IBM Tivoli Composite Application Manager Agent for Sybase ASE
6.2 Fix Pack 1

Installation and Configuration Guide

SC27-5677-01

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Note
Before using this information and the product it supports, read the information in "Notices" on page 19.

This edition applies to version 6.2 of IBM Tivoli Composite Application Manager Agent for Sybase ASE (product number 5724-I45) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Overview of the Sybase agent

You can use the Sybase agent (product code OY) to monitor Sybase Server and to perform basic actions with Sybase Server resources. IBM® Tivoli® Monitoring is the base software for the Sybase ASE agent.

IBM Tivoli Monitoring overview

IBM Tivoli Monitoring is the base software for the Sybase agent. IBM Tivoli Monitoring provides a way to monitor the availability and performance of all the systems in your enterprise from one or several designated workstations. It also provides useful historical data that you can use to track trends and to troubleshoot system problems.

You can use IBM Tivoli Monitoring to do the following tasks:

- Monitor for alerts on the systems that you are managing by using predefined situations or custom situations
- Establish your own performance thresholds
- Trace the causes leading to an alert
- Gather comprehensive data about system conditions
- Use policies to perform actions, schedule work, and automate manual tasks

The Tivoli Enterprise Portal is the interface for IBM Tivoli Monitoring products. Providing a consolidated view of your environment, the Tivoli Enterprise Portal permits you to monitor and resolve performance issues throughout the enterprise.

See the IBM Tivoli Monitoring publications listed in “Prerequisite publications” on page 17 for complete information about IBM Tivoli Monitoring and the Tivoli Enterprise Portal.

Features of Sybase agent

The Sybase agent offers a central point of management for distributed databases. It provides a comprehensive means for gathering exactly the information you need to detect problems early and prevent them. Because information is standardized across all systems, you can monitor hundreds of servers from a single workstation. You can collect and analyze specific information easily.

The Sybase agent is an intelligent, remote monitoring agent that resides on managed systems. It helps you anticipate trouble and warns system administrators when critical events occur on their systems. With the Sybase agent, database and system administrators can set required threshold levels and flags to alert administrators when the system reaches these thresholds.

Each Sybase agent instance collects information about one Sybase Server domain. The monitoring agent performs the following types of monitoring functions:

- Obtains data from a Sybase Server database and uses it to create various reports whenever you choose. This data is useful for examining the performance of the Sybase Server system.
- Evaluates situations to detect when Sybase Server attribute values exceed preset thresholds you have defined, and makes this exception information available to an IBM Tivoli Monitoring workstation.

Monitoring for exceptions requires you to create the Sybase agent situations that are meaningful to the Sybase Server transactions that you are monitoring. Example situations and expert advice are provided on the IBM Tivoli Monitoring workstation to make this task as easy as possible.

New in this release

For version 6.2.0.1 of the Sybase agent, the following enhancements have been made since version 6.2, including the fix packs:

- Modified descriptions of the following attributes:
  - Time Since Startup (Hrs.)
  - Dump Tran Date
- Added support to connect the Sybase agent to Sybase Server with net password encryption 1.

Components of Sybase agent

After you install the Sybase agent (product code "koy" or "oy") as directed in the *IBM Tivoli Monitoring Installation and Setup Guide*, you have an environment that contains the client, server, and monitoring agent implementation for IBM Tivoli Monitoring. That environments contains the following components:

- Tivoli Enterprise Portal client with a Java™-based user interface for viewing and monitoring your enterprise.
- Tivoli Enterprise Portal Server that is placed between the client and the Tivoli Enterprise Monitoring Server and enables retrieval, manipulation, and analysis of data from the monitoring agents.
- Tivoli Enterprise Monitoring Server, which acts as a collection and control point for alerts received from the monitoring agents, and collects their performance and availability data.
- Monitoring agent, Sybase agent, which collects and distributes data to a Tivoli Enterprise Monitoring Server.
- Operating system agents and application agents installed on the systems or subsystems you want to monitor. These agents collect and distribute data to the Tivoli Enterprise Monitoring Server.
- Tivoli Data Warehouse for storing historical data collected from agents in your environment. The data warehouse is located on a DB2®, Oracle, or Microsoft SQL database. To collect information to store in this database, you must install the Warehouse Proxy agent. To perform aggregation and pruning functions on the data, install the Warehouse Summarization and Pruning agent.
- Tivoli Enterprise Console event synchronization component for synchronizing the status of situation events that are forwarded to the event server. When the status of an event is updated because of IBM Tivoli Enterprise Console® rules or operator actions, the update is sent to the monitoring server, and the updated status is reflected in both the Situation Event Console and the Tivoli Enterprise Console event viewer. For more information, see the *IBM Tivoli Monitoring Installation and Setup Guide*.

