

# Citrix SCOM Management Pack for XenApp 6.x User Guide



**Software version: 1.43**

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This document provides installation, configuration, and usage instructions for Citrix SCOM Management Pack for XenApp 6.x.

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# Chapter 1: Quick introduction

## About XenApp Management Pack

Citrix SCOM Management Pack for XenApp 6.x (**XenApp Management Pack**) 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 XenApp 6.x (**XenApp**) infrastructure. It fully integrates topology, health, and performance data into SCOM, providing an end-to-end operations overview across the entire XenApp estate and enabling delivery of effective business service management.

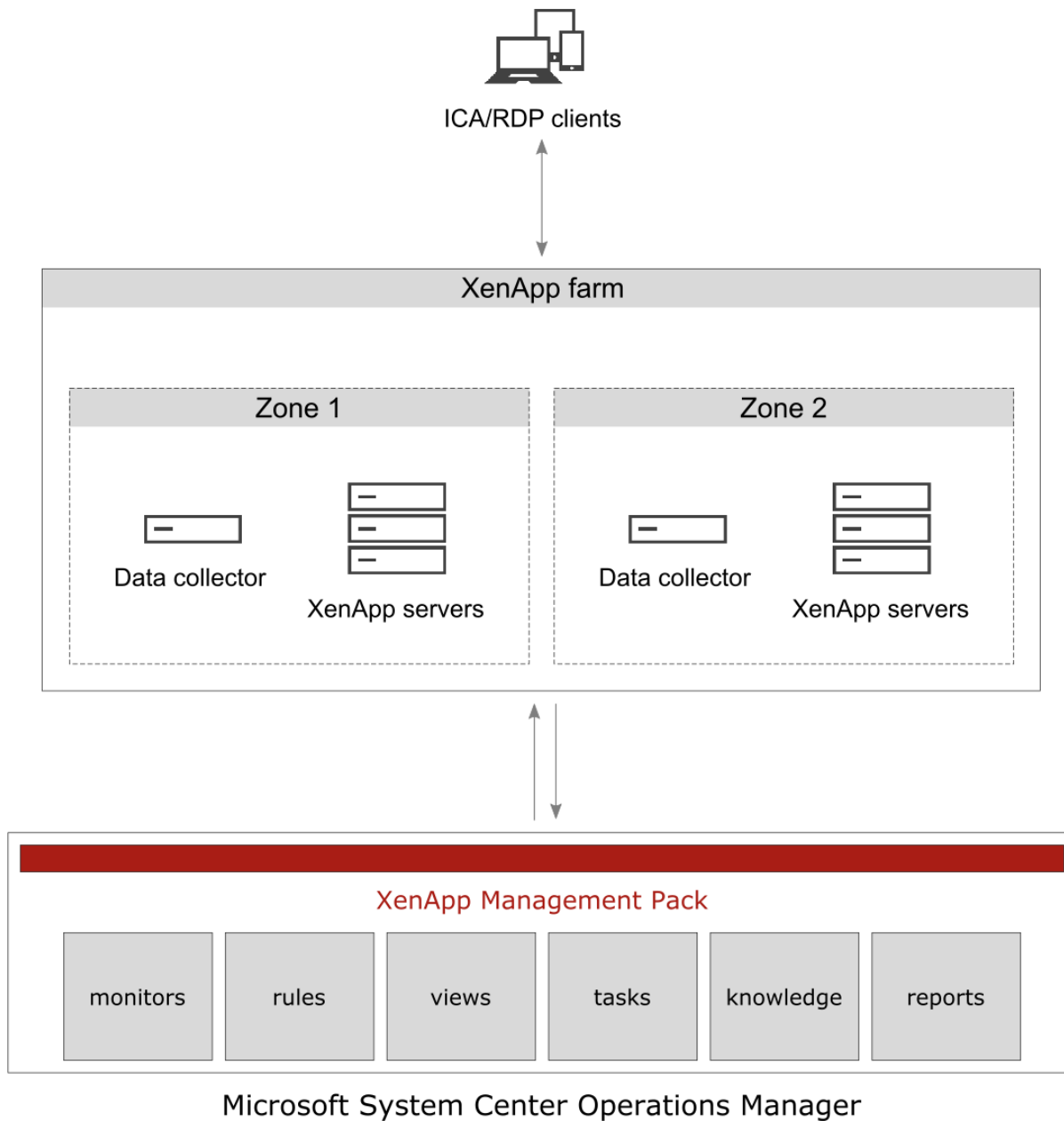
XenApp Management Pack allows you to:

- Monitor health and availability  
If any important part of the XenApp is not available, the XenApp users will not be able to work. GUI freezes or the users are unable to log on to the XenApp application.
- Monitor performance  
Performance degradation detection before the degradation affects end users is of great importance.
- Monitor XenApp components and tasks  
Almost any job a XenApp user requires is done by the chain of XenApp tasks. If any task or component in this chain encounters a problem, the job for the end user cannot be done or cannot be finished as expected.

## Product architecture

The following diagram shows how XenApp Management Pack connects the SCOM management platform and the XenApp infrastructure.

**Figure 1.1** A high-level view of the XenApp Management Pack architecture



## Chapter 2: Installation and configuration

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

## Preparing for the installation

Before installing XenApp Management Pack, make sure the following prerequisites are fulfilled:

- Your environment meets the hardware and software requirements.  
For software requirements, see the *Citrix SCOM Management Pack for XenApp 6.x Compatibility Matrix*. For hardware and/or other requirements, see the *Citrix SCOM Management Pack for XenApp 6.x Release Notes*.
- A SCOM management group is chosen for XenApp monitoring. The computer that hosts the SCOM management server of this management group is referred to as **management server computer**.
- SCOM agent is installed on all the computers that host XenApp, and these computers are configured as **agent nodes** in the management group.
- The SCOM agent Action Account has administrative privileges on all the computers that host XenApp.
- Complete XenApp configuration data is available.
- The default management packs that the included management packs depend on are imported in SCOM:
  - Data Warehouse Library
  - Health Library
  - Image Library (System Center)
  - Image Library (System)
  - Image Library (Windows)
  - Microsoft Generic Report Library
  - Performance Library
  - System Application Log Library
  - System Center Core Library
  - System Library
  - Windows Core Library
  - Windows Service Library

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**Note** If you accidentally delete any of the listed default management packs, you can import them back from the files in the SCOM installation directory.

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## Installing XenApp Management Pack on the SCOM management server computer

The server-side part of XenApp Management Pack must be installed on the computer that hosts SCOM management server.

