

System Center Monitoring Pack for SQL Server 2012 Parallel Data Warehouse Appliance

Microsoft Corporation

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Contents

[Microsoft SQL Server 2012 Parallel Data Warehouse Appliance Management Pack Guide 5](#_Toc353189172)

[Guide History 5](#_Toc353189173)

[Supported Configurations 5](#_Toc353189174)

[Management Pack Scope 5](#_Toc353189175)

[Before You Begin 6](#_Toc353189176)

[Monitoring architecture 6](#_Toc353189177)

[Prerequisites 6](#_Toc353189178)

[Mandatory Configuration 6](#_Toc353189179)

[Configure System DSN 6](#_Toc353189180)

[Configure Microsoft SQL Server 2012 Parallel Data Warehouse Appliance Credentials 9](#_Toc353189181)

[Optional Configuration 9](#_Toc353189182)

[Configure E-mail Alert Notifications 9](#_Toc353189183)

[Files in this Management Pack 13](#_Toc353189184)

[Management Pack Purpose 13](#_Toc353189185)

[Monitoring Scenarios 13](#_Toc353189186)

[How Health Rolls Up 13](#_Toc353189187)

[Configuring the Management Pack 14](#_Toc353189188)

[Best Practice: Create a Management Pack for Customizations 14](#_Toc353189189)

[Security Configuration 14](#_Toc353189190)

[Low privilege environment setup 15](#_Toc353189191)

[Overriding Discovery Interval 23](#_Toc353189192)

[Links 26](#_Toc353189193)

[Frequently Asked Questions 27](#_Toc353189194)

[Q: Appliance is not shown in the Appliance’s state view. What can I do? 27](#_Toc353189195)

[Appendix: Management Pack Contents 29](#_Toc353189196)

[SQL Server 2012 Parallel Data Warehouse Seed Object 29](#_Toc353189197)

[SQL Server 2012 Parallel Data Warehouse 30](#_Toc353189198)

[SQL 2012 PDW Appliances 30](#_Toc353189199)

[SQL 2012 PDW Compute Node 31](#_Toc353189200)

[SQL 2012 PDW Host Node 31](#_Toc353189201)

[SQL 2012 PDW Control Node 32](#_Toc353189202)

[SQL 2012 PDW Management Node 32](#_Toc353189203)

[SQL 2012 PDW Group of Host Nodes Clusters 32](#_Toc353189204)

[Microsoft SQL Server 2012 PDW Host Nodes Cluster 33](#_Toc353189205)

[SQL 2012 PDW Network Component Group 33](#_Toc353189206)

[SQL 2012 PDW Cluster Component Group 33](#_Toc353189207)

[SQL 2012 PDW Software Component Group 34](#_Toc353189208)

[SQL 2012 PDW Storage External Component Group 34](#_Toc353189209)

[SQL 2012 PDW Storage Internal Component Group 34](#_Toc353189210)

[SQL 2012 PDW Cooling Component Group 34](#_Toc353189211)

[SQL 2012 PDW Power Supply Component Group 34](#_Toc353189212)

[SQL 2012 PDW Server Processing Component Group 35](#_Toc353189213)

[SQL 2012 PDW Network Adapter Component (Network group) 35](#_Toc353189214)

[SQL 2012 PDW Network Connectivity Component (Network group) 36](#_Toc353189215)

[SQL 2012 PDW Node Component (Cluster group) 37](#_Toc353189216)

[SQL 2012 PDW Resource Group Component (Cluster group) 38](#_Toc353189217)

[SQL 2012 PDW Resource Component (Cluster group) 39](#_Toc353189218)

[SQL 2012 PDW Cluster Shared Volume Component (Cluster group) 40](#_Toc353189219)

[SQL 2012 PDW Application Heartbeat Component (Software group) 41](#_Toc353189220)

[SQL 2012 PDW Non-Clustered Service Component (Software group) 42](#_Toc353189221)

