Oracle® Enterprise Manager

System Monitoring Plug-in Installation Guide for Microsoft SQL Server

Release 6 (3.2.3.1.0)

E11225-02

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This document provides a brief description about the Oracle System Monitoring Plug-in for Microsoft SQL Server, details on the versions the plug-in supports, prerequisites for installing the plug-in, and step-by-step instructions on how to download, install, verify, and validate the plug-in.

Description

The System Monitoring Plug-in for Microsoft SQL Server extends Oracle Enterprise Manager Grid Control to add support for managing Microsoft SQL Server instances. By deploying the plug-in within your Grid Control environment, you gain the following management features:

- Monitor SQL Server instances.
- Gather configuration data and track configuration changes for SQL Server instances.
- Raise alerts and violations based on thresholds set on monitored metrics and configuration data.
- Provide rich out-of-box reports based on the gathered data.
- Support monitoring by a remote Agent. For remote monitoring, the agent need not be on the same host as the SQL Server.

Versions Supported

This plug-in supports the following versions of products:

- Enterprise Manager Grid Control 10.2.0.3 or higher
- Oracle Management Agent 10.2.0.1 or higher for Windows
- Standard, Enterprise, and Workgroup editions of Microsoft SQL Server 2000 and Microsoft SQL Server 2005 as detailed below:
  - Microsoft SQL Server 2000 (32-bit)
  - Microsoft SQL Server 2005 (32-bit)
  - Microsoft SQL Server 2005 (64-bit) running on x64 or Itanium-based servers
- Microsoft SQL Server 2005 Cluster (Active Passive) (Only remote monitoring is supported)

Prerequisites

The following prerequisites must be met before you can deploy the plug-in:

- Microsoft SQL Server 2000 or Microsoft SQL Server 2005, or Microsoft SQL Server 2005 Cluster (Active-Passive) is installed.
- The following components of Oracle Enterprise Manager Grid Control are installed and running:
  - Oracle Enterprise Manager Grid Control 10.2.0.3 or higher
  - Oracle Management Agent for Windows 10.2.0.1 or higher

    For 10.2.0.1 Agent, apply the one-off patch for bug #5587980. Refer to Metalink and Oracle bug #5587980 for more information.

    For 10.2.0.2 Agent, apply the one-off patch for bug# 5587980. Refer to Metalink and Oracle bug #5587980 for more information.

    You can install the Agent on the same computer as SQL Server 2000 or SQL Server 2005 (referred to as local Agent monitoring), or you can install the Agent on a different computer from SQL Server (referred to as remote Agent monitoring).
- (For SQL Server 2000) Windows Management Instrumentation (WMI) provider of the SQL Server are installed and enabled. Enable support by running the setup.exe file located in the SQL Server Installation CD:

  <CD_Drive>/x86/other/wmi
- Windows Management Instrumentation Service is up and running.
- Preferred credentials are set on all Agents where you want to deploy the plug-in.
- OS privileges for the user (set in the Preferred Credentials for the Agent) should meet the requirements documented in "Setting Credentials for the Job System to Work with Enterprise Manager" in one of the following installation guides:
  - Oracle Database Installation Guide 10g Release 2 (10.2) for Microsoft Windows (32-Bit) — B14316-01
  - Oracle Database Installation Guide 10g Release 2 (10.2) for Microsoft Windows (64-Bit) on Intel Itanium — B14317-02
  - Oracle Database Installation Guide 10g Release 2 (10.2) for Microsoft Windows (x64) — B15681-02

  These guides are listed in the Installation Guides section of the Oracle Database Documentation Library at the following location:

  `http://www.oracle.com/pls/db102/homepage`

  Note: If you do not assign the correct privileges for users, the deployment will fail.
- TCP/IP is enabled for the SQL Server instance. For details, see "TCP/IP Port Information" on page -4.