User interface options

Installation of the base software and other integrated applications provides the following interfaces that you can use to work with your resources and data:

Tivoli Enterprise Portal browser client interface
The browser interface is automatically installed with Tivoli Enterprise Portal. To start Tivoli Enterprise Portal in your Internet browser, enter the URL for a specific Tivoli Enterprise Portal browser client installed on your Web server.

Tivoli Enterprise Portal desktop client interface
The desktop interface is a Java-based graphical user interface (GUI) on a Windows or Linux workstation.

IBM Tivoli Enterprise Console
Event management application

Manage Tivoli Enterprise Monitoring Services window
The window for the Manage Tivoli Enterprise Monitoring Services utility is used for configuring the agent and starting Tivoli services that are not already designated to start automatically.

Chapter 2. Agent installation and configuration

When you follow the steps to install and configure the Sybase agent as described in "Installing monitoring agents" in the *IBM Tivoli Monitoring Installation and Setup Guide*, also use the agent-specific configuration information.

Agent-specific information is provided for the following procedures:

- Running the agent as a non-Administrator user
- Granting permissions
- Basic installation and configuration
  - Local
    - Using the Manage Tivoli Enterprise Monitoring Services window on Windows systems
    - Using the itmcmd command line
    - Silent installation
  - Remote
    - Using the Tivoli Enterprise Portal
    - Using the tacmd command line
- Reconfiguration
- Configuration settings
- Starting and stopping the Sybase agent
- Configuring the UTF-8 character set
- Enabling Unicode conversions

Never attempt to start the monitoring agent until you have completed the configuration steps appropriate to installation of the monitoring agent.

Requirements

Before installing and configuring the agent, make sure your environment meets the requirements for the IBM Tivoli Composite Application Manager Agent for Sybase ASE.

For information about system requirements, see the Prerequisites topic (http://www.ibm.com/support/knowledgecenter/SS3JRN_7.2.1/com.ibm.itcama.doc_7.2.1/prerequisites/apps721_systemreqs.html) in the IBM Tivoli Composite Application Manager for Applications Information Center.

For the most up-to-date information about system requirements, see the Software product compatibility reports (http://www-969.ibm.com/software/reports/compatibility/clarity/index.html). Search for the ITCAM for Applications product.

Running the agent as a non-administrator user

You can install and configure the Sybase ASE agent with a non-root user ID.

For UNIX and Linux operating systems, you can install, configure, and run the agent with a user ID other than root. However, you must complete some additional steps.

Installing the agent with a non-root user ID

Complete the following tasks for installing the agent with a non-root user ID:

- The user ID that is used to install the agent must have appropriate access to Sybase files to query the database and write to the agent tablespace. For example, if the user ID that was used to install Sybase is a member of the sybase group, then the user ID that is used to install the agent must be a member of the sybase group.
- Make sure that the user ID that is used to install the agent has write access to any pre-existing directories in the installation path. For example, if you want to install the agent in the `/opt/IBM/ITM` directory, and the `/opt/IBM` directory already exists, then the user ID that is used to install the agent must have write authority `/opt/IBM`.
- For installing the agent locally, complete following steps:
  1. When the following message is displayed during installation, complete these steps: `Enter root password to configure automatic restart of agents.`
     a. Press **Enter** without entering a password
     b. Enter `i` to ignore. This action disables the agent from starting automatically.

