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System Center Operations Manager

Guide to System Center Management Pack for SQL Server 2008 Analysis Services

Microsoft Corporation

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The Operations Manager team encourages you to provide any feedback on the management pack by sending it to sqlmpsfeedback@microsoft.com.

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Guide to System Center Management Pack for SQL Server 2008 Analysis Services

This guide was written based on version 7.0.17.0 of the management pack for SQL Server 2008 Analysis Services.

Changes History

Release Date	Changes
June 2019 (version 7.0.17.0 RTM)	<ul style="list-style-type: none"> MP was prepared for public release
June 2019 (version 7.0.16.0 CTP)	<ul style="list-style-type: none"> Added performance collections for MDX Query performance counters Added retry logic to some workflows in order to reduce "Category does not exist" errors thrown when WMI fail to respond Improved error handling in workflows that watch for memory consumption Improved descriptions of events thrown by management pack to make it easier to figure out error reason Fixed Start/Stop tasks Fixed issue when "SQLServerInstalled" property was set to "False" if SQL Server DB Engine was of higher version than SSAS instance Updated Dashboards configuration to show tiles for new MDX performance collections Updated display strings
June 2018 (version 7.0.7.0 RTM)	<ul style="list-style-type: none"> Updated the Visualization Library
June 2017 (version 6.7.31.0 RTM)	<ul style="list-style-type: none"> Restricted the length of some string class properties Updated the visualization library
December 2016 (version 6.7.15.0 RTM)	<ul style="list-style-type: none"> Added support for configurations where computer host names are longer than 15 symbols Fixed: AS workflows sometimes crash Updated the visualization library
March 2016	<ul style="list-style-type: none"> Updated references and removed deprecated elements to support 6.6.4.0+ visualization library Fixed bug when SSAS Management Pack could not collect OS performance counters with localized names Updated discoveries to throw errors in case of some problems detected during the discovery Fixed module error collection on cluster instances to reduce the noise Changed defaults for CPU Usage monitor, added sampling to Memory Usage on the server monitor

Release Date	Changes
	<ul style="list-style-type: none"> • Reduced inner complexity of modules • Fixed the discoveries; now the last items can be undiscovered • Simplified the dashboard to make it quicker and more informative • Reviewed and updated the Knowledge Bases • Added timeout support for every non-native workflow • Fixed Blocking Session Monitor – in some situations it could calculate blocking sessions incorrectly • Win10 support: fixed OS version detection issue • Fixed CPU usage alert description • The “Known Issues and Troubleshooting” section of the guide is updated
June 2015	<ul style="list-style-type: none"> • Dashboards were replaced with the new ones
October 2014	<ul style="list-style-type: none"> • Integration with the SQL Server Generic Presentation MP • New dashboards • "Instance type" property is added • Cross-version views are implemented • CPU Monitoring is now supported • Icons for various classes are updated • An issue related to the discovery of a non-cluster instance on a cluster virtual node is fixed. • Performance counters object names are updated • Old dashboards are deprecated and removed • Some other minor fixes
January 2014	The original release of this management pack

Supported Configurations

This management pack requires System Center Operations Manager 2012 RTM or later (Dashboards are supported starting with SCOM 2012 SP1). A dedicated Operations Manager management group is not required.

The following table details the supported configurations for the management pack for SQL Server 2008 Analysis Services:

Configuration	Support
SQL Server 2008 Analysis Services	<ul style="list-style-type: none"> • 64-bit SQL Server 2008 Analysis Services on 64-bit OS • x86 SQL Server 2008 Analysis Services on x86 OS

SQL Server 2008 R2 Analysis Services	<ul style="list-style-type: none"> • 64-bit SQL Server 2008 R2 Analysis Services on 64-bit OS • x86 SQL Server 2008 R2 Analysis Services on x86 OS
Clustered servers	Yes
Agentless monitoring	Not supported
Virtual environment	Yes

Management Pack Scope

The management pack for SQL Server 2008 Analysis Services enables the monitoring of the following features:

- Instance of SQL Server 2008 Analysis Services running in one of these modes:
 - Multidimensional Mode;
 - PowerPivot Mode;
- SQL Server 2008 Analysis Services Databases;
- SQL Server 2008 Analysis Services Database Partitions.

Please refer to the [“Monitoring Scenarios”](#) section for a complete list of monitoring scenarios supported by this management pack.

Important

This management pack supports up to 50 Databases per SSAS Instance. Exceeding the number of monitored Databases and a high number of Partitions may lead to performance degradation. It is recommended to disable discovery workflow for Partitions in this case.

Mandatory Configuration

- Import the Management Pack.
- Associate SSAS Run As profiles with an account that has administrator permissions for both Windows Server and SQL Server Analysis Services instance.
- Enable the Agent Proxy option on all agents installed on the servers that are members of a cluster. It is not necessary to enable this option for standalone servers. For instructions, see the procedure that follows this list.
- Note that SQL Server Browser service is mandatory for Analysis Services discovery and monitoring. SQL Server Browser must be installed and turned on.

Note

Microsoft SQL Server Analysis Services Visualization Library (version 1.0.5.0) has become obsolete and should be removed. This release of the management pack uses a new generic Microsoft SQL Server Visualization Library.

Files in this Management Pack

The management pack for SQL Server 2008 Analysis Services includes the following files:

File	Description
Microsoft.SQLServer.2008.AnalysisServices.Discovery.mpb	This management pack discovers Microsoft SQL Server 2008 Analysis Services Instances and related objects. The management pack contains discovery logic only and requires a separate monitoring management pack to be imported to monitor the discovered objects. Required.
Microsoft.SQLServer.2008.AnalysisServices.Monitoring.mpb	This management pack enables the monitoring of Microsoft SQL Server 2008 Analysis Services. It depends on Microsoft SQL 2008 Analysis Services (Discovery) Management Pack. Required.
Microsoft.SQLServer.2008.AnalysisServices.Presentation.mpb	This management pack adds SQL Server 2008 Analysis Services Dashboards. Optional.
Microsoft.SQLServer.2008.AnalysisServices.Views.mp	This management pack contains views and folder structure for Microsoft SQL Server 2008 Analysis Services management pack. Optional.
Microsoft.SQLServer.Generic.Presentation.mp	This management pack defines common folder structure and views. Optional.
Microsoft.SQLServer.Generic.Dashboards.mp	This management pack defines common components required for SQL Server dashboards. Optional.
Microsoft.SQLServer.Visualization.Library.mpb	This management pack contains basic visual components required for SQL Server dashboards. Optional.