Deploying the Plug-in

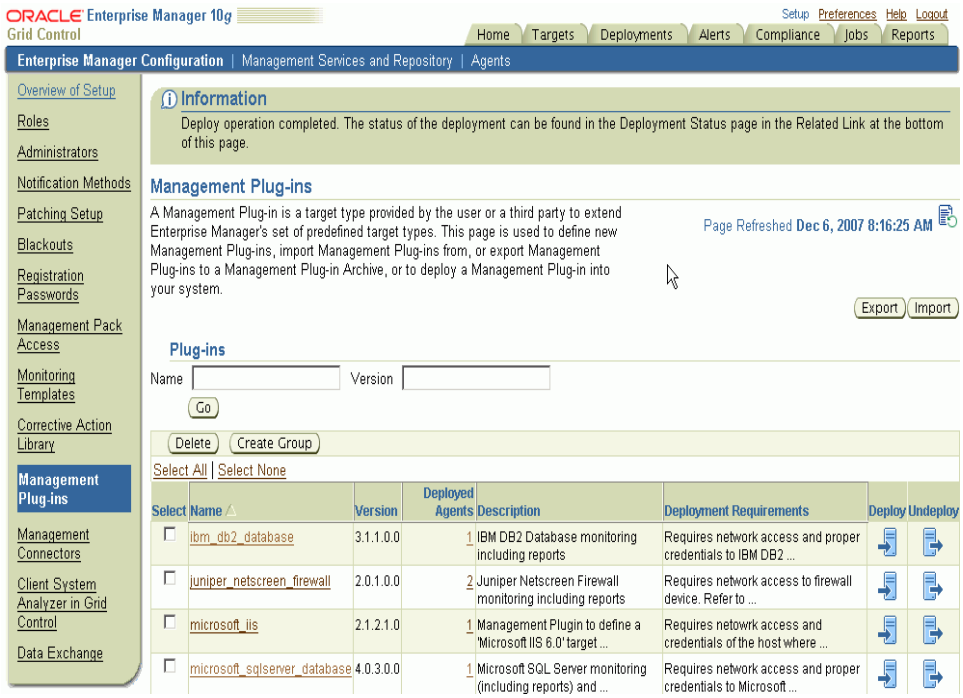
After you ensure that the prerequisites are met, follow these steps to deploy the plug-in:

1. Download the SQL Server Plug-in archive to your desktop or computer on which the browser is launched. You can download the archive from the Oracle Technology Network (OTN).
2. Log into Enterprise Manager Grid Control as a Super Administrator.
3. Click the **Setup** link in the upper right corner of the Grid Control Home page, then click the **Management Plug-ins** link on the left side of the Setup page.
4. Click **Import**.
5. Click **Browse** and select the plug-in archive.
6. Click **List Archive**.
7. Select the plug-in and click **OK.**
8. Verify that you have set preferred credentials on all Agents where you want to deploy the plug-in.
9. In the Management Plug-ins page, click the icon in the **Deploy** column for the SQL Server plug-in. The Deploy Management Plug-in wizard appears.
10. Click **Add Agents**, then select one or more Agents to which you want to deploy the plug-in. The wizard reappears and displays the Agent you selected.
11. Click **Next**, then click **Finish.**

    If you see an error message stating that the preferred credential is not set up, go to the Preferences page and add the preferred credentials for the Agent target type.

    If there are no errors, then you will see the following screen:

Figure 1 Successful Deployment



12. To check the deployment status, go to Related Links and click the link **Deployment Status.**

TCP/IP Port Information

The following sections provide information you require to enable the TCP/IP port and to find the TCP/IP port for a particular SQL server instance.

Enabling TCP/IP Port

For SQL Server 2000

1. From the SQL Server Enterprise Manager, right-click the SQL Server instance in the left panel and select **Properties.** SQL Server Properties dialog box appears.
2. In General tab, click **Network Configuration.** The SQL Server Network Utility dialog box appears.
3. Ensure that TCP/IP is listed in the Enabled protocols list.

For SQL Server 2005

1. From the **SQL Server Configuration Manager,** select **SQL Server 2005 Network Configuration** in the left panel and navigate to the SQL Server instance.

   The right panel displays all protocols for the specified SQL Server instance and their status.

2. Ensure that TCP/IP is enabled.
3. (If TCP/IP is disabled), right-click **TCP/IP** and select **Properties.** The TCP/IP Properties dialog box appears.
4. In the Protocol tab, select **enabled,** and click **Apply.**
5. Restart the SQL Server instance.

Finding TCP/IP Port

To find the TCP/IP port number for a particular SQL Server instance, in the registry editor, navigate to:

- (Non-default SQL Server instance) `HKEY_LOCAL_MACHINE\Software\Microsoft\Microsoft SQL Server\<Instance Name>\MSSQLServer\SuperSocketNetLib\Tcp`
- (Default SQL Server instance) `HKEY_LOCAL_MACHINE\Software\Microsoft\MSSQL Server\MSSQLServer\SuperSocketNetLib\Tcp`

The TCP Port provides the port number.

Adding Instances for Monitoring

After successfully deploying the plug-in, follow these steps to add the plug-in target to Grid Control for central monitoring and management:

1. From the Agent home page where the plug-in was deployed, select the Microsoft SQL Server target type from the **Add** drop-down list, then click **Go**. The Add Microsoft SQL Server page appears.
2. Provide the following information for the properties:
   - **Name —** Unique target name across all the Grid Control targets, such as SqlServer2k_Hostname. This is the display name in the Grid Control. It represents this SQL Server target across all user interfaces within Grid Control.
   - **JDBC URL —** URL for JDBC. The default port is 1433.