[SQL 2012 PDW External Storage Component (Storage External group) 42](#_Toc353189222)

[SQL 2012 PDW External Storage Virtual Disk Component (Storage External group) 43](#_Toc353189223)

[SQL 2012 PDW External Storage Pool Component (Storage External group) 44](#_Toc353189224)

[SQL 2012 PDW Fiber Channel HBA Component (Storage External group) 45](#_Toc353189225)

[SQL 2012 PDW External Disk Component (Storage External group) 46](#_Toc353189226)

[SQL 2012 PDW Internal Disk Component (Storage Internal group) 47](#_Toc353189227)

[SQL 2012 PDW Internal Volume Component (Storage Internal group) 49](#_Toc353189228)

[SQL 2012 PDW Internal Controller Component (Storage Internal group) 49](#_Toc353189229)

[SQL 2012 PDW Temperature Component (Cooling group) 51](#_Toc353189230)

[SQL 2012 PDW Cooling Device Component (Cooling group) 52](#_Toc353189231)

[SQL 2012 PDW Power Supply component (Power Supply group) 54](#_Toc353189232)

[SQL 2012 PDW Memory Component (Server Processing group) 55](#_Toc353189233)

[SQL 2012 PDW Processor Component (Server Processing group) 56](#_Toc353189234)

Microsoft SQL Server 2012 Parallel Data Warehouse Appliance Management Pack Guide

This guide was written based on version 1.0.14.0 of the Microsoft SQL Server 2012 Parallel Data Warehouse Appliance Monitoring Management Pack.

## Guide History

| **Release Date** | **Changes** |
| --- | --- |
| 03/2013 | Original release of this guide |

## Supported Configurations

This management pack requires a minimum version of System Center Operations Manager 2007 R2 and supports up to System Center Operations Manager 2012 SP1. All System Center Operations Manager reference in this document is based on System Center Operations Manager 2007 R2. A dedicated Operations Manager management group is not required.

The following table details the supported configurations for the Microsoft SQL Server 2012 Parallel Data Warehouse Management Pack:

|  |  |
| --- | --- |
| **Configuration** | **Support** |
| Microsoft SQL Server 2012 Parallel Data Warehouse Appliance | SQL Server 2012 |
| Agentless monitoring | Supported |
| Virtual environment | Not supported |

## Management Pack Scope

This management pack supports Microsoft SQL Server 2012 Parallel Data Warehouse.

## Before You Begin

### Monitoring architecture

All PDW monitoring is performed from single machine, called *watcher node*. Machine is considered watcher node if all of these conditions are met:

* Server OS installed;
* SCOM agent installed;
* At least one SQL Server DSN configured.

Watcher nodes discovery uses SQL Server system DSN definitions in the registry to identify the existence of one or more appliances. The IP address defined in the DSN will be used for the subsequent PDW components discovery. *Microsoft SQL Server 2012 PDW Watcher Account* is used to access the registry.

PDW components discovery and monitoring is performed through direct T-SQL queries issued from watcher node, *Microsoft SQL Server 2012 PDW Action Account* credentials are used to connect to the PDW.

For more information on accounts and required permissions please see Security Configuration section.

### Prerequisites

The following management packs should be imported and configured on Operations Manager Management server:

* System Center Core Library (v. 6.1.7221.0)
* Windows Core Library (v. 6.1.7221.0)
* Health Library (v. 6.1.7221.0)
* System Library (v. 6.1.7221.0)
* Microsoft SQL Server Appliance Library MP 1.0.5.0

## Mandatory Configuration

### Configure System DSN

For discovery and monitoring of the Microsoft SQL Server 2012 Parallel Data Warehouse Appliance, the SQL Server system DSN must be configured on the agent (watcher node) computer.

To configure the client, do the following:

1. Open the **ODBC Data Source Administrator** window.
2. On the **System DSN** tab, click **Add**.
3. Select **SQL Server** driver.
4. Click **Finish**.
5. Enter the:
* Data Source **Name**. This name is used as Appliance Name in the SCOM console.
* **Server**. This is the network address used to connect to PDW instance. This address should also include port number 17001 utilized by Microsoft SQL Server 2012 Parallel Data Warehouse.