Management Pack Purpose

This management pack provides monitoring for SQL Server 2008 Analysis Services instances, databases, and partitions.

In this section:

- [Monitoring Scenarios](#)
- [How Health Rolls Up](#)

For details on the discoveries, rules, monitors, views, and reports contained in this management pack, see [Appendix: Management Pack Contents](#).

Monitoring Scenarios

Monitoring scenario	Description	Associated rules and monitors
SSAS Instance monitoring	This scenario provides the monitoring of health aspects of SSAS Instances.	<ul style="list-style-type: none">• Service State. This monitor alerts when the Windows service for SSAS instance is not in running state for a period longer than the configured threshold.• Memory Configuration Conflict with SQL Server. This monitor alerts if there is an SQL Server relational database engine process running on the server, and the TotalMemoryLimit configuration for the SSAS instance is higher than the specified threshold, in order to ensure that the SQL Server process has sufficient memory.• TotalMemoryLimit Configuration. This monitor alerts when the configured TotalMemoryLimit for the SSAS instance exceeds the configured threshold, risking allocation of physical memory required for the operating system to perform necessary basic functions (at least 2 GB).• Memory Usage. This monitor reports a warning when memory allocations by the SSAS instance surpass the configured WarningThreshold, expressed as a percentage of the TotalMemoryLimit setting for the SSAS instance. The monitor issues a critical alert when these allocations surpass the configured CriticalThreshold.• Memory Usage on the Server. This monitor observes the memory usage by non-SSAS processes on the server, to ensure the TotalMemoryLimit for Analysis Services is always available.

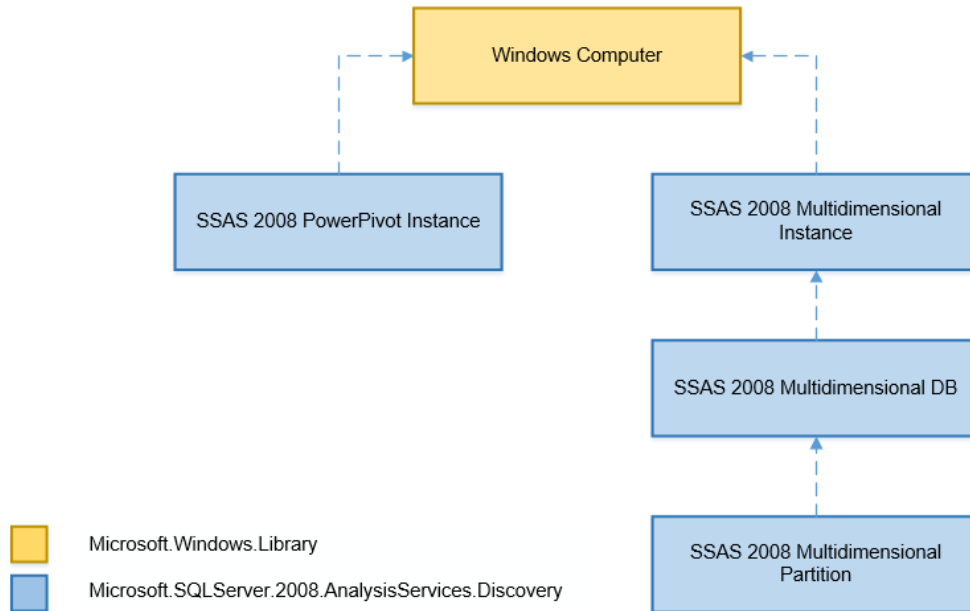
Monitoring scenario	Description	Associated rules and monitors
		<ul style="list-style-type: none"> • Processing Pool Job Queue length. This monitor alerts when the length of the processing pool job queue for the SSAS instance is greater than the configured threshold. • Query Pool Queue length. This monitor alerts when the size of query pool queue for the SSAS instance is greater than the configured threshold. • Default Storage Free Space. This monitor reports a warning when the available free space for the default storage for the instance drops below the Warning Threshold setting, expressed as a percentage of the sum of estimated default storage folder (DataDir) size and disk free space. The monitor reports a critical alert when the available space drops below the Critical Threshold. The monitor does not take into account databases or partitions located in folders other than the default storage folder (DataDir). • CPU utilization – The monitor alerts if the CPU usage by the SSAS process is high.
SSAS Database monitoring	This scenario provides the monitoring for health aspects of SSAS Databases.	<ul style="list-style-type: none"> • Database Free Space. This monitor reports a warning when the available disk space for SSAS database storage folder drops below Warning Threshold setting, expressed as a percentage of the sum of the estimated database storage folder size and disk free space. The monitor reports a critical alert when the available space drops below Critical Threshold. • Blocking Duration. This monitor alerts if at least one session is blocked longer than the configured threshold. • Blocking Session Count. The monitor alerts when the number of sessions blocked for a longer period than the configured WaitMinutes setting exceeds the configured threshold.
SSAS Partition monitoring	This scenario provides the monitoring for health aspects of SSAS Multidimensional	<ul style="list-style-type: none"> • Partition Storage Free Space. The monitor reports a warning when the available free space for the partition storage location drops below the CriticalThreshold setting, expressed as a percentage of the sum of the total size of the folder plus disk free space. The monitor reports a critical alert when the available space drops

Monitoring scenario	Description	Associated rules and monitors
	Database's partitions.	below the WarningThreshold. The monitor does not monitor available space for the default storage location for the SSAS instance.
Performance collection rules	This scenario collects various important performance metrics	SSAS 2008: Database Blocking Duration (minutes) SSAS 2008: Database Disk Free Space (GB) SSAS 2008: Database Drive Space Used By Others (GB) SSAS 2008: Database Free Space (%) SSAS 2008: Database Free Space (GB) SSAS 2008: Number of Database Blocked Sessions SSAS 2008: Database Size (GB) SSAS 2008: Database Storage Folder Size (GB) SSAS 2008: Partition Size (GB) SSAS 2008: Partition Free Space (GB) SSAS 2008: Partition Used by Others (GB) SSAS 2008: Partition Free Space (%) SSAS 2008: Total Drive Size (GB) SSAS 2008: Drive Used Space (GB) SSAS 2008: Actual System Cache (GB) SSAS 2008: Instance Free Space (%) SSAS 2008: Instance Free Space (GB) SSAS 2008: Cache Evictions/sec SSAS 2008: Cache Inserts/sec SSAS 2008: Cache KB added/sec SSAS 2008: CPU utilization (%) SSAS 2008: Default Storage Folder Size (GB) SSAS 2008: Low Memory Limit (GB) SSAS 2008: Cleaner Current Price SSAS 2008: Memory Usage on the Server (GB) SSAS 2008: Memory Usage on the Server (%) SSAS 2008: Memory Usage by AS Non-shrinkable (GB) SSAS 2008: Processing Pool Job Queue Length SSAS 2008: Processing Rows read/sec SSAS 2008: Instance Memory (GB)

Monitoring scenario	Description	Associated rules and monitors
		SSAS 2008: Instance Memory (%) SSAS 2008: Query Pool Job Queue Length SSAS 2008: Storage Engine Query Rows sent/sec SSAS 2008: Total Memory Limit (GB) SSAS 2008: Total Memory on the Server (GB) SSAS 2008: Used Space on Drive (GB)
Alert rules	The rule notifies about occurred errors	An error occurred during execution of an SSAS 2008 MP managed module

How Health Rolls Up

The following diagram shows how health states of the objects roll up in this management pack.