     For example,

     `jdbc:sqlserver://<host>:<port>`
   - **JDBC Driver —** (Optional) SQL+Driver JDBC driver class name.

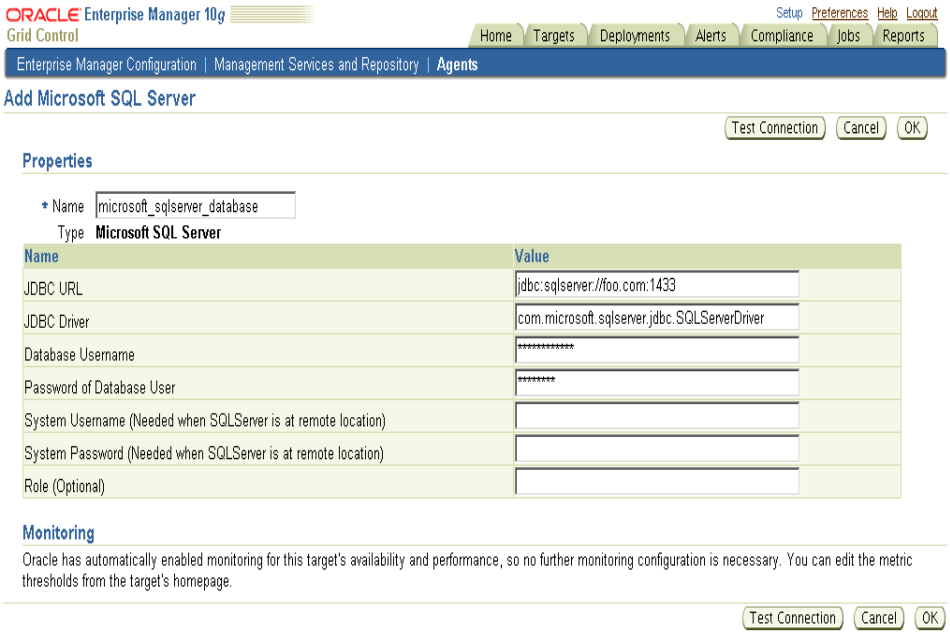
     For example,

     `com.microsoft.sqlserver.jdbc.SQLServerDriver`
   - **Database Username —** Valid user for the database in sysadmin fixed server role.
   - **Password for the Database User —** Corresponding password for the database user
   - **System Username —** Valid host user name. Required only for remote Agent monitoring. For more information, see "Configuring Remote Connections to Monitor Targets".

- **System Password —** Password for the Username. Required only for remote Agent monitoring.
- **Role —** (Optional)

3. Click Test Connection to make sure the parameters you entered are correct.
4. Reenter the encrypted parameters from step 2 if the connection test was successful, then click **OK**.

Figure 2 Add Microsoft SQL Server



Important: If you do not reenter the encrypted parameters before clicking **OK**, you might encounter an error suggesting that the login failed.

After you deploy and configure the plug-in to monitor one or more targets in the environment, you can customize the monitoring settings of the plug-in. This alters the collection intervals and threshold settings of the metrics to meet the particular needs of your environment. If you decide to disable one or more metric collections, this could impact the reports that the metric is a part of.