***Note****: port is separate by comma (,) sign*

1. Click **Next**
2. Uncheck **Connect to SQL Server to obtain default settings for the additional configuration options** checkbox and click **Next**.



1. Check **Change the default database to** checkbox and type **master** as the default database to be used.



Click **Next**.

1. On the next screen click **Finish** without any changes.



1. Verify the configuration and click **OK**.

### Configure Microsoft SQL Server 2012 Parallel Data Warehouse Appliance Credentials

For discovery and monitoring of the Microsoft SQL Server 2012 Parallel Data Warehouse Appliance, configure Run As accounts.

Please see setup for more information on how to setup Microsoft SQL Server 2012 Parallel Data Warehouse and System Center.

## Optional Configuration

### Configure E-mail Alert Notifications

SCOM provides ability to send an email message to the IT administrators when the state of the appliance changes. In order to configure email alert notifications one should:

1. Create SMTP channel
2. Create subscribers
3. Create subscription

#### Creating SMTP channel

To configure notifications, SCOM Administrator should create SMTP channel at first.

To do it, in SCOM Console:

1. On the **Administration** tab, right-click **Notifications** andnavigate to **New Channel** -> **E-Mail (SNMP)…**
2. On the **Description** page, type the **Channel Name** and **Description**.
3. On the **Settings** page, add SMTP server and type in the **Return address**.
4. On the **Format** page, enter the following in **E-mail subject**:

|  |
| --- |
| *Alert: $Data/Context/DataItem/AlertName$ Resolution state: $Data/Context/DataItem/ResolutionStateName$* |

1. On the **Format** page, enter the **E-mail message** as follows:

|  |
| --- |
| *Alert: $Data/Context/DataItem/AlertName$**Last modified by: $Data/Context/DataItem/LastModifiedBy$**Last modified time: $Data/Context/DataItem/LastModifiedLocal$**Alert description:**$Data/Context/DataItem/AlertDescription$**Alert view link: "$Target/Property[Type="Notification!Microsoft.SystemCenter.AlertNotificationSubscriptionServer"]/WebConsoleUrl$?DisplayMode=Pivot&AlertID=$UrlEncodeData/Context/DataItem/AlertId$"**Notification subscription ID generating this message: $MPElement$* |

1. Click **Finish**.

#### Creating subscribers

After channel is created, it’s necessary to add subscribers which can then be used to receive notifications.

To do this:

1. On the **Administration** tab, right-click **Notifications** and select **New subscriber…**
2. On the **Description** page type in **Subscriber Name**
3. On the **Schedule** page select if you want this subscriber to always get notifications or only during specified times.
4. On the **Addresses** page click **Add…**
	1. New **Subscriber Address** dialog will pop-up
	2. On the **General** page specify the **Address name** for the new address
	3. On the **Channel** page select “*E-Mail (SMTP)*” as **Channel Type** and type in actual email address for this subscriber (**Delivery address for the selected channel**).
	4. On the **Schedule** page select if you want this subscriber to always get notifications or only during specified times.
	5. Click **Finish**
5. Click **Finish**

#### Creating subscription

To create a subscription, do the following:

1. On the **Administration** tab, right-click **Notifications** and select **New subscription…**
2. On the **Description** page provide name and description for a new subscription.
3. On the **Criteria** page specify the conditions on which notifications should be generated. For more information on how to configure notifications for specific appliance instance see next section.
4. On the **Subscribers** page click **Add…** to add previously created subscribers. For more information on how to create subscribers see “Creating subscribers” section.
5. On the **Channels** page click **Add…** to add previously created SMTP channel. For more information on how to create SMTP channel see “Creating SMTP channel” section.
6. On the **Summary** page check whether everything is correct and select **Enable this notification subscription** checkbox.
7. Click **Finish**.

