Citrix SCOM Management Pack for XenServer

May 21, 2017

Citrix SCOM Management Pack 2.25 for XenServer ⌄

Citrix SCOM Management Pack 2.24 for XenServer ⌄

Citrix SCOM Management Pack 2.23 for XenServer ⌄

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Citrix SCOM Management Pack 2.21 for XenServer ⌄

Citrix SCOM Management Pack 2.25 for XenServer

May 21, 2017

Citrix SCOM Management Pack for XenServer is an availability and performance management solution that extends end-to-end service monitoring capabilities of Microsoft System Center Operations Manager (**SCOM**) to include the Citrix XenServer (XenServer) infrastructure. It fully integrates topology, health, and performance data into SCOM and provides centralized monitoring.
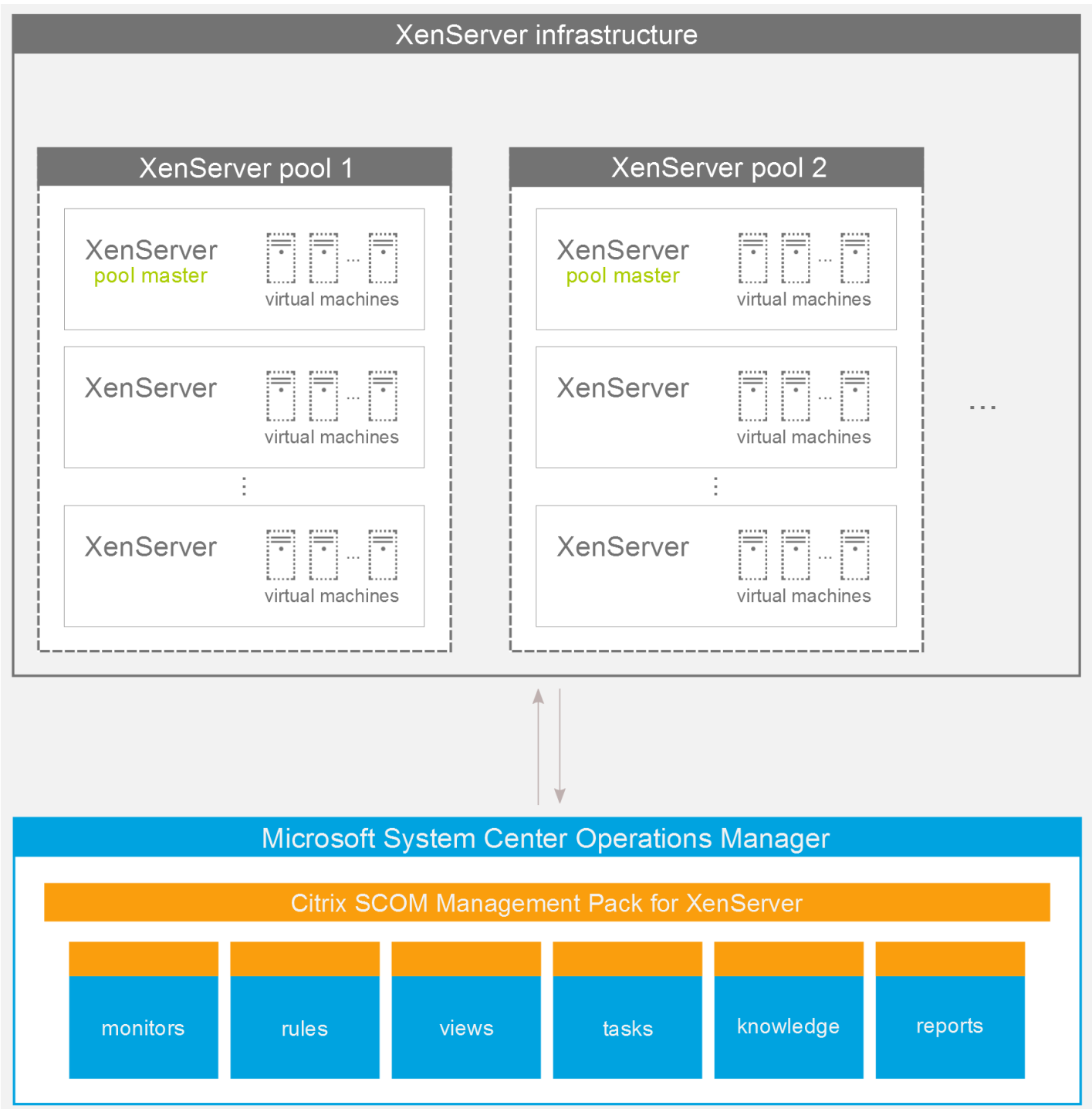
It covers the following key scenarios:

- Are all XenServer instances running?
- Are all virtual machines powered on?
- Are there any events that indicate a problem with XenServer or a particular virtual machine?
- Have any performance thresholds been violated?

Citrix SCOM Management Pack for XenServer components can help you detect and respond to critical events in your XenServer virtual infrastructure. Frequently, timely alerts help prevent XenServer outages and assure high availability of the XenServer virtual infrastructure.

Citrix SCOM Management Pack for XenServer provides a large number of performance collection rules which collect vital XenServer metrics to the SCOM data warehouse. Predefined reports allow you to use this data to review and analyze performance history and to predict trends.

Architecture

The following diagram shows how Citrix SCOM Management Pack for XenServer connects to the SCOM management platform and the XenServer enterprise infrastructure.

XenServer infrastructure

XenServer pool 1

XenServer
pool master
virtual machines

XenServer
virtual machines

XenServer
virtual machines

XenServer pool 2

XenServer
pool master
virtual machines

XenServer
virtual machines

XenServer
virtual machines

...

Microsoft System Center Operations Manager

Citrix SCOM Management Pack for XenServer

| monitors | rules | views | tasks | knowledge | reports |

What's new

Aug 14, 2017

Citrix SCOM Management Pack 2.25 for XenServer introduces the following features:

- **Support for Citrix XenServer.** Citrix SCOM Management Pack for XenServer now supports XenServer versions 7.2 and 7.1 CU1

- **FIPS Compliance.** Citrix SCOM Management Pack for XenServer uses FIPS (Federal Information Processing Standards) compliant algorithms and can monitor FIPS-compliant systems.

Known issues

None

Fixed issues

The following issues are fixed in this product version.

- **Issue ID**: SCOM-1151
  Symptom: The Citrix SCOM Management Pack for XenServer Agent might not get upgraded. The upgrade process initially removes the *Citrix MPXS Agent* service. However, the previously installed agent package is not replaced and the earlier program version remains registered with the operating system.

Upgrading

Note: Product versions earlier than 2.21 were released under the name Comtrade Management Pack for Citrix XenServer.

Upgrade is possible for the versions 2.20 and later.

In-place upgrade is not supported in the Citrix SCOM Management Pack for XenServer. Instead to do an upgrade, follow the steps as below:

1. Uninstall the current version of the management pack following the uninstallation instructions as per the documentation of your current version.
2. Install the new version of the Citrix SCOM Management Pack for XenServer following the instructions in Install and Configure. Your management pack customization is preserved.
3. This step is valid only if you are upgrading from **version 2.20**. To migrate your management pack customization, on each XenServer Management Pack proxy node, move the xsmp_config.dat file from the %ProgramFiles%\ComTrade\XenServer MP Agent folder to the %ProgramFiles%\Citrix\XenServer MP Agent folder.

System requirements

May 21, 2017

Before installing Citrix SCOM Management Pack for XenServer, make sure that your environment meets the requirements listed in this section.

Storage requirements

The Operations Manager data warehouse server must have enough free storage space for the performance data that is collected. Citrix SCOM Management Pack for XenServer daily stores approximately the following amounts of data into the data warehouse database (*OperationsManagerDW*):

- 48 KB per virtual machine
- 72 KB per physical XenServer host

Software requirements

Citrix SCOM Management Pack for XenServer requires a supported version of the following products that it integrates with:

- Citrix XenServer
- Microsoft System Center Operations Manager

Supported versions of Citrix XenServer

Citrix SCOM Management Pack for XenServer is compatible with the following Citrix XenServer versions:

Product version	Supported
Citrix XenServer 7.2	✔
Citrix XenServer 7.1	✔
Citrix XenServer 7.0	✔
Citrix XenServer 6.5[1]	✔
Citrix XenServer 6.2	✔
Citrix XenServer 6.1	✔
Citrix XenServer 6.0.2	✔
Citrix XenServer 6.0	✔

[1]This entry covers the RTM version, the RTM version updated with Service Pack 1.

Supported versions of SCOM

Citrix SCOM Management Pack for XenServer is compatible with the following SCOM versions:

Microsoft System Center Operations Manager version	Supported
Microsoft System Center Operations Manager 2016	✔
Microsoft System Center Operations Manager 2012 R2	✔
Microsoft System Center Operations Manager 2012 R2[2]	✔

[2]This entry covers both the RTM version and the RTM version updated with Service Pack 1 (SP1).

Supported operating systems

Citrix SCOM Management Pack for XenServer Agent is compatible with the following operating systems:

Operating system	Supported
Microsoft Windows Server 2016	✔
Microsoft Windows Server 2012 R2	✔
Microsoft Windows Server 2008 R2	✔

Language support

The product can be deployed and operates correctly in environments where regional settings are configured to use any of the following languages:

Language	Language code	Supported
English	en	✔

Spanish	es	✔

Install and configure

May 21, 2017

This chapter contains instructions that you must follow to install and configure the Citrix SCOM Management Pack for XenServer. Perform all procedures in the documented order of precedence.