Configure Management Pack for SQL Server 2008 Analysis Services

This section provides guidance on configuring and tuning this management pack.

- [Best Practice: Create a Management Pack for Customizations](#)
- [How to Import a Management Pack](#)
- [How to Enable Agent Proxy Option](#)
- [Security Configuration](#)

Best Practice: Create a Management Pack for Customizations

The management pack for Microsoft SQL Server 2008 Analysis Services is sealed so that you cannot change any of the original settings in the management pack file. However, you can create customizations, such as overrides or new monitoring objects, and save them to a different management pack. By default, the Operations Manager saves all customizations to the default management pack. As a best practice, you should instead create a separate management pack for each sealed management pack you want to customize.

Creating a new management pack for storing overrides has the following advantages:

- When you create a management pack for the purpose of storing customized settings for a sealed management pack, it is helpful to base the name of the new management pack on the name of the management pack that it is customizing, such as “Microsoft SQL Server 2008 Analysis Services Overrides”.
- Creating a new management pack for storing customizations of each sealed management pack makes it easier to export the customizations from a test environment to a production environment. It also makes it easier to delete a management pack, because you must delete any dependencies before you can delete a management pack. If customizations for all management packs are saved in the Default Management Pack and you need to delete a single management pack, you must first delete the Default Management Pack, which also deletes customizations to other management packs.

For more information about sealed and unsealed management packs, see [Management Pack Formats](#). For more information about management pack customizations and the default management pack, see [About Management Packs](#).

How to Create a New Management Pack for Customizations

To enable **Agent Proxy option** complete the following steps:

1. Open the Operations Manager console and click **Administration** button.
2. Right-click **Management Packs**, and then click **Create New Management Pack**.
3. Enter a name (for example, SQLMP Customizations), and then click **Next**.
4. Click **Create**.

How to Import a Management Pack

For more information about importing a management pack, see [How to Import an Operations Manager Management Pack](#).

How to Enable Agent Proxy Option

To enable **Agent Proxy option** complete the following steps:

1. Open the Operations Manager console and click **Administration** button.
2. In the Administrator pane, click **Agent Managed**.
3. Double-click an agent in the list.
4. On the Security tab, select “**Allow this agent to act as a proxy and discover managed objects on other computers**”.

Security Configuration



Note

Monitoring under the low privilege is not supported in this release.

Run As Profiles

When the management pack for Microsoft SQL Server Analysis Services is imported for the first time, it creates two new Run As profiles:

- Microsoft SQL Server 2008 Analysis Services Discovery Run As Profile – this profile is associated with all discoveries.
- Microsoft SQL Server 2008 Analysis Services Monitoring Run As Profile – this profile is associated with all monitors and rules.

By default, all discoveries and monitors defined in the SQL Server management pack use accounts defined in “Default Action Account” Run As profile. If the default action account for a given system does not have the necessary permissions to discover or monitor the instance of SQL Server Analysis Services, then those systems can be bound to more specific credentials in “Microsoft SQL Server 2008 ...” Run As profiles, which do have access.

Profile Name	Associated Rules, Monitors, and Discoveries	Notes
Microsoft SQL Server 2008 Analysis Services Discovery Run As Profile	SSAS 2008 Group Discovery SSAS 2008 Seed Discovery SSAS 2008 Multidimensional Instance Discovery SSAS 2008 Multidimensional DB Discovery SSAS 2008 Multidimensional Partition Discovery SSAS 2008 PowerPivot Instance Discovery	Account with administrator permissions for both Windows Server and SQL Server Analysis Services







Profile Name	Associated Rules, Monitors, and Discoveries	Notes
		instance should be used
Microsoft SQL Server 2008 Analysis Services Monitoring Run As Profile	SSAS 2008: Database Blocking Duration (minutes) SSAS 2008: Database Disk Free Space (GB) SSAS 2008: Database Drive Space Used By Others (GB) SSAS 2008: Database Free Space (%) SSAS 2008: Database Free Space (GB) SSAS 2008: Number of Database Blocked Sessions SSAS 2008: Database Size (GB) SSAS 2008: Database Storage Folder Size (GB) SSAS 2008: Partition Size (GB) SSAS 2008: Partition Free Space (GB) SSAS 2008: Partition Used by Others (GB) SSAS 2008: Partition Free Space (%) SSAS 2008: Total Drive Size (GB) SSAS 2008: Drive Used Space (GB) SSAS 2008: Actual System Cache (GB) SSAS 2008: Instance Free Space (%) SSAS 2008: Instance Free Space (GB) SSAS 2008: Cache Evictions/sec SSAS 2008: Cache Inserts/sec SSAS 2008: Cache KB added/sec SSAS 2008: CPU utilization (%) SSAS 2008: Default Storage Folder Size (GB) SSAS 2008: Low Memory Limit (GB) SSAS 2008: Cleaner Current Price SSAS 2008: Memory Usage on the Server (GB) SSAS 2008: Memory Usage on the Server (%) SSAS 2008: Memory Usage by AS Non-shrinkable (GB) SSAS 2008: Processing Pool Job Queue Length SSAS 2008: Processing Rows read/sec SSAS 2008: Instance Memory (GB) SSAS 2008: Instance Memory (%) SSAS 2008: Query Pool Job Queue Length	Account with administrator permissions for both Windows Server and SQL Server Analysis Services instance should be used

Profile Name	Associated Rules, Monitors, and Discoveries	Notes
	SSAS 2008: Storage Engine Query Rows sent/sec SSAS 2008: Total Memory Limit (GB) SSAS 2008: Total Memory on the Server (GB) SSAS 2008: Used Space on Drive (GB)	