To install XenApp Management Pack on the SCOM management server computer, do the following:

1. Log on to the management server computer. Use a user account from the local `Administrators` user group that has administrative privileges in SCOM.
2. In Windows Explorer, locate the `Citrix_SCOM_Management_Pack_for_XenApp6_<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**.

**Figure 2.1** Initial Setup Wizard page of XenApp Management Pack



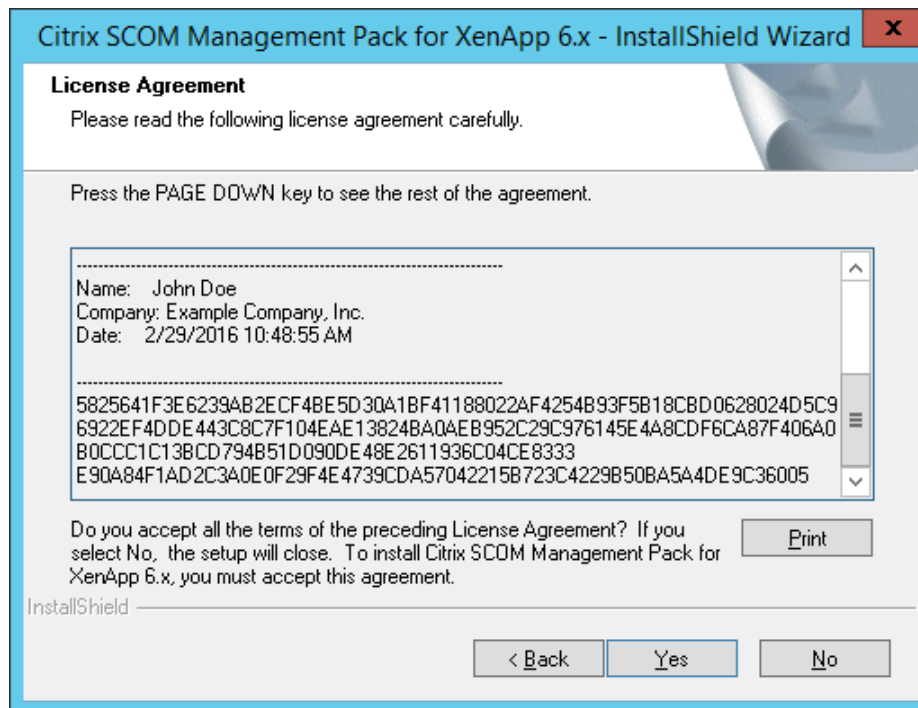
4. In the Product Configuration page, click **Next**.
5. In the Customer Information page, type valid information into the **User Name** and **Company Name** text boxes. Click **Next**.

**Figure 2.2** The Customer Information page

The screenshot shows a dialog box titled "Citrix SCOM Management Pack for XenApp 6.x - InstallShield Wizard". The main heading is "Customer Information" with a sub-instruction "Please enter your information." Below this, a larger instruction reads "Please enter your name and the name of the company for which you work." There are two text input fields: the first is labeled "User Name:" and contains the text "John Doe"; the second is labeled "Company Name:" and contains the text "Example Company, Inc.". At the bottom left, the text "InstallShield" is visible. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

6. In the Registration Confirmation dialog box, verify that the provided information is correct and click **Yes**.
7. In the License Agreement page of the Setup Wizard, carefully read the end user license agreement. If you accept the terms of the agreement, click **Yes**.

Figure 2.3 The License Agreement page



8. In the Choose Destination Location page, define the XenApp Management Pack installation folder. Citrix recommends that you install XenApp Management Pack to the default folder.

Proceed as follows:

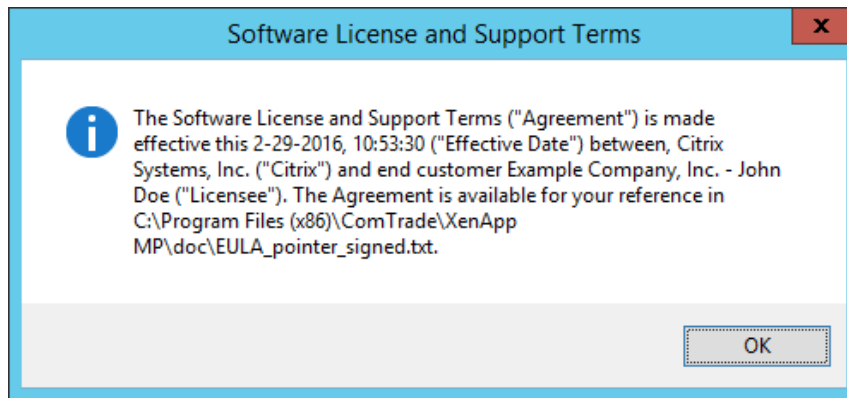
- o To install the product to the default folder listed in the Setup Wizard, no special actions are required.
- o To install the product to a different folder, follow the substeps:
  - a. Click **Browse**.
  - b. In the Choose Folder dialog box, browse to a desired installation folder, select it, and click **OK**.

Click **Next**.

9. In the Software License and Support Terms dialog box, read the message and click **OK**.



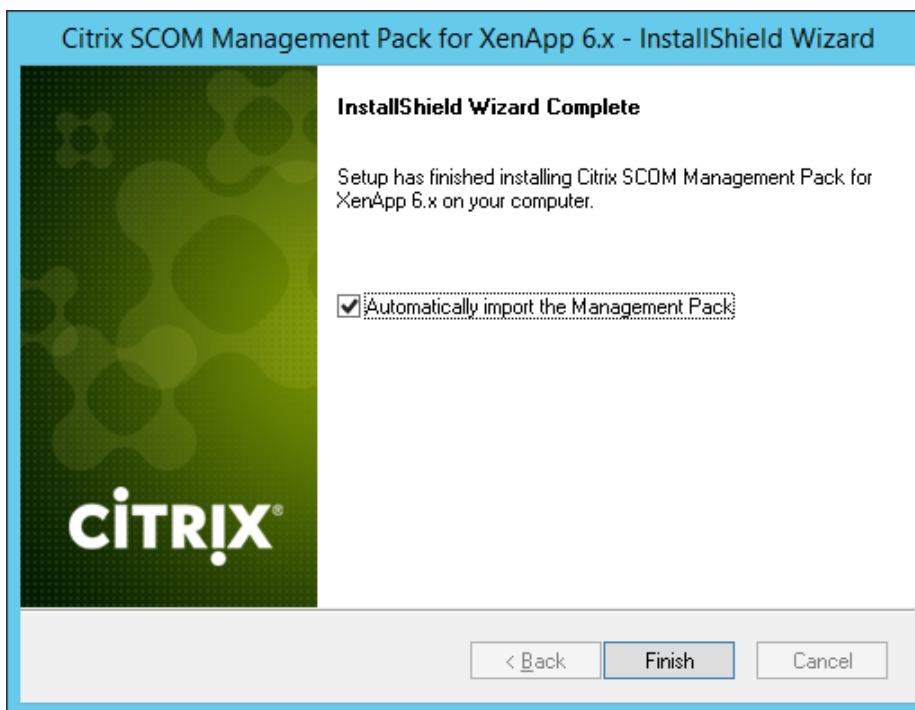
**Figure 2.4** The Software Licenses and Support Terms dialog box



10. In the Start Copying Files page of the Setup Wizard, click **Next**. The Setup Wizard starts copying the installation files.