     If you enable autostart by entering the root password, see "Upgrading and restarting the agent by using non-root" on page 13 for information about ensuring that the agent has started automatically with the desired user ID.
  2. Run the **SetPerm** command when the following message is displayed at the end of installation: `install.sh warning: root user must run bin/SetPerm from ITM home to complete setup.`
  3. Run the following commands:

     ```
     cd install_dir
     chown root */bin/kddos
     chmod u+sx */bin/kddos
     ```
- For installing the agent remotely, the following steps are required:
  – During installation, the following message might occur even though the monitoring agent was deployed successfully:

    `KUICAR020E: The addSystem command did not complete because a deployment error occurred. Refer to the following error returned from the server: The monitoring server encountered an error while deploying the managed system.`
  – After you deploy the monitoring agent, log on to the remote computer and run the following commands as root:

    ```
    cd install_dir
    bin/SetPerm
    chown root */bin/kddos
    chmod u+sx */bin/kddos
    ```
  – If you want to enable autostart, then see "Upgrading and restarting the agent by using non-root" on page 13 for information about ensuring that the agent has started automatically with the desired user ID.

Configuring the agent with a non-root user ID

If you install the UNIX OS agent or the Sybase agent as root, and you want to configure the Sybase agent with a non-root user ID, make sure that the user ID has the appropriate directory and file permissions to update the files in *install_dir* directory.

- For Linux operating systems, auto-discovery of databases is not available when a non-root is used for configuring the agent. On the console, select **3) No automatic search. Manual update only.** Do not select **1) Confine automatic search to running databases.** or **2) Also search for non-running databases(slower).** unless you are running the configuration as root.
- When you are prompted to enter the root password to enable the configuration to run the auto restart script, **Info - TO update auto restart script, you have to enter root password.**, press Enter if you do not want to enable this function at this time.

Running the agent with a non-root user ID

Start and stop the monitoring agent locally or remotely by using the same user ID that was used to configure the agent. All monitoring agent instances on a computer must use the same user ID when starting and stopping the monitoring agent. You cannot use `root` to start and stop the `syb` instance and use `sybase` to start and stop the `test` instance in the same installation directory. Data for attributes that are related to operating system metrics cannot be collected when a non-root user ID is used.

Granting permissions

You must grant permissions to the user ID that is used to monitor the Sybase ASE agent.

Before you begin

Before beginning this procedure, install the agent as described in the *IBM Tivoli Monitoring Installation and Setup Guide*.

About this task

The user ID used by the monitoring agent must have access to Sybase tables and install monitor tables.

This procedure includes creating a user ID for use by the monitoring agent and granting permission to the new user ID and installed Monitor tables.

If the Sybase agent is not running as root, the user ID under which it is running must belong to the Sybase group. This group must have read access to the Sybase log files.

You must have the Database administrator authorization role to perform the procedure to grant permissions.

Procedure

1. Open a command prompt.
2. Enter the command for the operating system you are using.
   - Windows

     `cd install_dir\tmaitm6\SQLLIB`

     Where:

     install_dir
     Home directory
   - UNIX

     `cd install_dir/misc`

     Where:

     install_dir
     Home directory
3. Use the isql command to log into the Sybase Server as user sa.
4. Enter the following command, which is case-sensitive, to configurethe ID used by the Sybase agent to communicate with Sybase Server:

   `1>sp_addlogin tivoli,password 2>go`

   Where:

   tivoli User ID. If the Tivoli user ID is not "tivoli", edit the koygrant.sql file and change "tivoli" to the Tivoli user ID.

password
Password assigned to the user

5. Enter the following case-sensitive command, which runs the koygrant.sql script to change the grant permission tables in the master database:

   ```
   isql -U sa -P password -S servername -i koygrant.sql
   ```

   Where:

   password
   Password for user "sa"

   servername
   Database server name

6. Create proxy tables used for the monitoring tables by running a script that is shipped with Sybase Server. To run the script, use the following case-sensitive command:

   ```
   isql -U sa -P password -S servername
   -i $SYBASE/ASE-12_5/scripts/installmontables
   ```

What to do next

When the permissions have been successfully granted, you can configure the monitoring agent.

To start the Sybase agent use the itmcmd dbagent or the itmcmd agent start command. This command is documented in the *IBM Tivoli Monitoring Command Reference*.

Local installation and configuration

You can install and configure the Sybase ASE agent locally by using a GUI, the command line, or the response file.

If you are installing and configuring locally, use the steps in "Installing monitoring agents" in the *IBM Tivoli Monitoring Installation and Setup Guide*. Also, use the agent-specific configuration information in this section and in Table 1 on page 9 for the Manage Tivoli Enterprise Monitoring Services window.