Preparing for the installation

Before installing the Citrix SCOM Management Pack for XenServer, make sure the following prerequisites are fulfilled:

- Your environment meets the hardware and software requirements. See System Requirements.
- A computer is chosen on which a SCOM management server resides and where the server side of Citrix SCOM Management Pack for XenServer will be installed. This computer is referred to as **SCOM management server**.
- One or more computers are chosen where Citrix SCOM Management Pack for XenServer Agent instances will be installed that will remotely collect XenServer data. These computers are referred to as Citrix SCOM Management Pack for XenServer proxy nodes (**proxy nodes**). The proxy nodes must be running a supported Microsoft Windows operating system.

Important: The terms proxy node and proxy agent do not mean the same thing. The former refers to a role in the Citrix SCOM Management Pack for XenServer deployment, whereas the latter refers to a special configuration of SCOM agent.

The choice about proxy nodes depends on the size and complexity of your XenServer environment. Citrix recommends that you use one proxy node for monitoring one or two small XenServer pools, but designate multiple proxy nodes in case you have a larger XenServer environment.

Important: While one proxy node can monitor multiple XenServer pools, proxy nodes should be designated and configured such that each pool is monitored from a single node.

For a sample hardware specification for proxy nodes, see Optimize, section Adjusting SCOM configuration for management of large environments.

SCOM agent is installed on all the proxy nodes. Proxy nodes are configured as **agent-managed computers** in the SCOM management group.

Installing the product on the SCOM management server

The server-side part of the Citrix SCOM Management Pack for XenServer must be installed on the SCOM management server.

To install the product on the SCOM management server, do the following:

1. Log on to the management server. Use a user account that has local administrative privileges and SCOM administrative privileges.
2. In Windows Explorer, locate the *Citrix_SCOM_Management_Pack_for_XenServer_<Version>.exe* file (where *<Version>* is

the current software version), and double-click it to invoke the installation process. Wait for the Setup Wizard to appear.

3. In the Welcome page of the Setup Wizard, click **Next**.
4. In the View Relevant Product Configuration page, click Next.
5. In the License Agreement page of the Setup Wizard, read the end user license agreement carefully. If you accept the terms of the agreement, click **Next**.
6. In the Destination Folder page, define the Citrix SCOM Management Pack for XenServer installation folder. Citrix recommends that you install Citrix SCOM Management Pack for XenServer to the default folder.   Proceed as follows:
   - To install the product to the default folder listed in the Setup Wizard, no special actions are required.
   - To install the product to a different folder, follow the sub-steps:
     - Click **Change**.
     - In the Browse For Folder dialog box, browse to a desired installation folder, select it, and click **OK**.
   - Click **Next**.
7. In the Configure Post-Install Actions page of the Setup Wizard, decide whether the Setup Wizard should automatically import the included management packs into SCOM.
   - To let the Setup Wizard import the management packs, select the **Automatically import the Management Pack** option. Citrix recommends this choice.
   - To import the management packs into SCOM manually at a later time, leave the **Automatically import the Management Pack option** unselected. For instructions about how to import or reimport the management packs, see Manually importing included management packs into SCOM.
8. Click **Install**. The Setup Wizard displays the Installing the product page and starts copying the installation files.
9. After the installation completes, the installation completion page is displayed.
   - If you let the Setup Wizard to automatically import the management packs, click **Next**. Else, click **Finish** to close the Setup Wizard.
   - If you let the Setup Wizard to automatically import the management packs, it displays the Executing post-install actions page. Attend the import process.
10. In the post-installation completion page, review the management packs import log, and click **Finish** to close the Setup Wizard.
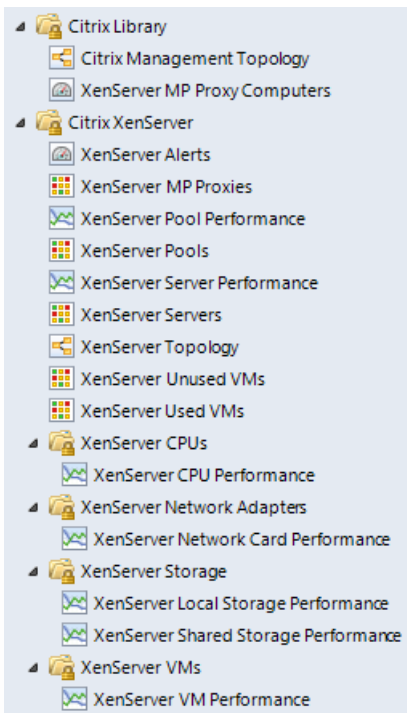
Verifying the installation on the management server

To verify that the Citrix SCOM Management Pack for XenServer installation on the management server is correct, do the following:

1. Log on to the management server.
2. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems earlier than Windows Server 2016).
3. Check for the presence of the following entry in the Name column:

   Citrix SCOM Management Pack for XenServer

   4. Launch the SCOM Operations console.
   5. In the **Monitoring** view, expand the items in the left pane until they match the following figure.

6. In the **Administration** view, expand **Administration > Management Packs** and click **Installed Management Packs** (the navigation pane structure may differ in SCOM versions earlier than 2016).

7. Verify the following management pack versions are listed in the middle pane:

Citrix Management Pack for XenServer	2.25.20.0
Citrix Management Pack for XenServer Reports	2.25.20.0
Citrix Management Pack Library	1.0.32.0

Configuring SCOM agent to act as proxy on proxy nodes

SCOM agent on each computer where Citrix SCOM Management Pack for XenServer Agent will be installed (Citrix SCOM Management Pack for XenServer proxy node) must be configured to act as a proxy agent. This configuration enables the agent to relay or forward information from or about other computes and network devices to the SCOM management server.

To configure the SCOM agent instances to act as proxy agents, do the following:

1. Launch the SCOM Operations console and connect to the management server.
2. In the **Administration** view, in the left pane, expand **Device Management**, and then click **Agent Managed**.

3. For each planned proxy node, follow the steps:

    a. Right-click the host name, and select **Properties**.
    b. Click the **Security** tab.
    c. Select the **Allow this agent to act as proxy and discover managed objects on other computers** option.
    d. Click **OK**.

Installing the product on the proxy nodes

On the designated Citrix SCOM Management Pack for XenServer proxy nodes, only the Citrix SCOM Management Pack for XenServer Agent must be installed.

To install Citrix SCOM Management Pack for XenServer Agent on a proxy node, do the following:

1. Log on to the proxy node. Use a user account that has local administrative privileges.
2. Copy the *MPXSAgent.exe* file from the *%ProgramData%\Citrix\CitrixMPShare\XenServer MP* folder on the management server to a location on the proxy node.
3. In Windows Explorer, locate the *MPXSAgent.exe* file, and double-click it to invoke the installation process. Wait for the Setup Wizard to appear.
4. In the Welcome page of the Setup Wizard, click **Next**.
5. In the License Agreement page of the Setup Wizard, read the end user license agreement carefully. If you accept the terms of the agreement, click **Install**.
6. After the installation completes, the completion page is displayed. Click **Finish** to close the Setup Wizard.

Verifying the installation on the proxy nodes

To verify that the Citrix SCOM Management Pack for XenServer installation on a proxy node is correct, do the following:
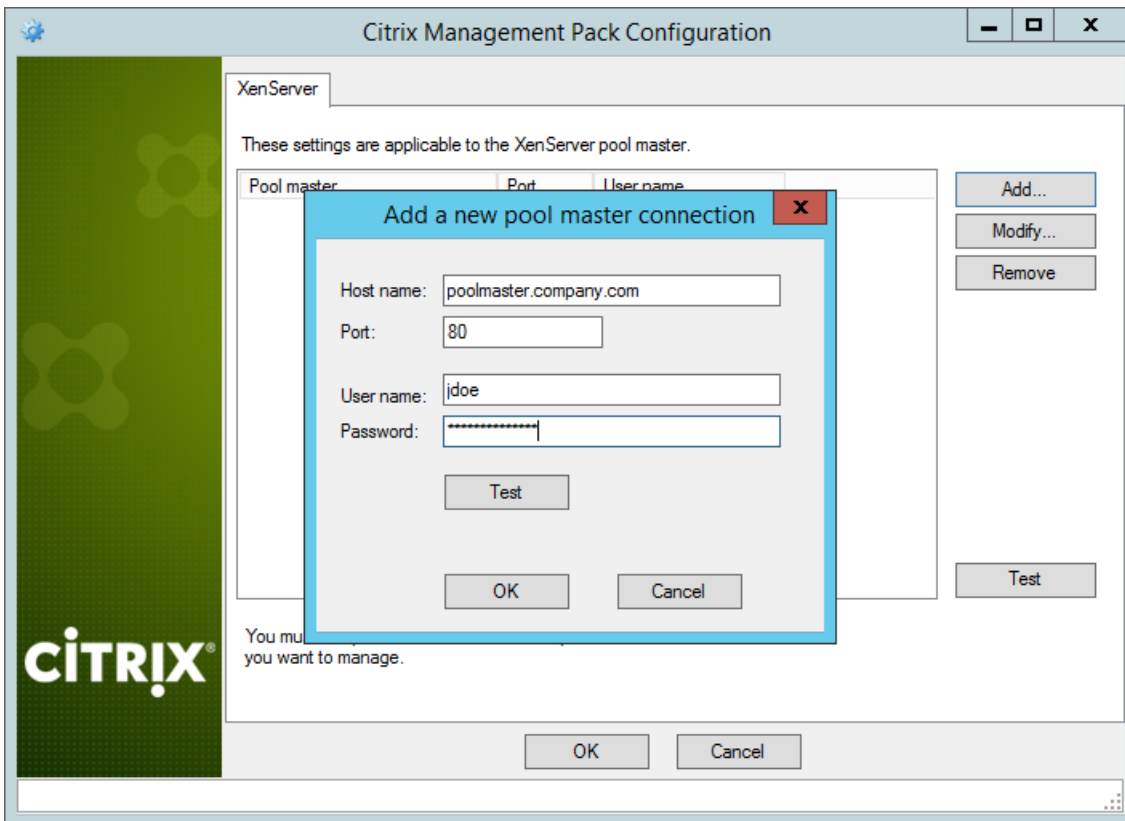
1. Log on to the proxy node.
2. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems earlier than Windows Server 2016).
3. Check for the presence of the following entry in the Name column:
   Citrix SCOM Management Pack Agent for XenServer
4. Go to ***Start > Administrative Tools*** and double-click **Services**.
5. In the Name column of the Services window, locate the *Citrix MPXS Agent* service, and make sure that its status is to *Started*.