#### Configuring email notifications for specific appliance instance

First one should create a group with all alerting components of PDW MP. For doing this:

1. On the **Authoring** tab, right-click **Groups** and select **Create a new group…**
2. In **Create Group Wizard**:
	1. On the **General Properties** page specify name and description for a new group. It’s recommended to use something meaningful, like “<Appliance name> alerting components”. In addition it’s required to specify target management pack where group information will be stored. It’s recommended to use special MP for such purpose. For more information see “Best Practice: Create a Management Pack for Customizations” section.
	2. On the **Dynamic Members** page click **Create/Edit rules…**
	3. Add “Microsoft SQL Server 2012 **PDW Component**” to the list and specify “Appliance Name - Equals - <Desired Appliance Name>” rule.
	4. Add “**Cluster of Microsoft SQL Server 2012 PDW Nodes**” to the list and specify “Appliance Name - Equals - <Desired Appliance Name>” rule.
	5. Select the **Excluded Members** page and click **Create**.

After group with alerting components of PDW MP has been created it’s now possible to use it in notification subscription criteria. For more information on how to create a subscription see “Creating subscription” section. To add additional criteria to the subscription:

1. Right-click existing subscription and click **Properties**.
2. On the **Criteria** page check “**raised by any instance in a specific group**” condition and specify newly created group of PDW components for desired appliance.



1. Select the **Summary** page and click **Finish**.

Now your subscription will only monitor alerts from desired appliance instance.

### Files in this Management Pack

The Microsoft SQL Server 2012 Parallel Data Warehouse Appliance Monitoring Management Pack includes the following files:

 Microsoft.SQLServerAppliance.PDW2.Library.mp

 Microsoft.SQLServerAppliance.PDW2.Discovery.mp

 Microsoft.SQLServerAppliance.PDW2.Monitoring.mp

## Management Pack Purpose

The Microsoft SQL Server 2012 Parallel Data Warehouse management pack discovers and monitors Microsoft SQL Server 2012 Parallel Data Warehouse instances and their components.

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** |
| --- | --- | --- |
| Appliance Components Health | This scenario collects health information for all available appliance components | All monitors except for Nodes Cluster Failover Monitor. |
| Appliance Nodes Clusters Health | This scenario collects health information for all nodes clusters in monitoring appliance. | Nodes Cluster Failover Monitor |

### How Health Rolls Up

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



## Configuring the Management Pack

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

* Best Practice: Create a Management Pack for Customizations
* Security Configuration
* Low privilege environment setup

### Best Practice: Create a Management Pack for Customizations

By default, Operations Manager saves all customizations such as overrides 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.

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 2012 Parallel Data Warehouse Customizations”.

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 example of the customization requiring new management pack, see “Overriding Discovery Interval” section.

### Security Configuration

| **Run As Profile Name** | **Associated Rules and Monitors** | **Notes** |
| --- | --- | --- |
| Microsoft SQL Server 2012 PDW Watcher Account | Microsoft SQL Server 2012 Parallel Data Warehouse Seed Discovery.Microsoft SQL Server 2012 Parallel Data Warehouse Discovery. | This account is used for discovery operations performed by Microsoft SQL Server 2012 Parallel Data Warehouse Management Pack. |
| Microsoft SQL Server 2012 PDW Action Account | Microsoft SQL Server 2012 Parallel Data Warehouse Nodes and Components Discovery.All management pack monitors. | This account is used for all operations requiring direct access to Microsoft SQL Server 2012 Parallel Data Warehouse. |

### Low privilege environment setup

#### Overview

This section describes how to configure the Microsoft SQL Server 2012 Parallel Data Warehouse management pack for least privilege access to the environment.

