults**. The Reset to factory default dialog box is displayed. Click **OK** to proceed with resetting the values or click **Cancel**.
 - Click **Boot Order** in the Value column to select one of the boot order items listed. The Configure Boot Order dialog box is displayed. Click **OK** to continue or click **Cancel** to exit the dialog box and return to the Configuration BootOrder page.

Related tasks:

"Boot Order" on page 27 Provides additional information about Boot Order configuration.

PXE settings

Use this option to configure Preboot Execute Environment (PXE) settings. PXE is an environment to boot computers using a network interface independent of data storage devices, such as hard disks or installed operating systems.

Procedure

 Using the navigation menu, click Full Settings > All > PXE. The Configuration - PXE page is displayed.

IBM ToolsCenter Suite			Settings About Exit
Welcome Updates Configura	ation System Information		
AII SYSTEM_PROD_DATA IMM ISCSI UEFI BootModes	Configuration - PXE Conf Click a row to edit the setting. Apply Reset to PXE Factory Defa		
DevicesandlOPorts LegacySupport	Setting Name	Group Name	Value
Memory	PXE.NicPortMacAddress.1	PXE	5C:F3:FC:3C:1B:F8
OperatingModes	PXE.NicPortMacAddress.2	PXE	5C:F3:FC:3C:1B:F9
POSTAttempts	PXE.NicPortPxeMode.1	PXE	UEFI and Legacy Support 👻
Power	PXE.NicPortPxeMode.2	PXE	UEFI and Legacy Support 👻
Processors	PXE.NicPortPxeProtocol.1	PXE	IPV4 -
SystemRecovery	PXE.NicPortPxeProtocol.2	PXE	IPV4 v
IntelRI350GigabitNetworkConne IntelRI350GigabitNetworkCo IntelRI350GigabitNetworkCo BootOrder			

Figure 34. Configuration - PXE

The PXE settings list consists of PXE MAC addresses, PXE port devices, and PXE port protocols. To view more information for each PXE setting listed, hover the mouse over each line and a description for that setting is displayed.

- 2. Select one of the following options:
 - To reset the settings, click **Reset to PXE Factory Defaults**. The Reset to factory default dialog box is displayed. Click **OK** to proceed with resetting the values or click **Cancel**.
 - Click to select an entry in the Value column.
 - The MAC addresses can be changed by entering a new address.
 - Click to select a PXE port device value from the drop-down menu.
 - Click to select a PXE port protocol value from the drop-down menu.
 - Click **Apply** to save the new PXE settings.

Using the System Information function

This section describes how to scan and view system status, event logs, and collect system information. You can collect full system information for analysis, service, and support. These files can be sent to IBM Support or the FTP server.

Procedure

1. On the Welcome page or from the ToolsCenter Suite menu, click to select **System Information**. The System Information - Overview page is displayed.

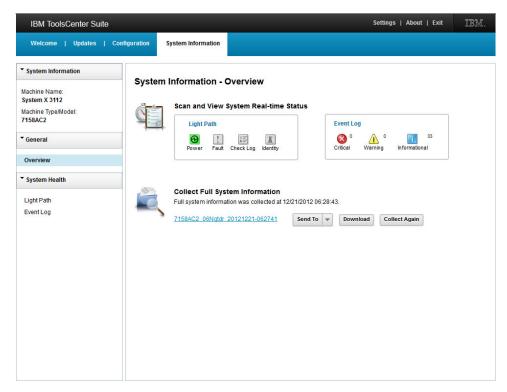


Figure 35. System Information - Overview

The navigation menu contains the System Health options. The right pane provides real time system status. When the System Information - Overview page is initially opened, the status is updated. To update the status again, click **Refresh** on the Event Log or Light Path screen.

In the Collect Full System Information section of the right pane, a date stamp indicating when the last full system information was collected is displayed. In addition, the report name is displayed as a link. Click on this link to open the report, which provides a complete System Overview of your system.