Configuring Citrix SCOM Management Pack for XenServer

Configuration of Citrix SCOM Management Pack for XenServer requires providing data about XenServer pool masters to the Citrix SCOM Management Pack for XenServer Agent on each proxy node.

To configure the Citrix SCOM Management Pack for XenServer on a proxy node, do the following:

1. Log on to the proxy node. Use a user account that has local administrative privileges.
2. Go to **Start > All Programs > Citrix > XenServer Management Pack**.
3. Follow the step:
   - If User Account Control (UAC) is disabled in the operating system, click **XenServer MP Configuration**.
   - If UAC is enabled, right-click **XenServer MP Configuration**, and select **Run as administrator**.
4. In the Citrix Management Pack Configuration window, click **Add**.
5. In the Add a new pool master connection dialog box, enter the following data related to a XenServer pool:
   - Fully qualified domain name of the pool master
   - Port number that the pool master uses for connections
   - User name and password that are used as connection credentials

6. Optionally, click **Test** to verify the connection to the pool master. In the Test result dialog box, check the verification result, and click **OK**.
7. Click **OK** to close the dialog box.
8. Repeat the steps 4 to 7 for each additional XenServer pool you want monitor from this proxy node.
9. Click **OK** to apply the configuration changes and close the window.

Uninstallation

This chapter contains instructions that you must follow to effectively uninstall the Citrix SCOM Management Pack for XenServer. Perform all procedures in the documented order of precedence.

To uninstall Citrix SCOM Management Pack for XenServer Agent from a computer that is a Citrix SCOM Management Pack for XenServer proxy node, do the following:

1. Log on to the proxy node. Use a user account that has local administrative privileges.
2. Make sure no product folders or files are in use by any user.
3. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems earlier than Windows Server 2016).
4. Right-click Citrix **SCOM Management Pack Agent for XenServer** and select **Uninstall**. Wait for the Setup Wizard to appear.
5. In the Welcome page of the Setup Wizard, click **Uninstall**.
6. In the Uninstalling the product page, the Setup Wizard reports the uninstallation progress.
7. In the Completion page of the Setup Wizard, click **Finish**.

Important: Perform this procedure only if you have customized the management packs included in the product.

To remove the customizations that you made to the management packs included in Citrix SCOM Management Pack for XenServer, do the following:

1. Launch the SCOM Operations console and connect to the management server.
2. In the **Administration** view, expand **Administration > Management Packs** and click **Installed Management Packs** (the navigation pane structure may differ in SCOM versions earlier than 2016).
3. In the results pane, locate the management packs that depend on the management packs included in Citrix SCOM Management Pack for XenServer.
4. For each such dependent management pack, follow the steps:

    a. Right-click it and then click **Delete**.
    b. On the message stating that deleting the management pack might affect the scoping of some user roles, click **Yes**.

To remove the management packs included in Citrix SCOM Management Pack for XenServer, do the following:

1. Launch the SCOM Operations console and connect to the management server.
2. In the **Administration** view, expand **Administration > Management Packs** and click **Installed Management Packs** (the navigation pane structure may differ in SCOM versions earlier than 2016).
3. In the results pane, right-click **Citrix Management Pack for XenServer Reports**, and then select **Delete**.
4. On the message stating that deleting the management pack might affect the scoping of some user roles, click **Yes**.
5. Repeat steps 3 and 4 with **Citrix Management Pack for XenServer**.
6. Check if other Citrix SCOM Management Pack products are installed on the management server. If none of them is installed, repeat steps 3 and 4 with **Citrix Management Pack Library**.

To uninstall the Citrix SCOM Management Pack for XenServer from the SCOM management server, do the following:

1. Log on to the management server. Use a user account that has local administrative privileges and SCOM administrative privileges.
2. Make sure no product folders or files are in use by any user.
3. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems

earlier than Windows Server 2016).

4. Right-click **Citrix SCOM Management Pack for XenServer** and select **Uninstall**. Wait for the Setup Wizard to appear.

5. In the Welcome page of the Setup Wizard, click **Uninstall**.

6. In the Uninstalling the product page, the Setup Wizard reports the uninstallation progress.

7. In the Completion page of the Setup Wizard, click **Finish**.

Optimize

May 21, 2017

Optional configuration

Some monitors and rules have default thresholds that might need additional tuning to suit your environment. You should evaluate monitors and rules to determine whether the default thresholds are appropriate for your environment. If a default threshold is not appropriate for your environment, you should baseline the relevant performance counters, and then adjust the threshold by overriding them.

For a complete list of monitors and rules available in Citrix SCOM Management Pack for XenServer see the Reference Guide.

For general information about discovering objects in SCOM, see the "Object Discoveries" section of the What Is in an Operations Manager Management Pack? webpage on the Microsoft TechNet website.

The following table lists the object types that Citrix SCOM Management Pack for XenServer discovers in the monitored environment.

Object type	Description	Automatic discovery
XenServer CPU	A CPU core installed in a XenServer host computer; it is available to virtual machines.	Yes ✔
XenServer Local Storage	A local storage configured for XenServer host computers.	Yes ✔
XenServer MP Proxy	A proxy for monitoring XenServer pools.	Yes ✔
XenServer MP Proxy Computer Role	A XenServer Management Pack proxy computer role.	Yes ✔
XenServer Network	A network interface installed in a XenServer host computer.	Yes ✔
XenServer Network Card	A network interface installed in a XenServer host computer.	Yes ✔
XenServer Pool	A XenServer pool.	Yes ✔

XenServer Server	A XenServer host computer.	Yes ✔
XenServer Shared Storage	A shared storage configured for XenServer host computers.	Yes ✔
XenServer Unused VM	An unused (powered off, suspended) virtual machine.	Yes ✔
XenServer VM	A virtual machine hosted by XenServer.	Yes ✔
XenServer VM CPU	A virtual CPU (vCPU).	No ✗
XenServer VM Network Card	A virtual machine network interface.	Yes ✔

Important: It may take up to 4 hours for objects to be discovered for the first time.

To check whether any XenServer objects are discovered in your SCOM, do the following:

1. Log on to the management server.
2. Launch the SCOM Operations console.
3. In the **Monitoring** view, type *XenServer* in the **Search** text box and then click **Search**.
4. In the Search Window dialog box, browse through the objects listed in the object groups.

Adjusting SCOM configuration for management of large environments

A single Citrix SCOM Management Pack for XenServer proxy node can manage up to five XenServer pools, each containing 16 servers with eight running virtual machines (640 virtual machines in total).

To manage a larger XenServer environment, you must make adjustments to the typical SCOM installation. Do the following:

1. On the proxy nodes, increase the size of the SCOM agent queue and the size of the version store.
2. On the SCOM management server, raise the threshold of memory utilization monitor for two crucial agent processes.

After the adjustments, a single proxy node with the following configuration can manage up to 15 pools, each containing 16 servers with 12 running virtual machines (2,880 virtual machines in total):

- Intel Core 2 Quad Processor Q9400
- 8 GB of physical RAM
- Windows Server 2008 R2

Note: Performance tests were conducted in a SCOM environment where all the rules and monitors enabled by Citrix SCOM Management Pack for XenServer by default were running.
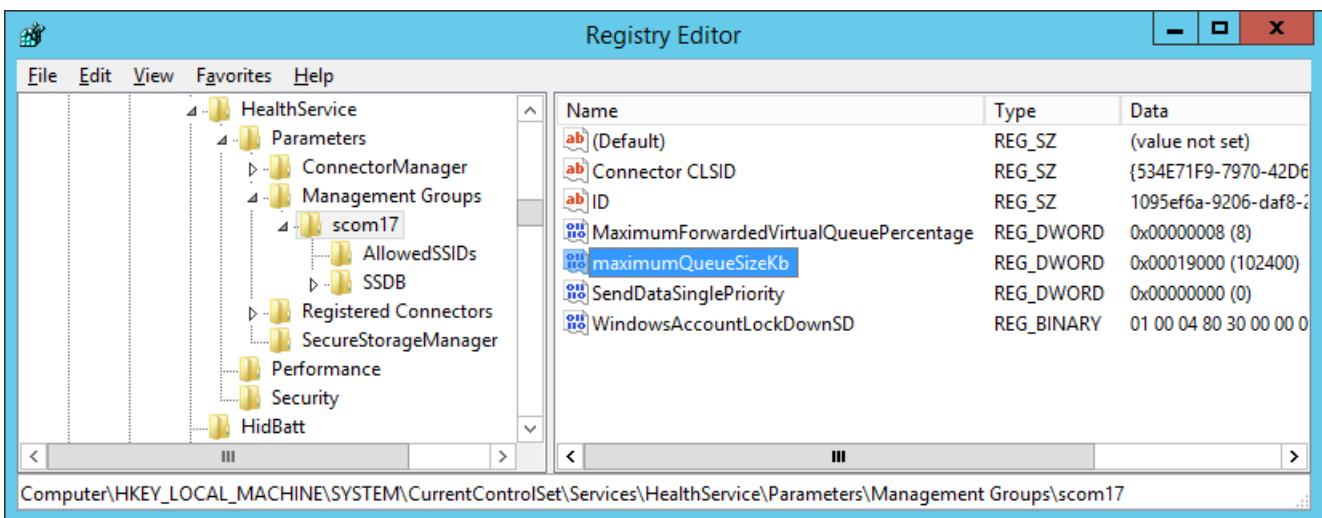
To manage even larger environments, use proxy nodes with a better hardware configuration.