11. After the installation completes, the installation completion page is displayed.

**Figure 2.5** Final Setup Wizard page



To let the Setup Wizard automatically import the included management packs into SCOM, leave the **Automatically import the Management Pack** option selected. Citrix recommends this choice.

To import the management packs into SCOM manually at a later time, clear the **Automatically import the Management Pack** option. For instructions about how to import or reimport the management packs, see “Manually importing included management packs into SCOM”

12. Click **Finish** to close the Setup Wizard.
13. If you let the Setup Wizard to automatically import the management packs, a Command Prompt window appears and reports the import progress. After the process completes, a dialog box informs you about successful completion. Click **OK** to close the dialog box.

### Verifying the installation on the management server computer

To verify that the XenApp Management Pack installation on the management server computer is correct, do the following:

1. Log on to the management server computer.
2. Go to **Start > Control Panel**, click **Programs**, and then click **Programs and Features**.
3. Check for the presence of the following entry in the Name column:

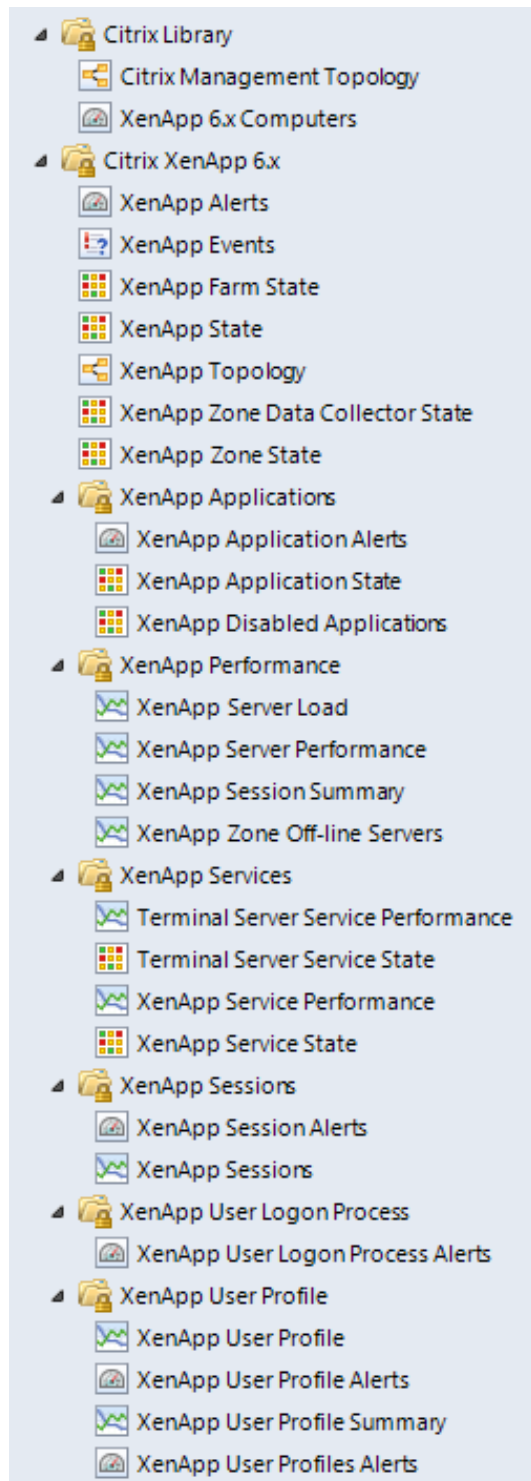
```
Citrix SCOM Management Pack for XenApp 6.x
```

4. Check if there is the `CitrixMPShare` shared folder on the computer and whether it points to the `%ProgramData%\Citrix\CitrixMPShare` location.

The shared folder is vital for communication between the management server and the agent node during installation of the agent.

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

**Figure 2.6** Elements of XenApp Management Pack, as seen in the SCOM Operations console



## Configuring access to the shared folder for agent installation

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**Note:** Steps of this procedure must be followed only once on a SCOM management server computer. In case you previously installed any of the following Citrix Management Pack products on the same computer, you do *not* need to repeat the steps:

- Provisioning Services Management Pack
  - StoreFront Management Pack
  - Web Interface Management Pack
  - XenApp and XenDesktop Management Pack
- 

To configure access to the shared folder for agent installation, do the following:

1. Log on to the SCOM management server computer. Use a user account from the local `Administrators` user group.
2. Choose a local user account (local to the computer with the shared folder) or a domain user account that will have access to the shared folder.