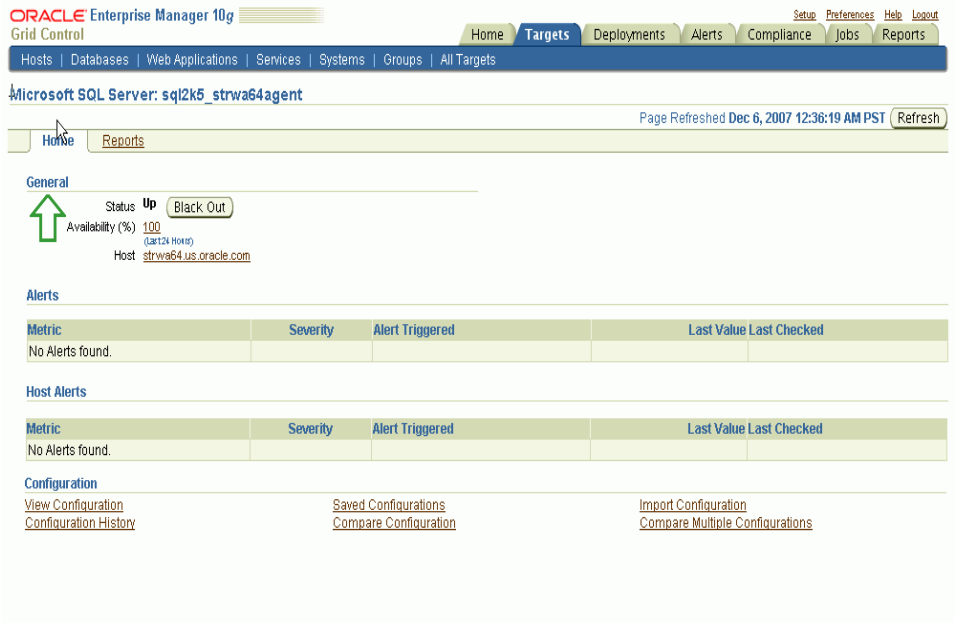
Verifying and Validating the Plug-in

After waiting a few minutes for the plug-in to start collecting data, use the following steps to verify and validate that Enterprise Manager is properly monitoring the plug-in target:

1. Click the SQL Server target link from the Agent home page Monitored Targets table.

   The Microsoft SQL Server home page appears.

Figure 3 Microsoft SQL Server Home Page



2. Verify that no metric collection errors are reported in the Metrics table.
3. Ensure that reports can be seen and no errors are reported by clicking the **Reports** property page.
4. Ensure that configuration data can be seen by clicking the **View Configuration** link in the Configuration section. If configuration data does not immediately appear, click **Refresh** in the View Configuration page.

Upgrading the Plug-in

Follow these steps to upgrade the plug-in:

1. Download the SQL Server Plug-in archive to your desktop or computer on which the browser is launched. You can download the archive from the Oracle Technology Network (OTN).
2. Log into Enterprise Manager Grid Control as a Super Administrator.
3. Click the **Setup** link in the upper right corner of the Grid Control Home page, then click the **Management Plug-ins** link on the left side of the Setup page.
4. Click **Import**.
5. Click **Browse** and select the plug-in archive that you have downloaded for upgrading.
6. Click **List Archive**.
7. Select the plug-in and click **OK.**
8. Verify that preferred credentials are set on all Agents to which you want to deploy the plug-in.

9. Blackout the Microsoft SQL Server targets for agents to which you want to deploy higher version of the plug-in. Ensure that you select immediate blackout.
10. In the Management Plug-ins page, click the icon in the **Deploy** column for the SQL Server plug-in. The Deploy Management Plug-in wizard appears.
11. Click **Add Agents**, then select one or more Agents to which you want to deploy the plug-in. The wizard reappears and displays the Agent you selected.
12. Click **Next**, then click **Finish.**

    If you see an error message stating that the preferred credential is not set up, go to the Preferences page and add the preferred credentials for the Agent target type.
13. Remove blackout for the targets (required only if Step 9 applies).

Undeploying the Plug-in

Follow these steps to undeploy the plug-in from an Agent:

1. Log in to Enterprise Manager Grid Control as a Super Administrator.
2. Select the **Targets** tab, then the **All Targets** subtab. The All Targets page appears.
3. Select the Microsoft SQL Server Plug-in target and click **Remove**. You must do this step for all targets of the plug-in.
4. Make sure that the preferred credentials are set on the Agents where the plug-in is deployed.
5. Click the **Setup** link in the upper right corner of the All Targets page, then click the Management Plug-ins link on the left side of the Setup page. The Management Plug-ins page appears.
6. Click the icon in the **Undeploy** column for the Microsoft SQL Server Plug-in. The Undeploy Management Plug-in page appears.
7. Check all the Agents that are currently deployed with the Microsoft SQL Server Plug-in and click **OK**.

   You must undeploy the plug-in from every Agent in the system to completely remove it from the enterprise.
8. Select the Microsoft SQL Server Plug-in on the Management Plug-in page and click **Delete**.

Configuring Connections

This section provides details about configuring connections for monitoring targets and executing jobs.

Configuring Remote Connections to Monitor Targets

If you want to monitor targets using remote Agents, then Oracle recommends that you do the following security configurations on every system where SQL Server target resides.

- Set WMI namespace security (Refer to the 'Modifying Windows Management Instrumentation Control Permissions' section of the *Oracle Enterprise Manager System Monitoring Plug-in Troubleshooting Guide*.)
- Restrict access to the registry from a remote computer (Refer to the 'Modifying Registry Permissions' section of the *Oracle Enterprise Manager System Monitoring Plug-in Troubleshooting Guide*.)
- Set DCOM Security to allow user to access a computer remotely (Refer to the 'Modifying DCOM Remote Access Permissions' section of the *Oracle Enterprise Manager System Monitoring Plug-in Troubleshooting Guide*.)

