Oracle® Enterprise Manager
Release Notes for System Monitoring Plug-ins
Release 6 (6.0)
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Oracle Enterprise Manager System Monitoring Plug-Ins (System Monitoring Plug-Ins) enhance the solutions offered by Enterprise Manager Grid Control by infusing additional capabilities to monitor for non-Oracle components, such as third-party databases, third-party middleware, storage, and network devices.

The System Monitoring Plug-Ins are developed by Oracle in partnership with third-party vendors. They offer a single, integrated monitoring solution for any application built on Oracle. If you have invested in other system management tools, then you can integrate System Monitoring Plug-Ins with Enterprise Manager Grid Control to monitor those third-party components, thereby reducing the total cost of ownership and increasing operational efficiencies.

This document is the Release Notes for System Monitoring Plug-Ins released as part of Release 6, in December 2007. You can find the following information in this document:

- Documentation Description and Access
- What Is New
- Installing a Plug-In
- Known Issues
- Issues Fixed in This Release
- Troubleshooting Plug-ins
- Documentation Accessibility

Documentation Description and Access

This document contains release notes for the following System Monitoring Plug-Ins:

- Apache Tomcat
- Check Point Firewall
- EMC CLARiiON System
- IBM DB2 Database
- Juniper Networks NetScreen Firewall
- Microsoft SQL Server
- Sybase Adaptive Server Enterprise (ASE)
- VMware ESX Server
You can access the latest documentation for System Monitoring Plug-Ins from Oracle Technology Network (OTN) available at:
http://www.oracle.com/technology/documentation/oem.html
Alternatively, if you have a DVD, launch the index.htm file from a browser. You can find data sheets, certification matrix, and other documentation on OTN under Enterprise Manager and in OracleMetalink.

What Is New
This section provides a summary of what is new in this release of System Monitoring Plug-Ins.

New Plug-Ins in This Release
The following are the new System Monitoring Plug-Ins released in this release.

System Monitoring Plug-In for Apache Tomcat
This release features a new plug-in called System Monitoring Plug-in for Apache Tomcat. This plug-in extends Oracle Enterprise Manager Grid Control (Grid Control) to add support for managing Apache Tomcat. By deploying the plug-in in your Grid Control environment, you gain the following management features:

- A comprehensive set of metrics that help you to determine the health of your plug-in.
- Predefined reports that help you monitor the performance of your plug-in.
- Alerts that can be configured to notify you of the problems with the plug-in.
- Other management features that help you monitor the end-user performance data.

System Monitoring Plug-In for Sybase Adaptive Server Enterprise (ASE)
This release features a new plug-in called System Monitoring Plug-in for Sybase Adaptive Server Enterprise (ASE). This plug-in extends Oracle Enterprise Manager Grid Control to add support for managing Sybase Adaptive Server Enterprise (ASE). By deploying the plug-in in your Grid Control environment, you gain the following management features:

- Monitor Sybase Adaptive Server instances.
- Gather configuration data and track configuration changes for Sybase Adaptive 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 Sybase Adaptive Server.

Updates to Existing Plug-Ins
The following are the existing System Monitoring Plug-Ins re-released with updates.
System Monitoring Plug-In for Microsoft SQL Server

- **Remote Monitoring Support for Microsoft SQL Server 2005 Cluster (Active Passive):** This release provides support for remote monitoring for Microsoft SQL Server 2005 Cluster (Active Passive) installation.

- **Automated Set Up of JDBC Driver:** For the previous releases of System Monitoring Plug-In for SQL Server, you had to manually set up the SQL Server JDBC driver. For this release, the JDBC drivers are packaged with the plug-in and therefore, you do not have to manually set it up.

System Monitoring Plug-In for IBM DB2 Database

This release has the following changes:

- **Customization of Collection Frequency for All Metrics:** For the previous releases of System Monitoring Plug-In for IBM DB2, you were able to customize the collection frequency only for a few metrics. In this release, you can customize the collection frequency for all the metrics.

- **New Tablespace Utilization (%) Metric:** A new `Tablespace Utilization (%)` metric has been added to the list. This metric indicates the table space utilization. An alert is triggered when it exceeds the threshold specified in Enterprise Manager Grid Control. [ER 6651834]
  
The `Tablespace Utilization (%)` metric may also be captured in the `Health Indicator Alert State` metric if you have enabled the database manager configuration parameter in IBM DB2. Therefore, you may see this metric captured in two different places and this may result in duplicate alerts being generated.

System Monitoring Plug-In for Juniper Networks NetScreen Firewall

This release provides support for the following:

- The plug-in monitors status of the devices configured in (NSRP NetScreen Redundancy Protocol) Clusters. It generates alerts when the status of the firewall changes from Master to other states (such as Primary Backup, Ineligible, and Inoperable). It also, provides 'clear message' when the firewall is back to Master status. A metric monitors the devices configured based on NSRP and report can also be generated for NSRP device configuration.