- 2. On the System Information Overview page, click to select one of the following options:
 - Light Path
 - Event Log
 - Collect Now

Light Path status

This option provides the location and status for each of the machine's front and rear panel LEDs and the Detail LEDs on the planar.

Procedure

 To view Light Path status information, click the Light Path dashboard or click More in the Light Path dashboard on the System Information - Overview page. The Light Path information page is displayed.

IBM ToolsCenter Suite			Settings About Exit
Welcome Updates	Configuration System Inform	nation	
System Information			
Machine Name: System X 3112 Machine Type/Model:	System Informat		2
7158AC2	LED Label	Location	Status
General	Fault	Front Panel	I Off
General	Identify	Front Panel	Off
Overview	Check Log	Front Panel	Off
System Health	Power	Front Panel	On On
Light Path	Detailed LEDs		
Event Log	LED Label	Location	Status
	CPU Mismatch	Planar	🖓 Off
	CONFIG	LightPath Card	Off Off
	CPU	LightPath Card	⊖ Off 🗉
	PS	LightPath Card	Off
	HDD	LightPath Card	🖓 Off
	FAN	LightPath Card	Off
	MEM	LightPath Card	₿ Off
	NMI	LightPath Card	Off
	OVER SPEC	LightPath Card	Off Off
	TEMP	LightPath Card	Off Off
	PCI	LightPath Card	⑦ Off
	LINK	LightPath Card	9 Off
	CPU 1	Planar	Off -

Figure 36. System Information - Light Path status

You can click **Refresh** on the Light Path screen to collect the latest light path information. When you select **Light Path** from the navigation menu, the previously-collected Light Path information is displayed.

The Light Path page provides status for:

LEDs on the front and rear panel of the machine (Level 1):

The status reported for the following LEDs is On or Off. The location is displayed as Front Panel or Rear Panel.

- Fault
- Identity
- Power
- Check Log

Detail LEDs:

The status reported for Detail LEDs is On and Off for all of the Detail LEDs, except IMM2 Heartbeat, which has a status of Blinking. The detail information varies for each machine type.

- CPU 1
- CPU 2
- DIMM 1
- DIMM 2
- DIMM 2
- DIMM 4
- DIMM 5
- DIMM 6
- DIMM 7

- DIMM 8
- DIMM 9
- DIMM 10
- DIMM 11
- DIMM 12
- DIMM 13
- DIMM 14
- DIMM 15
- DIMM 16
- PCIE 1
- PCIE 2
- Battery
- IMM2 Heartbeat
- Mezz Card
- 2. When you have completed viewing the LEDs, select one of the following options:
 - From the navigation menu, click to select the **Overview** System Information Overview page or the **Event log** page.
 - Click one of the ToolsCenter Suite menu items located at the top of the screen.

Event Log information

This option provides detailed information for Critical, Warning, and Informational events collected from the IPMI SEL event logs.

Procedure

 To view Event Log information, click the Event Log dashboard or click More in the Event Log dashboard on the System Information - Overview page. The System Information - Event Log page is displayed.

IBM ToolsCenter Suite			Settings	About Exit	ĪB
Welcome Updates	Configuration Sy:	stem Information			
System Information	System Ir	formation - E	vent l og		
Machine Name: System X 3112 Machine Type/Model: 7158AC2	Click severity le	evels to view event log	s in critical, warning and informational types. detected problems, click here: <u>Problem Determination and Se</u>	invice Guide 🔁	
General	· 😣 0	Critical Events			
Overview	• 🔬 • •	Warning Events			
System Health	• 🚺 27	Informational Events	1		
	Record ID	Message		Timestamp -	•
Light Path	1	Add-in Card 1 (Enti	ty Presence - PCI Riser 1): Assertion: Entity Absent	09/12/2012 05:19:21	^
Event Log	2	System Manageme Jmp): Assertion: De	ent Software 1 (System Firmware Progress - Phy Presence evice Inserted / Device Present	09/12/2012 05:19:31	
	3	System Manageme Security Jmp): Asse	ent Software 1 (Management Subsystem Health - Low ertion: Device Inserted / Device Present	09/12/2012 05:19:32	E
	4	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 05:19:32	
	5	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 05:21:04	
	6	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 07:34:52	
	7	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 07:37:35	
	8	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 07:40:48	
	9	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 07:42:00	
	10	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 07:43:01	
	11	System Firmware 1 Firmware Progress	(System Firmware Progress - Progress): Assertion: System	09/12/2012 07:44:02	
		0	Vourters Elements December December States Accession Outers		+

