



OnCommand® Plug-in 4.1.2 for Microsoft®

Installation and Setup Guide

For Clustered Data ONTAP®

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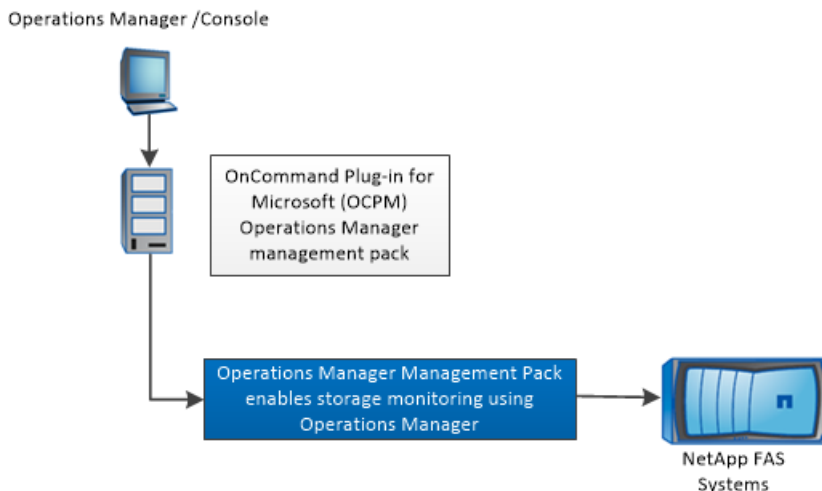
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Product overview

The NetApp OnCommand Plug-in for Microsoft is an enterprise-class storage monitoring and application that integrates with Microsoft System Center Operations Manager (SCOM). The plug-in enables administrators to monitor, manage, and report on NetApp storage.



OnCommand Plug-in for Microsoft features

Before you use OnCommand Plug-in for Microsoft, it might be helpful to understand OnCommand Plug-in for Microsoft features.

OnCommand Plug-in for Microsoft includes the following features:

- Simplified management of servers and storage systems using Microsoft System Center
- Support for clustered Data ONTAP
- Support for NetApp MetroCluster monitoring
- Support for discovery and monitoring of the following:
 - Data ONTAP 8.2 and later clusters and Storage Virtual Machines (SVMs, formerly known as Vservers)
 - SMB shares in clustered Data ONTAP
 - VMs and virtual hard disk files on LUNs and SMB shares in clustered Data ONTAP
- Plots of system performance metrics and alerts when those metrics exceed thresholds

OnCommand Plug-in for Microsoft components

NetApp OnCommand Plug-in for Microsoft uses Microsoft System Center components to monitor Data ONTAP storage. System Center is a set of Microsoft management products that help you manage physical and virtual IT environments.

OnCommand Plug-in for Microsoft uses the following System Center products:

| Component | Description |
|---|--|
| System Center Operations Manager (SCOM) | <p>A member of the System Center family of products. The end-to-end service management product that works with Microsoft software and applications, helping organizations increase efficiency while enabling greater control of the IT environment.</p> <p>SCOM includes the following components:</p> <p>SCOM agent</p> <p>The location where the SCOM SDKs and connectors are installed but not the SCOM software. This installation does not have the user interface and is used on systems that must communicate monitoring and other information to the SCOM server. The agent can be installed remotely on systems using the SCOM console on the SCOM server.</p> <p>SCOM console or server</p> <p>User interface used to view managed objects and perform administrative tasks. The server refers to the computer where the SCOM console is installed.</p> <p>SCOM console integration</p> <p>A feature that enables you to perform tasks on a SCOM system remotely.</p> <p>SCOM management packs</p> <p>Options that enable agents to monitor a specific service or application. Management packs might also contain tasks, reports, views, diagnostics, and recovery tools.</p> |

System Center Operations Manager (SCOM) management packs

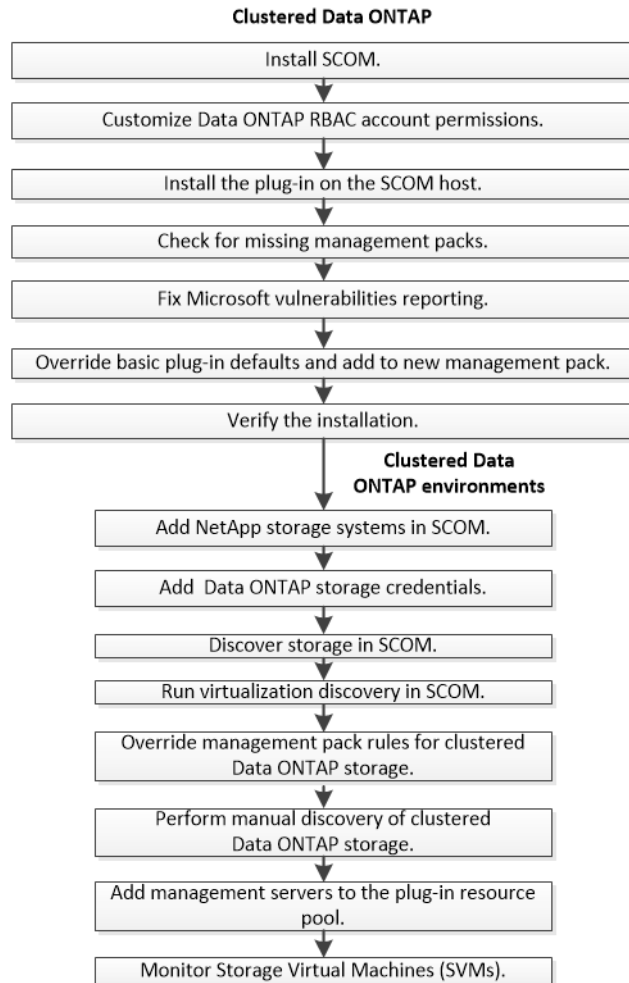
You use the System Center Operations Manager (SCOM) management packs to configure, monitor, and maintain your storage. While some SCOM management packs are required in SCOM prior to installation, these management packs are imported as part of the OnCommand Plug-in for Microsoft installation.

You can use the following SCOM management packs with OnCommand Plug-in for Microsoft:

| SCOM management pack | Description |
|---|---|
| Clustered Data ONTAP | This pack enables you to monitor your clustered Data ONTAP storage. |
| Clustered Data ONTAP MetroCluster | This pack enables you to monitor your clustered Data ONTAP MetroCluster storage components. |
| Clustered Data ONTAP MetroCluster Reports | This pack enables you to report on your clustered Data ONTAP MetroCluster storage. |
| Clustered Data ONTAP Reports | This pack enables you to report on your clustered Data ONTAP storage. |

Deployment workflow

Before you can use OnCommand Plug-in for Microsoft, you must check prerequisites, install Microsoft System Center Operations Manager (SCOM), initiate discovery, and perform other tasks.



Preparing for deployment

Before deploying OnCommand Plug-in for Microsoft, you should ensure that your system meets software, storage system, licensing, and other requirements.

Steps

1. Verify that your system meets Microsoft software requirements.
2. Verify that your system meets System Center Operations Manager (SCOM) library and reporting requirements.
3. Verify that your system supports storage system requirements (Data ONTAP, FlexClone).
4. Check Data ONTAP compatibility with OnCommand Plug-in for Microsoft features.
5. Verify that your system meets connection and port requirements.
6. Verify that your system meets discovery agent requirements.

Related references

[Microsoft software requirements](#) on page 8

[System Center Operations Manager library requirements](#) on page 9

[System Center Operations Manager reporting requirements](#) on page 9

[Storage system requirements](#) on page 10

[Data ONTAP compatibility with OnCommand Plug-in for Microsoft features](#) on page 10

[Connection and port requirements](#) on page 11

[Discovery agent requirements](#) on page 11

Microsoft software requirements

Microsoft software must meet minimum requirements before you can install OnCommand Plug-in for Microsoft and use its features.

OnCommand Plug-in for Microsoft requires the following versions of software:

| Software | Version | Needed for |
|---|--------------------------------------|-----------------------|
| Microsoft .NET Framework | 3.5 and 4.0 | All features |
| Microsoft SQL Server | 2008 R2 SP1 and later | All features |
| Microsoft System Center Operations Manager (SCOM) | 2012 (SP1 and R2), or 2016 and later | SCOM management packs |
| Microsoft Windows Server | 2012, or 2012 R2, or 2016 and later | All features |

For more information about requirements to install these products, see the Microsoft TechNet web site.