View Information in the Operations Manager Console

Version-Independent (Generic) Views and Dashboards

Microsoft.SQLServer.Generic.Presentation management pack introduces a common folder structure, which will be used by future releases of management packs for different components of SQL Server. The following views and dashboards are version-independent and show information about all versions of SQL Server:

-  Microsoft SQL Server
 -  Active Alerts
 -  SQL Server Roles
 -  Summary
 -  Computers
 -  Task Status

“SQL Server Roles” dashboard provides information about all instances of SQL Server Database Engine, SQL Server Reporting Services, SQL Server Analysis Services and SQL Server Integration Services:

SQL Server Roles

Instances (20)

Icon	Health	Maintenance Mode	Display Name	Path	Instance Type	Version	Service Pack Version	Edition
			MSSQLSERVER	WGSQ14-001	Analysis Services	12.0.2000.8	0	Standard Edition (64-bit)
			MSSQLSERVER	SQL2K8R2-004.MB.local	Analysis Services	10.50.4000.0	2	Enterprise Edition
			MSSQLSERVER	SQL14-004.MB.local	Analysis Services	12.0.2000.8	0	Standard Edition (64-bit)
			MSSQLSERVER	W2K8SP2-006.MB.local	Analysis Services	12.0.2000.8	0	Enterprise Edition
			MSSQLSERVER	MBSECL1.MB.local	Analysis Services	12.0.2000.8	0	Standard Edition (64-bit)
			MSSQLSERVER	W2K8SP2-005.MB.local	Analysis Services	11.0.2100.60	0	Enterprise Edition
			MSSQLSERVER	W2K8SP2-004.MB.local	Analysis Services	10.50.1600.1	0	Enterprise Edition
			SQL2008R2	SQL2K8R2-004.MB.local	Analysis Services	10.50.4000.0	2	Enterprise Edition
			SQL2008R2_NAMED	W2K8SP2-004.MB.local	Analysis Services	10.50.1600.1	0	Enterprise Edition
			SQL2012_SE	W2K8SP2-005.MB.local	Analysis Services	11.0.2100.60	0	Standard Edition

Details

Display Name	MSSQLSERVER
Path	SQL14-004.MB.local\MSSQLSERVER
Health	Error
Object Display Name	MSSQLSERVER
Instance Name	MSSQLSERVER
Instance Type	Analysis Services
Service Name	MSSQLServerOLAPService
Service Name for Cluster	
Version	12.0.2000.8
Edition	Standard Edition (64-bit)
Service Pack Version	0

SQL Server 2008 Analysis Services Views

The management pack for Microsoft SQL Server 2008 Analysis Services introduces a comprehensive set of state, performance and alert views, which can be found in the dedicated folder:

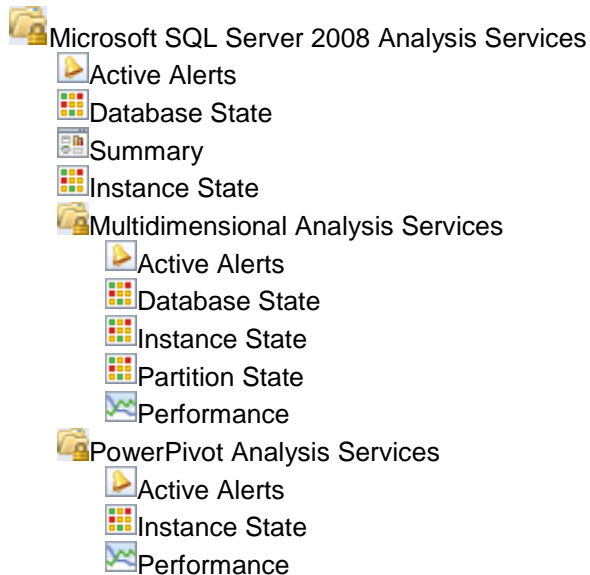
- Monitoring
 - Microsoft SQL Server
 - SQL Server Analysis Services
 - SQL Server 2008 Analysis Services**

Note

Some views may contain a very long list of objects or metrics. To find a specific object or group of objects, you can use the **Scope**, **Search**, and **Find** buttons on the Operations Manager toolbar. For more information, see [“Finding Data and Objects in the Operations Manager Consoles”](#) article in the Operations Manager Help.

Views and Dashboards

This management pack includes a set of rich dashboards, which provide detailed information about SQL Server 2008 Analysis Services (Instances) and Databases. The structure of the management pack views and folders is as follows:



Note

For detailed information, see [SQLServerDashboards.doc](#).

Links

The following links connect you to information about common tasks that are associated with System Center Management Packs:

- [The Operations Manager](http://go.microsoft.com/fwlink/?LinkId=730749)
(<http://go.microsoft.com/fwlink/?LinkId=730749>)
- [How to Import a Management Pack](http://go.microsoft.com/fwlink/?LinkId=717823) (<http://go.microsoft.com/fwlink/?LinkId=717823>)
- [Using Management Packs](http://go.microsoft.com/fwlink/?LinkId=730750)
(<http://go.microsoft.com/fwlink/?LinkId=730750>)

For questions about the Operations Manager and management packs, see [System Center Operations Manager community forum](http://go.microsoft.com/fwlink/?LinkID=179635) (<http://go.microsoft.com/fwlink/?LinkID=179635>).

A useful resource is [System Center Operations Manager Unleashed blog](http://go.microsoft.com/fwlink/?LinkId=730751) (<http://go.microsoft.com/fwlink/?LinkId=730751>), which contains “By Example” posts for specific management packs.

For additional information about the Operations Manager, see the following blogs:

- [Operations Manager Team Blog \(http://go.microsoft.com/fwlink/?LinkId=730752\)](http://go.microsoft.com/fwlink/?LinkId=730752)
- [Kevin Holman's OpsMgr Blog \(http://go.microsoft.com/fwlink/?LinkId=730753\)](http://go.microsoft.com/fwlink/?LinkId=730753)
- [Thoughts on OpsMgr \(http://go.microsoft.com/fwlink/?LinkId=730754\)](http://go.microsoft.com/fwlink/?LinkId=730754)
- [Raphael Burri's blog \(http://go.microsoft.com/fwlink/?LinkId=730755\)](http://go.microsoft.com/fwlink/?LinkId=730755)
- [BWren's Management Space \(http://go.microsoft.com/fwlink/?LinkId=730756\)](http://go.microsoft.com/fwlink/?LinkId=730756)
- [The System Center Operations Manager Support Team Blog \(http://go.microsoft.com/fwlink/?LinkId=730757\)](http://go.microsoft.com/fwlink/?LinkId=730757)
- [Ops Mgr ++ \(http://go.microsoft.com/fwlink/?LinkId=730758\)](http://go.microsoft.com/fwlink/?LinkId=730758)
- [Notes on System Center Operations Manager \(http://go.microsoft.com/fwlink/?LinkId=730759\)](http://go.microsoft.com/fwlink/?LinkId=730759)



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Appendix: Management Pack Contents

The management pack for Microsoft SQL Server 2008 Analysis Services discovers objects of classes described in the following sections. Not all of the objects are automatically discovered. Use overrides to enable discovery of those objects that are not discovered automatically.