Figure 37. System Information - Event Log

You can click Refresh on Event Log screen to collect the latest Event Log status. When you select **Event Log** from the navigation menu, the previously-collected Event Log information is displayed.

There are three types of severity levels recorded in the event logs:

- Critical
- Warning
- Information

The Event Log report categories are:

- RecordID
- Message
- Timestamp

On the Event Log page you have the following options for viewing information:

- Click the arrow to expand the severity level category. A detailed view of the severity level is displayed, containing all of the events collected.
- Click a report category heading to sort the list.
- Click the arrow to collapse the severity level category. A minimized view of the severity level is displayed.
- 2. Click **Problem Determination and Service Guide** to view suggested actions for detected problems found in the event logs.
- **3**. When you have completed viewing Event Log information, select one of the following options:
 - From the navigation menu, click to select the **Overview** System Information Overview page or the **Light Path** page.
 - Click one of the ToolsCenter Suite menu items located at the top of the screen.

Collect Full System Information

This option queries the system and provides full system information for analysis, service, and support. The files generated by the collection process can be sent to IBM support or an FTP server.

Procedure

1. Click **Collect Now** to start the collect system full information function. You can send these files to IBM support or FTP Server on the System Information - Overview page. The Collect Full System Information dialog box is displayed.

System Information	Sustan Information Oceanious		
achine Name:	System Information - Overview		
ystem X 3112	Collect Full System Information		
achine Type/Model: 58AC2			
IUNCL	Full System Information collection starts at 14:05. Please wait		
General	31%		27
Overview			ormational
Overview	Description	Status	
System Health	Initializing Inventory	Complete	
	Copying Schema	Complete	
Light Path	Running DSA collector plug-ins pass 1.	in progress	
Event Log	libamdaticonfiglog: AMD Aticonfig Log Collector	Complete	
	libasuprovider: Advanced Setting Utility(ASU) Setting Collector	Complete	-
	libdiskmgt: Disk Management Information Collector	Complete	
	libdisplayinfo: Display Information Collector	in progress	
	indisplaying. Display mornation conceas	in progress	

Figure 38. System Information - Collect Full System Information

While the collection process is running, a progress bar is displayed.

Note: Clicking **Cancel** before the collection operation has successfully completed, stops the collection process without recording any data. If you click **Cancel**, a dialog box opens, asking if you want to continue. To continue, click **Continue Collection** or **Stop Collection** to halt the collection process.

As the collection progresses, an inventory list is generated which provides the status for each inventory item, indicating *Initializing* while collecting information and *Complete* when done.

2. When the Full System Information collection has successfully completed, the following page is displayed.

IBM ToolsCenter Sui	te				
Welcome Updates	Configuration System Information				
▼ System Information	System Information - Overview				
Machine Name: System X 3112 Machine Type/Model:	Collect Full System Information				
7158AC2 * General	Full System Information collection has completed successfully at 100%	t 12/19/2012 14:17:28.		27 prmational	
Overview	Description Kunning USA analyzer plug-ins pass 1.	Status			
* System Health	libbasicanal: Basic Analysis	Complete			
	libesainfo: ESA-DSA Information	Complete			
Light Path	liblpanal: Light Path Analysis	Complete			
Event Log	libsraidanal: SRaid Analysis	Complete		Again	
	Running DSA analyzer plug-ins pass 2.	Complete			
	liblpanal: Light Path Analysis	Complete			
	Adding DSA log entries to XML file.	Complete			
	Writing XML data to file	Complete			
	Writing HTML files to directory	Complete			
	Inventory Finished	Complete	-		
	Clicking Cancel stops the collection process without recording of Ser	any data. nd To 👻 Download	Close		