For details about the Microsoft operation system version, see The Interoperability Matrix.

Related information

[Microsoft Technet: System Center](#)

[NetApp Interoperability](#)

System Center Operations Manager library requirements

Specific System Center Operations Manager (SCOM) management pack libraries are required for OnCommand Discovery Agent and reporting functionality. They must be included in SCOM before you install OnCommand Plug-in for Microsoft.

Required for OnCommand Discovery Agent

- Microsoft.SystemCenter.InstanceGroup.Library
- Microsoft.SystemCenter.Library
- Microsoft.SystemCenter.NetworkDevice.Library
- Microsoft.SystemCenter.VirtualMachineManager 2012 discovery
- Microsoft.SystemCenter.VirtualMachineManager.Library
- Microsoft.Windows.Library
- System.Health.Library
- System.Library
- System.Performance.Library
- SystemSnmp.Library

Additional libraries required for reporting

- Microsoft.SystemCenter.DataWarehouse.Report.Library
- Microsoft.SystemCenter.DataWarehouse.ServiceLevel.Report.Library
- Microsoft ODR Report Library

Imported management packs after installation

After you install OnCommand Plug-in for Microsoft, additional management packs are imported into SCOM. See information about OnCommand Plug-in for Microsoft management packs.

Related references

[System Center Operations Manager \(SCOM\) management packs](#) on page 6

System Center Operations Manager reporting requirements

You need specific System Center Operations Manager (SCOM) libraries to use OnCommand Plug-in for Microsoft reporting functionality.

SQL Server configuration required for reporting

You must configure SCOM for reporting so that the reporting management pack appears with the other management packs. To do this, you must correctly configure the SQL Server reporting services. For details, refer to the Microsoft TechNet website.

Libraries required for reporting

- Microsoft.SystemCenter.DataWarehouse.Report.Library
- Microsoft ODR Report Library
- Microsoft.SystemCenter.DataWarehouse.ServiceLevel.Report.Library

Storage system requirements

The storage system must meet minimum requirements before you can install OnCommand Plug-in for Microsoft.

| Requirement | Description |
|-------------|--|
| Data ONTAP | Clustered Data ONTAP 8.3.x, and ONTAP 9 and 9.1 is required. |
| FlexClone | A FlexClone license is required. |

The Interoperability Matrix contains the latest details about the storage system requirements.

Related information

[NetApp Interoperability](#)

Data ONTAP compatibility with OnCommand Plug-in for Microsoft features

Some OnCommand Plug-in for Microsoft features are supported in clustered Data ONTAP, while other features are supported only in one or the other.

| Feature | Functions in cluster environments | Required in cluster environments |
|--|-----------------------------------|----------------------------------|
| SCOM: clustered Data ONTAP | Yes | Yes |
| SCOM: clustered Data ONTAP MetroCluster | Yes | Yes |
| SCOM: clustered Data ONTAP reports | Yes | Yes |
| SCOM: console integration | Yes | Yes |
| MetroCluster reports | Yes | Yes |
| OnCommand Discovery Agent | Yes | Yes for FCP |
| OnCommand Plug-in for Microsoft database | Yes | No |
| OnCommand Plug-in VIM web service | Yes | No |

Connection and port requirements

Connections and ports must meet minimum requirements before you can install OnCommand Plug-in for Microsoft.

Consider the following requirements:

- The required port uses the HTTP or HTTPS protocol.
- Firewalls, proxies, or other network devices should not interfere with connections.

Discovery agent requirements

To begin monitoring, systems must be discovered. Comprehensive monitoring requires that you install an agent on the discovered system. Discovery agents must meet minimum requirements.

Discovery agents require the following:

- Hyper-V server role enabled
- Windows Server 2016, 2012, 2012 R2, 2008 R2 SP1

Installing OnCommand Plug-in for Microsoft

You install OnCommand Plug-in for Microsoft on the Microsoft System Center Operations Manager (SCOM) host. You can choose to install the plug-in interactively with the user interface wizard or silently with commands.

Before you begin

Microsoft System Center Operations Manager (SCOM) must already be installed.

About this task

Installation tasks are divided into these phases:

- Starting the OnCommand Plug-in for Microsoft installation, which includes tasks common to clustered Data ONTAP
- Connecting to the Data ONTAP environment, which includes tasks for only one of the environment

Consider the following deployment issues:

- If the host is an SCOM management server, you can install the SCOM management packs on the host.
- You can install the SCOM user interface on a different machine from the host.

Related tasks

[Starting the plug-in installation for clustered Data ONTAP](#) on page 12

[Connecting to your clustered Data ONTAP environment](#) on page 22

Starting the plug-in installation for clustered Data ONTAP

You begin the installation of OnCommand Plug-in for Microsoft on the Microsoft System Center Operations Manager (SCOM) server.

Before you begin

Microsoft System Center Operations Manager (SCOM) must already be installed.

Steps

1. [Customizing clustered Data ONTAP role-based access control permissions](#) on page 13
Configuring role-based access control (RBAC) involves creating users, creating roles, and assigning privileges to those roles. Then, you create permissions to dictate which role is used by which users or groups when they access an OnCommand Plug-in for Microsoft object.
2. [Installing OnCommand Plug-in for Microsoft using the installation wizard](#) on page 16
You can use the installation wizard to install System Center Operations Manager (SCOM), the management packs, and the web server. You install the OnCommand Plug-in for Microsoft on a SCOM server.
3. [Checking for missing management packs](#) on page 18
You use the System Center Operations Manager (SCOM) management packs to configure, monitor, and maintain your storage. You can check for management packs that were not installed but required subsequently after the installation package was created and then install them.

4. [Installing missing management packs](#) on page 18

You might need to install missing management packs that are required for OnCommand Plug-in for Microsoft. You use the System Center Operations Manager (SCOM) management packs to configure, monitor, and maintain your storage.

5. [Fixing Microsoft vulnerabilities reporting](#) on page 19

After you install OnCommand Plug-in for Microsoft on a Windows Server 2012 machine, some Microsoft vulnerabilities can appear. You should identify whether these vulnerabilities appear and, if so, resolve them.

6. [Overriding plug-in defaults and saving to a new management pack](#) on page 19

You can change the default settings of rules, such as the discovery rule that starts the discovery process, that were established during OnCommand Plug-in for Microsoft installation. Changes to the rules, called *overrides*, should be saved in a new management pack. You can override any rules to enable or disable them, alter the frequency, or change the start time for a rule.

7. [Verifying a successful installation](#) on page 21

After you install OnCommand Plug-in for Microsoft, you might want to ensure that OnCommand Plug-in for Microsoft components appear in the System Center Operations Manager (SCOM).

Customizing clustered Data ONTAP role-based access control permissions

Configuring role-based access control (RBAC) involves creating users, creating roles, and assigning privileges to those roles. Then, you create permissions to dictate which role is used by which users or groups when they access an OnCommand Plug-in for Microsoft object.

Before you begin

You must have already identified which Data ONTAP permissions are required. For details, see information about Data ONTAP permissions required for OnCommand Plug-in for Microsoft.

About this task

You can use the administrator or root login to perform all storage discovery and monitoring; however, it is a good practice to use role-based access control provided by Data ONTAP to create one or more custom accounts with limited access privileges.

You can create a user who has the permissions required to discover and monitor all of the objects in clustered Data ONTAP. The following example shows the clustered Data ONTAP CLI commands needed to create a user named “OCPM” and assigned a role.

In clustered Data ONTAP, the permissions are not based on ZAPIs, but are based on command or directory permissions.