#### Setting up a least privilege environment

##### Configuring Active Directory

In Active Directory create domain user that will be used for low-privilege access to WMI:

* PDWWatcher

##### Configuring the Watcher Node

1. On the watcher node grant access to the “Root/DEFAULT” WMI namespace for newly created “**PDWWatcher**” domain user.

To do this:

* 1. Open “**WMI Control**” snap-in.
	2. Right click “**WMI Control**” and select “**Properties**” from context menu.
	3. Go to “**Security**” tab.
	4. Expand “**Root**” namespace, find and select “**DEFAULT**” namespace then hit “**Security**” button.
	5. Default security configuration window appears. Add “**PDWWatcher**” domain user to the list and grant “**Execute Methods**”, “**Enable Account**” and “**Remote Enable**” permissions.
	6. Apply changes.
1. If the Operating System of the watcher node (see Monitoring architecture) is Windows Server 2008, Windows Server 2008 R2 or Windows Server 2012, add the “**PDWWatcher**” domain user to “**EventLogReaders**” local group. If the Operating System of agent machine is Windows Server 2003 or Windows Server 2003 R2, ensure “**PDWWatcher**” has read access to the **Application Event Log** and **System Event Log**.

See [this article](http://support.microsoft.com/kb/323076) for additional details.

##### Configuring the Microsoft SQL Server 2012 Parallel Data Warehouse

In order to monitor Microsoft SQL Server 2012 Parallel Data Warehouse it’s required to provide PDW credentials. Next few steps describe how to create a new PDW login with least privileges required for monitoring.

1. Login as an administrator with either **sqlcmd** or **SQL Server Data Tools (SSDT)**.

Create login for monitoring by issuing following commands

USE master;

GO

CREATE LOGIN [monitor\_user] WITH PASSWORD=N'\*\*\*\*\*\*\*\*\*',

CHECK\_EXPIRATION=OFF, CHECK\_POLICY=ON;

GRANT VIEW SERVER STATE TO monitor\_user;

***Note:*** *Although this login is granted low-privileges, replace the asterisks in the above query with a strong password.*

##### Configuring Run-As profile in System Center

In order, to configure System Center you have to perform following steps:

* Create Run As account for “**PDWWatcher**” domain user and map it to “**Microsoft SQL Server 2012 PDW Watcher Account**”.
* Create Run As account for “**monitoring\_user**” PDW user and map it to “**Microsoft SQL Server 2012 PDW Action Account**”.

Here’s detailed instructions on how you can do this:

1. Create “**PDW Watcher”** Run As account with “**Windows**” account type for “**PDWWatcher**” domain user.
	1. Navigate to **Administration** pane, right-click on the **Run As Configuration** -> **Accounts** and select **Create Run As Account…**



* 1. New **Create Run As Account Wizard** dialog will pop-up. On the **Introduction** page click **Next**.
	2. On the **General Properties** page select *Windows* **Run As Account type** and specify “**PDW Watcher**” as **Display name**.



* 1. On the **Credentials** page provide “**PDWWatcher**” domain user credentials.



* 1. On the **Distribution Security** page select **Less secure** and click **Create** button to finish.



* + 1. If you decide to use **More secure** option you have to manually specify computers to which credentials will be distributed. For doing this, after creating Run As account right-click on it and select **Properties**.
		2. Navigate to **Distribution** tab and **Add** desired computers.



1. Set the “**Microsoft SQL Server 2012 PDW Watcher Account**” profile to use “**PDW Watcher**” Run As account.
	1. Navigate to **Administration** -> **Run As Configuration** -> **Profiles**.



* 1. Look for “**Microsoft SQL Server 2012 PDW Watcher Account**” in the list, right-click it and select **Properties**.



* 1. **Run As Profile Wizard** dialog will pop-up. Skip the **Introduction** page by clicking **Next**.
	2. On the **General Properties** page click **Next**.
	3. On the **Run As Accounts** page click **Add…** button and select previously created “**PDW Watcher**” Run As account.



* 1. Click **Save** to finish profile assignment.
1. Wait until PDW appliances discovery completes.
	1. Navigate to **Monitoring** pane and open **SQL Server Appliance** -> **Microsoft SQL Server 2012 Parallel Data Warehouse** -> **Appliances** state view.