- You can now set the threshold to Allocated Sessions information to trigger alert for notification from Metrics and Policy Settings.

- Operating System credentials are now taken as an input from the user and added to Instance Property. These credentials are required to run jobs. For the job type support in Management Plug-ins, you should specify a credential set in your target metadata, and the job type uses this credential set to execute. The following CredentialSet information have been added to the metadata file:
  - Agent Host Username/Password
  - Juniper Netscreen Firewall Username/Password

System Monitoring Plug-In for Check Point Firewall

This release provides support for the following:

- This plug-in supports Nokia Operating System IPSO
- Operating System credentials are now taken as an input from the user and added to Instance Property. These credentials are required to run jobs. For the job type support in Management Plug-ins, you should specify a credential set in your target metadata, and the job type uses this credential set to execute. The following CredentialSet information have been added to the metadata file:
  - Checkpoint User Name/Password credential (same as OS credential)
  - Agent Host User Name/ password (agent credential)

System Monitoring Plug-in for EMC CLARiiON System
This release provides the following performance charts:
- CLARiiON LUN Performance Charts
- CLARiiON MetaLUN Performance Charts
- CLARiiON Disk Performance Charts

System Monitoring Plug-in for VMware ESX Server
This release provides support for the following:
- More Links have been added from the reports to improve usability and navigation. The following links have been added in the CPU Summary report:
  - 24 Hour Average CPU Usage of VMs table - links added for CPU Usage MHX and % columns
  - 24 Hour Average CPU Usage of Virtual CPUs (%) table - link added for CPU Usage % column
  - 24 Hour Average CPU Usage of VMs by Virtual CPU (MHz) table - link added for CPU Usage MHZ column

- Similarly, following links have been added in the Memory Summary report:
  - 24 Hour Average Memory Usage of VMs (KB) table - link added for Memory Usage KB column
  - 24 Hour Average Memory Usage of VMs (%) table - link added for Memory Usage % column
  - 24 Hour Average Memory Swapped By VMs (KB) table - link added for Swap Memory Usage KB column

- On the CPU and Memory Summary Reports, the tables that were associated with each time series chart now display an average value for the metric instead of the last collected value.

- Some messages have been improved to make them more user-friendly:
  - When users without proper ESX Server role or privilege to start, stop, or suspend a VM, or to set or exit ESX Server maintenance mode try to perform these tasks, the error message now displays that they may not have the proper role or privilege to perform the task.
  - If a user tries to start, stop or suspend a VM while the ESX Server is in maintenance mode, the error message displays the reason the task failed.
Installing a Plug-In

You can download the System Monitoring Plug-In archives from OTN by clicking Downloads, then Enterprise Manager. If you have a DVD, the plugin_archives directory contains the necessary plug-in archives to install each of the plug-ins.

To install a plug-in, do the following:

1. Copy or Save the desired plug-in archive to your desktop.
2. Launch the Grid Control console using a browser.
3. Follow the instructions outlined in the System Monitoring Plug-In Installation Guide for your particular plug-in.

Known Issues

This section describes the issues that exist for this release.

Universal Bugs and Limitations

The following generic Grid Control bugs and limitations impact all System Monitoring Plug-Ins.

- **Oracle Bug #4736085 — Error message is shown while undeploying the target**
  
  An inconsistent error state occurs if you undeploy System Monitoring plug-ins from multiple Agents if any Agent has preferred credentials set incorrectly.
  
  - **Cause** — If you first attempt to undeploy plug-ins from multiple Agents, but some Agents do not have the preferred credentials set, an expected error message appears. However, if you then attempt to undeploy from Agents that have the correct credentials set, caching problems continue to show the same error message.
  
  - **Workaround** — If you encounter this problem, log out and log back in. Navigate to the Undeploy Management Plug-ins page, and select only the Agents that have preferred credentials set.

- **Oracle Bug #5219848 — Successive deployments have problems if the first deployment failed**
  
  - **Cause** — Deployment of a plug-in fails on the first attempt on an Agent. Subsequent deployments, though reporting successfully, may not be fully successful. Configuration-related information on the View Configuration page and in reports will display an error.
  
  - **Workaround** — Redeploying the plug-in resolves the problem. Clean up Enterprise Manager and remove all traces of the plug-in as follows:
    
    1. Delete all existing plug-in targets.
    2. Undeploy the plug-in.
    3. Delete the plug-in.
    4. Reimport the plug-in.
    5. Freshly deploy the plug-in on an Agent that satisfies all prerequisites.
Oracle Bug #5179581 — Error: Target in broken state - metric collection errors encountered

**Note:** This bug has been fixed for Oracle Enterprise Manager Agent version 10.2.0.3 and higher. You might encounter this issue only for Agent versions lower than 10.2.0.3.