Steps

1. To create a user who has permissions on the clustered Data ONTAP controller required by the plug-in, run these commands and append the permission:

```
security login role create -role <OCPM> -access readonly -cmddirname
<permission>
```

Example

```
security login role create -role OCPM -access readonly -cmddirname
"cluster identity show"
security login role create -role OCPM -access readonly -cmddirname "cluster show"
security login role create -role OCPM -access readonly -cmddirname "cluster peer show"
security login role create -role OCPM -access readonly -cmddirname "lun show"
security login role create -role OCPM -access readonly -cmddirname
"network interface show"
security login role create -role OCPM -access readonly -cmddirname "network port show"
security login role create -role OCPM -access readonly -cmddirname "snapmirror show"
```

```

security login role create -role OCPM -access readonly -cmddirname
    "snapmirror policy show"
security login role create -role OCPM -access readonly -cmddirname "statistics show"
security login role create -role OCPM -access readonly -cmddirname "storage aggregate
show"
security login role create -role OCPM -access readonly -cmddirname "storage disk show"
security login role create -role OCPM -access readonly -cmddirname
    "storage failover show"
security login role create -role OCPM -access readonly -cmddirname "system node show"
security login role create -role OCPM -access readonly -cmddirname "version"
security login role create -role OCPM -access readonly -cmddirname
    "volume efficiency show"
security login role create -role OCPM -access readonly -cmddirname "volume qtree show"
security login role create -role OCPM -access readonly -cmddirname "volume quota report"
security login role create -role OCPM -access readonly -cmddirname "volume show"
security login role create -role OCPM -access readonly -cmddirname
    "vservers cifs share access-control show"
security login role create -role OCPM -access readonly -cmddirname
    "vservers cifs share show"
security login role create -role OCPM -access readonly -cmddirname "vservers cifs show"
security login role create -role OCPM -access readonly -cmddirname "vservers fcp show"
security login role create -role OCPM -access readonly -cmddirname "vservers iscsi show"
security login role create -role OCPM -access readonly -cmddirname "vservers peer show"
security login role create -role OCPM -access readonly -cmddirname "vservers show"

```

2. Create a user named “OCPM” with the role of “OCPM_role” and with these settings and enable the plug-in to connect to the controller:

```
security login create -username <user_name> -role <role> -application
http -authmethod password
```

```
security login create -username <user_name> -role <role> -application
ontapi -authmethod password
```

-authmethod includes both a variable named *password* and it also accepts the string “password”.

Example

```

security login create -username OCPM -role OCPM_role
-application http -authmethod password
security login create -username OCPM -role OCPM_role
-application ontapi -authmethod password

```

3. If you want to monitor NetApp MetroCluster software, set permissions:

```

security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check aggregate show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check config-replication show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check config-replication show-aggregate-eligibility"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check lif repair-placement"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check lif show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check node show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check run"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster check show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster configure"
security login role create -role OCPM -access readonly -cmddirname "metrocluster heal"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster interconnect adapter show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster interconnect mirror multipath show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster interconnect mirror show"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster node show"
security login role create -role OCPM -access readonly -cmddirname "metrocluster show"

```

```
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster switchback"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster switchover"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster vserver resync"
security login role create -role OCPM -access readonly -cmddirname
    "metrocluster vserver show"
```

Related references

[Clustered Data ONTAP storage permissions for basic monitoring](#) on page 15

Clustered Data ONTAP storage permissions for basic monitoring

Specific Data ONTAP permissions are required for basic monitoring using OnCommand Plug-in for Microsoft.

The following permissions are required for basic monitoring only for clustered Data ONTAP. The list does not include permissions for active management or cmdlets.

- cluster-identity-show
- cluster-peer-get-iter
- cluster-peer-show
- cluster-show
- diagnosis-alert-get-iter ClusterSeveredAllLinksAlert
- diagnosis-alert-get-iter ClusterInSwitchedOverStateAlert
- diagnosis-alert-get-iter InterclusterBrokenConnectionAlert
- diagnosis-alert-get-iter RaidLeftBehindAggrAlert
- diagnosis-alert-get-iter RaidLeftBehindSpareAlert
- diagnosis-alert-get-iter StorageFCAdapterOfflineAlert
- lun-show
- metrocluster-check-aggregate-get-iter
- metrocluster-check-get-iter
- metrocluster-interconnect-adapter-get-iter
- metrocluster-interconnect-mirror-get-iter
- metrocluster-node-get-iter
- metrocluster-vserver-get-iter
- network-interface-show
- network-port-show
- snapmirror-policy-show
- snapmirror-show
- statistics-show
- storage-aggregate-show
- storage-bridge-cooling-info temperature-sensor-operational-status

- storage-bridge-fc-port-info administrative-state
- storage-bridge-fc-port-info operational-state
- storage-bridge-get-iter
- storage-bridge-info is-being-monitored
- storage-bridge-info status
- storage-bridge-sas-port-info administrative-state
- storage-bridge-sas-port-info operational-state
- storage-disk-show
- storage-failover-show
- system-node-show
- version
- volume-efficiency-show
- volume-get-iter
- volume-qtree-show
- volume-quota-report
- volume-show
- vservers-cifs-share-access-control-show
- vservers-cifs-share-show
- vservers-cifs-show
- vservers-fcp-show
- vservers-iscsi-show
- vservers-peer-show
- vservers-show

The user named “ocpm” with role of “ocpm_role” must have permissions set for the following parameters:

- `-application http`
- `-application ontapi`

Installing OnCommand Plug-in for Microsoft using the installation wizard

You can use the installation wizard to install System Center Operations Manager (SCOM), the management packs, and the web server. You install the OnCommand Plug-in for Microsoft on a SCOM server.

About this task

All components are selected by default; however, you can select specific components. The installer performs the following tasks:

- If the supported version of SCOM is not detected on the system, unselects the SCOM management packs feature from the installation features

- Checks for any missing management pack requirements and provides a list
- Imports those management packs that have met all the requirements into SCOM

During installation, the OnCommand Plug-in for Microsoft management packs for clustered Data ONTAP are automatically imported while the OnCommand Plug-in for Microsoft resource pool is initialized and management servers are discovered. You must not manually unimport and then reimport the management packs, because then the OnCommand Plug-in for Microsoft resource pool is not initialized correctly. If you do unimport the management packs, you must reinstall the plug-in.

Steps

1. From the NetApp Support Site at mysupport.netapp.com, download the OnCommand Plug-in for Microsoft executable file to a directory on your hard drive.
2. Double-click the installer icon, and click **Run** to start the installation wizard.
3. Follow the instructions in the installation wizard to install the software.
4. In the **Feature Selection** page of the wizard, select the program features that you want to install.
5. Optional: To perform these options, complete the following steps:
 - To view an explanation of the icons and their meanings, click **Help**.
 - To change the location where the files are installed, click **Change** and type in the new path.
 - To view the disk space usage, click **Disk Space**.
6. After you have selected the features that you want to install, click **Next**.
7. In the **Web Service Credentials** dialog box, type your web service credentials and click **Next**.
8. In the **Configure OCPM Database** dialog box, type the required information.
 You must type the instance in the Database server field in the following format:
`<server_name>\<instance>`
 If you do not include the instance, the default instance is used.
9. In the **Ready to Install** dialog box, click **Install**.
 If the installer finds that required software is missing, a dialog box displays, in which you can view the requirements and from which you can install the missing software.
 After all files are installed on a storage system running clustered Data ONTAP, a dialog box shows the remote systems on which you can install the plug-in.
 If you install SCOM on a storage system running clustered Data ONTAP and import the management pack on one of three remote management servers, the SCOM console is visible on all three systems. However, you cannot access any of the functionality in the SCOM console because the plug-in is not installed on the other two systems.
10. Click **Finish**.
 When the installation of the plug-in is complete, the installer checks for remote SCOM management servers that were in the same management group to install the plug-in.
11. You can select all SCOM management servers for a remote installation.
12. If a management pack (for example, Clustered Data ONTAP Virtualization Management Pack) was not imported due to missing dependencies, repeat Step 2 and select **Repair** or **Modify**. This imports the missing management pack.

Checking for missing management packs

You use the System Center Operations Manager (SCOM) management packs to configure, monitor, and maintain your storage. You can check for management packs that were not installed but required subsequently after the installation package was created and then install them.

Steps

1. Check the Microsoft management pack catalog for missing management packs at both the System Center Central web site and the Microsoft TechNet site (<http://www.systemcentercentral.com/pack-catalog-categories/mp-catalog-pack-catalog/> and <http://social.technet.microsoft.com/wiki/contents/articles/16174.microsoft-management-packs.aspx>).
2. If you identify packs that are missing, refer to the instructions on how to download and install any missing management packs required for OnCommand Plug-in for Microsoft.

Related tasks

[Installing missing management packs](#) on page 18

You might need to install missing management packs that are required for OnCommand Plug-in for Microsoft. You use the System Center Operations Manager (SCOM) management packs to configure, monitor, and maintain your storage.

Related information

[Microsoft Technet: Microsoft Management Packs](#)

Installing missing management packs

You might need to install missing management packs that are required for OnCommand Plug-in for Microsoft. You use the System Center Operations Manager (SCOM) management packs to configure, monitor, and maintain your storage.