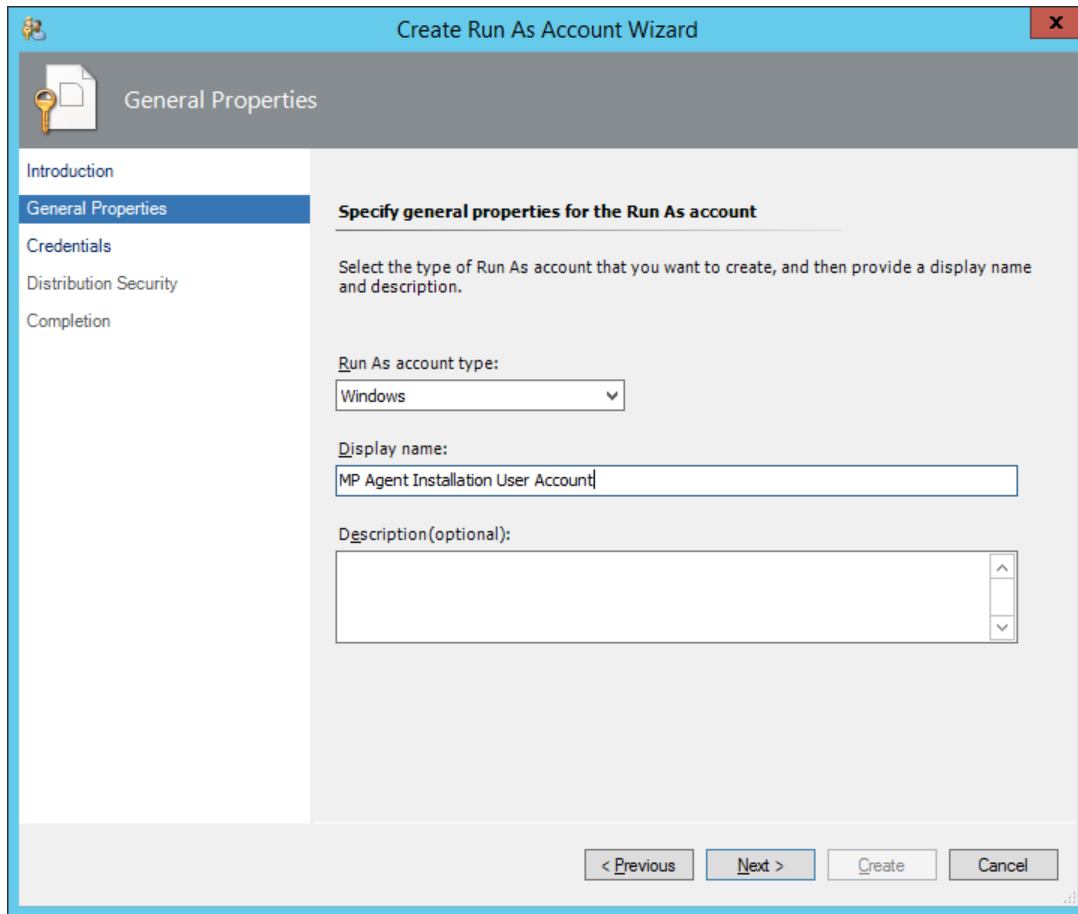
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**Important:** Citrix recommends creating a new, dedicated user account that you will use only for deployment of the Management Pack agent to managed computers.

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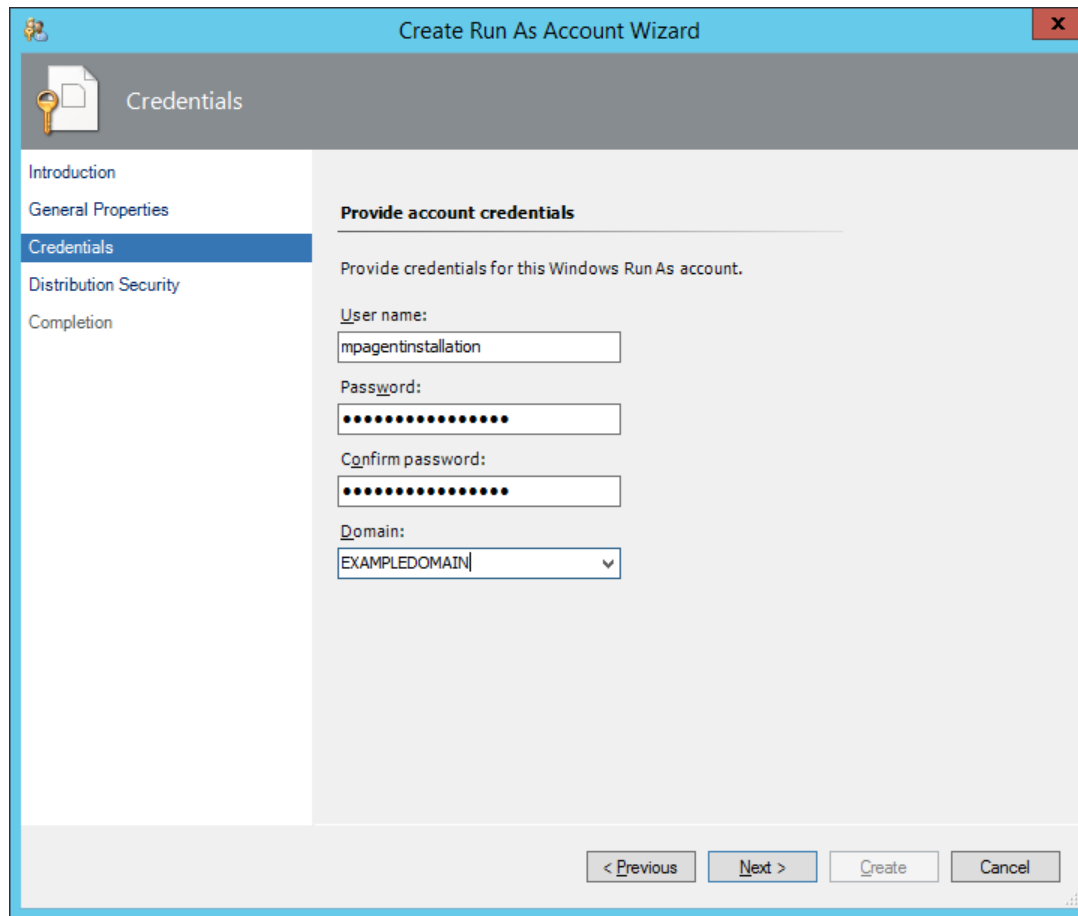
3. Using an operating system administrative tool, add the user account to the local `CitrixMPShareUsers` user group.
4. Launch the SCOM Operations console.
5. In the **Administration** view, in the left pane, expand **Run As Configuration**, and then click **Accounts**.
6. In the Tasks pane, expand **Actions**, and then click **Create Run As Account**.
7. In the Create Run As Account Wizard window, click **Next**.
8. In the **Run As account type** drop-down menu, leave the default selection (`Windows`).

Figure 2.7 The General Properties page



9. In the **Display name** text box, type a name that the SCOM Operations console will use to refer to the newly created SCOM user account. Click **Next**.
10. In the **User name** text box, type the user name of the operating system user account that you chose in step 2.

**Figure 2.8** The Credentials page



11. In the **Password** and **Confirm password** text boxes, type the valid password of the operating system user account.
12. In the **Domain** text box, update the value if needed. Click **Next**.
13. Depending the effective security policy in your SCOM environment, select either the **Less secure** or **More secure** option.