- **Cause** — This behavior occurs when target, agent, or both and/or target system become slow or heavily loaded and computation of dynamic properties take longer than the default timeout value.
- **Workaround** — Execute the following command:
  ```
  emctl reload agent dynamicproperties <target name>:<target type>
  ```
  OR
  You can alternatively resubmit the target instance properties:
  1. Click on the Monitoring Configuration link (under the Related Links section on the plug-in target home page).
  2. Reenter the encrypted properties.
  3. Click OK.

**Context-sensitive Help** — None of the System Monitoring plug-ins have context-sensitive online help. This feature will be supported in the future. Plug-in Installation Guides and Metric Reference Manuals available on Oracle Technology Network (OTN) provide all required information.

- If you use Enterprise Manager Grid Control 10.2.0.3 or lower, then while adding a plug-in target, you may encounter a warning message on the Add Targets Page even after providing the credentials. On this page, you can provide the credentials and click **Test Connection** to test the connection to the server. However, after successful testing of the connection, when you click **OK** to add the target, you may see a warning message.
  - **Cause** — This is because the page refreshes when **OK** is clicked, but the credentials are not cached and loaded on the page, though some encrypted values are displayed for those fields.
  - **Workaround** — To resolve this issue, re-enter the credentials and then click **OK**.

**Known Issues Specific to System Monitoring Plug-Ins**

The following are the known issues specific to System Monitoring Plug-Ins.

**Known Issues in System Monitoring Plug-In for Apache Tomcat**

Oracle Bug #6656926 — No Support for Local Monitoring of Apache Tomcat Target When Agent and Targets Are on AIX Host

If the Apache Tomcat target and the Agent are running on an AIX operating system, then local monitoring of that Apache Tomcat target is not supported.

To resolve this issue, install the Agent on a different operating system and then monitor the Apache Tomcat target.
Known Issues in System Monitoring Plug-In for EMC CLARiiON System

- **Oracle Bug #6233964, 6113649 — EMC Storage Module Does Not Support CLARiiON Devices**
  Before you install the EMC CLARiiON plug-in in your 10.2.0.3GC environment, ensure that you apply the patch for bug #6233964 on the Management Agent to enable the appearance of EMC CLARiiON Device.

- **Oracle Bug #6356346 — Issues with the Storage Groups Summary Report**
  Storage Groups Summary report does not display properly when EMC CLARiiON snapshot sessions are running.

- **Other Issues — Mapping of ASM diskgroups created using disks discovered through ASMLib, for example, ORCL:* is not supported.**

Known Issues in System Monitoring Plug-In for Microsoft SQL Server

The following Enterprise Manager Grid Control bugs impact the System Monitoring Plug-In for Microsoft SQL Server:

- **Oracle Bug #5692190 — Data retrieval is not feasible for certain metrics in the case of Microsoft SQL Server 2005 Targets**
  For Microsoft SQL Server 2005 targets monitored with Microsoft SQL Server plug-in version 3.0.2.1.0, collection of certain metrics is not feasible. Therefore you might encounter the following issues:
  - Security section of Microsoft SQL Server System Configuration Report page displays the message No Data Found.
  - No data is displayed for some elements in the sections SQL Server Configuration and Registry Setting Configuration of the View Configuration page.

- **Oracle Bug # 5680588 — Microsoft Case Note SRX06130600013 — Failure to provide data for SQL Server 2000**
  If Microsoft SQL Server 2000 and Microsoft SQL Server 2005 are installed on the same machine, WMI Provider for SQL Server fails to provide data for classes in the namespace root\MicrosoftSQLServer.

- **Microsoft SQL Server 2000 Supported Only If Installed On 32-Bit Platform**
  This release supports Microsoft SQL Server 2000 only if it is installed on 32-Bit platform.

- **Oracle Bug # 6710365 — Jobs Not Working for Clustered SQL Server Targets**
  For clustered SQL Server targets, although Jobs report successful completion, they do not actually stop, start, pause, or resume the clustered SQL Server instances.
  Note that this issue is only for clustered SQL Server targets. For standalone SQL Server instances, Jobs work fine as expected.

Known Issues in System Monitoring Plug-In for Sybase Adaptive Server Enterprise (ASE)

- **Possible Metric Collection Errors**
If the following parameters are not enabled, then metric collection errors may occur:

```sql
sp_configure "sql text pipe active", 1
sp_configure "sql text pipe max messages", 100
sp_configure "max SQL text monitored", 2048
sp_configure "plan text pipe active", 1
sp_configure "plan text pipe max messages", 100
sp_configure "statement pipe active", 1
sp_configure "statement pipe max messages", 100
sp_configure "statement statistics active", 1
sp_configure "per object statistics active", 1
```

- **Oracle Bug # 6711577 — Sybase ASE Index/Table Statistics Report Is Not Showing Any Data**
  
  Sybase ASE Index/Table statistics report does not show any data even after 24 hours of data collection.