Before you begin

You should have already identified management packs that were not installed but required.

Steps

1. From the SCOM console, click the **Administration** workspace option.
2. From the navigation tree, right-click **Management Packs**.
3. From the **Tasks** pane, click **Import Management Packs**.
4. In the **Import Management Packs** dialog box, click **Add** and select **Add from disk**.
5. Navigate to where you saved the download: for example, C:\Program Files (x86)\System Center Management Packs\Microsoft SQL Server System Center Operations Manager MP.
6. Select one or more .mp files and click **Open**.
7. Click **Install**.

Related tasks

[Checking for missing management packs](#) on page 18

You use the System Center Operations Manager (SCOM) management packs to configure, monitor, and maintain your storage. You can check for management packs that were not

installed but required subsequently after the installation package was created and then install them.

Fixing Microsoft vulnerabilities reporting

After you install OnCommand Plug-in for Microsoft on a Windows Server 2012 machine, some Microsoft vulnerabilities can appear. You should identify whether these vulnerabilities appear and, if so, resolve them.

Before you begin

A vulnerability scanner should already have been downloaded and installed.

About this task

Different vulnerabilities might require different resolutions.

Note: To review monthly bulletins, you might want to subscribe to the Microsoft Technical Security Notifications at <https://technet.microsoft.com/en-us/security/dd252948.aspx?f=255&MSPPError=-2147217396>.

Steps

1. Open and run the vulnerability scanner.
The tool provides a list of vulnerabilities.
2. Resolve the following potential and more common of the possible vulnerabilities:

| Vulnerability | How to resolve |
|---|---|
| MSRDP Uses Non-Network-Level Authentication Sessions to Log on to Servers | Change remote settings to allow a connection running remote desktop with network-level authentication (NLA). |
| SMB Certificate Is Not Trusted | Turn on or off SMB signing and trusting. Implementing SMB signing increases both client-side and server-side load for SMB operations and could decrease throughput. See the support article on disabling SMB signing. |
| KB2862973 Not Installed: This May Cause a Vulnerability | Install Microsoft KB Windows8-RT-KB2862973-x64. |
| SSL Sessions Are Not Signed | Fix SSL signing issues. See the support articles on discussions.tenable.com. |
| Servers Store User Logon Details in Local Registry | Change the registry key on all servers by setting HKLM\Software\Microsoft\WindowsNT\CurrentVersion\Winlogon\CachedLogonsCount to 0. |

Overriding plug-in defaults and saving to a new management pack

You can change the default settings of rules, such as the discovery rule that starts the discovery process, that were established during OnCommand Plug-in for Microsoft installation. Changes to the

rules, called *overrides*, should be saved in a new management pack. You can override any rules to enable or disable them, alter the frequency, or change the start time for a rule.

Steps

1. Create a custom management pack to store your overrides by completing the following steps:
 - a. From the SCOM console, click the **Administration** workspace option.
 - b. In the **Administration** tree, select **Management Packs**.
 - c. From the **Actions** pane, click **Create Management Pack**.

You can create one management pack for all of your overrides or group your overrides and create management packs for each group. However, you should not save changes to the default management pack.

2. From the SCOM console, click the **Authoring** workspace option.
3. Select **Management Pack Objects > Rules**.
4. In the Look for box, enter **discovery rule** and click **Find Now**.
5. Under Management Server, select **Data ONTAP: Discovery Rule**.

The screenshot shows the SCOM Authoring console. On the left, the 'Rules (28)' pane is expanded, and 'Data ONTAP: Discovery Rule' is selected. The main pane displays a list of rules with columns: Name, Inherited from, Management Pack, Created, and Enabled by default. The 'Data ONTAP: Discovery Rule' is highlighted in blue. The 'Rule details' pane on the right shows the rule's description and properties.

| Name | Inherited from | Management Pack | Created | Enabled by default |
|---|-----------------------------|--------------------------------------|------------------------|--------------------|
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |
| Type: Data ONTAP Management Server (2) | | | | |
| Data ONTAP: Trigger Controller Discovery Rule | Data ONTAP Manage... | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | Yes |
| Data ONTAP: Trigger VFilter Discovery Rule | Data ONTAP Manage... | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | Yes |
| Type: Data ONTAP Virtualization: Management Server (1) | | | | |
| Data ONTAP Virtualization: Unattached VHD Discovery R... | Data ONTAP Virtualizatio... | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | Yes |
| Type: Data Warehouse Connection Server (2) | | | | |
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |
| Type: Gateway (2) | | | | |
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |
| Type: Management Server (2) | | | | |
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |
| Type: Microsoft.SystemCenter.DataWarehouseSynchronizationServer (2) | | | | |
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |
| Type: Notification Subscription Server (2) | | | | |
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |
| Type: Root Management Server Emulator (2) | | | | |
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |
| Type: Site Management Server (2) | | | | |
| Data ONTAP Virtualization: Discovery Rule | Management Server | OnCommand Data ONTAP Virtualizati... | 10/31/2014 1:59:26 ... | No |
| Data ONTAP: Discovery Rule | Management Server | OnCommand Data ONTAP | 10/31/2014 1:59:00 ... | No |

Rule details:

Data ONTAP: Discovery Rule

Management Pack: OnCommand Data ONTAP

Target: Management Server

View Introduction

Rule Description:

This is the principal discovery rule for all Data ONTAP storage systems. Once you use the SNMP network device Discovery wizard in System Center Operations Manager to discover your Data ONTAP storage controllers, this rule contacts each storage controller and discovers all of its physical and logical storage elements.

6. Right-click the rule that you want to change and select **Overrides > Override the Rule > For all objects of class: Management Server**.
7. In the **Override Properties** dialog box, select the **Override** box adjacent to Interval Seconds and modify the Interval Seconds override value to 3600.

Override Properties

Rule name: Data ONTAP: Discovery Rule
 Category: Discovery
 Overrides target: Class: Management Server

Show Rule Properties...

Override-controlled parameters:

| | Override | Parameter Name | Parameter Type | Default Value | Override Value | Effective Value | Change Status | |
|---|-------------------------------------|------------------|----------------|---------------|----------------|-----------------|---------------|--|
| ▶ | <input checked="" type="checkbox"/> | Enabled | Boolean | False | True | False | [Added] | |
| | <input checked="" type="checkbox"/> | Interval Seconds | Integer | 86400 | 3600 | 86400 | [Added] | |
| | <input type="checkbox"/> | Sync Time | String | 21:00 | 21:00 | 21:00 | [No change] | |
| | <input type="checkbox"/> | TimeoutSeconds | Integer | 3600 | 3600 | 3600 | [No change] | |

Details:

Enabled Description [Edit...](#)

The new custom override will be created in the 'Client Monitoring Overrides Management Pack'. Click apply to view the new effective value for this parameter.

Management pack

Select destination management pack:

Client Monitoring Overrides Management Pack [New...](#)

Help OK Apply Cancel

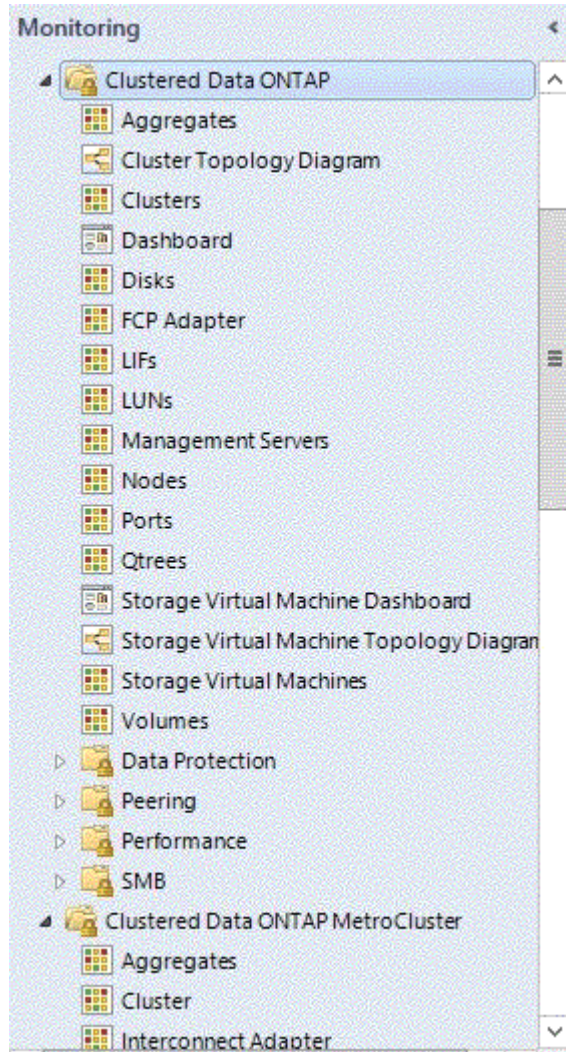
8. Select the new management pack to which you want to save these overrides.
9. Click **OK**.