Installing and Configuring the agent on Windows systems

To install and configure the Sybase ASE agent locally on Windows systems, complete the following steps:

1. In the Configure Database Agents window, move the database servers that you want to monitor from the **Database Servers Available** field to the **Servers to Monitor** field.
2. After you select the database servers that you want to monitor, the following fields are populated in the Database Properties window:
   - **Server Name**
   - **Database Version**
   - **Home Directory**
   - **Error Log File**

   Enter your login and password in the **Login** and **Password** fields.

   Important: Use only ASCII characters in the fields in this window.
3. Before you click **OK** in the Configure Database Agents window, make sure all servers that you want to monitor are listed in the **Servers to Monitor** field. When you click **OK**, any servers that are not listed in the **Servers to Monitor** field are deleted from the Manage Tivoli Enterprise Monitoring Services window.

Installing and configuring the agent on UNIX and Linux systems

To install and configure the Sybase ASE agent locally on UNIX and Linux systems, complete the following tasks:

- Select **Advanced Configuration** to configure the database connection information that the Sybase agent needs to communicate with the database. This option displays a new window.
- Press Enter in the Welcome to CandleDBConfig panel, the Select Search limits panel is displayed.
  - In the Select Search limits panel, select **1) Confine automatic search to running databases** to have the Sybase agent discover information (instance name, SYBASE_HOME, and version) about databases that are currently running.
  - Before performing any discovery, the instances that were previously discovered in the Inventory of known Sybase servers before search section are listed.
    - The instance name that is listed without any parenthetical expression appended to the name indicates that the Sybase agent is previously configured to monitor this instance.
    - The instance name that is listed with (I) appended to the name indicates that the Sybase agent discovered the instance earlier, but is not completely configured to monitor that instance.
    - The instance name that is listed with (X) appended to the name indicates that the Sybase agent discovered this instance earlier, and the instance was selected to be excluded.
  - The Inventory of known Sybase servers before search section is based on what was found during previous configuration sessions. These databases might be running currently, or they might not exist any longer. To delete an instance from this list, you must delete the *ITMHOME*/config/*hostname*_oy_*instance*.cfg file associated with this instance.
  - The Inventory of known Sybase servers after search section lists all previously known instances, plus any additional instances that were found to be currently running.
    - Any new instances discovered have an (I) appended to the instance name to indicate that their configuration is incomplete.
    - You must specify the user ID and password to be used to connect to the instance to complete the configuration. Then, the Sybase Options panel is displayed.
- On the Select Search limits panel, select 2) Also search for non-running databases (slower) to have the Sybase agent discover information about non-running databases. This list contains the inventory before and after the discovery using the same conventions described previously. Then, the **Sybase Options** panel is displayed.
- In the Select Search limits panel, select **3) No automatic search. Manual update only** to immediately proceed to the Sybase Options panel without any searches.
- In the Sybase Options panel, select **3) Display or Modify defined servers** to review or modify the instance information. You can use this selection to view and modify the SYBASE_HOME, version, user ID, and password associated with this instance.
  - Select **1) All Sybase servers found. Ready to specify login/passwords** if you want to specify or modify the user ID, passwords, or both that the Sybase agent uses to communicate with the instances.
  - Select **2) Optional disk searches, manually add servers** if you want to perform additional searches based on specifying directories or users, or if you want to manually add an instance.
  - Select **4) Exclude/Include a server from the configuration** if you want to exclude a server or include a server that was previously excluded.
  - Select **5) Verify Monitoring Agent for Sybase installation** if you want to verify the Sybase agent installation. This option connects to the database and connects to the Tivoli Enterprise Monitoring Server and reports any potential problems with the installation. The verification process creates a koyagent managed system name, an offline entry that you must manually clear after this selection has completed.

Using the itmcmd command line

To install and configure this monitoring agent on UNIX systems, use one of the following commands:

- itmcmd config

  Use this command to initially configure the agent. This command prompt for Tivoli Enterprise Monitoring Server connection information, and information that is specific to the database instance.
- itmcmd dbconfig

  Use this command if the Tivoli Enterprise Monitoring Server information for the Sybase agent is already configured, and you need to only configure the database connection information.

You can also use these commands to verify that installation and configuration are complete.

See the *IBM Tivoli Monitoring Command Reference* for complete information about the parameters for these commands.