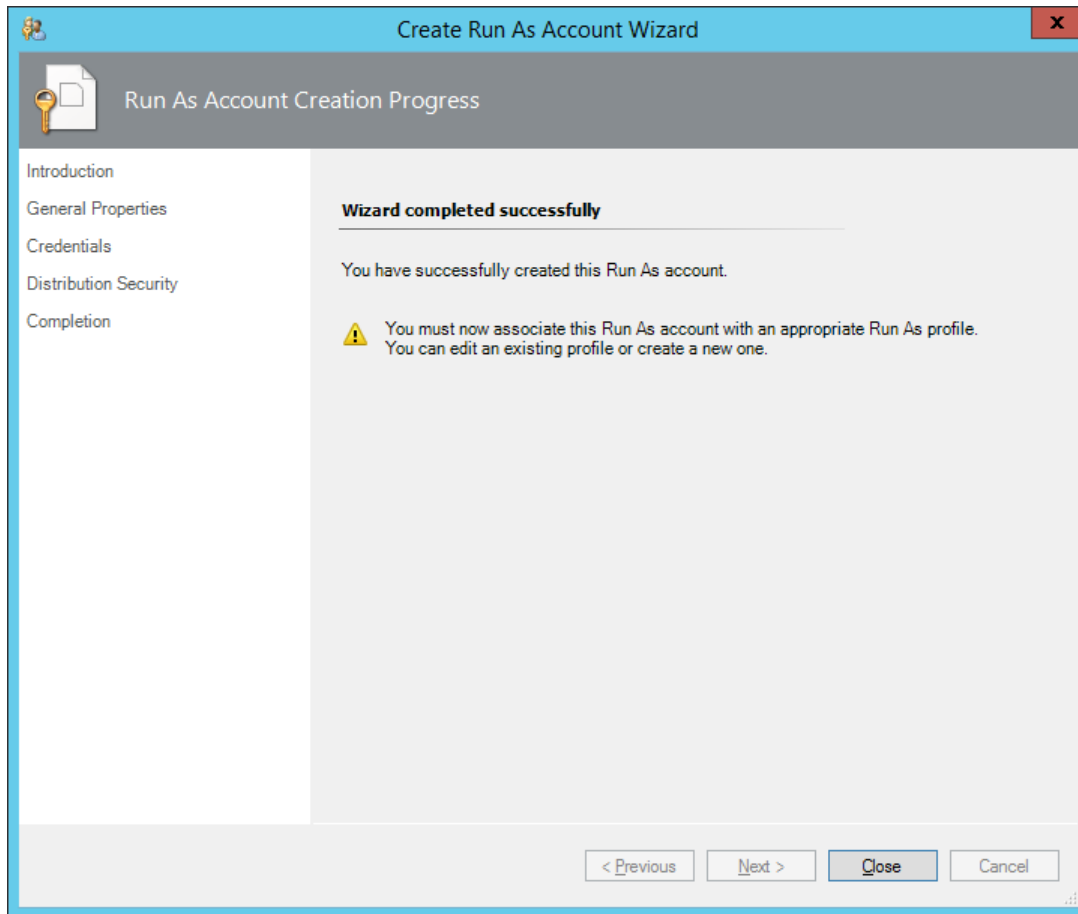
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Note: Selecting **More secure** requires manual steps to be performed in SCOM for each newly added managed computer.

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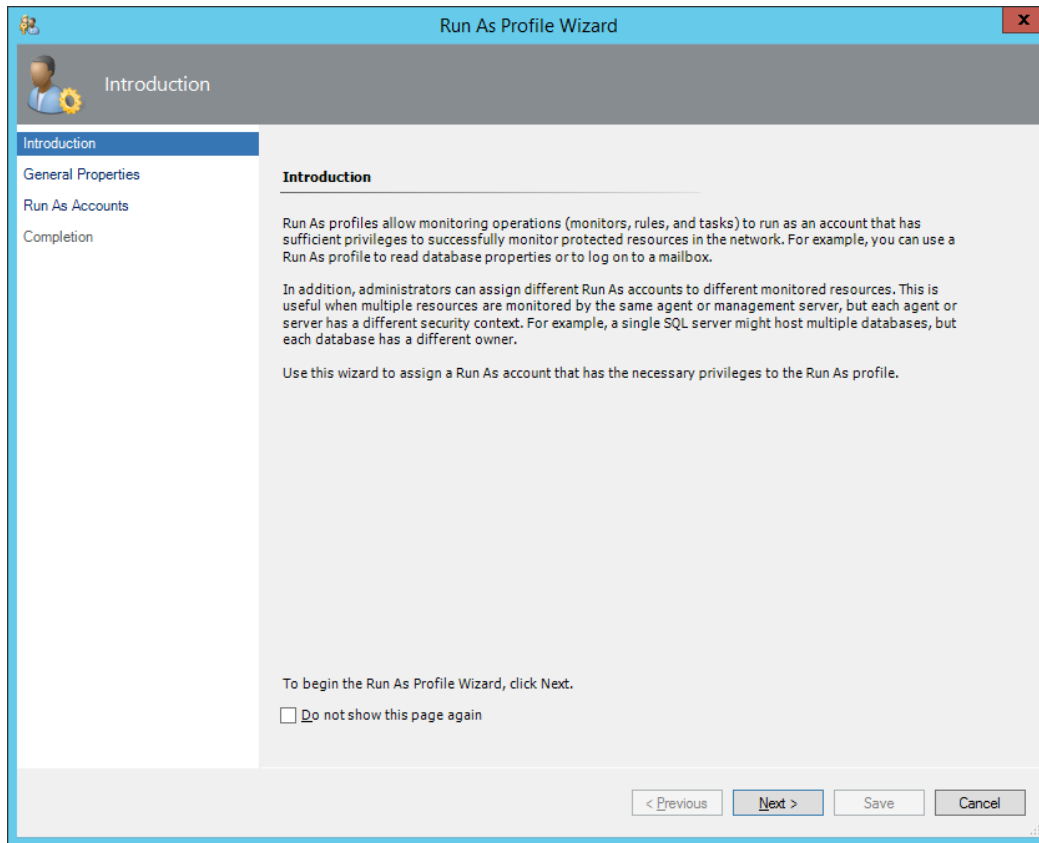
14. Click **Create**.
15. After the message about successful account creation appears, click **Close**.

**Figure 2.9** The Completion page



16. In the left pane, under Run As Configuration, click **Profiles**.
17. In the Profiles list, right-click **Citrix Management Pack Network Share Account**, and then select **Properties**.