Verifying a successful installation

After you install OnCommand Plug-in for Microsoft, you might want to ensure that OnCommand Plug-in for Microsoft components appear in the System Center Operations Manager (SCOM).

Steps

1. From the SCOM console, click the **Monitoring** workspace option.
2. From the Monitoring navigation tree, ensure that one or more of the following appear:
 - Clustered Data ONTAP, for OnCommand Plug-in for Microsoft installations for clustered Data ONTAP environments
 - Clustered Data ONTAP MetroCluster, for OnCommand Plug-in for Microsoft installations for clustered Data ONTAP environments



Connecting to your clustered Data ONTAP environment

Connecting to your clustered Data ONTAP environment for the OnCommand Plug-in for Microsoft involves adding clustered storage systems, enabling discovery, overriding rules, adding Data ONTAP credentials, and adding management servers to the resource pool.

Before you begin

You must have already finished all the beginning installation tasks.

Steps

1. [Adding clustered Data ONTAP storage systems and credentials](#) on page 23
You can add a clustered Data ONTAP storage system so that you can monitor clustered storage in System Center Operations Manager (SCOM). When you add the storage system, you can also enter the corresponding credentials.
2. [Adding clustered Data ONTAP domain account credentials for a Run As action account](#) on page 24
To monitor NetApp storage systems in OnCommand Plug-in for Microsoft, you must add Windows domain account credentials under which discoveries and monitoring workflows run. If you cannot connect to the controller entered into using the Manage Storage System option (for

clustered Data ONTAP), you might need to configure the Run As action account. You might also need to do this if you the workflows are not operating successfully in SCOM.

3. [Discovering storage in SCOM](#) on page 25
To monitor storage, you must first run the discovery process in System Center Operations Manager (SCOM).
4. [Discovering virtualized storage in SCOM](#) on page 26
To monitor virtualized storage, you must first run the virtualization discovery process in System Center Operations Manager (SCOM).
5. [Initiating storage discovery in SCOM](#) on page 27
To monitor storage, you must first initiate the discovery process in System Center Operations Manager (SCOM).
6. [Overriding clustered Data ONTAP management pack rules](#) on page 27
You can change the default settings of rules, such as the discovery rule that starts the discovery process, that were established during installation. In addition to overriding basic management pack defaults completed earlier in the installation process, you must override clustered Data ONTAP management pack defaults. You can save changes to the rules, called *overrides*, in a new management pack.
7. [Overriding available space monitors](#) on page 28
You should change the default settings of rules, established during OnCommand Plug-in for Microsoft installation, that monitor the available space for aggregates and volumes. These changes affect the threshold for triggering available space alerts. You should save these changes to the rules, called *overrides*, in a new management pack.
8. [Discovering clustered Data ONTAP storage systems manually](#) on page 30
To use SCOM to monitor clustered Data ONTAP storage systems, you must run the discovery process, which retrieves storage system information.
9. [Adding a management server to a plug-in resource pool](#) on page 30
You can add System Center Operations Manager (SCOM) management servers to the resource pool in the clustered Data ONTAP management pack by using the System Center Operations Manager (SCOM) console. You might want to do this to monitor load balancing among the servers in the resource pool.
10. [Monitoring Storage Virtual Machines \(SVMs\)](#) on page 31
You can monitor Storage Virtual Machines (SVMs) in the clustered Data ONTAP management pack by using the System Center Operations Manager (SCOM) console. An SVM is a logical storage unit, formerly referred to as a *Vserver*.

Related tasks

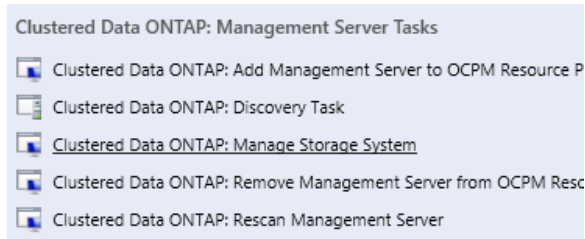
[Starting the plug-in installation for clustered Data ONTAP](#) on page 12

Adding clustered Data ONTAP storage systems and credentials

You can add a clustered Data ONTAP storage system so that you can monitor clustered storage in System Center Operations Manager (SCOM). When you add the storage system, you can also enter the corresponding credentials.

Steps

1. From the SCOM console, click the **Monitoring** workspace option.
2. In the navigation tree, click **Clustered Data ONTAP > Management Servers**
3. In the Tasks pane, click **Clustered Data ONTAP: Manage Storage System**.



Note: If an error message appears about not being able to find a file, you might need close SCOM, exit the VM, and reopen it.

4. In the **Manage Storage Systems** dialog box, click **Add**.
5. Type the name or IP address of the clustered storage system or storage virtual machine (SVM).
6. Type the user credentials associated with the storage system.
7. Click **Add**.

Adding clustered Data ONTAP domain account credentials for a Run As action account

To monitor NetApp storage systems in OnCommand Plug-in for Microsoft, you must add Windows domain account credentials under which discoveries and monitoring workflows run. If you cannot connect to the controller entered into using the Manage Storage System option (for clustered Data ONTAP), you might need to configure the Run As action account. You might also need to do this if you the workflows are not operating successfully in SCOM.

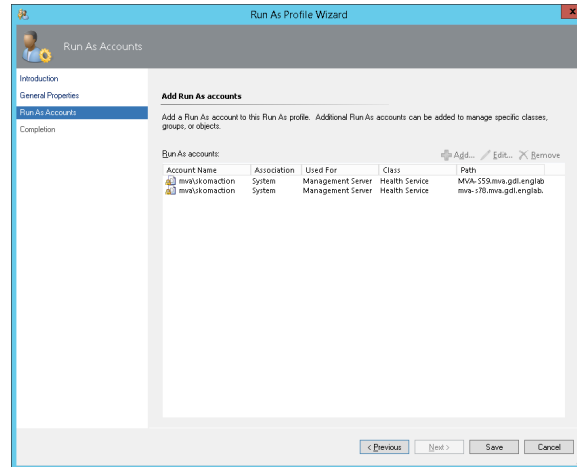
About this task

The OnCommand Plug-in for Microsoft discovery and monitoring scripts are called using Windows PowerShell and run under the context of an action account in SCOM. This account should have a Windows profile created to run the PowerShell script. If this account is not used to log in to the SCOM server before running the OnCommand Plug-in for Microsoft SCOM management pack, the discovery and monitoring tasks fail to run the PowerShell script.

You should add the Run As account as an administrator on the local machine for all of the servers.

Steps

1. Add the OnCommand Plug-in for Microsoft Run As action account as an administrator on the local host.
 - a. From the SCOM console on the local host, select **Administration > Run As Configuration > Profiles > Default Action Account > Verify Properties > Run As Accounts**.



- b. Click **Add** and add the Run As action account information.
2. If you cannot connect to the controller (entered in the Manage Storage System option for clustered Data ONTAP), configure the Run As action account by doing the following:
 - a. From the SCOM console on the local host, select **Administration > Run As Configuration > Accounts > Action Account**.
 - b. Add the OnCommand Plug-in for Microsoft Run As action account as an administrator.
 - c. Change the credentials of the SCOM default action account to a user with privileges that enables it to run.
3. Right-click the OnCommand Plug-in for Microsoft account, select **Properties**, click the **Credentials** tab, and enter the credentials.
4. Log in to the SCOM server with the default action account.
5. Restart the SCOM service.
6. Run a manual discovery in SCOM.

Discovering storage in SCOM

To monitor storage, you must first run the discovery process in System Center Operations Manager (SCOM).

About this task

The clustered Data ONTAP SCOM management pack includes clustered Data ONTAP storage discovery and clustered Data ONTAP virtualization discovery. These are enabled by default.