Example:

```
itmcmd dbconfig [-h install_dir] [-s server | -i ID| -p password] [oy]
```

Silent installation

If you are performing a silent installation by using a response file, see "Performing a silent installation of IBM Tivoli Monitoring" in the *IBM Tivoli Monitoring Installation and Setup Guide*.

Remote

You can install and configure the agent remotely by using the Tivoli Enterprise Portal or tacmd command line.

If you are installing and configuring remotely, use the steps in "Deploying non-OS agents" in the *IBM Tivoli Monitoring Installation and Setup Guide*. Also, use the agent-specific configuration information in Table 1 on page 9 and the information for using the Tivoli Enterprise Portal or using the tacmd command line.

Tivoli Enterprise Portal

To deploy this monitoring agent remotely using the command line, use the procedure, "Deploying through the portal," in the *IBM Tivoli Monitoring Installation and Setup Guide*.

In the New Managed System Configuration window, use the settings in Table 1 on page 9 for the **Tivoli Enterprise Portal Database Server Properties** tab and the **Agent** tab **Run as** information.

tacmd command line

To deploy this monitoring agent remotely using the command line, use the procedure, "Deploying through the command line," in the *IBM Tivoli Monitoring Installation and Setup Guide*. Also, use the agent-specific configuration information in Table 1 on page 9 for the tacmd addSystem command. The *IBM Tivoli Monitoring Command Reference* has complete information about the tacmd addSystem command.

Use the -t or --type TYPE parameter to specify the Sybase agent that you are configuring: OY.

Specify the properties with the -p or -property option.

For example:

```
tacmd addSystem -t OY -n myhostname:KUX -p
INSTANCE=dbServer
DBSETTINGS.db_ver=12.5.3
DBSETTINGS.db_home="/opt/sybase/ASE-12_5"
DBSETTINGS.db_dir="/opt/sybase"
DBSETTINGS.SYBASE_OCS="/opt/sybase/OCS-12_5"
DBSETTINGS.db_errorlog="/opt/sybase/ASE-12_5/install/dbServer.log"
DBSETTINGS.db_login=tivoli
DBSETTINGS.db_password=tivoli_password
```

The parameters in the example are shown on separate lines for clarity. When typing the command, type all of the parameters on one line.

Configuration settings

Table 1 contains a list of the configuration settings for each of the interfaces where you can specify these settings and a description of each setting.

Table 1. Names and descriptions of configuration settings for each interface

Interfaces where configuration settings are specified			Description	Examples
Manage Tivoli Enterprise Monitoring Services window	**Tivoli Enterprise Portal**	**tacmd command line**		
Server Name	Database Server Instance Name[1]	INSTANCE	Name of the Sybase Database Server instance that is to be monitored. Use the Sybase Server instance name. On UNIX, the instance name cannot contain any of the following characters: . (period) : (colon) = (equals) " (double quote) The name must be short enough to fit within the total managed system name, which must be between 2 and 32 characters in length.	—
—	—	DBSETTINGS.db_dir	(UNIX only) Database server instance directory path	`/opt/sybase`
Home Directory	Database Server Home Directory Path[1]	DBSETTINGS.db_home	(Windows only) Directory path of the database server instance.	(Windows only) `c:\sybase`
Extended Parameters	Extended Parameters	DBSETTINGS.db_extparms	List of cursors to be disabled. **Note:** The DB2, DB15, and KOYSEGD cursors can be disabled using this configuration setting.	DBD2

Table 1. Names and descriptions of configuration settings for each interface (continued)

Interfaces where configuration settings are specified			Description	Examples
Manage Tivoli Enterprise Monitoring Services window	**Tivoli Enterprise Portal**	**tacmd command line**		
—	Database Server ASE Directory Location	DBSETTINGS.db _home	(UNIX only) Directory path of the ASE directory.	(UNIX only) `/opt/sybase/ASE-12_5`

—	Database Server Open Client Directory	DBSETTINGS .SYBASE_OCS	Installations directory for the Sybase database Open Client Services Directory	UNIX:
				`/opt/sybase/OCS-12_5`
				Windows:
				`c:\sybase\OCS-12_5`