 

* 1. Wait while appliance appears in the list. The name of the appliance should be equal to one, specified in the DSN.

After discovery completes you should see all appliances listed but not monitored. For monitoring to work follow the next steps.

***Note:*** *Next steps can be completed in parallel, while you’re waiting for initial appliance discovery to finish.*

***Note:*** *If after significant amount of time (5-10 minutes) you still cannot see appliance in the list, look into “Q: Appliance is not shown in the Appliances state view. What can I do?” FAQ section.*

1. Create another new Run As account to query PDW for health data retrieval.
	1. Begin creating new Run As account as described in pt. 1.
	2. On the **General Properties** page select “**Basic Authentication**” account type.



* 1. On the **Credentials** page supply valid credentials to access PDW health state DMVs.



For more information on how to create new PDW account for monitoring, read previous section (Configuring the Microsoft SQL Server 2012 Parallel Data Warehouse).

1. Configure the “**Microsoft SQL Server 2012 PDW Action Account**” profile to use newly created Run As account for **PDW** instance.
	1. Navigate to “**Microsoft SQL Server 2012 PDW Action Account**” properties as described in pt. 2.
	2. On the **Run As Accounts** page click **Add…** and select newly created Run As account.



For more information about how to create a Run As account, see [How to Create a Run As Account in Operations Manager 2007](http://go.microsoft.com/fwlink/?LinkId=193877). For more information about various Run As Account types, see [Run As Accounts and Run As Profiles in Operations Manager 2007](http://go.microsoft.com/fwlink/?LinkId=193879).

### Overriding Discovery Interval

Sometimes you need to speed-up the discovery process. To do this, you can override the discovery interval like this:

1. In **SCOM Console**, navigate to **Authoring** pane and select **Management Pack Objects** -> **Object Discoveries**.



1. Click **Change Scope…** to scope the list down.

 

If you don’t see **Change Scope…**, click **Scope** button on the toolbar.

1. In the **Scope Management Pack Objects** dialog look for “*Parallel*” and select “**Microsoft SQL Server 2012 Parallel Data Warehouse**” and “**Microsoft SQL Server 2012 Parallel Data Warehouse Seed Object**”.

 

Click **OK**.

1. Right-click **Microsoft SQL Server 2012 Parallel Data Warehouse Discovery** and navigate to **Overrides** -> **Override the Object Discovery** -> **For all objects of class: Microsoft SQL Server 2012 Parallel Data Warehouse Seed Object**.



1. Check **Interval (sec)** parameter and specify desired discovery interval (in seconds) in the **Override Value** column.

 

It is not recommended to use intervals smaller then 120 seconds.

1. Select destination management pack and click **OK**.

For more information on destination management pack, see Best Practice: Create a Management Pack for Customizations.

To speed-up the initial discovery you should also override the interval of “**Microsoft SQL Server 2012 Parallel Data Warehouse Seed Discovery**”.

## Links

The following links connect you to information about common tasks that are associated with management packs:

 [Administering the Management Pack Life Cycle](http://go.microsoft.com/fwlink/?LinkId=211463) (http://go.microsoft.com/fwlink/?LinkId=211463)

 [How to Import a Management Pack in Operations Manager 2007](http://go.microsoft.com/fwlink/?LinkID=142351) (http://go.microsoft.com/fwlink/?LinkID=142351)

 [How to Monitor Using Overrides](http://go.microsoft.com/fwlink/?LinkID=117777) (http://go.microsoft.com/fwlink/?LinkID=117777)

 [How to Create a Run As Account in Operations Manager 2007](http://go.microsoft.com/fwlink/?LinkID=165410) (http://go.microsoft.com/fwlink/?LinkID=165410)

 [How to Modify an Existing Run As Profile](http://go.microsoft.com/fwlink/?LinkID=165412) (http://go.microsoft.com/fwlink/?LinkID=165412)

 [How to Export Management Pack Customizations](http://go.microsoft.com/fwlink/?LinkId=209940) (http://go.microsoft.com/fwlink/?LinkId=209940)

 [How to Remove a Management Pack](http://go.microsoft.com/fwlink/?LinkId=209941) (http://go.microsoft.com/fwlink/?LinkId=209941)

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

A useful resource is the [System Center Operations Manager Unleashed blog](http://opsmgrunleashed.wordpress.com/) (http://opsmgrunleashed.wordpress.com/), which contains “By Example” posts for specific management packs.