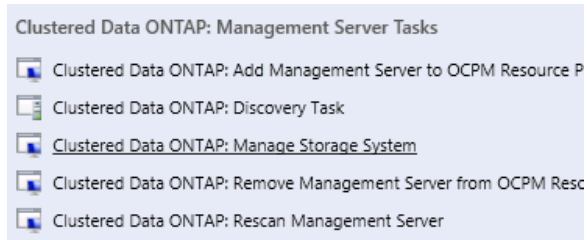
For the clustered Data ONTAP SCOM management pack, the discovery rules are targeted at a resource pool.

The OnCommand Plug-in for Microsoft discovery and monitoring scripts are called using Windows PowerShell and run under the context of an action account in SCOM. This account should have a Windows profile created to run the PowerShell script. If this account is not used to log in to the SCOM server before running the OnCommand Plug-in for Microsoft SCOM management pack, the discovery and monitoring tasks fail to run the PowerShell script.

Steps

1. From the SCOM console, click the **Monitoring** workspace option.

2. In the navigation tree, click **Clustered Data ONTAP > Management Servers**.
3. In the **Tasks** pane, click **Clustered Data ONTAP: Discovery Task**.



4. In the **Discovery Task** dialog box, select the storage targets on which you want to run discovery, and then click **Run**.
5. To verify which discovery rules are enabled, open a cmdlet window:

Debug-OCHost - CheckSettings

```
PS C:\Debug-OCHost -CheckSettings
SCOM Clustered Data ONTAP storage discovery      : Enabled
SCOM Clustered Data ONTAP virtualization discovery : Enabled
OCPM VIM service status                          : Running
OCPM VIM service port number                     : 808
OCPM VMI provider status                         : OK
Remote Registry status                           : Not Configured
Remote powershell status                        : Enabled
Firewall settings                               : Configured
Multipath I/O                                    : Disabled
Data ONTAP DSM                                   : Not Configured
Microsoft DSM                                    : Not Configured
OCPM SQL server instance                         : SCOM2012R2
OCPM SQL server port                             : 1433
```

Discovering virtualized storage in SCOM

To monitor virtualized storage, you must first run the virtualization discovery process in System Center Operations Manager (SCOM).

About this task

The clustered Data ONTAP SCOM management pack includes clustered Data ONTAP storage discovery and clustered Data ONTAP virtualization discovery. These are enabled by default.

For the clustered Data ONTAP SCOM management pack, the discovery rules are targeted at a resource pool.

Steps

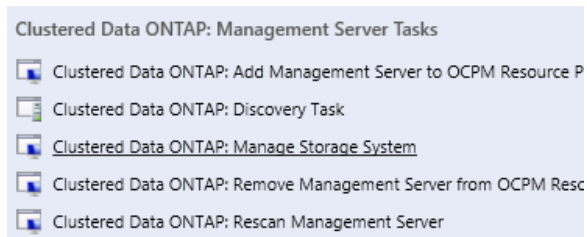
1. From the SCOM console, click the **Monitoring** workspace option.
2. From the navigation tree, click **Clustered Data ONTAP > Management Servers**.
3. In the **Tasks** pane, click **Clustered Data ONTAP: Virtualization Discovery Task**.
4. In the **Virtualization Discovery Task** dialog box, select the storage targets on which you want to run discovery and click **Run**.

Initiating storage discovery in SCOM

To monitor storage, you must first initiate the discovery process in System Center Operations Manager (SCOM).

Steps

1. From the SCOM console, click the **Monitoring** workspace option.
2. In the navigation tree, click **Clustered Data ONTAP > Management Servers**.
3. In the **Tasks** pane, do one of the following:



- Click **Clustered Data ONTAP: Manage Storage System** and from the Manage Storage System dialog box, click **Discover**.
If you click **Discover**, discovery is initiated on all clustered Data ONTAP controllers listed, not just the one selected. The job does not appear in the Task Status window.
- Click **Clustered Data ONTAP: Discovery Task** and from the Run Task dialog box, click the target and click **Run**.
If you click **Run**, the job appears in the Task Status window and you can verify completion from there.

Overriding clustered Data ONTAP management pack rules

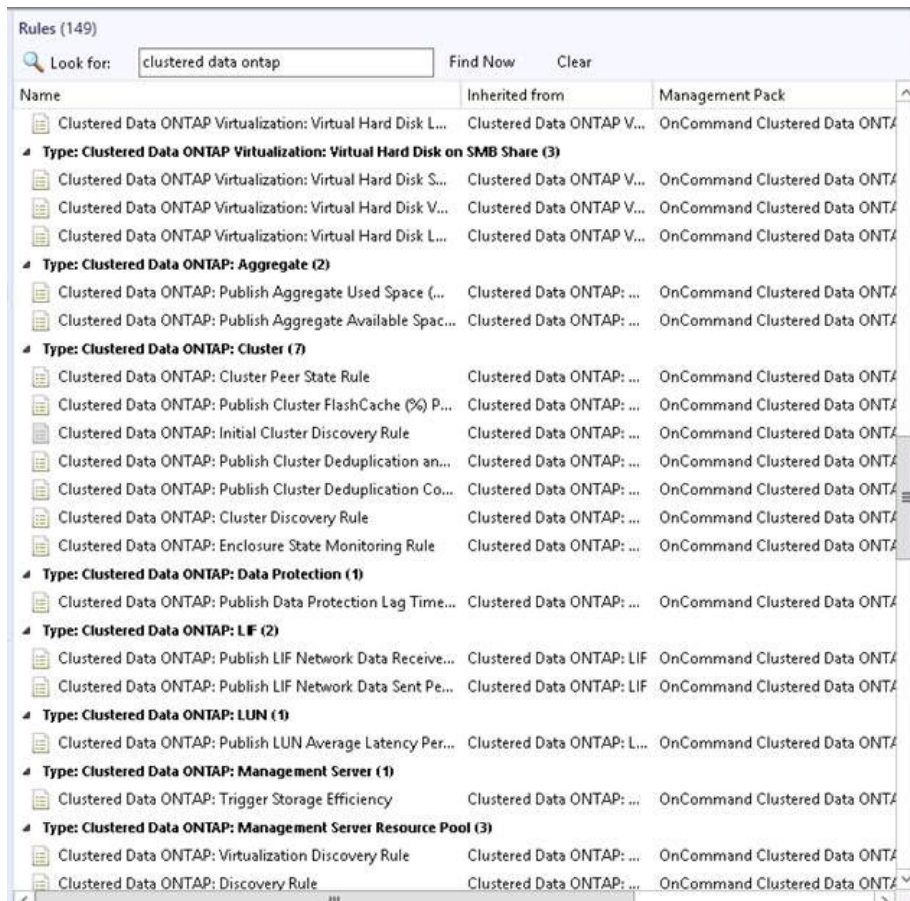
You can change the default settings of rules, such as the discovery rule that starts the discovery process, that were established during installation. In addition to overriding basic management pack defaults completed earlier in the installation process, you must override clustered Data ONTAP management pack defaults. You can save changes to the rules, called *overrides*, in a new management pack.

Steps

1. Create a custom management pack to store your overrides:
 - a. From the SCOM console, click the **Administration** workspace option.
 - b. In the **Administration** tree, select **Management Packs**.
 - c. From the **Actions** pane, click **Create Management Pack**.

You can create one management pack for all of your overrides or group your overrides and create management packs for each group. However, you should not save changes to the default management pack.

2. From the SCOM console, click the **Authoring** tab.
3. In the navigation tree, click **Management Pack Object > Rules**.
4. In the Look for field, enter **clustered data ontap** and click **Find Now**.



5. Right-click the rule.
6. Select **Overrides** for all objects, specific objects, or the entire group.
7. Select the overrides that you want to set depending on whether you want to enable or disable the rule, alter the frequency, or change the start time of the rule.
8. Select the custom management pack you created where you want to save overrides.
9. Click **OK**.

Overriding available space monitors

You should change the default settings of rules, established during OnCommand Plug-in for Microsoft installation, that monitor the available space for aggregates and volumes. These changes affect the threshold for triggering available space alerts. You should save these changes to the rules, called *overrides*, in a new management pack.

About this task

Consider the following situations:

- When a system's root aggregates equal or exceed 95% utilization, the default available space monitor triggers alerts on FlexPod and other configurations.
To avoid these alerts, you should either disable the monitor or use a higher threshold value in the aggregate space utilization monitor. For example, you might want to override the thresholds of aggregate space utilization monitors for these aggregates to a lower threshold parameter of 96 and an upper threshold parameter of 98.