Login	Database Server User Id[1]	DBSETTINGS.db _login	Sybase Server user ID to be used to connect to the Sybase Server. See "Granting permissions" on page 5 for more information. Use only ASCII characters.	`tivoli`
Password	Database Server Password[1]	DBSETTINGS.db _password	Password for the Sybase Server user ID Use only ASCII characters.A null password is not acceptable.	—
Database Version	Database Server Version[1]	DBSETTINGS.db _ver	Sybase Server version.	`12.5.3`

Error Log File	Database Server Error Log File[1]	DBSETTINGS.db _errorlog	File path for the Sybase Server log file	Windows:
				`c:\sybase\ASE-12_5\ install\SERVER.log`
				UNIX:
				`/opt/sybase/ASE-12_5/ install/SERVER.log`

This account[3] Password[3]	Username[3]	For Windows: _WIN32_STARTUP _Username For UNIX: _UNIX_STARTUP _Username	On Windows: The default is System Account. If you choose to specify a different user or account, then see "Running the agent as a non-administrator user" on page 3 for information about special considerations. On UNIX: The default is blank (root is used). If you choose to specify a different user, then see "Running the agent as a non-administrator user" on page 3 for information about special considerations.	—

Table 1. Names and descriptions of configuration settings for each interface (continued)

Interfaces where configuration settings are specified			Description	Examples
Manage Tivoli Enterprise Monitoring Services window	**Tivoli Enterprise Portal**	**tacmd command line**		
[1] **Database Server Properties** tab [2] **Agent** tab **Run as** area [3] **Change Startup**				

Starting and stopping the Sybase agent

You can start or stop the Sybase ASE agent locally or remotely.

After you install and configure the Sybase agent, you must start the agent using one of the interfaces relevant to the operating system that you are using. Table 2 shows which interfaces you can use with Windows and UNIX locally and remotely.

Table 2. Interfaces for starting and stopping the Sybase agent

Operating system	Local	Remote
Windows	• Manage Tivoli Enterprise Monitoring Services • tacmd startAgent • tacmd stopAgent • tacmd restartAgent	• Tivoli Enterprise Portal • tacmd startAgent • tacmd stopAgent • tacmd restartAgent
UNIX	• Manage Tivoli Enterprise Monitoring Services • itmcmd agent • itmcmd dbagent	• Tivoli Enterprise Portal • tacmd startAgent • tacmd stopAgent • tacmd restartAgent

Manage Tivoli Enterprise Monitoring Services

To use Manage Tivoli Enterprise Monitoring Services to start the Sybase agent, the monitoring instance owner must start the Manage Tivoli Enterprise Monitoring Services utility.

Enter only ASCII characters in the fields for the Manage Tivoli Enterprise Monitoring Services window.

Tivoli Enterprise Portal

See "Starting and stopping a monitoring agent" in the "Working with monitoring agents" topic of the *IBM Tivoli Monitoring Administrator's Guide* for information about using the Tivoli Enterprise Portal to start or stop the monitoring agent.

itmcmd command line

In the following examples, the itmcmd agent or the itmcmd dbagent command is used to start and stop the monitoring agent:

- `itmcmd agent`

For example:

```
./itmcmd agent start oy
```

The -o parameter is optional:

-o Specifies the database instance to start or stop. The database instance name must match the name used for starting the database. For example:

```
itmcmd agent -o sybase start oy
```

- `itmcmd dbagent`

  For example:

  ```
  ./itmcmd dbagent start oy
  ```

  The -s parameter is optional:

  -s Specifies the database instance to start or stop. The database instance name must match the name used for starting the database. For example:

  ```
  itmcmd dbagent -s sybase start oy
  ```

For information about using the itmcmd commands, see the *IBM Tivoli Monitoring Command Reference*.

tacmd command line

In the following examples, the tacmd command is used to start, stop, or restart the Sybase agent:

- `tacmd startAgent -t oy`
- `tacmd stopAgent -t oy`
- `tacmd restartAgent -t oy`

For information about using the tacmd commands, see the *IBM Tivoli Monitoring Command Reference*.

Configuring the UTF-8 character set

You must configure the UTF-8 character set so that the Sybase ASE agent can collect data from the Sybase Server to display on the Tivoli Enterprise Portal.

About this task

You must configure the UTF-8 character set so that the Sybase agent can collect data from the Sybase Server to display on the Tivoli Enterprise Portal, which uses the UTF-8 character set to display data.