Increasing the size of the SCOM agent queue

SCOM agent uses a queue to store data that needs to be sent to the management server. Typically, the queue prevents the loss of data when the management server is not available or the agent is not able to communicate with other available management servers. When the queue is full, the agent starts dropping the oldest data. If one proxy node is planned to manage a large XenServer environment, the default agent queue size of 15,360 KB (15 MB) is not enough to accommodate the high workflow amount. This results in an erroneous management of the XenServer environment.

To increase the queue size, do the following:

1. In the Start menu, type *regedit* in the Search text box, and then click the Search icon.
2. In the results list, click **regedit** or **regedit.exe**.
3. In the User Account Control dialog box, click **Yes**.
4. In the Registry Editor window, navigate to **HKEY_LOCAL_MACHINE** > **SYSTEM** > **CurrentControlSet** > **Services** > **HealthService** > **Parameters** > **Management Groups** > **<GroupName>**, where *<GroupName>* is the name of the management group the SCOM agent belongs to.
5. Right-click the *maximumQueueSizeKb* value and select **Modify**.

6. In the **Value data** text box, type a value in the range of 15360 to 307200 (kilobytes, 307200 KB equals 300 MB).

Caution: Citrix recommends that you back up Windows Registry before making any changes to it.

7. Click **OK**.
8. Using the Services administrative tool of the operating system, restart the **Microsoft Monitoring Agent** service.
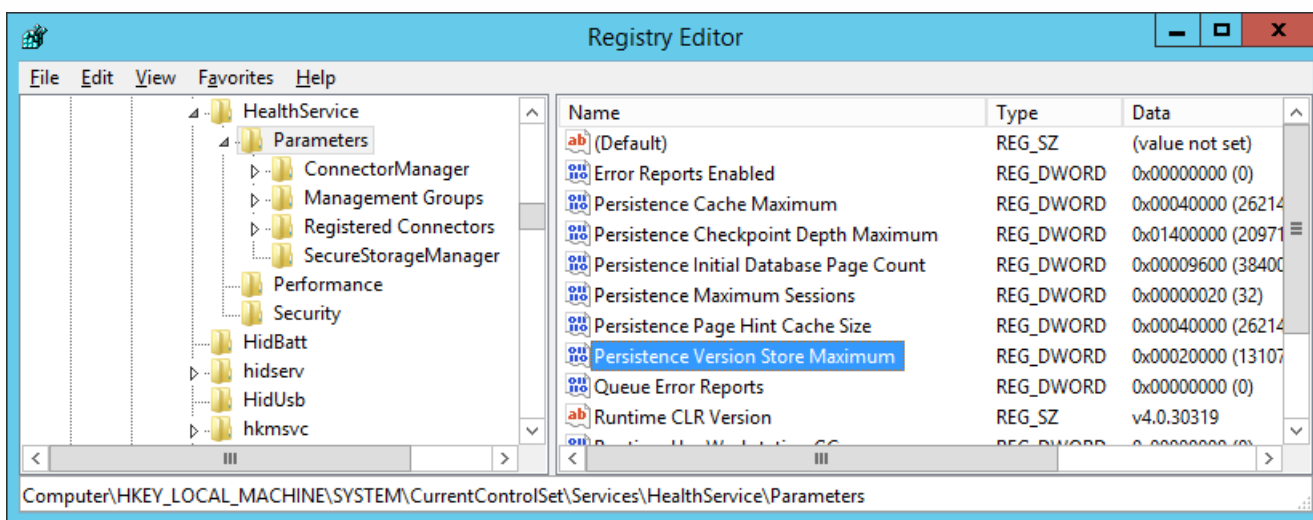
Increasing the size of the version store

The Microsoft Monitoring Agent service stores records of unfinished transactions in a version store. Version store enables Extensible Storage Engine (ESE) to track and manage current transactions. It contains a list of operations that are performed by active transactions that are maintained by the Health Service. This list is an in-memory list of modifications made to the Health Service store database. The default size of version store is 1,920 16KB memory pages (30 MB) and is optimized for a typical installation of SCOM, which is not enough for the high workflow amount a large XenServer

environment may generate.

To increase the queue size, do the following:

1. In the Start menu, type *regedit* in the Search text box, and then click the Search icon.
2. In the results list, click **regedit** or **regedit.exe**.
3. In the User Account Control dialog box, click **Yes**.
4. In the Registry Editor window, navigate to **HKEY_LOCAL_MACHINE > SYSTEM > CurrentControlSet > Services > HealthService > Parameters**.
5. Right-click the *Persistence Version Store Maximum value* and select **Modify**.

6. In the **Value data** text box, type a value in the range of 1,920 to 19,200 (16-KB blocks, 19,200 16-KB blocks equals 300 MB).

Caution: Citrix recommends that you back up Windows Registry before making any changes to it.

7. Click **OK**.
8. Using the Services administrative tool of the operating system, restart the **Microsoft Monitoring Agent** service.

Raising the memory utilization monitor threshold

SCOM constantly monitors memory utilization of two crucial agent processes: System Center Management Service Host Process and the Microsoft Monitoring Agent service. When this metric crosses the 300 MB boundary, the recovery action is to restart these two processes. For a proxy agent computer, the threshold must be raised to 800 MB.

To set the monitor threshold, do the following:

1. Log on to the management server.
2. Launch the SCOM Operations console.
3. In the **Monitoring** view, expand **Operations Manager > Agent Details** and click Agents By Version.
4. In the results pane, in the Name column, right-click in the line of the proxy computer, and select **Open > Health Explorer for <ProxyNodeFQDN>**.
5. In the Health Explorer for *<ProxyNodeFQDN>* window, disable any filter that might be set.

6. Expand **Entity Health > Performance > System Center Management Health Service Performance > System Center Management Health Service Memory Utilization**.
7. Right-click **Health Service Private Bytes Threshold** and select **Monitor Properties**.

8. In the Health Service Private Bytes Threshold Properties window, in the **Overrides** tab, click **Override** and select **For the object: <ProxyNodeFQDN>**.
9. In the Override Properties window, in the Parameter Name column, locate the *Agent Performance Monitor Type (Consecutive Samples) - Threshold* line.
10. In the same line, in the Override column, select the check box.
11. In the Override Value column, type *83886088* (bytes; this amount equals 800 MB).
12. From the Select destination management pack drop-down list, select the management pack that you want to save the customization into. Click **New** to create a new management pack if needed.
13. Click **OK** to close the Override Properties window.
14. Click **Close** to close the Health Service Private Bytes Threshold Properties window.
15. In the left pane, right-click **Monitor Host Private Bytes Threshold** and select **Monitor Properties**.

16. In the Monitor Host Private Bytes Threshold Properties window, in the **Overrides** tab, click **Override** and select **For the object: <ProxyNodeFQDN>**.

17. In the Override Properties window, in the Parameter Name column, locate the *Agent Performance Monitor Type (Consecutive Samples) - Threshold* line.

18. In the same line, in the Override column, select the check box.

19. In the Override Value column, type *83886088* (bytes; this amount equals 800 MB).

20. From the Select destination management pack drop-down list, select the management pack that you want to save the customization into. Click **New** to create a new management pack if needed.

21. Click **OK** to close the Override Properties window.

22. Click **Close** to close the Monitor Host Private Bytes Threshold Properties window.

Manually importing included management packs into SCOM

For general instructions about how to import management packs into SCOM, see the How to Import an Operations Manager Management Pack webpage on the Microsoft TechNet website.

To import the sealed management packs for XenServer manually, do the following:

1. Log on to the management server.
2. Launch the SCOM Operations console.
3. In the Administration view, click **Management Packs**.
4. Make sure all required default management packs are present in the list in the results pane. For a list of requirements, see "Preparing for the installation."
5. In the Tasks pane, expand **Actions**, and then click **Import Management Packs**.
6. In the Import Management Packs dialog box, click **Add**, and then select **Add from disk**.
7. In the Online Catalog Connection, click **No**.
8. In the Select Management Packs to import dialog box, browse to the folder that contains the following management pack files, select those files, and then click **Open**.

- *Comtrade.Citrix.Library.mp*
- *Comtrade.Citrix.XenServer.mp*
- *Comtrade.Citrix.XenServer.Reports.mp*

9. Click **Install**.

Customizing sealed management packs

Customization of the sealed management packs that Citrix SCOM Management Pack for XenServer provides is similar to the default SCOM management pack customization. For details, see the Microsoft TechNet website:

For general information about customization of management packs, see the Customizing Management Packs webpage.

For instructions on how to customize a management pack, see the Create a New Management Pack for Customizations webpage.

