

Guide for System Center Management Pack for Distributed Transaction Coordinator on Windows Server 2012 R2 and Later Versions of Windows Server Operating System

Microsoft Corporation

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Guide for System Center Management Pack for Distributed Transaction Coordinator (MSDTC) on Windows Server 2012 R2 and Later Versions of Windows Server Operating System

This guide was written based on version 7.1.10100.0 of the Management Pack for Distributed Transaction Coordinator (MSDTC) on Windows Server 2012 R2 and later versions of Windows Server Operating System.

Guide History

|  |  |
| --- | --- |
| Release Date | Changes |
| October 2013 | Original release of this guide |
| August 2015 | Update the guide for later versions of Windows Server operating system |

Supported Configurations

The Windows MSDTC 2012 R2 Management Pack for System Center Operations Manager 2012 R2 is designed to monitor Windows MSDTC 2012 R2 and later versions. A dedicated Operations Manager management group is not required.

The following table details the supported configurations for the Management Pack for Windows MSDTC 2012 R2 and later versions:

|  |  |
| --- | --- |
| Configuration | Support |
| Windows Server 2012 R2 and later versions | Windows Server 2012 R2 and later versions |
| Clustered servers | Yes  |
| Agentless monitoring | Not supported/not tested |
| Virtual environment | Yes |

Management Pack Scope

This management pack supports Windows Server 2012 R2 and later versions.

Prerequisites

The following requirements must be met to run this management pack:

The following management packs must be installed prior to installing the Windows MSDTC 2012 R2 Management Pack:

* Windows Server Library Management Pack
* Microsoft Windows Server Cluster Management Pack

Files in this Management Pack

The Management Pack for Windows MSDTC 2012 R2 includes the following files:

 Microsoft.Windows.MSDTC.2012.R2.mp

 Microsoft.Windows.MSDTC.library.mp

Management Pack Purpose

 [Monitoring Scenarios](#z5a9ff008734b4183946f840ae0464ab0)

 [How Health Rolls Up](#zb8b3e32eb8154a8da8b18b606568e65d)

For details on the discoveries, rules, monitors, views, and reports contained in this Management pack, see [Appendix: Management Pack Contents](#z5).

Monitoring Scenarios

The Windows MSDTC 2012 R2 Management Pack manages MSDTC service that an operator or administrator is interested in monitoring, configuring, or reporting on.

The following component events are captured in this management pack:

* Windows Server 2012 R2 Server (and later versions) Distributed Transaction Coordinator (MSDTC)

#### Objects the Windows MSDTC 2012 R2 Management Pack Discovers

The Windows MSDTC 2012 R2 Management Pack discovers the object types described in the following table.

|  |  |  |
| --- | --- | --- |
| **Object type** | **Discovered automatically** | **Description** |
| MSDTC 2012 R2 Service Discovery | Yes | Servers with MSDTC installed |
| MSDTC 2012 R2 clustered MSDTC Role Discovery | Yes | Clustered MSDTC roles |

Not all of the objects are automatically discovered. Use overrides to discover those that are not discovered automatically. For information about discovering objects, see the "Object Discoveries in Operations Manager 2012 R2" topic in Operations Manager 2012 R2 Help

Use the following procedure to modify automatic discovery parameters.

#### To use an override to change the parameters for automatic discovery

1. In the Authoring pane, expand **Management Pack Objects**, and then click **Object Discoveries**.
2. On the Operations Manager toolbar, click **Scope**, and then filter the objects that appear in the details pane.
3. In the Operations Manager toolbar, use the **Scope** button to filter the list of objects, and then click **MSDTC 2012 R2 DTC Role Discovery**.
4. On the Operations Manager toolbar, click **Overrides**, click **Override the Object Discovery**, and then click **For all objects of type: Windows Server**, **For a group**.
5. In the **Overrides Properties** dialog box, click the **Override** box for the parameter(s) you wish to modify.
6. Under **Management Pack**, click **New** to create an unsealed version of the management pack, and then click **OK**.

### Classes

The following diagram shows the classes defined in this management pack.

