Idera SQL Diagnostic Manager Management Pack Guide for System Center Operations Manager

Install Guide

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Contents

Introduction to the Idera SQL Diagnostic Manager Management Pack Guide

The standard Microsoft SQL Server Management Pack for Operations Manager delivers a good base level of SQL Server infrastructure monitoring, providing a summary view of SQL Server health in the context of associated applications and underlying enterprise infrastructure services. The function of Idera SQL Diagnostic Manager (SQL DM) is entirely complementary to this, providing database administrators with deep insights into the availability and performance of SQL Servers. By linking these two management solutions using the Idera SQL DM Management Pack, the detailed information about SQL Server performance tracked by Diagnostic Manager is integrated into Operations Manager and its application health models. This provides Operations Manager with a wealth of knowledge not previously available to IT administrators.

Document Version

This guide is based on the 1.0.14 Management Pack and versions 7.5.4 and above of Idera SQL DM.

Getting the Latest Management Pack and Management Pack Documentation

You can find the most recent version of the Idera SQL DM Management Pack at Idera.com.

Supported Configurations

The Idera SQL DM Management Pack for Operations Manager is designed for the following versions of System Center Operations Manager:

- System Center Operations Manager 2007 R2 and above

The current version of the Management Pack has been validated against

- Idera SQL DM versions 7.5.4 and above

The current version of the Management Pack requires

- The Idera SQL DM agent running PowerShell 2.0 and above

Getting Started

The Idera SQL DM Management Pack integrates the detailed Alert and status information gathered by SQL DM into the Operations Manager environment, providing a stream of live updates to IT Operators on the status of SQL Server instances being monitored by SQL DM. The Management Pack includes automatic discovery of SQL DM installations, and of the SQL Server instances being managed from those installations. Once discovered, the SQL Diagnostic Manager Management Pack propagates the current status, health and events of these instances up to Operations Manager.

Before You Import This Management Pack

Pre-Configuration of SQL Accounts

This Idera Management Pack requires the Operations Manager agent to have read-access to the SQL Diagnostic Manager SQL database. This access should be granted prior to installing the Management Pack and enabling discovery of SQL Diagnostic Manager installed instances.

The Operations Manager "Default Action Account" defined in the default "Run As" profile needs to be granted access to the SQL Diagnostic Manager Database. The account must be granted access to the SQLdmRepository sufficient to read tables and execute stored procedures.

By default the local Operations Manager agent executes the Management Pack rules and tasks in the context of the "OM Action Account". Where the OM Action Account does not have the appropriate rights to access the SQL Diagnostic Manager repository in SQL Server, the following steps will help you configure a "Run As" profile using a new account for that purpose:

▶**To configure Run As profiles**

1. Identify the names of the target computers where the default action account has insufficient rights to monitor SQL Diagnostic Manager.

2. For each system, create or use an existing set of credentials that have at least the SQL Server privileges required to access the SQLdmRepository database tables and stored procedures.

3. For each set of credentials identified in step 2, make sure a corresponding "Run As" account exists in the management group. Create the "Run As" account if necessary.

4. Set up the mappings between the targets and the "Run As" accounts on the **Run As Accounts** tab of each of the Run As profiles.

For more information, see the Microsoft document, [Run As Profiles and Run As Accounts in Operations Manager 2007](#)[1]

Note
Verify that the TCP/IP Protocol is enabled in the SQL Server instance that contains the SQLdm Repository.

Verify Operations Manager Agent Installation

The Idera Management Pack requires that an Operations Manager 2007 agent be installed locally on each server where an instance of Idera SQL Diagnostic Manager is present. If an agent is not already installed then the Discovery Wizard in the Operations Manager Console may be used to push the agent installation to the SQL Diagnostic Manager machine.

▶ To push an Operations Manager agent to a SQL Diagnostic Manager server

1. Open the Operations console, and then click the **Administration** button.
2. Right-click **Device Management** and then click **Discovery Wizard**.
3. Follow the prompts in the wizard to first identify a target computer and then initiate the agent deployment.

For more information, see the Microsoft document, [Use the Discovery Wizard to Deploy Agents](#)[2].

Files in This Management Pack

This release comprises a single Management Pack, contained in one file described in the following table.

File	Display name	Description
Idera.SQLDM.mp	Idera SQL Diagnostic Manager	Contains the object types, Discovery rules, Health Model, Tasks and Actions related to integration data from SQL Diagnostic Manager relating to monitored SQL Server instances.