The Sybase agent must have the UTF-8 charset configured for translation purposes.

You must have Sybase system administrator access to perform this procedure.

Before beginning this procedure, determine which character sets you have configured using the Sybase Server **isql** command to query the Sybase Server for all of the configured character sets. At the isql prompt, enter the following query to list the configured character sets:

```
1> use master
2> go
1> select csid, id, name from syscharsets
2> go
csid id  name
 ---- --- ------------------------------
0   0 ascii_8
0   1 iso_1
1  50 bin_iso_1
```

Procedure

1. Bring up a command window.
2. Go to the Sybase/charsets/utf8 directory.
3. Run the following command:

   ```
   charset -Usa -Ppassword -Sservername binary.srt utf8
   ```

4. Restart the Sybase agent so that it can use the UTF-8 charset.

   If the UTF-8 charset is not available, you receive the following error message: `Open Client Server Message Number: 2409 Character set conversion is not available between client character set 'utf8' and server character set 'charset'.`

   Note: If your server uses the cp850 character set, you receive the following message that you can safely ignore: `Message String: Character set conversion is not available between client character set 'utf8' and server character set 'cp850'.`

Results

When you finish this procedure, determine whether the UTF-8 character set is configured by running the **isql** command that you ran before beginning this procedure.

Enabling Unicode conversions

You must configure the Sybase ASE agent to collect data in the unicode format.

About this task

To collect data in the Unicode format, the Sybase agent must be configured to convert between the configured code and the UTF8 code page, which the agent uses. Perform this procedure to ensure that the UTF8 conversion occurs. This procedure ensures that the code page-specific data in the Sybase agent converts to UTF8 and is displayed correctly in the Tivoli Enterprise Portal.

The Sybase agent must have the UTF-8 charset that is configured for translation purposes.

You must have Sybase system administrator access to complete this procedure.

Before you start this procedure, determine whether Unicode conversions are already enabled. Run the following command from an isql prompt:

```
1> sp_configure "enable unicode conversions"
2> go
```

If the values that are displayed for Config Value and Run Value are not 0, no further steps are required. If the values are 0, complete the step in the procedure.

Procedure

1. At the isql prompt, run the following command to enable the Unicode conversions:

   ```
   1&gt; sp_configure "enable unicode conversions", 2
   2&gt; go
   ```

   If the Sybase agent is running, it restarts.
2. When you finish Step 1, determine whether the UTF-8 character set is configured by running the **isql** command that you ran before you started this procedure.

Upgrading and restarting the agent by using non-root

The monitoring agent can run using a non-root user ID on UNIX and Linux systems.

About this task

You can run the **itmcmd agent start** command while logged in as a non-root user. Also, you can remotely deploy the agent by using the `Run As` option on the GUI or by using the **_UNIX_STARTUP_.Username** option on the **tacmd addSystem** command line. If the agent is running by using a non-root user ID, and then the agent is upgraded, restarted remotely, restarted as a result of a system reboot, or the **itmcmd agent start** command is run by using the root user ID, the monitoring agent subsequently runs as the root user. To confirm the user ID that the monitoring agent is using, run the following command:

```
install_dir/bin/cinfo -r
```

If the agent is using root, and that is not the desired user ID, then use the following steps to restart the agent:

Procedure

1. Log in as root.
2. Run the **itmcmd agent stop** command.
3. Log in (or 'su') to the user ID that you want the agent to run as.
4. Run the **itmcmd agent start** command.

Results

If the agent was running as root because of a system reboot, then edit the startup file using the following steps so that the appropriate user ID is used the next time the system is rebooted:

1. Look at *install_dir*/registry/AutoStart, and get *NUM*.
2. Edit the autostart for your operating system.

   The location of the startup file is platform dependent as follows:
   - AIX®: /etc/rc.itm*NUM*
   - Linux: /etc/init.d/ITMAgents*NUM*
   - Solaris: /etc/init.d/ITMAgents*NUM*
3. Add or modify entries for your operating system using the following command:

   ```
   /usr/bin/su - user
   -c "install_dir/bin/itmcmd agent
   -h install_dir
   -o instancename
   start product_code"
   ```

   Where:

   user User ID that used to start the process

   instancename
   Name of the database instance

   install_dir
   Name of the directory

   product_code
   2-character product code for the agent, for example, oy for the Sybase agent