Windows!Microsoft.Windows.ComputerRole

Microsoft.MSDTC.6.3.ServerRole

Microsoft.MSDTC.6.3.Servers

Microsoft.MSDTC.6.3.ClusteredRoles

Legend

ComputerRole

Service/ClusteredRole

Derived from Built in Class

Server with MSDTC service or Clustered role

Derived from

Hosting

How Health Rolls Up

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



Key Monitoring Scenarios

The following table provides a summary of the monitors to be created for MSDTC.

A summary of monitors and the details for each monitor are provided in the following tables:

 Server Monitors

 Clustered Role Monitors

Monitor Summary

| **Target** | **Type** | **Aggregate** | **Name** | **Enabled?** |
| --- | --- | --- | --- | --- |
| MSDTC servers | Unit | Availability | MSDTC Service State | Yes |
| Unit | Availability | Reinstall MSDTC | Yes |
| Unit | Availability | Resolve Transactions Manually | Yes |
| Unit | Availability | Change MSDTC Log Path | Yes |
| Unit | Availability | Free Disk Space or Move the Log File to Another Drive | Yes |
| Unit | Availability | Increasing the Log Size or Resolve Old Transactions | Yes |
| Unit | Availability | Increase the Number of MSDTC Log Buffers | Yes |
| Unit | Availability | MSDTC Service Log Availability | Yes |
| Unit | Availability | Reinstall MSDTC Log | Yes |
| Unit | Availability | Remove the Read Only Attribute from the MSDTC Log | Yes |
| Unit | Availability | Restart MSDTC Log and Restart MSDTC | Yes |
| Unit | Availability | Run the MSDTC Reset Log Utility | Yes |
| Unit | Configuration | Configure MSDTC on a Failover Cluster | Yes |
| Unit | Configuration | Restart the Cluster | Yes |
| Unit | Configuration | Start the Cluster Service and Start MSDTC | Yes |
| Unit | Availability | Check the XA Provider Registry Key | Yes |
| Unit | Availability | Free up System Memory | Yes |
| Unit | Availability | Restart MSDTC | Yes |
| Unit | Availability | Start MSDTC | Yes |
| Unit | Availability | Stop MSDTC | Yes |
| Unit | Configuration | Confirm that the Upgraded Service is Running Properly | Yes |
| Unit | Configuration | Login account has no permission | Yes |
| Unit | Configuration | Report an Invalid Error Code to Microsoft | Yes |
| Unit | Configuration | Restart Component Services and Confirm That MSDTC Is Running Properly | Yes |
| Unit | Configuration | Stop and Restart MSDTC | Yes |
| Unit | Configuration | Check the MSDTC Registry Key | Yes |
| Unit | Configuration | Check XA Registry Keys | Yes |
| Unit | Configuration | Confirm That the Server Has Access to The OLE Transaction Managers Key | Yes |
| Unit | Configuration | Restore the Default Account | Yes |
| Unit | Configuration | Turn on the Remote Registry Service | Yes |
| Unit | Availability | Check XA Registry Keys for Transactions Processing | Yes |
| Unit | Availability | Register the Component on the Server | Yes |
| Unit | Availability | Resolve the In Doubt Transactions | Yes |
| Unit | Availability | Restart MSDTC for Transactions Processing | Yes |
| Unit | Configuration | Stop and then Restart MSDTC for volume snapshot support | Yes |
| MSDTC clustered role | Unit | Availability | Role State | Yes |

Configuring the Management Pack for Distributed Transaction Coordinator (MSDTC) on Windows Server 2012 R2 and Later Versions of Windows Server Operating System

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

 [Best Practice: Create a Management Pack for Customizations](#z2)

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.

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.

Links

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

System Center 2012 - Operations Manager

 [Management Pack Life Cycle](http://go.microsoft.com/fwlink/p/?LinkID=232986)

 [How to Import a Management Pack](http://go.microsoft.com/fwlink/p/?LinkID=219431)

 [Tuning Monitoring by Using Targeting and Overrides](http://go.microsoft.com/fwlink/p/?LinkID=217065)

 [How to Create a Run As Account](http://go.microsoft.com/fwlink/p/?LinkId=232988)

 [How to Export a Management Pack](http://go.microsoft.com/fwlink/p/?LinkId=232990)

 [How to Remove a Management Pack](http://go.microsoft.com/fwlink/p/?LinkId=232991)

Operations Manager 2007 R2

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

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

 [How to Monitor Using Overrides](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)

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

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

 [How to Remove a Management Pack](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).