Figure 39. System Information - Collect Full System Information Completed

Select one of the following options:

- Click **Send To** to send information to IBM Support or the FTP Server. From the drop-down menu, select one of the following options.
 - Send to IBM Support: A dialog box is displayed indicating that the send of the collection to IBM Support may take a few minutes. When this operation is complete, click Close. If the send to IBM Support fails, the Configure Internet Connection dialog box is displayed.

Note: If you are not connected to the Internet, the Configure Internet Connection dialog box is displayed. Check your configuration and try again, otherwise, click **OK** to continue or **Cancel**. For more information see "Internet Connection settings" on page 11.

- Send to FTP Server: Perform the following steps in the Send to FTP Server dialog box.
 - a. Enter the IP Address: FTP server IP
 - **b.** The Send to FTP action requires authentication. Enter the following information:
 - IP Address: FTP server IP
 - **Port**: The default port is 21.
 - Click to select **Require Authentication**.
 - Enter the User Name.
 - Enter the **Password**.
 - Click Ok to continue or Cancel to exit this operation.
- Click **Download**. This option allows you to download the complete information report to a local file. The open zip file dialog box is display indicating the name of the full system report zip file. By default, the **Save File** option is selected. Select one of the following options.

- Click **Open with** to browse and select an application for downloading the zip file. Click **OK**. A dialog box opens to select a directory for saving the zip file.
- Click **OK** to save the file. A dialog box opens to select a directory for saving the zip file.
- Click **Close** to return to the System Information Overview page.

Results

When you return to the System Information - Overview page, the collection information name and a date stamp is displayed in the right pane.

IBM ToolsCenter Suite				:	Settings About Exit	IBM.
Welcome Updates Config	juration Sy	ystem Information				
▼ System Information	System	nformation - Overv	OW			
Machine Name: System X 3112 Machine Type/Model: 7158AC2	System	Scan and View System				
▼ General	"herefy	Light Path	g Identity	Event Log O Critical War	0 ii 33 ning Informational	
Overview						
▼ System Health Light Path Event Log	Ê,	Collect Full System Inf Full system information was 7158AC2 06Notor 2012122	collected at 12/21/2012 (Collect Again	

Figure 40. System Information - Full System Information Report link

What to do next

Select one of the following options.

- Click **Full System Information report link** located under the date stamp to view the Full System Information report in a browser window. For more information, see "Viewing the ToolsCenter Suite report"
- Click Send To and select Send to IBM Support or Send to FTP.
- Click **Download** to download the full information report to local file.
- Click Collect Again to collect the full system information again.
- Click to select one of the other options listed on this page or select another ToolsCenter Suite function.

Viewing the ToolsCenter Suite report

Use this option to view the ToolsCenter Suite report and detailed information produced by the Collect Full System Information function.

Procedure

1. Click **Full System Information report** link on the System Information -Overview page to view the full system information report. The System Overview report is displayed in a browser window as shown below.

You can also click **Collect Again** to collect full system information again before viewing the report. The Collect Full System Information dialog box is displayed while the full system information is updated. For more information, see "Collect Full System Information" on page 49.