Analysis Services Database Group

Analysis Services Database Group contains all SQL Server root objects such as Analysis Services instance.

Analysis Services Database Group - Discoveries

[SSAS 2008: Server Database Group Discovery](#)

This object discovery populates Server Roles group to contain all SQL Server 2008 Analysis Services Server Roles.

Analysis Services Server Roles Group

Analysis Services Server Roles Group contains all SQL Server root objects such as Analysis Services instance.

Analysis Services Server Roles Group - Discoveries

[SSAS 2008: Server Roles Group Discovery](#)

This object discovery populates Server Roles group to contain all SQL Server 2008 Analysis Services Server Roles.

Server Roles Group

Server Roles Group contains all SQL Server root objects such as Database Engine, Analysis Services instance or Reporting Service instance.

Server Roles Group - Discoveries

[SSAS 2008: Server Roles Group Discovery](#)

This object discovery populates Server Roles group to contain all SQL Server 2008 Analysis Services Server Roles.

SQL Server Alerts Scope Group

SQL Server Alerts Scope Group contains SQL Server objects, which can throw alerts.

SQL Server Alerts Scope Group - Discoveries

[SSAS 2008: Alerts Scope Group Discovery](#)

This object discovery populates the Alerts Scope group to contain all SQL Server 2008 Analysis Services Server Roles.

SQL Server Analysis Services Alerts Scope Group

SQL Server Analysis Services Alerts Scope Group contains SQL Server Analysis Services objects, which can throw alerts.

SQL Server Analysis Services Alerts Scope Group - Discoveries

[SSAS 2008: Alerts Scope Group Discovery](#)

This object discovery populates Alerts Scope group to contain all SQL Server 2008 Analysis Services Server Roles.

SQL Server Computers

This group contains all Windows computers that are running a component of Microsoft SQL Server

SQL Server Computers - Discoveries

[SSAS 2008: Discover SQL Server Computer Group membership](#)

Populates the computer group to contain all computers running SQL Server 2008 Analysis Services.

SSAS 2008 Event Log Collection Target

This object is used to collect errors from event log of computers that have SSAS 2008 components.

SSAS 2008 Event Log Collection Target - Discoveries

[SSAS 2008 Event Log Collection Target Discovery](#)

This discovery rule discovers an event log collection target for a Microsoft SQL Server 2008 Analysis Services. This object is used to collect module errors from event log of computers that have SSAS 2008 components.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Frequency in seconds		14400

SSAS 2008 Event Log Collection Target - Rules (alerting)

An error occurred during execution of a SSAS 2008 MP managed module

The rule oversees the Event Log and watches for error events submitted by SSAS 2008 management pack. If one of the workflows (discovery, rule or monitor) fails, an event is logged and a critical alert is reported.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	Yes
Priority	Defines Alert Priority.	2
Severity	Defines Alert Severity.	2

SSAS 2008 Instance

An installation of Microsoft SQL Server 2008 Analysis Services

SSAS 2008 Instance - Unit monitors

Processing Pool Job Queue length

The monitor alerts when the length of the processing pool job queue for SSAS instance is greater than the configured threshold.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Number of samples	Health State changes, if the number of threshold breaches is greater than or equal to the Minimum Number of Breaches.	4

Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Warning Threshold	Health State changes, if Analysis Services performance counter exceeds the threshold.	0

Default Storage Free Space

The monitor reports a warning when the available free space for the default instance storage drops below Warning Threshold setting, expressed as percentage of the sum of estimated default storage folder (Data Directory) size and disk free space. The monitor reports a critical alert when the available space drops below Critical Threshold. The monitor does not take into account databases or partitions located in folders other than the default storage folder (Data Directory).

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Critical Threshold (%)	The monitor will change the state to Critical if the value drops below this threshold.	5
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

Warning Threshold	The monitor will change the state to Warning if the value drops below this threshold.	10
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Memory Configuration Conflict with SQL Server

The monitor alerts, if there is a SQL Server relational database engine process running on the server, and Total Memory Limit configuration for SSAS instance is higher than the specified threshold, in order to ensure that the SQL server process has sufficient memory.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	604800
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Warning Threshold (%)	Health State changes, if there is an SQL Server relational database engine process running on the server, and Total Memory Limit configuration setting for SSAS instance exceeds the threshold.	40

Service State

The monitor alerts when Windows service for SSAS instance is not in running state for a duration greater than the configured threshold.

Name	Description	Default value
------	-------------	---------------

Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Alert only if service startup type is automatic	This may only be set to 'True' or 'False'. If set to 'False', then alerts will be triggered, no matter what the startup type is set to. Default is 'True'.	true
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	60
Number of samples	Health State changes, if the number of subsequent check failures is greater than or equal to the Minimum Number of Checks.	15
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

Total Memory Limit Configuration

The monitor alerts when the configured Total Memory Limit for SSAS instance exceeds the configured threshold, risking allocation of physical memory required for the operating system to perform its essential functions, at least 2 GB.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	604800

Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Warning Threshold (GB)	The monitor alerts when the configured Total Memory Limit for the operating system exceeds the configured threshold, risking allocation of physical memory required for the operating system to perform its essential functions, at least 2 GB.	2

Memory Usage

The monitor reports a warning when memory allocations by SSAS instance surpass the configured Warning Threshold, expressed as a percentage of Total Memory Limit setting for SSAS instance. The monitor issues a critical alert when these allocations surpass the configured Critical Threshold.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Critical Threshold (%)	The monitor will change the state to Critical if the value drops below this threshold.	95
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run	300

	before being closed and marked as failed.	
Warning Threshold	The monitor will change the state to Warning if the value drops below this threshold.	80

CPU Utilization (%)

The monitor alerts, if SSAS process CPU usage exceeds the Threshold.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Critical Threshold (%)	The monitor alerts, if the CPU utilization caused by SSAS process is higher than the threshold.	95
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Number of samples	Indicates how many times a measured value should breach a threshold before the state is changed.	4
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

Memory Usage on the Server

The monitor observes the memory usage by non Analysis Services processes on the server, to ensure Total Memory Limit for Analysis Services is always available.