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May 21, 2017

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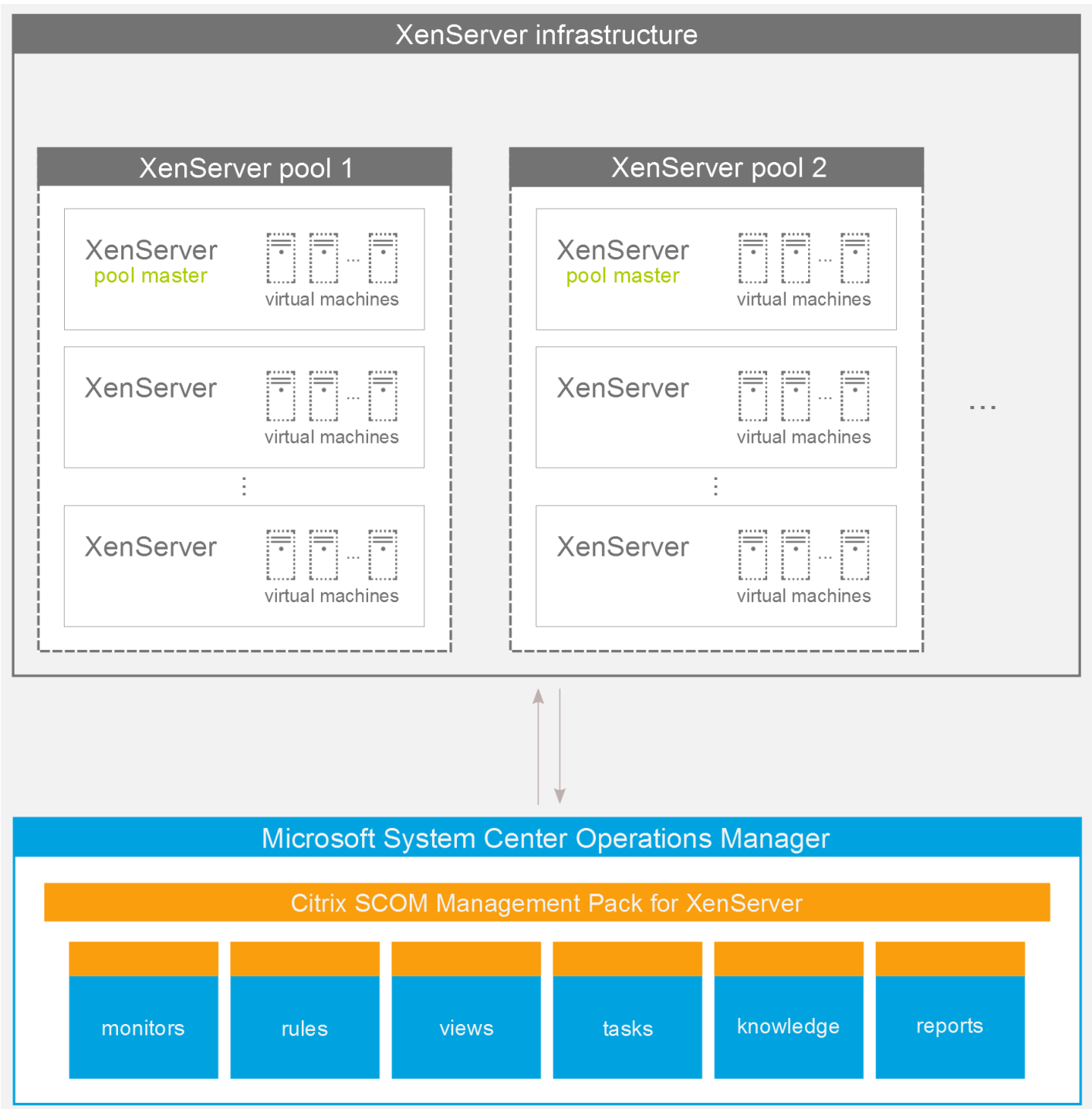It covers the following key scenarios:

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Citrix SCOM Management Pack for XenServer components can help you detect and respond to critical events in your XenServer virtual infrastructure. Frequently, timely alerts help prevent XenServer outages and assure high availability of the XenServer virtual infrastructure.

Citrix SCOM Management Pack for XenServer provides a large number of performance collection rules which collect vital XenServer metrics to the SCOM data warehouse. Predefined reports allow you to use this data to review and analyze performance history and to predict trends.

Architecture

The following diagram shows how Citrix SCOM Management Pack for XenServer connects to the SCOM management platform and the XenServer enterprise infrastructure.

What's new

May 21, 2017

Citrix SCOM Management Pack 2.24 for XenServer introduces the following features:

- **Documentation in HTML format.** The documentation for the Citrix SCOM Management Pack 2.24 for XenServer is available in HTML format. To access the documentation of earlier versions, see Citrix SCOM Management Pack for XenServer.

- **Support for Citrix XenServer 7.1.** Citrix SCOM Management Pack for XenServer supports XenServer version 7.1.

Known issues

The following is a list of known issues in this product version.

- **Issue ID**: SCOM-1151
  Symptom: The Citrix SCOM Management Pack for XenServer Agent might not get upgraded. The upgrade process initially removes the *Citrix MPXS Agent* service. However, the previously installed agent package is not replaced and the earlier program version remains registered with the operating system.
  Action: Repeat the upgrade procedure.

Fixed issues

None

Upgrading

Note: Product versions earlier than 2.21 were released under the name Comtrade Management Pack for Citrix XenServer.

Upgrade is possible for the versions 2.20 and later.

In-place upgrade is not supported in the Citrix SCOM Management Pack for XenServer. Instead to do an upgrade, follow the steps as below:

1. Uninstall the current version of the management pack following the uninstallation instructions as per the documentation of your current version.
2. Install the new version of the Citrix SCOM Management Pack for XenServer following the instructions in Install and Configure. Your management pack customization is preserved.
3. This step is valid only if you are upgrading from **version 2.20**. To migrate your management pack customization, on each XenServer Management Pack proxy node, move the xsmp_config.dat file from the %ProgramFiles%\ComTrade\XenServer MP Agent folder to the %ProgramFiles%\Citrix\XenServer MP Agent folder.

System requirements

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Before installing Citrix SCOM Management Pack for XenServer, make sure that your environment meets the requirements listed in this section.

Storage requirements

The Operations Manager data warehouse server must have enough free storage space for the performance data that is collected. Citrix SCOM Management Pack for XenServer daily stores approximately the following amounts of data into the data warehouse database (*OperationsManagerDW*):

- 48 KB per virtual machine
- 72 KB per physical XenServer host

Software requirements

Citrix SCOM Management Pack for XenServer requires a supported version of the following products that it integrates with:

- Citrix XenServer
- Microsoft System Center Operations Manager

Supported versions of Citrix XenServer

Citrix SCOM Management Pack for XenServer is compatible with the following Citrix XenServer versions:

Product version	Supported
Citrix XenServer 7.1	✔
Citrix XenServer 7.0	✔
Citrix XenServer 6.5[1]	✔
Citrix XenServer 6.2	✔
Citrix XenServer 6.1	✔
Citrix XenServer 6.0.2	✔
Citrix XenServer 6.0	✔

[1]This entry covers the RTM version, the RTM version updated with Service Pack 1.

Supported versions of SCOM

Citrix SCOM Management Pack for XenServer is compatible with the following SCOM versions:

Microsoft System Center Operations Manager version	Supported
Microsoft System Center Operations Manager 2016	✔
Microsoft System Center Operations Manager 2012 R2	✔
Microsoft System Center Operations Manager 2012 R2[2]	✔

[2]This entry covers both the RTM version and the RTM version updated with Service Pack 1 (SP1).

Supported operating systems

Citrix SCOM Management Pack for XenServer Agent is compatible with the following operating systems:

Operating system	Supported
Microsoft Windows Server 2016	✔
Microsoft Windows Server 2012 R2	✔
Microsoft Windows Server 2008 R2	✔

Language support

The product can be deployed and operates correctly in environments where regional settings are configured to use any of the following languages:

Language	Language code	Supported
English	en	✔
Spanish	es	✔

Install and configure

May 21, 2017

This chapter contains instructions that you must follow to install and configure the Citrix SCOM Management Pack for XenServer. Perform all procedures in the documented order of precedence.

Preparing for the installation

Before installing the Citrix SCOM Management Pack for XenServer, make sure the following prerequisites are fulfilled:

- Your environment meets the hardware and software requirements. See System Requirements.
- A computer is chosen on which a SCOM management server resides and where the server side of Citrix SCOM Management Pack for XenServer will be installed. This computer is referred to as **SCOM management server**.
- One or more computers are chosen where Citrix SCOM Management Pack for XenServer Agent instances will be installed that will remotely collect XenServer data. These computers are referred to as Citrix SCOM Management Pack for XenServer proxy nodes (**proxy nodes**). The proxy nodes must be running a supported Microsoft Windows operating system.

Important: The terms proxy node and proxy agent do not mean the same thing. The former refers to a role in the Citrix SCOM Management Pack for XenServer deployment, whereas the latter refers to a special configuration of SCOM agent.

The choice about proxy nodes depends on the size and complexity of your XenServer environment. Citrix recommends that you use one proxy node for monitoring one or two small XenServer pools, but designate multiple proxy nodes in case you have a larger XenServer environment.

Important: While one proxy node can monitor multiple XenServer pools, proxy nodes should be designated and configured such that each pool is monitored from a single node.

For a sample hardware specification for proxy nodes, see Optimize, section Adjusting SCOM configuration for management of large environments.