IBM ToolsCenter Suite		System X 3112 -{7158AC2} localhost.localdomain	IBM.
Software System Overview Installed Packages Kernel Modules	System Overvi Computer System	ew	Î
Network Settings	Manufacturer	IBM	
Resource Utilization	Version	03	
Processes	Product Name	System X 3112 -[7158AC2]	100
OS Configuration	Serial Number	06Ngtdr	E
Linux Config Files	System UUID	7b23d58e-2793-11e1-bbec-5d3fc3c1bf8	
PCI Information	Operating System	1	
PCI Information	Computer Name	localhost localdomain	
IMM Configuration	Product Name	LINUX	
Environmentals	Build Number	Red Hat Enterprise Linux Server release 6.2 (Santiago)	
Drive Health	Vendor	Red Hat, Inc.	
LSI Controller	Kernel Name	Linux	
LSI IDE Controller	Kernel Release	2.6.32-220.el6.x86_64	
Mellanox Adapter	Hardware Platform	x86_64	
PMC RAID	Uptime	4 days 19 hours 52 minutes 56 seconds	
ServeRAID	Time of Last Boot	12/14/2012 18:22:54	
ServeRAID Logs			
Qlogic Emulex	TimeZone		

Figure 41. System Information - Full System Information Report

- 2. From the navigation menu, you can select specific items listed within the five main report categories to get more detailed information. The available report information is determined by machine type, operating system, installed hardware and software. Information that is not applicable to your system will be greyed out in the navigation menu.
 - Software
 - System Overview
 - Installed Packages
 - Kernel Modules
 - Network Settings
 - Resource Utilization
 - Processes
 - OS Configuration
 - Linux Config Files
 - Hardware
 - Hardware Inventory
 - PCI Information
 - Firmware/VPD
 - IMM Configuration
 - Environmentals
 - Drive Health
 - LSI Controller
 - LSI IDE Controller
 - Mellanox Adapter

- PMC RAID
- ServeRAID
- ServeRAID Logs
- Qlogic
- Emulex
- Broadcom
- Brocade Adapter
- VMware ESXi
- Light Path
- IMM Built-in Self Test
- FoD Activation Key
- Platform Logs
 - /var/log/boot.log
 - /var/log/cron
 - /var/log/dmesg
 - /var/log/messages
 - /var/log/secure
- IMM Logs
 - Chassis Event Log
 - IPMI Event
- Analysis
 - Merged Log
 - UpdateXpress
 - File Loader Results
 - Diagnostics Log
 - DSA Error Log
- **3**. When you have finished viewing information, click to close the browser window.

IBM ToolsCenter Suite files

This section describes where IBM ToolsCenter Suite files are stored.

The ToolsCenter Suite log file

The ToolsCenter Suite log file is stored in the %ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\logs directory. %ToolsCenterSuite% is the working directory.

New log information is appended to the tcsuite_20120909225751.log file. The number in the log file name represents: year/month/date/hour/minute/second.

Update files

The update files that are downloaded using one of the Update options are stored in the following directories.

UpdateXpress System Pack XML and binary files

%ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\
depot\Update\%MachineType%\%OperatingSystem%\uxsp

Individual XML and binary files

%ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\
depot\Update\%MachineType%\%OperatingSystem%\individual

%ToolsCenterSuite% is the ToolsCenter Suite working directory; %MachineType% is the four-digit machine type of the server and represents the machine type selected; and %OperatingSytem% is the server operating system.

Chapter 5. Troubleshooting and support

Use this section to troubleshoot and resolve problems with ToolsCenter Suite.

Known limitations

The current known limitations for IBM ToolsCenter Suite 9.40 are:

Unzipping the downloaded ToolsCenter Suite package to the ToolsCenter Suite working directory causes the system to crash

Unzipping the downloaded ToolsCenter Suite package to the ToolsCenter Suite working directory causes the system to crash because the ToolsCenter Suite working directory name is too long. Unzip the downloaded ToolsCenter Suite package under the system root directory.

Windows 64-bit operating systems

For all Windows 64-bit operating systems, you will get RAW data and be missing the logic device table information on Windows OS.