   Examples:

   - For AIX, add entries with the following format:

     ```
     su - USER -c "/opt/IBM/ITM/bin/itmcmd agent
     -o INSTANCE start oy"
     ```

     Where:

USER Name of the user

INSTANCE
Name of the database instance

- For Linux and Solaris, add entries with the following format:

```
/bin/su - USER -c "/opt/IBM/ITM/bin/itmcmd agent
-o INSTANCE start oy >/dev/null 2>&1"
```

Where:

USER Name of the user

INSTANCE
Name of the database instance

4. Repeat Steps 1 on page 14 through 3 on page 14 for each instance of the monitoring agent that was stopped.
5. Save the file.

Appendix. ITCAM for Applications documentation library

Various publications are relevant to the use of ITCAM for Applications.

For information about how to access and use the publications, see **Using the publications** (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.itm.doc_6.3/common/using_publications.htm).

To find publications from the previous version of a product, click **Previous versions** under the name of the product in the **Contents** pane.

Documentation for this product is in the ITCAM for Applications Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itcama.doc_7.2.1/welcome_apps721.html):

- Quick Start Guide
- Offering Guide
- Download instructions
- Links to Prerequisites
- Installation and Configuration Guide for each agent
- Link to Reference information for each agent
- Link to Troubleshooting Guide for each agent

Prerequisite publications

To use the information about the agents effectively, you must have some prerequisite knowledge.

See the following information at the IBM Tivoli Monitoring Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/index.jsp) to gain prerequisite knowledge:

- *IBM Tivoli Monitoring Administrator's Guide*
- *IBM Tivoli Monitoring Installation and Setup Guide*
- *IBM Tivoli Monitoring High Availability Guide for Distributed Systems*
- IBM Tivoli Monitoring: Installation and Configuration Guides for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: User's Guides for the following agents: Agentless OS monitors, Log file agent, System p agents, Systems Director base agent
- *IBM Tivoli Monitoring Agent Builder User's Guide*
- *IBM Tivoli Monitoring Command Reference*
- *IBM Tivoli Monitoring: Messages*
- *IBM Tivoli Monitoring Troubleshooting Guide*
- IBM Tivoli Monitoring: References for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: Troubleshooting Guides for the following agents: Operating System agents and Warehouse agents
- *Tivoli Enterprise Portal User's Guide*

Related publications

The publications in related information centers provide useful information.

See the following information centers, which you can find by accessing Tivoli Documentation Central (https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/Tivoli%20Documentation%20Central):

- Tivoli Monitoring
- Tivoli Application Dependency Discovery Manager
- Tivoli Business Service Manager
- Tivoli Common Reporting
- Tivoli Enterprise Console
- Tivoli Netcool/OMNIbus

Tivoli Monitoring Community on Service Management Connect

Service Management Connect (SMC) is a repository of technical information that is organized by communities.

Access Service Management Connect at https://www.ibm.com/developerworks/servicemanagement.

For information about Tivoli products, see the Application Performance Management community (http://www.ibm.com/developerworks/servicemanagement/apm/index.html).

Connect, learn, and share with Service Management professionals. Get access to developers and product support technical experts who provide their perspectives and expertise. You can use SMC for these purposes:

- Become involved with transparent development, an ongoing, open engagement between other users and IBM developers of Tivoli products. You can access early designs, sprint demonstrations, product roadmaps, and prerelease code.
- Connect one-on-one with the experts to collaborate and network about Tivoli and the Application Performance Management community.
- Read blogs to benefit from the expertise and experience of others.
- Use wikis and forums to collaborate with the broader user community.

Other sources of documentation

You can obtain additional technical documentation about monitoring products from other sources.

See the following sources of technical documentation about monitoring products:

- IBM Integrated Service Management Library (http://www.ibm.com/software/brandcatalog/ismlibrary/) is an online catalog that contains integration documentation as well as other downloadable product extensions.
- IBM Redbook publications (http://www.redbooks.ibm.com/) include Redbooks® publications, Redpapers, and Redbooks technotes that provide information about products from platform and solution perspectives.
- Technotes (http://www.ibm.com/support/entry/portal/software), which are found through the IBM Software Support website, provide the latest information about known product limitations and workarounds.

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