For additional information about Operations Manager, see the following blog posts:

 [Operations Manager Team Blog](http://blogs.technet.com/momteam/default.aspx) (http://blogs.technet.com/momteam/default.aspx)

 [Kevin Holman's OpsMgr Blog](http://blogs.technet.com/kevinholman/default.aspx) (http://blogs.technet.com/kevinholman/default.aspx)

 [Thoughts on OpsMgr](http://thoughtsonopsmgr.blogspot.com/) (http://thoughtsonopsmgr.blogspot.com/)

 [Raphael Burri’s blog](http://rburri.wordpress.com/) (http://rburri.wordpress.com/)

 [BWren's Management Space](http://blogs.technet.com/brianwren/default.aspx) (http://blogs.technet.com/brianwren/default.aspx)

 [The System Center Operations Manager Support Team Blog](http://blogs.technet.com/operationsmgr/) (http://blogs.technet.com/operationsmgr/)

 [Ops Mgr ++](http://blogs.msdn.com/boris_yanushpolsky/default.aspx) (http://blogs.msdn.com/boris\_yanushpolsky/default.aspx)

 [Notes on System Center Operations Manager](http://blogs.msdn.com/mariussutara/default.aspx) (http://blogs.msdn.com/mariussutara/default.aspx)

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## Frequently Asked Questions

### Q: Appliance is not shown in the Appliance’s state view. What can I do?

First thing you can do is try to override the discovery interval to force the discovery to happen. This may help in case of initial setup or after changes to the environment have been made.

See “Overriding Discovery Interval” section for more information on how to do this.

If changing discovery interval is not helping, you should check **SQL Server Appliance** -> **Microsoft SQL Server 2012 Parallel Data Warehouse** -> **Alerts** view:

 

Look for “**Microsoft SQL Server 2012 Parallel Data Warehouse Seed**” source.



Select one of newest alerts and read alert description to better understand the problem. For more information about alerts, see the SQL Server PDW help file (MPP.CHM).



As you can see, nodes discovery script is failing because it cannot connect to the PDW to query the DMVs. In this case PDW credentials configured incorrectly.

To fix this you have to create “**monitoring\_user**” PDW account or change the credentials in the Run As account mapped to “**Microsoft SQL Server 2012 PDW Action Account**” profile.

For more information on how to do this, see Configuring Run-As profile in System Center.

## Appendix: Management Pack Contents

The Microsoft SQL Server 2012 Parallel Data Warehouse Appliance Monitoring Management Pack discovers the object types described in the following sections.

### SQL Server 2012 Parallel Data Warehouse Seed Object

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Rules

| **Rule** | **Data source** | **Alert** | **Notes** | **Corresponding Monitor** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- |
| Microsoft SQL Server 2012 Parallel Data Warehouse Management Pack Self-Monitoring (Critical) | Error events with ID 4320 placed in Operations Manager events log | TrueAlert priority:HighAlert severity:Critical | Alert generated for every matching event | none | True | not applicable |
| Microsoft SQL Server 2012 Parallel Data Warehouse Management Pack Self-Monitoring (Non-Critical) | Warning events with ID 4320 placed in Operations Manager events log | TrueAlert priority:MediumAlert severity:Warning | Alert generated for every matching event | none | True | not applicable |