Full Settings option

In the Full Settings option, when changing the value of **Power.PowerPerformenceBias**, there is no error message reported even though the setting change is not successful.

Concurrent operation of ToolsCenter Suite

IBM ToolsCenter Suite does not support more than one session running at a time. If you try to start a second instance, close the opened ToolsCenter Suite browser window first, and then click ToolsCenter Suite desktop shortcut or the .bat/.sh script file to start it. When you try to start a second instance, the following message is displayed: Warning! The current instance of ToolsCenter Suite that is running will be killed if you continue. If you select Y, the old instance will be killed and the new instance will be started. Continue? (Y/N)

Select Y to launch a new instance.

Installing activation keys from the IBM site

Installing activation keys from the IBM KMS website cannot be done using a network connection via proxy.

In Firefox, for Boot Order in Configuration

In Firefox, for Boot Order in Configuration, select the blank row of the list builder widget. The last row of the list builder widget will be selected and highlighted.

ToolsCenter Suite does not support IPv6

ToolsCenter Suite does not support sending the collected full information to an IPv6 FTP server.

Workarounds

The following workarounds are applicable to IBM ToolsCenter Suite 9.40:

Custom mode is not currently supported for Energy and Performance of Frequently Used Settings of Configuration. Workaround:

Use Full Settings to change these values.

When using IE on some Windows operating systems, the progress icon may not rotate

Workarounds:

- For Windows 2008, under Windows Server Manager > Configure IE ESC, turn off the Internet Explore Enhanced Security Configuration for the current user.
- For Windows 2003, from the **Start Menu** open the **Control Panel**. Click **Add or Remove Programs**, and then click **Add/Remove Windows Components**. Deselect the **Internet Explorer Enhanced Security Configuration** option, and click **Next**. Windows will uninstall this component.

When using IE on some Windows operating systems, there is no activation key install progress page when install activation key from Local file. Workarounds:

- For Windows 2012, under **Server Manager** > **Local Server**, turn off the IE Enhanced Security Configuration.
- For Windows 2008, under **Windows Server Manager** > **Configure IE ESC**, turn off the Internet Explore Enhanced Security Configuration for the current user.
- For Windows 2003, from the Start Menu open the Control Panel. Click Add or Remove Programs, and then click Add/Remove Windows Components. Deselect the Internet Explorer Enhanced Security Configuration option, and click Next. Windows will uninstall this component.

Warnings

The following warnings are applicable to IBM ToolsCenter Suite 9.40:

- In Internet Explorer v10 (IE10), the password entry field now has an Eye icon. The Eye icon allows you to read the password info. This is a new function of IE 10.
- IBM ToolsCenter must be started from the desktop shortcut or .bat/.sh script file. Opening links directly from a browser window can lead to unpredictable results.
- To run ToolsCenter Suite in a Linux environment, change the execution privilege of run.sh.
- We do not recommend that you use browser actions such as back, forward, refresh in a browser window. IBM ToolsCenter Suite does not fully support back, forward, and refresh. Under some circumstances, using these browser functions can cause unexpected results.
- System Information and Updates use the proxy configured in the Setting menu item and not the proxy configured in the browser configuration.
- **SYSTEM_PROD_DATA.SysInfoProdName** in the Full Settings option of the Configuration function is not editable, to ensure the server behaves correctly.

Getting help and technical assistance

Use this information to locate technical assistance for your IBM System x and BladeCenter tools.

About this task

If you need help, service, or technical assistance or just want more information about IBM products, you will find a wide variety of sources available from IBM to assist you. This section contains information about where to go for additional information about IBM and IBM products, what to do if you experience a problem with your system, and whom to call for service, if it is necessary.

Before you call

Use this information before you call Service and Support and report a problem.