Name	Description	Default value
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Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Critical Threshold (%)	The monitor will change the state to Critical if the value drops below this threshold.	5
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Warning Threshold	The monitor will change the state to Warning if the value drops below this threshold.	10

Query Pool Queue length

The monitor alerts when the size of query pool queue for SSAS instance is greater than the configured threshold.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Number of samples	Health State changes, if the number of threshold breaches is greater than or equal to the Minimum Number of Breaches.	4

Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Warning Threshold	Health State changes, if Analysis Services performance counter exceeds the threshold.	0

SSAS 2008 Instance - Rules (non-alerting)

SSAS 2008: Total Memory on the Server (GB)

The rule collects the total size of memory in gigabytes on the computer, where SSAS instance is running.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Query Pool Job Queue Length

The rule collects the length of the query pool job queue.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes

Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Instance Memory (%)

The rule collects the total size in percent of memory allocated by SSAS instance.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Cleaner Current Price

The rule collects current cost of memory as calculated by SSAS (cost per byte per unit of time) normalized and expressed on a scale from 0 to 1000.

Name	Description	Default value
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Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Memory Usage on the Server (%)

The rule collects total memory usage in percent on the server, where SSAS instance is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Instance Free Space (GB)

The rule collects the amount of free space on the drive, where the default storage folder (Data Directory) for SSAS instance is located in gigabytes.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: CPU utilization (%)

The rule collects rate of CPU usage by SSAS Instance.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Processing Pool Job Queue Length

The rule collects the length of the processing pool job queue.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Cache added KB/sec

The rule collects SSAS rate of memory added to the cache, KB/sec.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Actual System Cache (GB)

The rule collects the size in gigabytes of system cache on the computer, where SSAS instance is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Cache Inserts/sec

The rule collects SSAS rate of insertions into the cache.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Memory Usage by AS Non-shrinkable (GB)

The rule collects non-shrinkable memory in gigabytes allocated by SSAS instance.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Instance Free Space (%)

The rule collects the amount of free space on the drive, where the default storage folder (Data Directory) for SSAS instance is located, expressed as percentage of the sum of estimated default storage folder (Data Directory) size and disk free space.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Processing Rows read/sec

The rule collects Rate of rows read from all relational databases.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Default Storage Folder Size (GB)

The rule collects the total size in gigabytes of the default storage folder (Data Directory) for SSAS instance, calculated as a sum of estimated sizes of the DBs and partitions located in the Data Directory.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run	300

	before being closed and marked as failed.	
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SSAS 2008: Total Drive Size (GB)

The rule collects the total size in gigabytes of the drive, where the default storage folder (Data Directory) for SSAS instance is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Memory Usage on the Server (GB)

The rule collects total memory usage in gigabytes on the server, where SSAS instance is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	

Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
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SSAS 2008: Storage Engine Query Rows sent/sec

The rule collects Rate of rows sent by server to clients.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Instance Memory (GB)

The rule collects the total size in gigabytes of memory allocated by SSAS instance.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	

Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
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SSAS 2008: Cache Evictions/sec

The rule collects SSAS rate of evictions from the cache.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Total Memory Limit (GB)

The rule collects the configuration on SSAS instance for Total Memory Limit in gigabytes.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	

Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
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SSAS 2008: Low Memory Limit (GB)

The rule collects the current configuration for the Low Memory Limit of SSAS instance in gigabytes.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Used Space on Drive (GB)

The rule collects the total amount of used disk space on the disk, where SSAS instance Data Directory is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900

Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Processing Rows written/sec

The rule collects Rate of rows written during processing of data.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Indexes Processing Rows/sec

The rule collects Rate of rows from MOLAP files used to create indexes.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900

Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Processing Aggregations Rows created/sec

The rule collects Rate of aggregation rows created during processing of aggregations in MOLAP data files.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: MDX Total NON EMPTY unoptimized

The rule collects Total number of times an unoptimized NON EMPTY algorithm was used.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No

Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: MDX Total NON EMPTY for calculated members

The rule collects Total number of times a NON EMPTY algorithm looped over calculated members.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: MDX total cells calculated

The rule collects Total number of cell properties calculated.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No

Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: MDX Number of calculation covers

The rule collects Total number of evaluation nodes built by MDX execution plans, including active and cached.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: MDX Total Sonar subcubes

The rule collects Total number of subcubes that the query optimizer generated.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No

Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: MDX Total Recomputes

The rule collects Total number of cells recomputed due to error.

Name	Description	Default value
Enabled	Enables or disables the workflow.	True
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008 Multidimensional DB

Microsoft SQL Server 2008 Analysis Services Multidimensional Database

SSAS 2008 Multidimensional DB - Discoveries

[SSAS 2008 Multidimensional DB Discovery](#)

The object discovery discovers all databases of an instance of Microsoft SQL Server 2008 Analysis Services, Multidimensional Mode.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	14400
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008 Multidimensional DB - Unit monitors

Database Free Space

The monitor reports a warning when the available disk space for SSAS multidimensional database storage folder drops below Warning Threshold setting, expressed as percentage of the sum of the estimated database storage folder size plus disk free space. The monitor reports a critical alert when the available space drops below Critical Threshold. The monitor does not take into account partitions located in folders other than the DB storage folder.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Critical Threshold (%)	The monitor will change the state to Critical if the value drops below this threshold.	5
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	

Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Warning Threshold	The monitor will change the state to Warning if the value drops below this threshold.	10

Blocking Session Count

The monitor alerts when the number of sessions that are blocked longer than the configured WaitMinutes setting exceeds the configured threshold.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Critical Threshold	Health State changes when the number of blocked sessions exceeds the threshold.	10
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Number of samples	Health State changes, if the number of threshold breaches is greater than or equal to the Minimum Number of Breaches.	4
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Wait Minutes	Wait Minutes parameter defines the minimum waiting time for the session to be considered by the monitor.	1

Blocking Duration

The monitor alerts, if at least one session is blocked for a longer period than the configured threshold.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300
Warning Threshold (min)	Health State changes, if at least one session is blocked longer than the threshold.	1

SSAS 2008 Multidimensional DB - Dependency (rollup) monitors

Partitions Performance Rollup

SQL Server 2008 Analysis Services Multidimensional Partitions Performance Health Rollup

SSAS 2008 Multidimensional DB - Rules (non-alerting)

SSAS 2008: Database Free Space (%)

The rule collects the amount of free space on the drive, where the storage folder of the database is located, expressed as percentage of the sum of estimated database storage folder size and disk free space. The rule does not take into account partitions located in folders other than the DB storage folder.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes

Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Database Free Space (GB)

The rule collects the amount of free space in gigabytes on the drive, where the storage folder of the database is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Database Storage Folder Size (GB)

The rule collects the estimated size of the database storage folder in gigabytes.