Configuring Connections to Execute Jobs

If you want to execute jobs using local or remote Agents, then Oracle recommends that you do the following security configurations on every system where SQL Server target resides.

- Set WMI namespace security (Refer to the 'Modifying Windows Management Instrumentation Control Permissions' section of the *Oracle Enterprise Manager System Monitoring Plug-in Troubleshooting Guide*.)
- Set DCOM Security to allow user to access a computer remotely (Refer to the 'Modifying DCOM Remote Access Permissions' section of the *Oracle Enterprise Manager System Monitoring Plug-in Troubleshooting Guide*.)

For configuration details, refer to the following:

- Microsoft Help and Support Web site.

  To access the Web site, go to the following URL:

  `http://support.microsoft.com`

- *Oracle Enterprise Manager Oracle Enterprise Manager System Monitoring Plug-in Troubleshooting Guide* available at the following URL:

  `http://www.oracle.com/technology/documentation/oem.html`

- Document 367797.1 on Oracle *Metalink* .

  To locate document 367797.1:

  1. Go to the following URL:

     `http://metalink.oracle.com`

  2. Click **Advanced** at the top of the Oracle *Metalink* page.
  3. Enter 367797.1 in the **Document ID** field and click **Submit.**

Creating and Editing Jobs

To create and edit jobs, follow these steps:

1. In Grid Control, click the **Jobs** tab. Grid Control displays the Job Activity page.
2. Select a job type from the **Create Job** menu and click **Go**.

   You can select one of these:

- Microsoft SQL Server and/or SQL Agent Start
- Microsoft SQL Server and/or SQL Agent Stop
- Microsoft SQL Server Pause or Resume

Note: If you want to edit a job, then select an existing job from the list and click **Edit**.

3. In the **General** tab of the Create <*Job Type*> Job page, provide a name for the job and add the individual targets or one composite target such as a Group.

Note: If you are editing a job, then modify the job name and the selected targets.

4. In the **Parameters** tab of the Create <*Job Type*> Job page, from the **Options** menu, select an appropriate option to make the job function accordingly when it starts.

   You can select one of these options:

Table 1 Job Parameters Options

Job Type	Available Options
Microsoft SQL Server and/or SQL Agent Start	■ Start SQL Server and SQL Server Agent services (You will select this option when both, SQL Server and SQL Server Agent, are stopped or when SQL Server is running but the SQL Server Agent is stopped) ■ Start SQL Server service (You will select this option when both, SQL Server and SQL Server Agent, are stopped and if you want to start only the SQL Sever)
Microsoft SQL Server and/or SQL Agent Stop	■ Stop SQL Server and SQL Server Agent services (You will select this option when both, SQL Server and SQL Server Agent, are running, when SQL Server is paused but the SQL Server Agent is running, when SQL Server is running/paused but the SQL Server Agent is stopped) ■ Stop SQL Server Agent service (You will select this option when you want to stop a running SQL Server Agent)
Microsoft SQL Server Pause or Resume	■ Pause SQL Server service (You will select this option when you want to pause a running SQL Server) ■ Resume SQL Server service (You will select this option when you want to resume a paused SQL Server)

   Grid Control starts the SQL server and agent services according to the selection made.

Note: If you are editing a job, then modify the options for that job.

5. In the **Credentials** tab of the Create <*Job Type*> Job page, select an appropriate option for credentials.

   You can choose to use the preferred credentials that are already set or override the preferred credentials with new credentials. In either case, you need to provide the credetials for agent host and database host.

   To set the preferred credentials, click **Preferences** at the top-right corner of the Grid Control console. From the left-vertical navigation bar, click **Preferred Credentials**. Grid Control displays the Preferred Credentials page. On this page, you can set the preferred credentials

   Note: If you are editing a job, then modify the credentials set for that job.

6. In the **Schedule** tab of the Create <*Job Type*> Job page, schedule the job.

   Note: If you are editing a job, then modify the schedule prepared for that job.

7. In the **Access tab** of the Create <*Job Type*> Job page, define or modify the access you want other users to have to this job.

   Note: If you want to edit, then modify the access levels for that job.

8. Click **Submit** to create the job.

Troubleshooting the Plug-In

To resolve various issues that you might encounter while using the plug-in, see the *Oracle Enterprise Manager System Monitoring Plug-in Troubleshooting Guide* available at the following URL:

http://www.oracle.com/technology/documentation/oem.html

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