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[1] http://technet.microsoft.com/en-us/library/bb735423.aspx

[2] http://technet.microsoft.com/en-us/library/cc950509.aspx

Import the Management Pack

You are now ready to import the SQL Diagnostic Manager Management Pack into your Operations Manager installation. The import process loads the management settings, classes and rules for monitoring SQL Diagnostic Manager into the Operations Manager database. From there the relevant rules and objects are then replicated to all systems where SQL Diagnostic Manager is installed.

Below are the steps required to import the Management Pack when you have downloaded it to a hard drive local to the Operations Manager console. For other methods of importing the Management Pack, see the Microsoft document, [How to Import a Management Pack in Operations Manager 2007](#)[3].

▶ **To Import the Management Pack**

1. Open the Operations Console for Operations Manager, and then click the **Administration** button.

2. In the right hand Actions pane or from the Actions→Actions menu option click **Import Management Packs**

3. Click **Add** then click **Add from disk…**

4. Browse to and **select** the Idera SQL Diagnostic Manager Management Pack

5. Click the **Install** button and wait for the importation to complete

Discovery of SQL Diagnostic Manager servers and monitored SQL Server instances will begin automatically, as the Management Pack is deployed to the relevant agents across the network.

📝 **Note**
The length of this process varies according to the CPU performance of your Operations Manager machine.

Optional Configuration

After you import the SQL Diagnostic Manager Management Pack, the Monitoring Workspace displays the object types that are discovered automatically. For more information about object types, see the section below Objects the Management Pack Discovers. You can fine tune the scheduling of the process that identifies which SQL objects are being managed by the SQL DM Management Pack. You can use the overrides feature of Operations Manager to change these configuration settings.

▶ **To use an override to change a setting for automatic discovery**

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[3] http://technet.microsoft.com/en-us/library/cc974494.aspx

1. In the Authoring workspace, expand **Management Pack Objects**, and then click **Object Discoveries**.

2. On the Operations Manager toolbar, click **Scope**, and enter "**Idera SQL**" then press **Find Now** to filter the objects that appear in the details pane to include only SQL Diagnostic Manager objects.

3. In the details pane, click the object type for which you want to change the setting.

4. On the Operations Manager toolbar, click **Overrides**, click **Override the Object Discovery**, and then click either **For all objects of type:** <name of object type>, **For a group**, **For a specific object of type:** <name of object type>, or **For all objects of another type**.

5. In the **Override Properties** dialog box, click the **Override** box for the **Enabled** parameter you want to change.

6. Under **Management Pack**, click **New** to create an unsealed version of the Management Pack, and then click **OK**.

After you change the override setting, the configuration for that object type is automatically replicated and the relevant objects will appear in the Monitoring pane under **Idera SQL Diagnostic Manager**. For more information about setting overrides, see the Microsoft document, [Overrides in Operations Manager 2007](#)[4]

Relocating the SQL DM Repository

If at any point you change the name of the database in which the SQL Diagnostic Manager repository is stored, you will need to manually update an entry in the registry on the SQL Diagnostic Management service machine. This change allows SQL Diagnostic Manager discovery rules in Operations Manager to locate and query the database. To make this change proceed as follows:

To update the repository name in the registry

1. On the SQL DM server open the registry editor with the command **regedit.exe** at the Run line

2. In the Registry Editor navigate to the Key: **HKLM\SOFTWARE\Idera\SQLdm**

3. In the details pane, double click the **Database** entry

4. Enter the new repository name in the value editor dialog and press **OK**

5. On the next SQL DM Discovery cycle, the new database name will be read and replicated to the Operations Manager database

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[4] http://technet.microsoft.com/en-us/library/bb381198.aspx

Understanding the Idera SQL Diagnostic Manager Management Pack

Objects the Management Pack Discovers

You can use the SQL Diagnostic Manager Management Pack to monitor both the instances of SQL Diagnostic Manager itself and the SQL Server instances which it is monitoring. You can use the Authoring pane of the Operations console to enable, disable and modify the discovery of such objects.   For more information about enabling object discovery, see Object Discoveries in Operations Manager 2007[5] in Operations Manager Help.

📝 **Note**

    You can use the same procedure to override the settings for discovery of any object.

The SQL DM Pack discovers the object types described in the following table. Discovery of these objects is automatic. Use overrides to change the configuration for each discovery process.

Category	Object ID	Discovered Automatically
SQL DM Service	Idera.SQLDM.Service	Yes
SQL Instance	Idera.SQLDM.SqlInstance	Yes

Applying an Override to Discovery settings

Use the following procedures as an example of changing the discovery interval for SQL DM Services.