A useful resource is the [System Center Operations Manager Unleashed blog](http://go.microsoft.com/fwlink/?LinkId=246391), which contains “By Example” posts for specific management packs.

For additional information about Operations Manager, see the [System Center 2012 - Operations Manager Survival Guide](http://go.microsoft.com/fwlink/?LinkId=246383) and [Operations Manager 2007 Management Pack and Report Authoring Resources](http://go.microsoft.com/fwlink/?LinkId=246388)

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Appendix: Management Pack Contents

The Management Pack for Distributed Transaction Coordinator (MSDTC) on Windows Server 2012 R2 discovers the object types described in the following sections. Not all of the objects are automatically discovered. Use overrides to discover those objects that are not discovered automatically.

Microsoft.MSDTC.6.3.Discovery

Discovery Information

|  |  |  |
| --- | --- | --- |
| Interval | Enabled | When to Enable |
| 43200 seconds | True | not applicable |

Related Monitors

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Monitor | Data source | Interval | Alert | Reset Behavior | Corresponding Rule | Enabled | When to Enable |
| Microsoft.MSDTC.6.3.Monitor.Service | Service name = MSDTC | Interval period | True Alert priority:NormalAlert severity: Error | Automatic  |  | True  |  “not applicable” |

Note

If you are using connectors, you can disable the monitor and enable its corresponding rule to enable alerts without changing health status.

Note

Disable the rule and enable its corresponding monitor to enable alerts, state changes, and health rollup.

Related Views

|  |  |  |
| --- | --- | --- |
| View | Description | Rules and Monitors that Populate the View |
| Microsoft.MSDTC.6.3.State.View | Show the MSDTC services | **** Microsoft.MSDTC.6.3.Monitor.Service |

Microsoft.MSDTC.6.3.ClusteredRoleDiscovery

Discovery Information

|  |  |  |
| --- | --- | --- |
| Interval | Enabled | When to Enable |
| 43200 seconds | True | not applicable |

Related Monitors

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Monitor | Data source | Interval | Alert | Reset Behavior | Corresponding Rule | Enabled | When to Enable |
| Microsoft.MSDTC.6.3.Monitor.ClusteredRole | MSCLUSTER\_Resource | Interval period | False | Automatic  |  | True  |  “not applicable” |

Note

If you are using connectors, you can disable the monitor and enable its corresponding rule to enable alerts without changing health status.

Note

Disable the rule and enable its corresponding monitor to enable alerts, state changes, and health rollup.

Related Views

|  |  |  |
| --- | --- | --- |
| View | Description | Rules and Monitors that Populate the View |
| Microsoft.MSDTC.6.3.ClusteredRoles.State.View | Show the clustered MSDTC roles | **** Microsoft.MSDTC.6.3.Monitor.ClusteredRole |

Appendix: Rules

The following tables list the rules from the Management Pack.

Note

Be aware that some of these rules may create noise in your environment.

Rules

Event Based Rules

| **Name** | **Type** | **Event Id** | **Enabled?** |
| --- | --- | --- | --- |
| Required file is missing from the System32 folder in Windows directory. | Event Collection | 4143,4212,4213,4214,4129 | Yes |
| Confirm network connectivity and firewall setting. | Event Collection | 4358,4359 | Yes |
| System reported an unexpected error condition. Reinstall MSDTC to resolve it. | Event Collection | 4418 | Yes |
| The service must be restarted or missing files. | Event Collection | 4424,4228 | Yes |
| Check low-resource condition. | Event Collection | 4425 | Yes |
| Restart MSDTC | Event Collection | 4363,4367,4368,4370,4155,4168,4169,4170,4209,4229,4230,4233,4355,4356,4433,4434,4435,4436,4441,4455,4456,53321 | Yes |