SCOM agent is installed on all the proxy nodes. Proxy nodes are configured as **agent-managed computers** in the SCOM management group.

Installing the product on the SCOM management server

The server-side part of the Citrix SCOM Management Pack for XenServer must be installed on the SCOM management server.

To install the product on the SCOM management server, do the following:

1. Log on to the management server. Use a user account that has local administrative privileges and SCOM administrative privileges.
2. In Windows Explorer, locate the *Citrix_SCOM_Management_Pack_for_XenServer_<Version>.exe* file (where *<Version>* is

the current software version), and double-click it to invoke the installation process. Wait for the Setup Wizard to appear.

3. In the Welcome page of the Setup Wizard, click **Next**.
4. In the View Relevant Product Configuration page, click Next.
5. In the License Agreement page of the Setup Wizard, read the end user license agreement carefully. If you accept the terms of the agreement, click **Next**.
6. In the Destination Folder page, define the Citrix SCOM Management Pack for XenServer installation folder. Citrix recommends that you install Citrix SCOM Management Pack for XenServer to the default folder.   Proceed as follows:
   - To install the product to the default folder listed in the Setup Wizard, no special actions are required.
   - To install the product to a different folder, follow the sub-steps:
     - Click **Change**.
     - In the Browse For Folder dialog box, browse to a desired installation folder, select it, and click **OK**.
   - Click **Next**.
7. In the Configure Post-Install Actions page of the Setup Wizard, decide whether the Setup Wizard should automatically import the included management packs into SCOM.
   - To let the Setup Wizard import the management packs, select the **Automatically import the Management Pack** option. Citrix recommends this choice.
   - To import the management packs into SCOM manually at a later time, leave the **Automatically import the Management Pack option** unselected. For instructions about how to import or reimport the management packs, see Manually importing included management packs into SCOM.
8. Click **Install**. The Setup Wizard displays the Installing the product page and starts copying the installation files.
9. After the installation completes, the installation completion page is displayed.
   - If you let the Setup Wizard to automatically import the management packs, click **Next**. Else, click **Finish** to close the Setup Wizard.
   - If you let the Setup Wizard to automatically import the management packs, it displays the Executing post-install actions page. Attend the import process.
10. In the post-installation completion page, review the management packs import log, and click **Finish** to close the Setup Wizard.
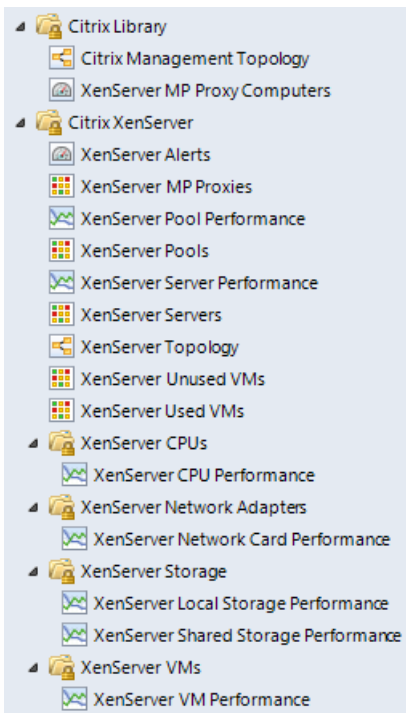
Verifying the installation on the management server

To verify that the Citrix SCOM Management Pack for XenServer installation on the management server is correct, do the following:

1. Log on to the management server.
2. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems earlier than Windows Server 2016).
3. Check for the presence of the following entry in the Name column:

   Citrix SCOM Management Pack for XenServer

   4. Launch the SCOM Operations console.
   5. In the **Monitoring** view, expand the items in the left pane until they match the following figure.

6. In the **Administration** view, expand **Administration > Management Packs** and click **Installed Management Packs** (the navigation pane structure may differ in SCOM versions earlier than 2016).

7. Verify the following management pack versions are listed in the middle pane:

Citrix Management Pack for XenServer	2.24.13.0
Citrix Management Pack for XenServer Reports	2.24.13.0
Citrix Management Pack Library	1.0.18.0

Configuring SCOM agent to act as proxy on proxy nodes

SCOM agent on each computer where Citrix SCOM Management Pack for XenServer Agent will be installed (Citrix SCOM Management Pack for XenServer proxy node) must be configured to act as a proxy agent. This configuration enables the agent to relay or forward information from or about other computes and network devices to the SCOM management server.

To configure the SCOM agent instances to act as proxy agents, do the following:

1. Launch the SCOM Operations console and connect to the management server.
2. In the **Administration** view, in the left pane, expand **Device Management**, and then click **Agent Managed**.
3. For each planned proxy node, follow the steps:

a. Right-click the host name, and select **Properties**.

b. Click the **Security** tab.

c. Select the **Allow this agent to act as proxy and discover managed objects on other computers** option.

d. Click **OK**.

Installing the product on the proxy nodes

On the designated Citrix SCOM Management Pack for XenServer proxy nodes, only the Citrix SCOM Management Pack for XenServer Agent must be installed.

To install Citrix SCOM Management Pack for XenServer Agent on a proxy node, do the following:

1. Log on to the proxy node. Use a user account that has local administrative privileges.
2. Copy the *MPXSAgent.exe* file from the *%ProgramData%\Citrix\CitrixMPShare\XenServer MP* folder on the management server to a location on the proxy node.
3. In Windows Explorer, locate the *MPXSAgent.exe* file, and double-click it to invoke the installation process. Wait for the Setup Wizard to appear.
4. In the Welcome page of the Setup Wizard, click **Next**.
5. In the License Agreement page of the Setup Wizard, read the end user license agreement carefully. If you accept the terms of the agreement, click **Install**.
6. After the installation completes, the completion page is displayed. Click **Finish** to close the Setup Wizard.

Verifying the installation on the proxy nodes

To verify that the Citrix SCOM Management Pack for XenServer installation on a proxy node is correct, do the following:

1. Log on to the proxy node.
2. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems earlier than Windows Server 2016).
3. Check for the presence of the following entry in the Name column:
   Citrix SCOM Management Pack Agent for XenServer
4. *Go to **Start > Administrative Tools** and double-click **Services**.*
5. In the Name column of the Services window, locate the *Citrix MPXS Agent* service, and make sure that its status is to *Started*.
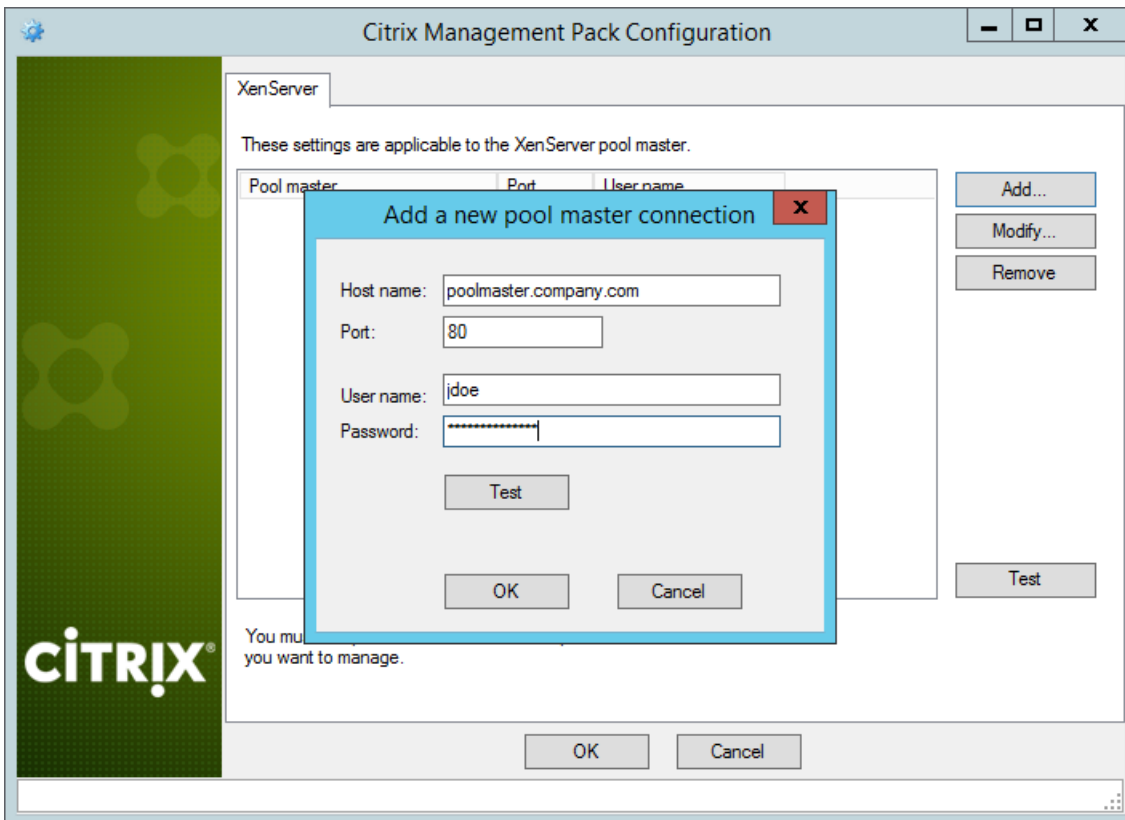
Configuring Citrix SCOM Management Pack for XenServer

Configuration of Citrix SCOM Management Pack for XenServer requires providing data about XenServer pool masters to the Citrix SCOM Management Pack for XenServer Agent on each proxy node.