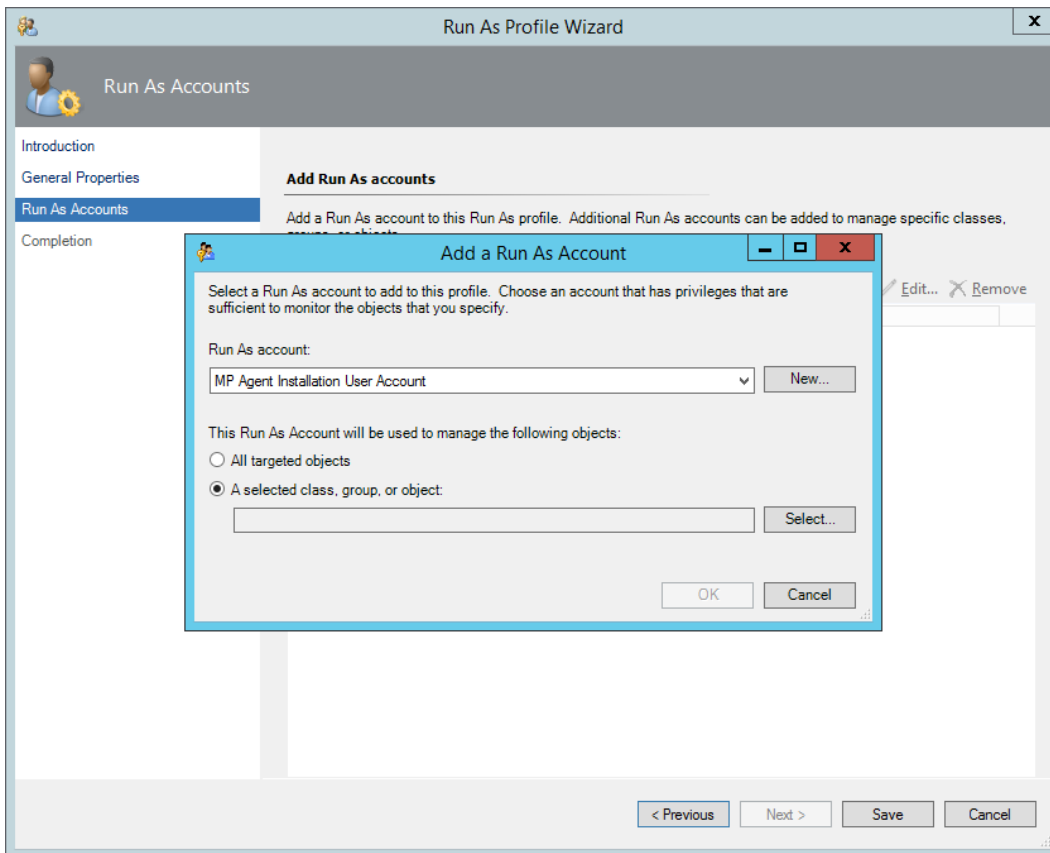
Figure 2.10 The Introduction page



18. In the Run As Profile Wizard window, click **Next** twice.
19. In the Add Run As accounts page, click **Add**.
20. In the Add a Run As Account dialog box, in the Run as account list, select the newly created SCOM user account.

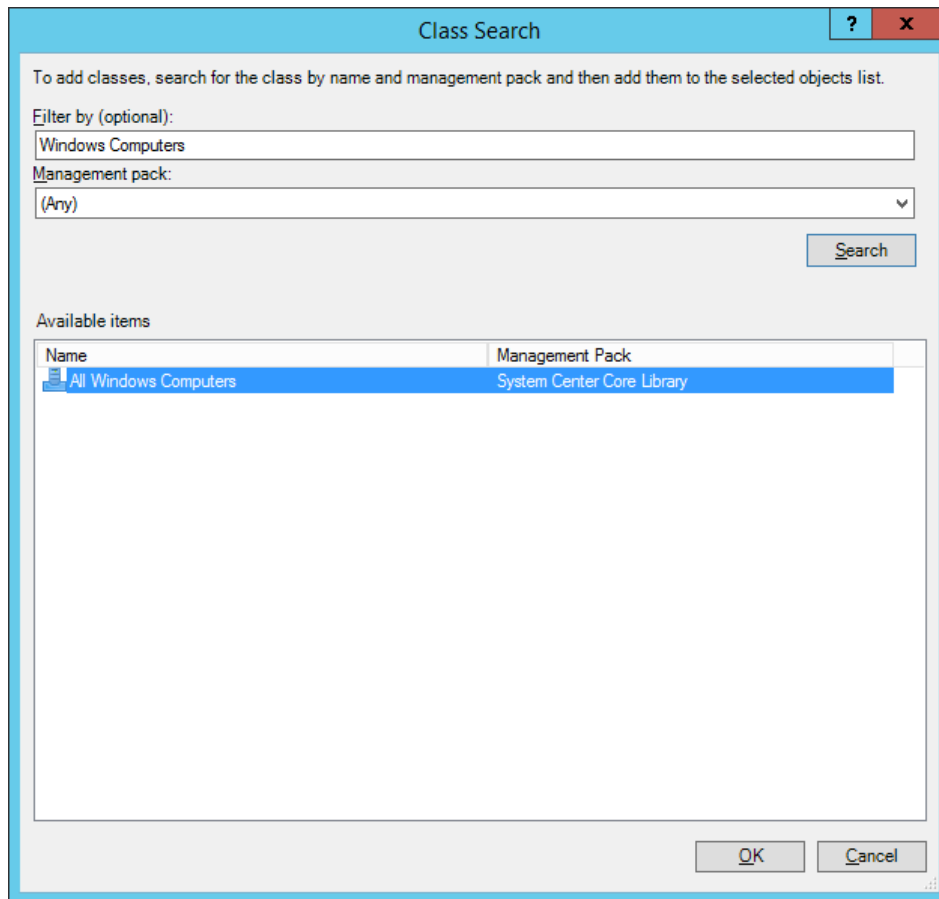


Figure 2.11 The Add a Run As Account dialog box



21. Select the **A selected class, group, or object** option.
22. Click **Select** and then select **Class**.
23. In the Class Search dialog box, in the **Filter by (optional)** text box, type `Windows Computers`.
24. Click **Search**.
25. In the Available items list, select **All Windows Computers**.

**Figure 2.12** The Class Search dialog box



26. Click **OK** to close the Class Search dialog box.
27. Click **OK** to close the Add a Run As Account dialog box.
28. Click **Save** to update the profile. This may take a while.
29. Click **Close** to close the Run As Profile Wizard window.