Name	Description	Default value
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Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Drive Used Space (GB)

The rule collects the total size in gigabytes of all files and folders on the drive, where the database storage folder is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Database Blocking Duration (minutes)

The rule collects the longest blocking duration for currently blocked sessions.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Database Drive Space Used By Others (GB)

The rule collects the amount of used space on the drive, where the database is located, other than space used by the database itself.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Total Drive Size (GB)

The rule collects the total size in gigabytes of the drive, where the database storage folder is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Database Size (GB)

The rule collects the total estimated database size in gigabytes including size of all partitions.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Number of Database Blocked Sessions

The rule collects the number of sessions that are currently blocked.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Database Disk Free Space (GB)

The rule collects the amount of free space on the drive, where the database is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008 Multidimensional Instance

An installation of Microsoft SQL Server 2008 Analysis Services, Multidimensional Mode

SSAS 2008 Multidimensional Instance - Discoveries

[SSAS 2008 Multidimensional Instance Discovery](#)

The object discovery discovers all instances of Microsoft SQL Server 2008 Analysis Services, Multidimensional Mode.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	14400
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008 Multidimensional Instance - Dependency (rollup) monitors

[Database Performance Rollup](#)

SQL Server 2008 Analysis Services Multidimensional Database Performance Health Rollup

SSAS 2008 Multidimensional Partition

Microsoft SQL Server 2008 Analysis Services Multidimensional Partition

SSAS 2008 Multidimensional Partition - Discoveries

[SSAS 2008 Multidimensional Partition Discovery](#)

The object discovery discovers all partitions for Microsoft SQL Server 2008 Analysis Services Database, Multidimensional Mode.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes

Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	14400
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008 Multidimensional Partition - Unit monitors

Partition Storage Free Space

The monitor reports a warning when the available free space for the partition storage location drops below Critical Threshold setting expressed as percentage of the sum of the total size of the folder plus disk free space. The monitor reports a critical alert when the available space drops below Warning Threshold. The monitor does not monitor available space for the default storage location for SSAS instance.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	True
Critical Threshold (%)	The monitor will change the state to Critical if the value drops below this threshold.	5
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

Warning Threshold	The monitor will change the state to Warning if the value drops below this threshold.	10
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SSAS 2008 Multidimensional Partition - Rules (non-alerting)

SSAS 2008: Partition Free Space (GB)

The rule collects the amount of free space in gigabytes on the drive, where the storage folder of the partition is located.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Partition Used by Others (GB)

The rule collects the total amount of space in gigabytes on the drive, where the storage folder of the partition is located, which is allocated by files and folders other than the storage folder of the partition.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900

Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Partition Size (GB)

The rule collects the estimated size of the partition in gigabytes.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008: Partition Free Space (%)

The rule collects the size of free space on the drive, where the partition storage is located, expressed as a percentage of the sum of the partition storage folder total size plus disk free space.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Generate Alerts	Defines whether the workflow generates an Alert.	No

Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	900
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008 PowerPivot Instance

An installation of Microsoft SQL Server 2008 Analysis Services, PowerPivot Mode

SSAS 2008 PowerPivot Instance - Discoveries

[SSAS 2008 PowerPivot Instance Discovery](#)

The object discovery discovers all instances of Microsoft SQL Server 2008 Analysis Services, PowerPivot Mode.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Interval Seconds	The recurring interval of time in seconds in which to run the workflow.	14400
Synchronization Time	The synchronization time specified by using a 24-hour format. May be omitted.	
Timeout (seconds)	Specifies the time the workflow is allowed to run before being closed and marked as failed.	300

SSAS 2008 Seed

An installation of Microsoft SQL Server 2008 Analysis Services Seed

SSAS 2008 Seed - Discoveries

SSAS 2008 Seed Discovery

This object discovery discovers a seed for Analysis Services installation. This object indicates that the particular server computer contains Analysis Services installation.

Name	Description	Default value
Enabled	Enables or disables the workflow.	Yes
Frequency in seconds		14400

Appendix: Known Issues and Troubleshooting

Users who had the previous version of SSAS management pack installed should remove Microsoft SQL Server Analysis Services Visualization Library (version 1.0.5.0) manually.

Issue: The library has become a generic component and a new management pack that contains the functionality is released. Since it is impossible to remove the obsolete pack automatically during the installation process, users have to do it manually.

Resolution: Remove Microsoft SQL Server Analysis Services Visualization Library (version 1.0.5.0).

If the last SSAS database or partition is deleted the object will be still displayed in SCOM as if it exists.

Issue: Current implementation of SSAS database and partition discoveries incorrectly resolves the situation when the last SSAS database or partition is deleted. In case the information regarding the deleted object is still visible to the user.

Resolution: There is no resolution. The error may be addressed in future releases of the management pack. A user can either add an SSAS database/partition or remove the SSAS instance.

'An error occurred during execution of an SSAS 2008 MP managed module' alert rule generates extra alerts for virtual nodes.

Issue: Current implementation of the rule uses 'SSAS 2008 Seed' as a target. Virtual nodes have mutual seed, as a result, each time an error occurs on a physical machine an alert is automatically reported from every virtual entity, which is currently associated with that physical machine.

Resolution: There is no resolution. The error may be addressed in future releases of the management pack.

Event 6200 “Analysis Services connection failed” error is reported into the Operations Manager event log.

Issue: Instance discovery workflows of SSAS management pack require connection to an SSAS instance if the connection is not provided the workflows report about encountered problems. Such an issue may occur when the instance is stopped during execution of a workflow, or when the instance is incorrectly configured.

Resolution: Set ‘Threadpool\Query\MaxThreads’ property to a value of less than or equal to two times the number of processors on the server.

The Operations Manager consoles crash when the user simultaneously opens two or more Instance/Database Summary dashboards on the same machine.

Issue: It is allowed to run two or more the Operations Manager consoles on the same machine, but opening summary dashboards in more than one of them leads to a crash of all consoles. The issue is not observed in Web-consoles.

Resolution: There is no resolution.

The Operations Manager console crashes if the user who is browsing Instance Summary dashboard selects an SSAS Instance, which has already been deleted.