To configure the Citrix SCOM Management Pack for XenServer on a proxy node, do the following:

1. Log on to the proxy node. Use a user account that has local administrative privileges.

2. Go to **Start > All Programs > Citrix > XenServer Management Pack**.

3. Follow the step:
   - If User Account Control (UAC) is disabled in the operating system, click **XenServer MP Configuration**.
   - If UAC is enabled, right-click **XenServer MP Configuration**, and select **Run as administrator**.

4. In the Citrix Management Pack Configuration window, click **Add**.

5. In the Add a new pool master connection dialog box, enter the following data related to a XenServer pool:
   - Fully qualified domain name of the pool master
   - Port number that the pool master uses for connections
   - User name and password that are used as connection credentials

6. Optionally, click **Test** to verify the connection to the pool master. In the Test result dialog box, check the verification result, and click **OK**.

7. Click **OK** to close the dialog box.

8. Repeat the steps 4 to 7 for each additional XenServer pool you want monitor from this proxy node.

9. Click **OK** to apply the configuration changes and close the window.

Uninstallation

This chapter contains instructions that you must follow to effectively uninstall the Citrix SCOM Management Pack for XenServer. Perform all procedures in the documented order of precedence.

To uninstall Citrix SCOM Management Pack for XenServer Agent from a computer that is a Citrix SCOM Management Pack

for XenServer proxy node, do the following:

1. Log on to the proxy node. Use a user account that has local administrative privileges.
2. Make sure no product folders or files are in use by any user.
3. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems earlier than Windows Server 2016).
4. Right-click Citrix **SCOM Management Pack Agent for XenServer** and select **Uninstall**. Wait for the Setup Wizard to appear.
5. In the Welcome page of the Setup Wizard, click **Uninstall**.
6. In the Uninstalling the product page, the Setup Wizard reports the uninstallation progress.
7. In the Completion page of the Setup Wizard, click **Finish**.

Important: Perform this procedure only if you have customized the management packs included in the product.

To remove the customizations that you made to the management packs included in Citrix SCOM Management Pack for XenServer, do the following:

1. Launch the SCOM Operations console and connect to the management server.
2. In the **Administration** view, expand **Administration > Management Packs** and click **Installed Management Packs** (the navigation pane structure may differ in SCOM versions earlier than 2016).
3. In the results pane, locate the management packs that depend on the management packs included in Citrix SCOM Management Pack for XenServer.
4. For each such dependent management pack, follow the steps:

   a. Right-click it and then click **Delete**.
   b. On the message stating that deleting the management pack might affect the scoping of some user roles, click **Yes**.

To remove the management packs included in Citrix SCOM Management Pack for XenServer, do the following:

1. Launch the SCOM Operations console and connect to the management server.
2. In the **Administration** view, expand **Administration > Management Packs** and click **Installed Management Packs** (the navigation pane structure may differ in SCOM versions earlier than 2016).
3. In the results pane, right-click **Citrix Management Pack for XenServer Reports**, and then select **Delete**.
4. On the message stating that deleting the management pack might affect the scoping of some user roles, click **Yes**.
5. Repeat steps 3 and 4 with **Citrix Management Pack for XenServer**.
6. Check if other Citrix SCOM Management Pack products are installed on the management server. If none of them is installed, repeat steps 3 and 4 with **Citrix Management Pack Library**.

To uninstall the Citrix SCOM Management Pack for XenServer from the SCOM management server, do the following:

1. Log on to the management server. Use a user account that has local administrative privileges and SCOM administrative privileges.
2. Make sure no product folders or files are in use by any user.
3. Go to **Start > Control Panel** and click **Programs and Features** (actions of this step may differ on operating systems earlier than Windows Server 2016).

4. Right-click **Citrix SCOM Management Pack for XenServer** and select **Uninstall**. Wait for the Setup Wizard to appear.
5. In the Welcome page of the Setup Wizard, click **Uninstall**.
6. In the Uninstalling the product page, the Setup Wizard reports the uninstallation progress.
7. In the Completion page of the Setup Wizard, click **Finish**.

Optimize

May 21, 2017

Optional configuration

Some monitors and rules have default thresholds that might need additional tuning to suit your environment. You should evaluate monitors and rules to determine whether the default thresholds are appropriate for your environment. If a default threshold is not appropriate for your environment, you should baseline the relevant performance counters, and then adjust the threshold by overriding them.

> ### Citrix SCOM Management Pack for XenServer Reference Guide
> A complete list of monitors and rules available in Citrix SCOM Management Pack for XenServer.

For general information about discovering objects in SCOM, see the "Object Discoveries" section of the What Is in an Operations Manager Management Pack? webpage on the Microsoft TechNet website.

The following table lists the object types that Citrix SCOM Management Pack for XenServer discovers in the monitored environment.

Object type	Description	Automatic discovery
XenServer CPU	A CPU core installed in a XenServer host computer; it is available to virtual machines.	Yes ✔
XenServer Local Storage	A local storage configured for XenServer host computers.	Yes ✔
XenServer MP Proxy	A proxy for monitoring XenServer pools.	Yes ✔
XenServer MP Proxy Computer Role	A XenServer Management Pack proxy computer role.	Yes ✔
XenServer Network	A network interface installed in a XenServer host computer.	Yes ✔
XenServer Network Card	A network interface installed in a XenServer host computer.	Yes ✔
XenServer Pool	A XenServer pool.	Yes ✔

XenServer Server	A XenServer host computer.	Yes ✔
XenServer Shared Storage	A shared storage configured for XenServer host computers.	Yes ✔
XenServer Unused VM	An unused (powered off, suspended) virtual machine.	Yes ✔
XenServer VM	A virtual machine hosted by XenServer.	Yes ✔
XenServer VM CPU	A virtual CPU (vCPU).	No ✘
XenServer VM Network Card	A virtual machine network interface.	Yes ✔

Important: It may take up to 4 hours for objects to be discovered for the first time.

To check whether any XenServer objects are discovered in your SCOM, do the following:

1. Log on to the management server.
2. Launch the SCOM Operations console.
3. In the **Monitoring** view, type *XenServer* in the **Search** text box and then click **Search**.
4. In the Search Window dialog box, browse through the objects listed in the object groups.

Adjusting SCOM configuration for management of large environments

A single Citrix SCOM Management Pack for XenServer proxy node can manage up to five XenServer pools, each containing 16 servers with eight running virtual machines (640 virtual machines in total).

To manage a larger XenServer environment, you must make adjustments to the typical SCOM installation. Do the following:

1. On the proxy nodes, increase the size of the SCOM agent queue and the size of the version store.
2. On the SCOM management server, raise the threshold of memory utilization monitor for two crucial agent processes.

After the adjustments, a single proxy node with the following configuration can manage up to 15 pools, each containing 16 servers with 12 running virtual machines (2,880 virtual machines in total):

- Intel Core 2 Quad Processor Q9400
- 8 GB of physical RAM
- Windows Server 2008 R2

Note: Performance tests were conducted in a SCOM environment where all the rules and monitors enabled by Citrix SCOM Management Pack for XenServer by default were running.
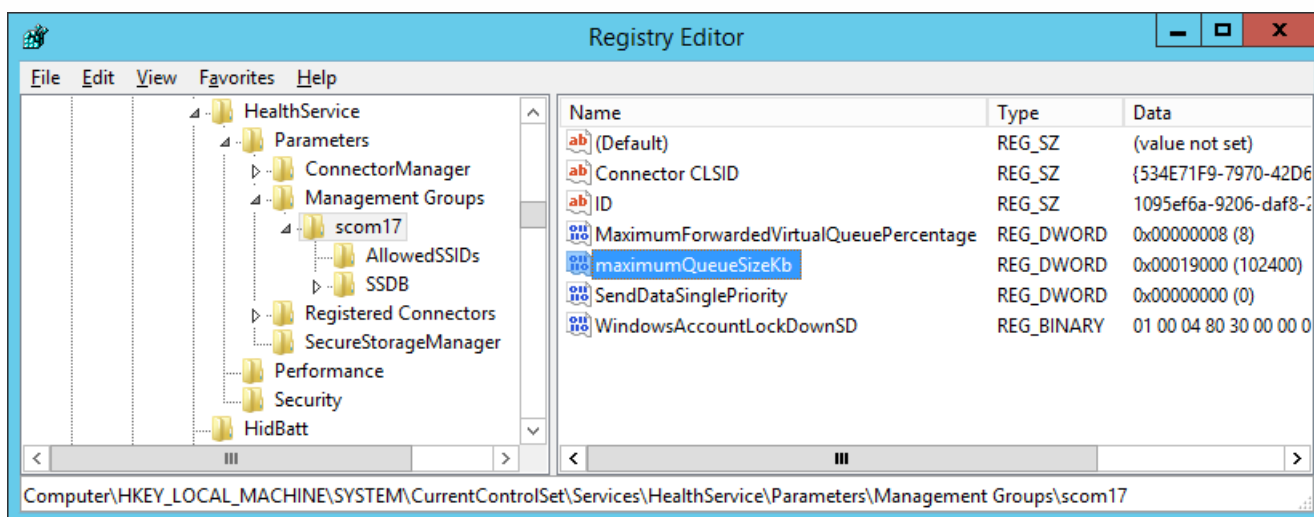
To manage even larger environments, use proxy nodes with a better hardware configuration.

Increasing the size of the SCOM agent queue

SCOM agent uses a queue to store data that needs to be sent to the management server. Typically, the queue prevents the loss of data when the management server is not available or the agent is not able to communicate with other available management servers. When the queue is full, the agent starts dropping the oldest data. If one proxy node is planned to manage a large XenServer environment, the default agent queue size of 15,360 KB (15 MB) is not enough to accommodate the high workflow amount. This results in an erroneous management of the XenServer environment.

