



Microsoft: SQL Server Enhanced PowerPack Release Notes

Version 105

Overview

Version 105 of the *Microsoft: SQL Server Enhanced PowerPack* adds a new execution environment, new Device Categories, and addresses a number of issues.

- **Minimum Required SL1 Version:** 10.1.0
- **Other Key Information:**
 - Additional permissions are required for the user account SL1 uses to perform collection. See the [Required Permissions](#) section of this document for more information. If you are currently monitoring devices using the PowerPack, you must update the permissions of the user account you are using to monitor those devices. New Dynamic Applications will be aligned to existing devices during the next discovery of those devices.
 - This version of the PowerPack requires PowerShell version 3.0 or later to be installed on the monitored SQL Servers.
 - The SQL Servers that you monitor must have the SQL Server PowerShell module installed.

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Before You Install or Upgrade

Ensure that you are running version 10.1.0 or later of SL1 before installing *Microsoft: SQL Server Enhanced* version 105.

NOTE: For details on upgrading SL1, see the appropriate [Release Notes](#).

In addition, ensure that the SQL Servers you want to monitor are running PowerShell 3.0 or later.

Required Permissions

Version 105 of the *Microsoft: SQL Server Enhanced PowerPack* requires the following permissions for the user account used for monitoring:

- SQL 2014 and later versions require one of the following configurations:

- The user account has an enabled login on every instance and database to be monitored, with CONNECT SQL, VIEW SERVER STATE, and CONNECT ANY DATABASE permission granted to the login on each instance. The login should have VIEW DATABASE STATE permission and DB_DATAREADER role granted on the 'master' database, and the DB_DATAREADER role granted on the 'msdb' database.
- The user account has an enabled login on every instance and has the SYSADMIN role.
- SQL 2012 requires one of the following configurations:
 - The user account has an enabled login on every instance and database to be monitored, with CONNECT SQL and VIEW SERVER STATE granted to the login on each instance. The login should also have VIEW DATABASE STATE permission and the DB_DATAREADER role granted on the 'master' database, and the DB_DATAREADER role granted on the 'msdb' database. In addition, every database in the instance should have CONNECT access granted to the login.
 - The user account has an enabled login on every instance and has the SYSADMIN role.

Installation and Upgrade Process

To install this PowerPack:

1. Familiarize yourself with the [Known Issues](#) for this release.
2. See the [Before You Install or Upgrade](#) section. If you have not done so already, upgrade your system to the 10.1.0 or later release.
3. Download the *Microsoft: SQL Server Enhanced* version 105 PowerPack from the Support Site to a local computer.
4. Go to the **PowerPack Manager** page (System > Manage > PowerPacks). Click the **[Actions]** menu and choose *Import PowerPack*. When prompted, import *Microsoft: SQL Server Enhanced* version 105.
5. Click the **[Install]** button. For details on installing PowerPacks, see the chapter on *Installing a PowerPack* in the **PowerPacks** manual.

Features

Version 105 of the *Microsoft: SQL Server Enhanced* PowerPack includes the following features:

- Dynamic Applications to discover and monitor SQL servers and their component devices
- Event Policies that are triggered when SQL Server components meet certain status criteria
- Device Classes for each type of SQL Server components device monitored
- An example credential you can use to create PowerShell credentials to connect to SQL servers

Enhancements and Issues Addressed

The following enhancements and addressed issues are included in version 105 of the *Microsoft: SQL Server Enhanced PowerPack*:

- Error handling for unavailable instances was improved.
- This PowerPack no longer supports SQL Server 2008.
- The "Microsoft: SQL Server Enhanced EE" execution environment was added to the PowerPack.
- The PowerPack now supports SQL databases and instances with special characters in their name (for example, ñ, í, ë, etc.). Names will be displayed without the extended characters, but with the closest equivalent, so an instance named "Sqlñstance" will appear as "SqlInstance".
- The "silo_apps" content library was added to the PowerPack for Unicode handling.
- Support was added for discovery of clustered SQL instances that contain the name of the default SQL instance.
- The "Microsoft: SQL Server Discovery" Dynamic Application was renamed to "Microsoft: SQL Server Cache and Discovery".
- The "Microsoft: SQL Server Performance" Dynamic Application was updated to remove the "Cores" and "Uptime" collection objects, retrieve data from Windows Counters, and update Presentation Objects and Alerts.
- The "The SQL Server instance is not available" alert log message was added to the following Dynamic Applications:
 - Microsoft: SQL Server Failed Jobs Configuration
 - Microsoft: SQL Server Instance Configuration
 - Microsoft: SQL Server Long Jobs Configuration
 - Microsoft: SQL Server Long Queries Configuration
- The following Device Categories were added to the PowerPack:
 - Database
 - Database.Application
 - Database.Instance
- All Dynamic Applications were updated to have the **Collector Affinity** field set to *Root device collector* by default. (Support Case: 00063928)
- SL1 does not support the root device of a DCM tree being merged to another DCM tree's component device. As this PowerPack will not work on a merged device, the "Microsoft: SQL Server Cache and Discovery" Dynamic Application was updated to detect if a device is merged. If the device is merged before running a discovery session, the "Microsoft: SQL Server Cache and Discovery" Dynamic Application will not align. If the device is merged after the "Microsoft: SQL Server Cache and Discovery" Dynamic Application is already aligned or if it's aligned to a merged device manually or by Device Template, it will detect that it's now on a merged device and take no further action. Data will not be collected and any child device components that were previously created will eventually go through the Vanish and Purge process.