About this task

Before you call, make sure that you have taken these steps to try to solve the problem yourself:

- Ensure that you have the latest version of the tool installed.
- Check all cables to make sure that they are connected.
- Check the power switches to make sure that the system and any optional devices are turned on.
- Use the troubleshooting information in your system documentation, and use the diagnostic tools that come with your system.
- Go to the IBM support website at www.ibm.com/systems/support/ to check for technical information, hints, tips, and new device drivers.
- Use an IBM discussion forum on the IBM website to ask questions.

You can solve many problems without outside assistance by following the troubleshooting procedures that IBM provides in the online help or in the documentation that is provided with your IBM product. The documentation that comes with IBM systems also describes the diagnostic tests that you can perform. Most systems, operating systems, and programs come with documentation that contains troubleshooting procedures and explanations of error messages and error codes. If you suspect a software problem, see the documentation for the operating system or program.

Using the documentation

Use this information for locating detailed information on using the documentation.

About this task

Information about your IBM system and preinstalled software, if any, or optional device is available in the documentation that comes with the product. That documentation can include information centers, online documents, printed documents, readme files, and help files. See the troubleshooting information in your system documentation for instructions for using the diagnostic programs. The troubleshooting information or the diagnostic programs might tell you that you need additional or updated device drivers or other software. IBM maintains pages on the World Wide Web where you can get the latest technical information and download device drivers and updates. To access these pages, go to the IBM support website at www.ibm.com/systems/support/ and follow the instructions. Also, some documents are available through the IBM Publications Center website at www.ibm.com/shop/publications/order/. Documentation for IBM System x and BladeCenter tools are available in the IBM ToolsCenter website at www.ibm.com/shop/publications/order/.

Getting help and information from the World Wide Web

Use this information to find the latest information about IBM systems, optional devices, services, and support.

About this task

On the World Wide Web, the IBM website has up-to-date information about IBM systems, optional devices, services, tools, and support. The address for IBM System x information is www.ibm.com/systems/x/. The address for IBM BladeCenter information is www.ibm.com/systems/bladecenter/. The address for IBM IntelliStation[®] information is www.ibm.com/intellistation/.

You can find service information for IBM systems and optional devices at www.ibm.com/systems/support/.

Software service and support

Use this information to contact IBM service and support with questions about your IBM System x and BladeCenter tools.

About this task

Through IBM Support Line, you can get telephone assistance, for a fee, with usage, configuration, and software problems with System x servers, BladeCenter products, IntelliStation workstations, and appliances. For information about which products are supported by Support Line in your country or region, see www.ibm.com/ services/sl/products/.

For more information about Support Line and other IBM services, see www.ibm.com/services/, or see www.ibm.com/planetwide/ for support telephone numbers. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

Hardware service and support

Use this contact information to order new equipment or request IBM service support.

About this task

You can receive hardware service through IBM Services or through your IBM reseller, if your reseller is authorized by IBM to provide warranty service. See www.ibm.com/planetwide/for support telephone numbers, or in the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

In the U.S. and Canada, hardware service and support is available 24 hours a day, 7 days a week. In the U.K., these services are available Monday through Friday, from 9 a.m. to 6 p.m.

Appendix. Accessibility features for IBM ToolsCenter SuiteToolsCenter Suite

Accessibility features help users who have a disability, such as restricted mobility or limited vision, to use information technology products successfully.

Accessibility features

The following list includes the major accessibility features in ToolsCenter Suite:

- Can be operated using only the keyboard
- Communicates all information independent of color
- Supports the attachment of alternate output devices
- Provides online documentation in an accessible format

The ToolsCenter Suite topic collection in the IBM ToolsCenter for System x and BladeCenter information center, and its related publications, are accessibility-enabled and support Next Generation Platform.

Keyboard navigation

This product uses standard Microsoft Windows navigation keys.

IBM and accessibility

See the IBM Human Ability and Accessibility Center website at www.ibm.com/able for more information about the commitment that IBM has to accessibility.

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Readers' Comments — We'd Like to Hear from You

IBM System x IBM ToolsCenter Suite User's Guide Version 9.40

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