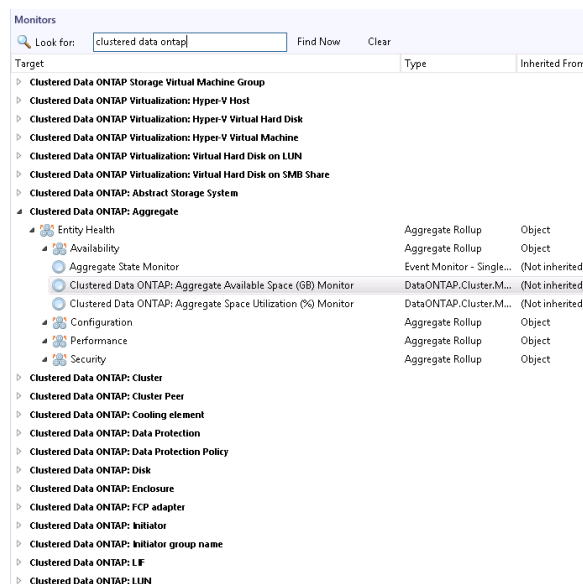
- Because the size of small aggregates or volumes might be below the threshold, you should look for alerts for the available space monitor for both volumes and aggregates.
To avoid the alert, you should lower the threshold.
- For some root Flex volumes that are 1 GB, you might want to disable the available space monitor and rely on the space utilization monitor instead.
Alternatively, you might want to override and lower the thresholds on the available space monitor for these volumes to 0.2 and 0.1 GB.

You can disable these monitors for all objects in a class for some objects. For example, you could turn off alerts for the Storage Virtual Machine (SVM, formerly known as Vserver) root volumes, but not all objects in the clustered Data ONTAP class, which enables you to still monitor the important data volumes.

Steps

1. Create a custom management pack to store your overrides:
 - a. From the SCOM console, click the **Administration** workspace option.
 - b. In the **Administration** tree, select **Management Packs**.
 - c. From the **Actions** pane, click **Create Management Pack**.

You can create one management pack for all of your overrides or group your overrides and create management packs for each group. However, you should not save changes to the default management pack.
2. From the SCOM console, click the **Authoring** workspace.
3. In the navigation tree, click **Management Pack Object > Monitors**.
4. Override the Clustered Data ONTAP Aggregate Space Utilization monitor:
 - a. In the main **Monitors** pane, select **Clustered Data ONTAP: Aggregate > Entity Health > Availability > Clustered Data ONTAP: Aggregate Space Utilization (%) Monitor**.



- b. Right-click the monitor name and select **Overrides > Override the Monitor > For all objects of class: Clustered Data ONTAP: Aggregate**.

Note: You could select a specific aggregate to override instead by selecting **For a specific object of class: Clustered Data** and choosing the specific aggregate.

- c. Change the Lower or Upper Threshold Override Value parameter, as needed.
5. Override the Clustered Data ONTAP Volume Available Space monitor:
 - a. In the main Monitors pane, select **Clustered Data ONTAP: Volume > Entity Health > Availability > Clustered Data ONTAP: Volume Available Space (GB) Monitor**.
 - b. Right-click the monitor name and select **Overrides > Override the Monitor > For all objects of class: Clustered Data ONTAP: Volume**.
 - c. Change the Lower or Upper Threshold Override Value parameter, as needed.
6. Select the custom management pack you created where you want to save overrides.

Discovering clustered Data ONTAP storage systems manually

To use SCOM to monitor clustered Data ONTAP storage systems, you must run the discovery process, which retrieves storage system information.

Before you begin

OnCommand Plug-in for Microsoft and its required management packs must already be installed.

The discovery process must have been enabled. For clustered Data ONTAP only, the discovery is enabled by default.

Steps

1. From the SCOM console, click the **Monitoring** workspace option.
2. In the navigation tree, click **Clustered Data ONTAP > Management Servers**.
3. From the **Tasks** pane, click **Clustered Data ONTAP: Manage Storage System** to initiate the manual discovery process.
4. From the **Manage Storage Systems** view, click **Add**.
5. From the **Add Storage System** view, enter storage system information and click **Add**.

Adding a management server to a plug-in resource pool

You can add System Center Operations Manager (SCOM) management servers to the resource pool in the clustered Data ONTAP management pack by using the System Center Operations Manager (SCOM) console. You might want to do this to monitor load balancing among the servers in the resource pool.

About this task

The clustered Data ONTAP management pack and SCOM enable you to monitor resource pools. A resource pool is a collection of management servers that balance work load among the servers in the pool and take over from a failed server in the pool. Resource pools enable monitoring continuity, if one of the management servers becomes unavailable.

All SCOM servers in a resource pool point to the same SCOM database.

For example, if four nodes exist in the resource pool, you would run the discovery tasks from the node on which the plug-in is installed. You would run all other tasks, such as alerting and monitoring, from the other nodes in the resource pool.

Steps

1. From the SCOM console, click the **Monitoring** workspace option.
2. From the Monitoring navigation tree, click **Clustered Data ONTAP > Management Servers**.
3. Select the management server.
4. From the list of **Clustered Data ONTAP: Management Server Tasks**, click **Clustered Data ONTAP: Add Management Server to OCPM Resource Pool**.

Monitoring Storage Virtual Machines (SVMs)

You can monitor Storage Virtual Machines (SVMs) in the clustered Data ONTAP management pack by using the System Center Operations Manager (SCOM) console. An SVM is a logical storage unit, formerly referred to as a *Vserver*.

About this task

Clusters are administered by whole cluster rather than on a per-node basis and data is served from one or more SVMs. Each SVM is configured to own storage in the form of volumes provisioned from a physical aggregate and logical interfaces (LIFs).

Steps

1. From the SCOM console, click the **Monitoring** workspace option.
2. From the Monitoring navigation tree, click **Clustered Data ONTAP > Management Servers**.
3. Select the management server.
4. From the list of tasks, click **Clustered Data ONTAP: Discovery Task** to initiate the manual discovery process.
5. Click **Close** to close the discovery task.
6. From the list of tasks, click **Clustered Data ONTAP: Manage Storage System**.
7. From the **Manage Storage Systems** view, note the total number of Storage Virtual Machines (SVMs) and the list of names.

Uninstalling the plug-in and SCOM management packs

Custom configurations that were performed during the setup of OnCommand Plug-in for Microsoft can cause the uninstall process to react in different ways. You must understand how to completely uninstall OnCommand Plug-in for Microsoft and return the SCOM environment to its original state.

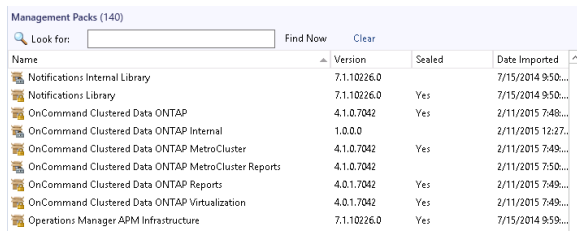
Before you begin

To eliminate any loss of settings, you should have removed the override settings for Data ONTAP stored in the default management pack prior to uninstalling OnCommand Plug-in for Microsoft. When you try to delete the OnCommand Plug-in for Microsoft management packs, SCOM might prompt you to remove the Microsoft default management pack dependency. This message occurs if you save any override management pack values to the default management pack, which is not recommended. You will lose all override settings stored in the default management pack.