**Known Issues in System Monitoring Plug-In for VMware ESX Server**

**Oracle Bug #6686929 — Generated URLs for Links in Reports to Other EM Pages Need to be Encoded**

On the VM Summary report, there are links from the host name of the VMs to the Host home page. Also, on the CPU Usage and Memory Usage reports, there are links from the values of various metrics displayed to the Metric Details page.

If either the name of the VM in the VM Summary report or the names of the ESX Server target instance and the VM in the CPU Usage and Memory Usage reports have special non-alphanumeric characters such as "_", " ", and so on, then the resultant URL for the link will not have those special characters encoded properly.

To resolve this issue, when the Host home page or the Metric Details page displays after clicking one of the links on the report, go to the URL displayed in the browser address bar and correct the "_" or " " (which are not encoded) in the VM name and the ESX Server target instance name to "*_" and ":_20", respectively. For example, change "$target=302_up1 nedc" to "$target=302*_up1_20nedc" and refresh the page.

**Known Issues in System Monitoring Plug-In for Check Point Firewall**

**Oracle Bug #6712538 — No ECM Data Collected for Nokia Hardware**

Technically, in Enterprise Manager Grid Control, the configuration management (ECM) data is collected within 10-15 minutes of adding a target. However, for Nokia hardware, the data is not collected.

To resolve this issue, manually refresh the page by clicking Refresh on the View Configuration page.

**Issues Fixed in This Release**

This section provides details of the issues that are fixed in this release.
Issues Fixed in System Monitoring Plug-In for Microsoft SQL Server

Oracle Bug #5528951 — Metric Collection Error for Database Backup
For Microsoft SQL Server 2005 target monitored with Microsoft SQL Server plug-in version 3.1.3.1.0 or lower, you might encounter Metric Collection Error for Database backup metrics.

Oracle Bug # 6215134 — SQL Server Test Connection Fails - MSSQL_DATABASE Results in Repeating Key Value
For Microsoft SQL Server 2005 target monitored with Microsoft SQL Server plug-in version 3.1.3.1.0 or lower, you might encounter duplicate rows for Database metric.

Oracle Bug# 6351594 — EMail Alert for SQL Server Plug-In Does Not Have Description Mesage
For Microsoft SQL Server 2005 target monitored with Microsoft SQL Server plug-in version 3.1.3.1.0 or lower, you might see no data uploaded for Error Log Entry Metric.

Oracle Bug# 6375148 — SQL Server Database Backup Metric Fails with java.lang.outofmemory Error
For Microsoft SQL Server 2005 target monitored with Microsoft SQL Server plug-in version 3.1.3.1.0 or lower, you might encounter java.lang.outofmemory error for database backup metrics.

Oracle Bug# 6375851 — SQL Server Metric DATABASE_LOCKS Fails with Repeated Key Values
For Microsoft SQL Server 2005 target monitored with Microsoft SQL Server plug-in version 3.1.3.1.0 or lower, you might see duplicate rows for Database Locks metric.

Oracle Bug# 6386612 — NULL Shown for FileGroup Names
For Microsoft SQL Server 2005 target monitored with Microsoft SQL Server plug-in version 3.1.3.1.0 or lower, you will see NULL for some filegroup names, which would be now reported as Not Applicable as per SQL Server Management Studio User Interface.

Oracle Bug# 6450926 — Offline Databases Cause Metric Collection Error
For Microsoft SQL Server 2005 target monitored with Microsoft SQL Server plug-in version 3.1.3.1.0 or lower, you will see a metric collection error while adding a target, if any of the databases are offline.

Issues Fixed in System Monitoring Plug-In for IBM DB2

Oracle Bug # 5073775 — Metric Column Names Shows Incorrect Data
For IBM DB2 target monitored with IBM DB2 plug-in version 3.0.1.0.0 or lower, you might see incorrect values for the following metrics - Database Backup Monitoring, Last Backup Timestamp, and Server Instance Name. For these metrics, you might see database name value for Server Instance Name column and server instance name value for Database Name column.
Issues Fixed in System Monitoring Plug-In for EMC CLARiiON System

Oracle Bug# 6363851 — Issues with Used Space (GB) and Free Space (GB)

Used Space (GB) and Free Space (GB) sum is not matching to Allocated Space (GB) on report host file system and CLARiiON storage device mapping.

Troubleshooting Plug-ins

For information about the troubleshooting scenarios that you might encounter while working with the System Monitoring plug-ins, see the Enterprise Manager System Monitoring Plug-in Troubleshooting Guide available on OTN at the following URL:

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

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