▶**To use an override to change the setting for automatic discovery**

1. In the Authoring pane, expand **Management Pack Objects**, and then click **Object Discoveries**.

2. On the Operations Manager toolbar, click **Scope**, and then filter the objects that appear in the details pane to include only **SQL DM Discovery** objects.

3. In the Operations Manager toolbar, use the **Scope** button to filter the list of objects, and then

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[5] http://technet.microsoft.com/en-us/library/bb381270.aspx

click **SQL DM Discovery**.

4. On the Operations Manager toolbar, click **Overrides**, click **Override the Object Discovery**, and then click **For all objects of class: Windows Operating System**.

5. In the **Override Properties** dialog box, click the **Override** box for the **Frequency in seconds** parameter.

6. Under **Management Pack**, click **New** to create an unsealed version of the management pack, and then click **OK**, or select an unsealed management pack that you previously created in which to save this override. As a best practice, you should not save overrides to the Default Management Pack.

After you change the override setting, the discovery cycle is changed all managed Windows systems will be scanned for SQL Diagnostic Manager instances on the new period.

The SQL Diagnostic Manager Health Model

The SQL Diagnostic Manager Management Pack reports the health of each SQL Server instance monitored by SQL DM, as well as the service health of SQL Diagnostic Manager itself.

SQL DM Server	The health of the SQL Diagnostic Manager is tracked by monitoring the state of the three underlying services, using the following three service monitors: • Collection Service Monitor • Management Service Monitor • Predictive Service Monitor
SQL Instance	The health of each SQL Server instance being monitored by SQL Diagnostic Manager is rolled up by reflecting the Alerts counts open for that instance within SQL Diagnostic Manager. If a SQL Server instance currently has 1 or more Critical alerts open, then the Health of that instance is recorded as Critical. If one or more Warning alerts is open, but no Critical alerts, then the health of the instance is recorded as Warning. In Health Explorer the Diagnostic Manager Alert status which drove a specific Health state change is recorded and displayed in the State Change Events tab.

Impact of Monitoring

The replication and execution of Management Pack rules and settings to SQL DM Servers has minimal impact on the SQL Diagnostic Manager server and no impact on the monitored SQL Server instances.

Viewing Information in the Operations Manager Console

You can see a high-level view of object types in your SQL Server deployment.

A view can contain a long list of objects. To find a specific object or set of objects, you can use the **Scope**, **Search**, and **Find** buttons on the Operations Manager toolbar. For more information, see the How to Manage Monitoring Data Using Scope, Search, and Find topic in Operations Manager Help.

These views are listed directly under the **Idera SQL Diagnostic Manager** node in the Monitoring pane of the Operations Console. Details of each view is provided in the table which follows.

- SQL DM Server Health
- SQL Instance Alerts
- SQL Instance Events
- SQL Instance Health
- Dashboard

View Name	Description
SQL DM Server Health	This Health view lists all discovered SQL Diagnostic Manager servers in the environment. The health state of each instance is displayed, together with information about the specific SQL Server instance.
SQL Instance Alerts	Displays a list of current Alerts generated when a specific SQL Server instance monitored by SQL Diagnostic Manager has entered an unhealthy state.
SQL Instance Events	This view offers a list of all Alert transitions recorded by SQL Diagnostic Manager for each SQL Server instance which is being monitored. This view provides a complete history of the status of all monitored SQL Server instances.
SQL Instance Health	The Health view displays the current health state of each SQL Server instance monitored by a SQL Diagnostic Manager server.
Dashboard	This view combines the SQL DM Server Health, SQL Instance Health and the SQL Server instance events views into a single pane.

Appendix – Known Issues and Workarounds

Management Pack not compatible with Operations Manager 2007 SP1 and lower

The Idera SQL Diagnostic Manager Management uses the Operations Manager R2 PowerShell module, which is not supported by Operations Manager 2007 SP1 and lower.

To leverage this Management Pack, upgrade the installation to Operations Manager 2007 R2 or above.

Console always launched to last connected SQL DM Server

The Idera SQL Diagnostic Manager console always launches to the last used SQL Diagnostic Manager installation. Consequently when multiple SQL Diagnostic Manager installations are being monitored, and the console is launched using the Operations Manager "Launch SQL DM Console" task, it may be necessary to manually connect the SQL DM console to the relevant server. To achieve this:

▶ **To connect to an alternative SQL Diagnostic Manager server:**

1. In the SQL Diagnostic Manager console click the **File** menu and then click **Connect to SQLdm Repository**

2. Enter the relevant SQL connection information.

3. Click **Connect** to establish the link to the new SQLdm Server