- An issue was addressed in which the "Microsoft: SQL Server Database Instance Discovery" Dynamic Application would discover SQL instances but not SQL databases due to permissions issues on one instance.
- The "Instances Not Owned" collection object in the "Microsoft: SQL Server Instance Discovery" Dynamic Application was updated to appear as a list instead of a long string of instances. (Support Cases: 00063928 and 00144873)
- Alerts in the "Microsoft: SQL Server Database Discovery" Dynamic Application were updated to support the "RESTORING" status. (Support Case: 00208073)
- All Performance Dynamic Applications in the PowerPack were updated to support 64-bit CPUs. (Support Cases: 00082214, 00128481, and 00211474)
- All Dynamic Applications in the PowerPack have been updated to process returned data before triggering warnings or errors. This is to address an issue in which collection would stop even when there were valid responses. (Support Case: 00157826)
- The **Message-Match** option has been disabled by default for the following event policies to address an issue in which duplicate events were occurring: (Support Case: 00198759)
 - Microsoft: SQL Server Data Free Space is below threshold
 - Microsoft: SQL Server Data Free Space has returned to normal
 - Microsoft: SQL Log Free Space has returned to normal
 - Microsoft: Log Free Space is below threshold
 - Microsoft: SQL Server Number of Blocked Users have exceeded the Threshold
 - Microsoft: SQL Server Number of Blocked Users have returned to normal
 - Microsoft: SQL Server Number of Deadlock Per Second has exceeded the Threshold
 - Microsoft: SQL Server Number of Deadlock Per Second has returned to normal
 - Microsoft: SQL Server Number of Locked Users have exceeded the Threshold
 - Microsoft: SQL Server Number of Locked Users have returned to normal
- The "Microsoft: SQL Server Instance Discovery" Dynamic Application was updated to address an issue in which the SQL instance device name would display as hex code characters.
- Status alerts in the "Microsoft: SQL Server Database Discovery" Dynamic Application were removed.
- Microsoft SQL Server instances will no longer be labeled *Unavailable* when their **Collection State** is different than *Active*. Status alerts for SQL instances will now occur on SQL servers to address an issue in which alerts were occurring for parent devices that were disabled but had child devices still running. (Support Case: 00196264)
- An issue was addressed in which the "Microsoft: SQL Server Failed Jobs Configuration" Dynamic Application would trigger a false positive alert from historic failed jobs up to six months old. The Dynamic Application was updated to only report jobs that have failed in the past 24 hours. (Support Cases: 00170915 and 00178200)
- An issue was addressed in the "Microsoft: SQL Server Long Jobs Configuration" Dynamic Application in which false alerts were triggered for jobs that were stopped and more than one day old. (Support Case: 00119607)

- The "Microsoft: SQL Server Database Configuration" Dynamic Application was updated to address an issue in which it was alerting on the database from a different server. (Support Cases: 00119483 and 00210125)
- An issue was addressed in which Dynamic Applications were still triggering alerts when a SQL database was offline. (Support Case: 00199418)
- The "Microsoft: SQL Server Database Performance" Dynamic Application was updated to change the default for all size-related metrics from "0" to – NO DATA – or ' ' to show data gaps when no collection occurs. (Support Case: 00093898)
- An issue was addressed in which databases in clustered MySQL instances starting with the name of the default instance (MYSQLSERVER) were not discovered. (Support Case: 00234577)
- The "Microsoft: SQL Server Long Queries Configuration" Dynamic Application was updated to address an issue in which an exception was occurring when running the Dynamic Application. (Support Case: 00178200)
- An issue was addressed in which an unavailable instance, or an instance that was not configured properly, would stop discovering databases on any other available instances on the SQL server .
- An issue was addressed in which duplicate devices were appearing after the failover of a cluster node or cluster service device. (Support Case: 00179920)
- The following Dynamic Applications were updated to address an issue in which the Dynamic Applications were reporting errors and failing to collect data:
 - Microsoft: SQL Server Database Cache Performance
 - Microsoft: SQL Server Database Performance
 - Microsoft: SQL Server File Groups Performance
- An issue was addressed in which the "Microsoft: SQL Server Wait Metrics Configuration" Dynamic Application was throwing an exception. The snippets in the PowerPack have also been updated to handle PowerShell data character limits. (Support Cases: 00166210 and 00171171)
- The "Microsoft: SQL Server Performance" Dynamic Application was updated to group instance CPU data by instance name instead of by Process ID.
- The "Microsoft: SQL Server Instance Performance" Dynamic Application was updated to address an issue in which disk error alerts are not generated when the transaction log for the database is full.

Known Issues

The following known issues affect version 105 of the *Microsoft: SQL Server Enhanced PowerPack*:

- SQL Server instances with a "\$" in the instance name will not discover databases or collect data. The instance name displayed in SL1 will contain only the characters after the "\$".
- The "GetDB-Counters" snippet in the "Microsoft: SQL Server Database Performance" Dynamic Application will not collect data when the performance counter cannot be found. To address this, you will need to rebuild the performance counter manually. See the Microsoft documentation for the steps to rebuild the performance counter: <https://docs.microsoft.com/en-us/troubleshoot/windows-server/performance/manually-rebuild-performance-counters>

- The *Microsoft: SQL Server Dashboard PowerPack* is not compatible with the *Microsoft: SQL Server Enhanced PowerPack*.
- The performance Dynamic Applications in the PowerPack do not collect data for SQL Server x86 instances installed on a 64-bit platform.
- Upgrading to from v103 to v104 may log an exception which includes “get_cached_dictionary - Exception for 8C0F8D1AB88C18E1ADD9DFA4A0D43E50_SqlInventoryCache_52_Me_SqlDatabase.CLUS_INST02.model.52 - __new__() takes exactly 13 arguments (12 given)” The exception does not recur on subsequent collections.

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