### **Configuring agent nodes to act as SCOM proxies**

Each agent node where XenApp is installed must be configured to act as a SCOM proxy computer. This configuration enables the agent to relay or forward information from or about other computers or network devices to the management server. You can either configure the nodes one by one or you can configure all discovered nodes at the same time. The latter scenario is particularly useful in large XenApp environments.

To configure the agent nodes one by one, do the following:

1. Choose the computers that will act as proxies in your XenApp environment.
2. Log on to the management server computer.
3. Launch the SCOM Operations console.
4. In the **Administration** view, in the left pane, expand **Device Management**, and then click **Agent Managed**.
5. For each XenApp (agent-managed) computer, 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**.

To configure all discovered agent nodes at the same time, do the following:

1. Log on to the management server computer. Use a user account from the local `Administrators` user group.
2. Go to **Start > All Programs > Citrix > XenApp Management Pack**.
3. Click **XenApp MP Configuration**.
4. In the Citrix Management Pack Configuration window, click the **Proxy** tab.
5. Click **Discover** to invoke the discovery process. It will discover all computers that are listed in the XenApp 6.x Computers list in the Monitoring view of the SCOM Operations console.

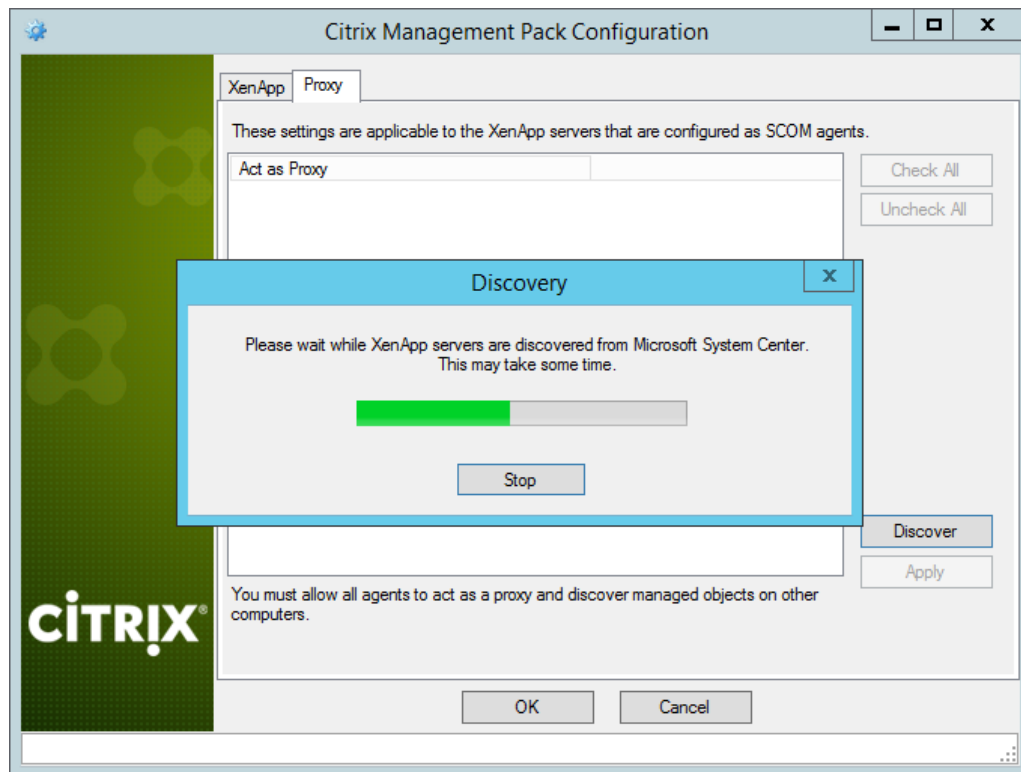
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**Note:** Newly added agent nodes may not be immediately visible in the XenApp 6.x Computers list in SCOM. Allow some time for the list to get updated.

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This discovery process may take a while.

**Figure 2.13** The Proxy tab of the Citrix Management Pack Configuration tool



6. Select the computers that you want to configure as proxies or click **Check All** to select all of them. Click **Uncheck All** to clear the selection.
7. Click **Apply** to update the configuration in SCOM. This may take a while.
8. Optionally, to cease an agent node to act as a proxy, clear its entry in the Act as Proxy list, and click **Apply** to update the configuration in SCOM.
9. Click **OK** to close the window.

### Setting up a XenApp farm administrator account

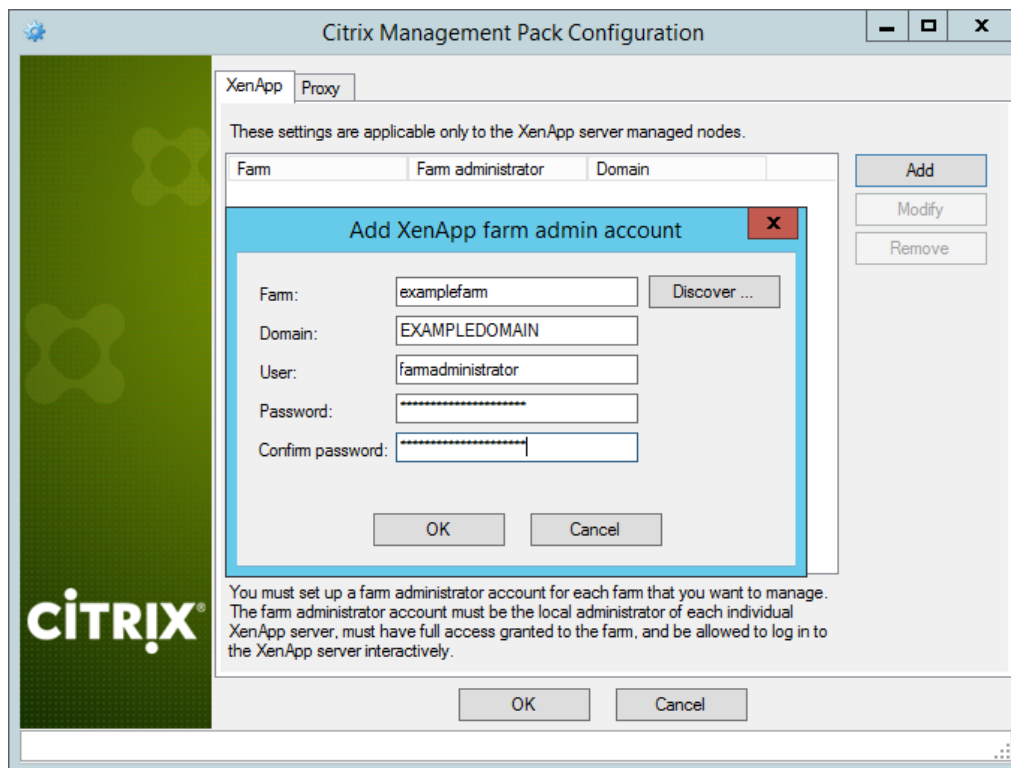
A farm administrator account needs to be set in XenApp Management Pack for each XenApp farm that you want to manage. The farm administrator account must be the local administrator of each XenApp server and must have full access granted to the farm.