Issue: The action causes a crash of the Operations Manager console.

Resolution: Open Operation console again.

“Health Service State” monitor is in critical state and Health Service restarts periodically.

Issue: By default, the threshold of “Monitoring Host Private Bytes Threshold Monitor” from the System Management Pack is 300 Mbytes. “MonitoringHost.exe” process may exceed the threshold and the “Health Service State” monitor may start the recovery procedure when SSAS 2008 Management Pack is collecting information about a large number of objects (more than 50 SSAS databases or 1500 partitions per server).

Resolution: Override the threshold of the “Monitoring Host Private Bytes Threshold Monitor” or reduce the number of objects being monitored by disabling discovery of partition objects.

Event 6200 “Category does not exist” (source – “SSAS 2008 MP”) is being generated on 64-bit operating systems running 32-bit SSAS instances.

Issue: SSAS doesn’t register performance counters properly when a 32-bit SSAS instance is installed on a 64-bit OS. In this case, required performance counters cannot be found by Management Pack and SSAS 2008 MP is unable to run properly.

Resolution: This issue cannot be resolved, WoW64 is not supported. It is highly recommended to use either 32-bit SSAS instances on 32-bit OS or 64-bit SSAS instances on 64-bit OS.

Health Service and Monitoring Host processes consume too much memory on systems running SSAS 2008 instances with a large number of databases

Issue: On agent-managed systems that host one or more instance of SQL Server 2008 Analysis Services with a large number of databases and/or partitions, “Health Service” and “Monitoring Host” processes may consume too much memory.

Resolution: It is not recommended to monitor more than 50 SSAS Databases on a single server. It is recommended to disable SSAS partitions discovery if you have more than 1500 partitions on a single server.

SSAS 2008 Summary Dashboards for Instances, Databases, and Partitions display all active alerts if nothing is selected in the navigation widget (leftmost widget on the dashboard).

Issue: Dashboards display all active alerts if nothing is selected in the navigation widget (leftmost widget on the dashboard).

Resolution: Make sure that at least one Instance, Database or Partition is selected in the navigation widget.

WMI errors may occur when SQL Server AS 2008/2008 R2 and SQL Server AS 2012 are installed on the same server.

Issue: Modules can throw an error during WMI query.

Resolution: Update SQL Server 2008/2008 R2 with the latest service pack.

Partition Storage Free Space Monitor may generate too many alerts.

Issue: The monitor may generate a lot of alerts if database default storage folder and partition storage folder are sharing the same drive.

Resolution: Disable the monitor for all partitions, which are sharing the same drive with database storage folder.

SSAS Seed object cannot be discovered if SQL Server 2008 Express Edition and SQL Server 2008 are installed on the same server.

Issue: SSAS 2008 Management Pack can throw a WMI error during Seed object discovery.

Resolution: Update SQL Server 2008/2008 R2 with the latest service pack or disable Seed object discovery for a given server if that server is not running an Instance of SQL Server 2008 Analysis Services.

SSAS 2008 Management Pack generates an alert: “An error occurred during execution of an SSAS 2008 MP managed module”.

Issue: Alert “An Error occurred during execution of an SSAS 2008 MP managed module” can be found in global “Active Alerts” view.

Resolution: This alert is generated if SSAS 2008 Management Pack cannot execute one of the workflows due to an unknown issue. Examine alert message and alert context to determine the root cause.

SSAS 2008 Management Pack may register Errors in the event log during installation of a new instance of SQL Server Analysis Services.

Issue: SSAS 2008 Management Pack may generate a lot of errors in event log during installation of a new instance of SQL Server Analysis Services.

Resolution: The issue occurs because Management Pack cannot get all required properties from the registry and WMI during the installation process. Once the installation process is completed, the Management Pack will be able to operate properly.

SQL Server 2008 Analysis Services reports an incorrect value for Total and Low memory limit performance counters.

Issue: SQL Server Analysis Services may report incorrect values for Total and Low memory limit performance counters after reconfiguration.

Resolution: SQL Server Analysis Services doesn't apply new configuration values immediately. SSAS service should be restarted to apply new settings.

SSAS 2008 Management Pack generates an alert: "Could not find a part of the path to configuration file 'msmdsrv.ini'"

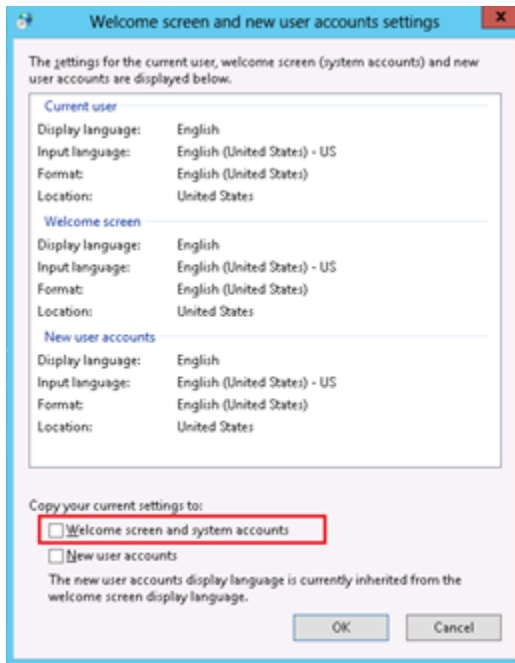
Issue: SSAS 2008 Management Pack reports an error in the Event log and generates an alert "Could not find a part of the path to configuration file 'msmdsrv.ini'". The issue occurs during a cluster failover.

Resolution: There is no resolution. The issue may occur when monitoring workflow is trying to collect information during a cluster failover. Once the failover is completed, the Management Pack will be able to operate properly.

SSAS 2008 Management Pack may not collect OS performance counters with localized names

Issue: SSAS 2008 Management Pack may not collect OS performance counters with localized names.

Resolution: Workaround: set English display language for user accounts associated with SSAS Discovery and Monitoring Run AS Profiles. Also, apply English as display language for system accounts.



Collecting counters from x86 instances installed on x64 OS machines is not available.

Issue: If x86 instances are installed on a machine with x64 OS, collection of counters from such instances may not work.

Resolution: Mind bitness of the instances during installation.

The dashboards may crash upon MP upgrade.

Issue: In some cases, upon upgrade of the MP to version 6.6.7.6 the Operations Manager console may crash with “ObjectNotFoundException” error.

Resolution: Wait until the importing process is completed, and restart the Operations Manager console. Mind that the Operations Manager console restarting is essential after MP upgrade. Otherwise, the dashboards will not work.