To increase the queue size, do the following:

1. In the Start menu, type *regedit* in the Search text box, and then click the Search icon.
2. In the results list, click **regedit** or **regedit.exe**.
3. In the User Account Control dialog box, click **Yes**.
4. In the Registry Editor window, navigate to **HKEY_LOCAL_MACHINE** > **SYSTEM** > **CurrentControlSet** > **Services** > **HealthService** > **Parameters** > **Management Groups** > **<GroupName>**, where *<GroupName>* is the name of the management group the SCOM agent belongs to.
5. Right-click the *maximumQueueSizeKb* value and select **Modify**.

Registry Editor			
File **Edit** **View** **Favorites** **Help**			

▲ 🗁 HealthService
  ▲ 🗁 Parameters
    ▷ 🗁 ConnectorManager
    ▲ 🗁 Management Groups
      ▲ 🗁 scom17
        ┄ AllowedSSIDs
        ▷ 🗁 SSDB
    ▷ 🗁 Registered Connectors
    ┄ SecureStorageManager
  🗁 Performance
  🗁 Security
🗁 HidBatt
	Name	**Type**	**Data**

	🔤 (Default)	REG_SZ	(value not set)
	🔤 Connector CLSID	REG_SZ	{534E71F9-7970-42D6
	🔤 ID	REG_SZ	1095ef6a-9206-daf8-2
	🔢 MaximumForwardedVirtualQueuePercentage	REG_DWORD	0x00000008 (8)
	🔢 maximumQueueSizeKb	REG_DWORD	0x00019000 (102400)
	🔢 SendDataSinglePriority	REG_DWORD	0x00000000 (0)
	🔢 WindowsAccountLockDownSD	REG_BINARY	01 00 04 80 30 00 00 0

Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HealthService\Parameters\Management Groups\scom17

6. In the **Value data** text box, type a value in the range of 15360 to 307200 (kilobytes, 307200 KB equals 300 MB).

Caution: Citrix recommends that you back up Windows Registry before making any changes to it.

7. Click **OK**.
8. Using the Services administrative tool of the operating system, restart the **Microsoft Monitoring Agent** service.
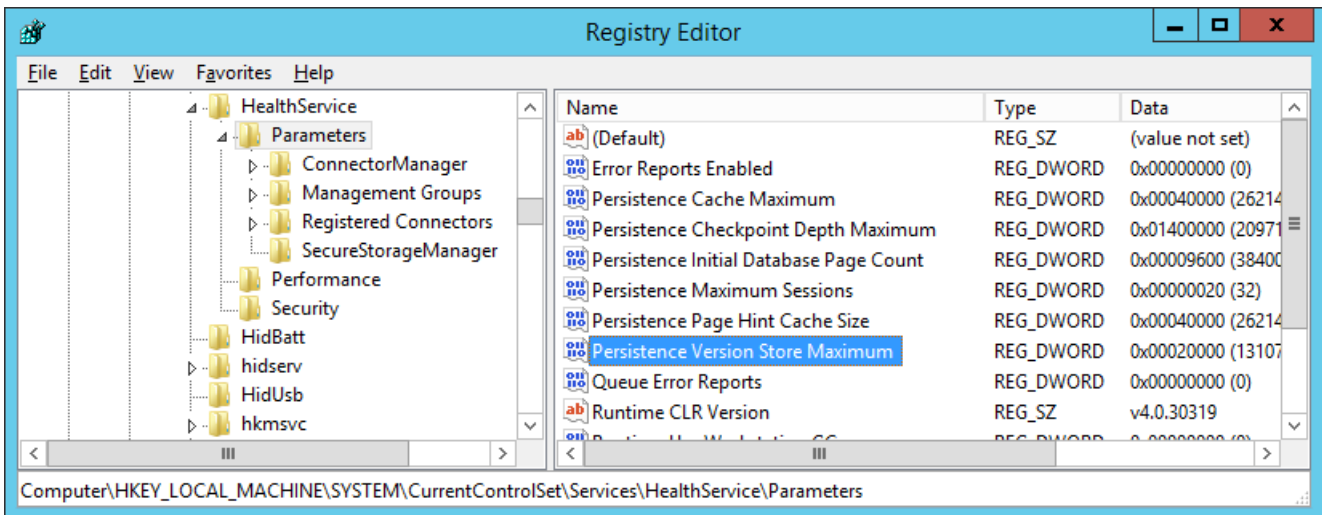
Increasing the size of the version store

The Microsoft Monitoring Agent service stores records of unfinished transactions in a version store. Version store enables Extensible Storage Engine (ESE) to track and manage current transactions. It contains a list of operations that are performed by active transactions that are maintained by the Health Service. This list is an in-memory list of modifications made to the Health Service store database. The default size of version store is 1,920 16KB memory pages (30 MB) and is optimized for a typical installation of SCOM, which is not enough for the high workflow amount a large XenServer

environment may generate.

To increase the queue size, do the following:

1. In the Start menu, type *regedit* in the Search text box, and then click the Search icon.
2. In the results list, click **regedit** or **regedit.exe**.
3. In the User Account Control dialog box, click **Yes**.
4. In the Registry Editor window, navigate to **HKEY_LOCAL_MACHINE > SYSTEM > CurrentControlSet > Services > HealthService > Parameters**.
5. Right-click the *Persistence Version Store Maximum value* and select **Modify**.

6. In the **Value data** text box, type a value in the range of 1,920 to 19,200 (16-KB blocks, 19,200 16-KB blocks equals 300 MB).

Caution: Citrix recommends that you back up Windows Registry before making any changes to it.

7. Click **OK**.
8. Using the Services administrative tool of the operating system, restart the **Microsoft Monitoring Agent** service.

Raising the memory utilization monitor threshold

SCOM constantly monitors memory utilization of two crucial agent processes: System Center Management Service Host Process and the Microsoft Monitoring Agent service. When this metric crosses the 300 MB boundary, the recovery action is to restart these two processes. For a proxy agent computer, the threshold must be raised to 800 MB.

To set the monitor threshold, do the following:

1. Log on to the management server.
2. Launch the SCOM Operations console.
3. In the **Monitoring** view, expand **Operations Manager > Agent Details** and click Agents By Version.
4. In the results pane, in the Name column, right-click in the line of the proxy computer, and select **Open > Health Explorer for <ProxyNodeFQDN>**.
5. In the Health Explorer for *<ProxyNodeFQDN>* window, disable any filter that might be set.

6. Expand **Entity Health > Performance > System Center Management Health Service Performance > System Center Management Health Service Memory Utilization**.

7. Right-click **Health Service Private Bytes Threshold** and select **Monitor Properties**.

8. In the Health Service Private Bytes Threshold Properties window, in the **Overrides** tab, click **Override** and select **For the object: <ProxyNodeFQDN>**.

9. In the Override Properties window, in the Parameter Name column, locate the *Agent Performance Monitor Type (Consecutive Samples) - Threshold* line.

10. In the same line, in the Override column, select the check box.

11. In the Override Value column, type *83886088* (bytes; this amount equals 800 MB).

12. From the Select destination management pack drop-down list, select the management pack that you want to save the customization into. Click **New** to create a new management pack if needed.

13. Click **OK** to close the Override Properties window.

14. Click **Close** to close the Health Service Private Bytes Threshold Properties window.

15. In the left pane, right-click **Monitor Host Private Bytes Threshold** and select **Monitor Properties**.

16. In the Monitor Host Private Bytes Threshold Properties window, in the **Overrides** tab, click **Override** and select **For the object: <ProxyNodeFQDN>**.

17. In the Override Properties window, in the Parameter Name column, locate the *Agent Performance Monitor Type (Consecutive Samples) - Threshold* line.

18. In the same line, in the Override column, select the check box.

19. In the Override Value column, type *83886088* (bytes; this amount equals 800 MB).

20. From the Select destination management pack drop-down list, select the management pack that you want to save the customization into. Click **New** to create a new management pack if needed.

21. Click **OK** to close the Override Properties window.

22. Click **Close** to close the Monitor Host Private Bytes Threshold Properties window.

Manually importing included management packs into SCOM

For general instructions about how to import management packs into SCOM, see the How to Import an Operations Manager Management Pack webpage on the Microsoft TechNet website.

To import the sealed management packs for XenServer manually, do the following:

1. Log on to the management server.
2. Launch the SCOM Operations console.
3. In the Administration view, click **Management Packs**.
4. Make sure all required default management packs are present in the list in the results pane. For a list of requirements, see "Preparing for the installation."
5. In the Tasks pane, expand **Actions**, and then click **Import Management Packs**.
6. In the Import Management Packs dialog box, click **Add**, and then select **Add from disk**.
7. In the Online Catalog Connection, click **No**.
8. In the Select Management Packs to import dialog box, browse to the folder that contains the following management pack files, select those files, and then click **Open**.

- *Comtrade.Citrix.Library.mp*
- *Comtrade.Citrix.XenServer.mp*
- *Comtrade.Citrix.XenServer.Reports.mp*

9. Click **Install**.

Customizing sealed management packs

Customization of the sealed management packs that Citrix SCOM Management Pack for XenServer provides is similar to the default SCOM management pack customization. For details, see the Microsoft TechNet website:

For general information about customization of management packs, see the Customizing Management Packs webpage.

For instructions on how to customize a management pack, see the Create a New Management Pack for Customizations webpage.