

SolutionPack for Microsoft SQL Server

Release number 1.0.0.0

Summary Sheet

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Overview

This article explains how to install and configure the SolutionPack for Microsoft SQL Server. This SolutionPack provides the unified monitoring of Microsoft SQL databases using SQL queries targeted at servers. It provides key information for database administrators, such as server host performance, database availability, and deadlocks.

This SolutionPack is one of many provided with [Service Assurance Suite](#).

Technical Specifications

Compatible Watch4net versions

- ◆ 6.3u1 and later

Supported Microsoft SQL versions

- ◆ SQL Server 2008R2
- ◆ SQL Server 2012

Data collection method

- ◆ SQL collector

SQL commands

These commands are used by the SolutionPack:

- ◆ SELECT
- ◆ CONNECT
- ◆ INSERT
- ◆ CREATE TABLE (creates temporary tables)
- ◆ EXEC (executes store procedure that lists disks and their available free space)
- ◆ DROP (removes temporary tables)

User privilege requirements

- ◆ SQL authentication requires that the user be a member of the SYSADMIN group
- ◆ Windows user account requires the user be a member of the Guests group or the Domain Guests group
- ◆ Windows user account must be imported into the Microsoft SQL Server with settings similar to these:
 - Server roles of public
 - Securable grants for Connect SQL, View any definitions, and View server state
- ◆ The default database must be the master

Main reports

- ◆ Host Health (%), including the percentage of CPU and memory utilization of all hosts
- ◆ Performance of SQL Server
- ◆ Databases Overview

- ◆ Performance Scorecard of storage usage, index contention, memory pressure, signal waits, SQL server hosts performance, and user connections and logins
- ◆ Situations to Watch, including memory exceptions, SQL server locks, I/O bottlenecks, CPU bottleneck, data files out of space, and actual and forecasted SLA values
- ◆ Inventory of servers, databases, data files, and objects

Where to find the latest SolutionPack software

SolutionPack software updates

Obtain new or updated SolutionPack software by doing one of the following:

- ◆ Install the latest core software update, such as 6.4. SolutionPacks distributed with core software have a 30-day free evaluation period. If you plan to use the software longer than 30 days, you must install a SolutionPack license before the trial period ends.
- ◆ Upload a `SolutionPackCenter Update.zip` file from **Centralized Management** › **Packages Management** › **Packages Listing** › **Upload**. Since new SolutionPacks distributed in the zip file do not include a 30-day trial license, you must install a license file before installing the SolutionPack.

Installing the SolutionPack

Before you begin

- ◆ Determine whether you need a SolutionPack license file by checking the feature names and expiration dates listed in **Centralized Management** › **License Management**. If the license is not listed, obtain one by completing a Support Request (SR) form, which you can find on the EMC support website <http://support.emc.com>.
- ◆ Make sure the core modules, such as the Module-Manager, are up-to-date on all servers since not all module dependencies are validated during the SolutionPack installation. See the *EMC M&R (Watch4net) Installation and Configuration Guide* provides for more information.

Procedure

1. Log in to **Centralized Management**.
2. Select **SOLUTIONPACK CENTER**.
3. Select the **SolutionPack for Microsoft SQL Server** in the **Browse and Install SolutionPacks** screen.
4. Read the summary information and click **Install**.

You have the option of selecting Windows authentication instead of SQL Server authentication for this SolutionPack.

5. For both Windows and SQL Server authentication, set these values:
 - Fully qualified name of the SQL server
 - The port to connect to
6. For SQL Sever authentication, set these values:
 - Username
 - Password

7. For Windows authentication, do the following:
 - a. Check **Choose for Windows authentication instead of SQL Server authentication**.
 - b. Type the **Windows domain name**.
 - c. Set values for **Username** and **Password**.

After you finish

After the installation is complete, select **Centralized Management > SolutionPack** to verify the installed SolutionPack.

Confirming report creation

After you install a SolutionPack, you can view its reports.

To view the reports:

Procedure

1. Go to **User Interface > Report Library**.
2. Click the SolutionPack to view its reports.

Results

It may take a minimum of three polling cycles to display all relevant information in these reports. By default, one polling cycle is five minutes.

Troubleshooting

Report display problems

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What to do if data does not appear in reports

Procedure

1. Do the following to check the Collector Manager logs:
 - a. View `/opt/APG/Collecting/Collector-Manager/microsoft-sqlserver/logs/collecting-0-0.log`.
 - b. Verify that the last message in the log states that a certain number of raw values were collected using 13 SQL queries. This message indicates the collector is working.

For example: `<instance_master> collect done: 2,735 new raw values collected in 0 seconds 527 ms using 13 SQL queries`
 - c. Check for any Java exceptions and warning messages.
2. If collector errors exist, do the following:
 - a. Ping the Microsoft SQL Server using the fully qualified domain name (FQDN).

- b. Replace the current user, which is the username and password set during SolutionPack installation to retrieve data from the Microsoft SQL sever, with a user with SYSADMIN rights.
 - c. Use telnet to check if the Microsoft SQL port is accessible from the SQL collector server.
 - d. Reconfigure the SolutionPack by navigating to **Centralized Management > SolutionPacks > Microsoft SQL Server**.
 - e. Under **SolutionPackBlock**, click the pencil next to **Collector** to reconfigure the settings.
 - f. To edit advanced connection settings, you may need to manually edit the SQL collector configuration file.
3. If no errors exist and the last message in the log indicates that 13 queries were executed, do the following:
 - a. Wait a minimum of three polling cycles. By default, one polling cycle is five minutes.
 - b. Navigate to **Centralized Management > Scheduled Tasks**.
 - c. Under the **Backend** category, run `backend/Default/import_variable_status.task`.
 - d. Refresh the reports after five minutes.
4. Make sure the **Frontend** is attached to the database used by the SQL collector.

Running a scheduled task to import data into reports

After you push a new configuration into a collector, a scheduled task runs and populates the reports with new data. You can manually run the scheduled task to import the data more quickly.

Before you begin

Allow at least three polling cycles to pass before manually running the scheduled task.

Procedure

1. Click **Administration**.
2. Click **Centralized Management**.
3. Expand **Scheduled Tasks**.
4. Click **Database**.
5. Select the **import-properties-Default** task.
6. Click **Run Now**.
7. Confirm success in running the task in the **Last Result** and **Last Result Time** columns.

Viewing collector errors in the Collector-Manager log files

Review the Collector-Manager log files to troubleshoot problems with data collection.

Procedure

1. Click **Administration**.
2. Click **Centralized Management**.
3. Expand **Collecting**.

4. Click the Collector-Manager for your collector instance.
Collector-Manager::*Collector-Manager instance* - *physical_host_ID*
5. Expand **Log Files** and click the **View File** icon to review the configuration error messages.

Viewing collector errors from the command line

Procedure

- ◆ Use this path to access the log files of this SolutionPack: `/opt/APG/Collecting/Collector-Manager/<MS-sql-server-instance-name>/logs/collecting-0-0.log`

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