Steps

1. From the SCOM console, click the **Administration** workspace option.

2. From the Administration navigation tree, click **Management Packs**.



The screenshot shows a window titled "Management Packs (140)". It has a search bar with a magnifying glass icon, a "Find Now" button, and a "Clear" button. Below the search bar is a table with the following columns: Name, Version, Sealed, and Date Imported. The table contains several rows of management packs, including "Notifications Internal Library", "Notifications Library", "OnCommand Clustered Data ONTAP", "OnCommand Clustered Data ONTAP Internal", "OnCommand Clustered Data ONTAP MetroCluster", "OnCommand Clustered Data ONTAP MetroCluster Reports", "OnCommand Clustered Data ONTAP Reports", "OnCommand Clustered Data ONTAP Virtualization", and "Operations Manager APM Infrastructure".

| Name | Version | Sealed | Date Imported |
|---|-------------|--------|--------------------|
| Notifications Internal Library | 7.1.10226.0 | | 7/15/2014 9:50... |
| Notifications Library | 7.1.10226.0 | Yes | 7/15/2014 9:50... |
| OnCommand Clustered Data ONTAP | 4.1.0.7042 | Yes | 2/11/2015 7:48... |
| OnCommand Clustered Data ONTAP Internal | 1.0.0.0 | | 2/11/2015 12:37... |
| OnCommand Clustered Data ONTAP MetroCluster | 4.1.0.7042 | Yes | 2/11/2015 7:49... |
| OnCommand Clustered Data ONTAP MetroCluster Reports | 4.1.0.7042 | | 2/11/2015 7:50... |
| OnCommand Clustered Data ONTAP Reports | 4.0.1.7042 | Yes | 2/11/2015 7:49... |
| OnCommand Clustered Data ONTAP Virtualization | 4.0.1.7042 | Yes | 2/11/2015 7:49... |
| Operations Manager APM Infrastructure | 7.1.10226.0 | Yes | 7/15/2014 9:59... |

3. Select a management pack.
4. From the list of actions, click **Delete**.
5. From the Windows Control Panel, uninstall the OnCommand Plug-in for Microsoft application.
6. Reboot your system.

Installing OnCommand Plug-in for Microsoft using silent mode

You can install OnCommand Plug-in for Microsoft using silent mode instead of following the pages of the installation wizard. When you use silent mode, you can use a command line that lets you automatically install all of the software features at once.

Before you begin

You must have completed all tasks needed to prepare for deployment.

About this task

During silent installation, no interface, progress bars, or error messages display. If errors occur, messages are written to a log file that is located in the Temp folder, or you can provide a custom log file path in the silent install command line. A new log file is written whenever there is any software that you need to install before you can install the plug-in.

Steps

1. From [NetApp Support](#), download the OnCommand Plug-in for Microsoft executable file to a directory on your hard drive.
2. From the command line, switch to the directory to which you saved the executable file.
3. From the directory in which the downloaded product executable file resides, run the executable:

```
OnCommand-PlugIn-Microsoft_4.1_x64_NetApp.exe /s /v"/qn
SILENT_MODE=1 /L*v <log_file_name> ADDLOCAL=<ALL|Feature Names>
SVCUSERNAME=<domain_user> SRV_PASSWORD=<passwd>
SRV_CONFIRMUSERPASSWORD=<passwd> REMOTE_ALL=1 DBCONNECTIONSTRING=
\"Server=<server_name>; Integrated security=SSPI; database=master;\""
```

The installation begins and runs in the background.

After you finish

Complete tasks required to connect to your Data ONTAP environment.

Related tasks

[Preparing for deployment](#) on page 8

Silent install and uninstall process parameters and variables

When you want to run an install or uninstall process in the background, or *silently*, you construct a command to do so using a particular set of parameters and variables.

The plug-in passes the parameters to setup.exe in the following order:

```
OnCommand-PlugIn-Microsoft_4.1_x64_NetApp.exe /s /v"/qn SILENT_MODE=1 /L*v
<log_file_name> ADDLOCAL=<ALL|Feature Names> SVCUSERNAME=<domain_user>
SRV_PASSWORD=<passwd> SRV_CONFIRMUSERPASSWORD=<passwd> REMOTE_ALL=1
DBCONNECTIONSTRING=\"Server=<server_name>; Integrated security=SSPI;
database=master;\""
```

The following list includes those parameters and variables that you can use with the silent installation command:

/s

Specifies silent mode

/v

Passes the parameters to the installer

Note: Do not leave a space between the “v” and the quotation mark.

/q

Specifies silent installation, with which you can use the following options:

b

Creates a basic user interface

f

Displays a full user interface

n

Does not create a user interface

r

Displays a reduced user interface

/w (Optional)

Waits until the installation is complete before exiting

If you are using the `/w` parameter in a batch file, you should precede the entire `setup.exe` command line with **start /WAIT:**

```
start /WAIT OnCommand-PlugIn-Microsoft_4.1_x64_NetApp.exe /w ...
```

ADDLOCAL=

In a custom installation, indicates the features that you want to install

If there is no `AddLocal` parameter in the command, all features are installed by default.

REMOTE_ALL=

In a custom installation, pushes the installer to other remote SCOM servers

If there is no `Remote` parameter in the command, the installer is not pushed to remote SCOM servers by default.

Selecting features for custom installation

If you do not want to use the default OnCommand Plug-in for Microsoft installation that includes all plug-in features, you must select the names of the features that you want to install and use the `AddLocal` parameter to construct a command that silently runs a custom installation.

If you install a parent feature, such as Management Packs, then all of its child features are also installed. If you install a child feature, such as Hyper-V Storage Monitoring and Management, its parent feature, Management Packs, is also installed, along with any required sibling features, such as Storage Monitoring.

The following example illustrates a custom installation:

```
OnCommand-PlugIn-Microsoft_4.1_x64_NetApp.exe /s /v"/qn
SILENT_MODE=1 /L*v <log_file_name> ADDLOCAL=<ALL|Feature Names>
SVCUSERNAME=<domain_user> SRV_PASSWORD=<passwd>
```

```
SRV_CONFIRMUSERPASSWORD=<passwd> REMOTE_ALL=1 DBCONNECTIONSTRING=
\"Server=<server_name>; Integrated security=SSPI; database=master;\""
```

Plug-in features used with the AddLocal parameter in silent installation cmdlets

There are specific feature names that you must use with the AddLocal parameter to install the various plug-in components.

The AddLocal parameter values can be used in the ADDLOCAL=<ALL | Feature Names> section of the following example:

```
OnCommand-PlugIn-Microsoft_4.1_x64_NetApp.exe
/s /v"/qn SILENT_MODE=1
/L*v <log_file_name> ADDLOCAL=<ALL | Feature Names>
SVCUSERNAME=<domain_user>
SRV_PASSWORD=<passwd> SRV_CONFIRMUSERPASSWORD=<passwd> REMOTE_ALL=1
DBCONNECTIONSTRING=\"Server=<server_name>;
Integrated security=SSPI; database=master;\""
```

The following are the feature names for the AddLocal parameter:

| Management pack | Feature | Subfeature | ADDLOCAL=<Feature Names> options |
|--|---|---|-----------------------------------|
| System Center Operations Manager (SCOM) Management Packs | | | ManagementPacks |
| | Storage Monitoring | | StorageMonitoring |
| | | Reports | Reporting |
| | Hyper-V Storage Monitoring and Management | | HVStorageMonitoring |
| | | Reports | HVStorageReporting |
| | Clustered Data ONTAP Management Pack | | ClusteredDataONTAP ManagementPack |
| | | Reports | ClusterReporting |
| | | Clustered Data ONTAP Virtualization Management Pack | ClusteredDataONTAP Virtualization |
| | | MetroCluster Data ONTAP Management Pack | MetroCluster |

| Management pack | Feature | Subfeature | ADDLOCAL=<Feature Names> options |
|------------------------------|--------------|--------------------------------------|-------------------------------------|
| | | MetroCluster Clustered Reports | MetroCluster Reporting |
| | SCOM console | | SCOMConsole |
| Documentation | | | Doc |
| OnCommand Discovery Agent | | | OCAgent |

Uninstalling the plug-in using silent mode

You can uninstall the OnCommand Plug-in for Microsoft software silently, without a wizard, when you no longer need the plug-in or when you upgrade to a later version.

About this task

During the silent uninstall process, no interface, progress bars, or error messages are displayed.

Step

1. From a command-line prompt, run the following command:

```

MsiExec.exe /x{3FEDDDE8-6819-4D79-8444-1AB602C51F0B} /L*v
C:your_log_file.log /q

msiexec.exe /x{3FEDDDE8-6819-4D79-8444-1AB602C51F0B}

```

The uninstall process begins and runs in the background.

Any errors that occur during the uninstall process are saved to the log file that was included in the command input. If a log file is not specified in the command, then the log file is saved to the Temp folder after the procedure finishes.

After you finish

You can view the log file to ensure that the uninstallation is successful.

Where to go next

After you have installed and configured OnCommand Plug-in for Microsoft, you can discover storage systems and monitor storage systems.

You can find more information about these tasks, as well as release-specific information for OnCommand Plug-in for Microsoft, OnCommand Plug-in for Microsoft Release Notes, that describes new features, important cautions, known problems, and limitations of the product available on the NetApp Support Site at mysupport.netapp.com.

Related information

[OnCommand Plug-in 4.1.2 for Microsoft Release Notes](#)

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