Related Views

| **View** | **Description** | **Rules and Monitors that Populate the View** |
| --- | --- | --- |
| Alerts | This view shows all alerts generated by object defined in Microsoft SQL Server 2012 Parallel Data Warehouse management pack. | All rules and monitors defined in management pack. |

### SQL Server 2012 Parallel Data Warehouse

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Views

| **View** | **Description** | **Rules and Monitors that Populate the View** |
| --- | --- | --- |
| Appliances | This view shows all discovered instances of Microsoft SQL Server 2012 Parallel Data Warehouse. | none |

### SQL 2012 PDW Appliances

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Views

| **View** | **Description** | **Rules and Monitors that Populate the View** |
| --- | --- | --- |
| Appliances Diagram | This view shows all discovered Microsoft SQL Server 2012 Parallel Data Warehouse instances presented as tree diagram. | none |

### SQL 2012 PDW Compute Node

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Views

| **View** | **Description** | **Rules and Monitors that Populate the View** |
| --- | --- | --- |
| Nodes | This view shows Nodes of all discovered Microsoft SQL Server 2012 Parallel Data Warehouse instances. | none |

### SQL 2012 PDW Host Node

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Views

| **View** | **Description** | **Rules and Monitors that Populate the View** |
| --- | --- | --- |
| Nodes | This view shows Nodes of all discovered Microsoft SQL Server 2012 Parallel Data Warehouse instances. | none |

### SQL 2012 PDW Control Node

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Views

| **View** | **Description** | **Rules and Monitors that Populate the View** |
| --- | --- | --- |
| Nodes | This view shows Nodes of all discovered Microsoft SQL Server 2012 Parallel Data Warehouse instances. | none |

### SQL 2012 PDW Management Node

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Views

| **View** | **Description** | **Rules and Monitors that Populate the View** |
| --- | --- | --- |
| Nodes | This view shows Nodes of all discovered Microsoft SQL Server 2012 Parallel Data Warehouse instances. | none |

### SQL 2012 PDW Group of Host Nodes Clusters

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### Microsoft SQL Server 2012 PDW Host Nodes Cluster

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Nodes Cluster Failover Monitor | Microsoft SQL Server 2012 Parallel Data Warehouse Nodes Clusters State Provider | 15 minutes | TrueAlert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Network Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Cluster Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Software Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Storage External Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Storage Internal Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Cooling Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Power Supply Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Server Processing Component Group

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

### SQL 2012 PDW Network Adapter Component (Network group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |

### SQL 2012 PDW Network Connectivity Component (Network group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |

### SQL 2012 PDW Node Component (Cluster group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Resource Group Component (Cluster group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Resource Component (Cluster group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Cluster Shared Volume Component (Cluster group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Application Heartbeat Component (Software group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Non-Clustered Service Component (Software group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW External Storage Component (Storage External group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW External Storage Virtual Disk Component (Storage External group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW External Storage Pool Component (Storage External group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Fiber Channel HBA Component (Storage External group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |

### SQL 2012 PDW External Disk Component (Storage External group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Internal Disk Component (Storage Internal group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Internal Volume Component (Storage Internal group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Internal Controller Component (Storage Internal group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Temperature Component (Cooling group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Failed State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Error | Automatic | none | True | not applicable |

### SQL 2012 PDW Cooling Device Component (Cooling group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Failed State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |

### SQL 2012 PDW Power Supply component (Power Supply group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |

### SQL 2012 PDW Memory Component (Server Processing group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |

### SQL 2012 PDW Processor Component (Server Processing group)

Discovery Information

| **Interval** | **Enabled** | **When to Enable** |
| --- | --- | --- |
| 4 hours | True | not applicable |

Related Monitors

| **Monitor** | **Data source** | **Interval** | **Alert** | **Reset Behavior** | **Corresponding Rule** | **Enabled** | **When to Enable** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Unknown State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Non-Recoverable State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |
| Critical State | Microsoft SQL Server 2012 Parallel Data Warehouse Components States Provider | 15 minutes | True Alert priority:NormalAlert severity:Warning | Automatic | none | True | not applicable |