To set up farm administrator accounts, do the following:

1. Log on to the management server computer. Use a user account from the local Administrators user group.

2. Go to **Start > All Programs > Citrix > XenApp Management Pack**.
3. Click **XenApp MP Configuration**.
4. In the Citrix Management Pack Configuration window, in the XenApp tab, click **Add**.
5. In the Add XenApp farm admin account dialog box, type the following data in the respective text boxes:
  - Farm name
  - Properties of the farm administrator account:
    - Domain name
    - User name
    - Password

**Figure 2.14** The Add XenApp farm admin account dialog box



6. Click **OK**.
7. Repeat steps 4 and 5 for each additional farm administrator account you want to set.

8. Optionally, to modify the domain name, user name, or password of a farm administrator configuration, click **Modify**. In the Modify XenApp farm admin account dialog box, modify the data as required, and then click **OK**.
9. Optionally, to remove a farm administrator configuration, click **Remove** and then click **Yes**.
10. Click **OK** to apply the configuration changes and close the window.

### Installing XenApp Management Pack on the agent-managed computers

On the computers that are agent-managed by SCOM, only XenApp Management Pack Agent must be installed.

To install XenApp Management Pack on an agent-managed computer, do the following:

1. Log on to the management server computer.
2. Launch the SCOM Operations console.
3. In the **Monitoring** view, in the left pane, expand **Citrix Library**, and then click **XenApp 6.x Computers**.
4. In the middle pane, select the agent-managed computer from the XenApp 6.x Computers list.
5. In the Tasks pane, expand **XenApp Computer Role Tasks**, and then click **Install Citrix MPXA Agent**.
6. In the Run Task – Install Citrix MPXA Agent, adjust the task parameters as follows:
  - **UpgradeAgent**: This option, when set to `true`, causes uninstallation of the existing XenApp Management Pack Agent from the agent-managed computer before the current version is installed. Before such uninstallation, the SCOM agent must be put into maintenance mode.  
Default value: `false`
  - **IgnorePrereqCheck**: You *may* not alter this option.  
Default value: `false`
  - **AgentInstallationSource**: This option defines the location of the Management Pack agent installation package and its configuration files. If no value is specified, the installation process attempts to identify the location based on the data received from the management server.  
The value for this option must be specified according on the agent-managed computer – SCOM management server relationship:

- If the agent-managed computer is managed by the management server where XenApp Management Pack is installed, leave the value empty.
- If the agent-managed computer is managed by some other management server or the computer hosts a multi-homed SCOM agent, specify the host name of the management server computer where XenApp Management Pack is installed.
- If the agent-managed computer does not have access to the `CitrixMPShare` shared folder on the management server computer, specify the location of the Management Pack agent installation package and its configuration files in the agent-managed computer UNC format. A prerequisite is the agent-managed computer agent-managed computer at these files are copied from the `CitrixMPShare` shared folder to a location the agent-managed computer has access to.

Default value: (empty)

- **AgentInstallationDestination:** This option defines the Management Pack agent installation directory on the agent-managed computer. If no value is specified, the Management Pack agent is installed to the `%ProgramData%\ComTrade\XenApp MP Agent` directory.

Default value: (empty)

7. Click **Run** to invoke the installation process.
8. Observe the output the task generates. If the task reports no errors, the installation on the agent-managed computer is correct.

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**Tip:** The task initially performs a prerequisite check. If any of the installation prerequisites are not fulfilled, the process is interrupted before the actual installation begins. In this case, invoke the **Check Installation Prerequisites for Citrix MPXA Agent** task to pinpoint the problematic prerequisite.

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### Verifying the installation and configuration on the agent-managed computers

To verify that the XenApp Management Pack installation on an agent-managed computer is correct, do the following:

1. Log on to the agent-managed computer.
2. Go to **Start > Control Panel**, click **Programs**, and then click **Programs and Features**.
3. Check for the presence of the following entry in the Name column:

`Citrix SCOM Management Pack Agent for XenApp 6.x`

4. Go to **Start > Administrative Tools** and double-click **Services**.

5. In the Name column of the Services window, locate the Citrix MPXA Agent service, and make sure that its status is to Started.

To verify that the XenApp Management Pack configuration on an agent-managed computer is correct, do the following:

1. Log on to the management server computer. Use a user account from the local Administrators user group.
2. Launch the SCOM Operations console.
3. In the **Monitoring** view, in the left pane, expand **Citrix Library**, and click **XenApp 6.x Computers**.
4. In the middle pane, select the XenApp (agent-managed) computer.
5. In the Tasks pane, expand **Actions**, and then click **Check Requirements and Configuration for Citrix MPXA Agent**.
6. Observe the output the task generates. If all checks are denoted successful, the configuration on the monitored node is correct.

## Chapter 3: Uninstallation

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

### Uninstalling XenApp Management Pack from the agent-managed computers

To uninstall XenApp Management Pack from an agent-managed computer that has XenApp Management Pack Agent installed, do the following:

1. Log on to the management server computer.
2. Launch the SCOM Operations console.
3. In the Monitoring view, expand **Citrix Library**, and then click **XenApp 6.x Computers**.
4. In the middle pane, select the agent-managed computer.



5. In the Tasks pane, expand **Actions**, and then click **Uninstall Citrix MPXA Agent**.
6. Repeat steps 4 and 5 for each additional agent-managed computer.

### Removing dependent management packs (customizations)

To remove the customizations that you made to the management packs included in XenApp Management Pack, do the following:

1. Log on to the management server computer.
2. Launch the SCOM Operations console.
3. In the Administration view, click **Management Packs**.
4. In the middle pane, locate the management packs that depend on the management packs included in XenApp Management Pack.
5. 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**.

### Removing included management packs

To remove the management packs included in XenApp Management Pack, do the following:

1. Log on to the management server computer.
2. Launch the SCOM Operations console.
3. In the Administration view, click **Management Packs**.
4. Remove references to the included management packs from the `Microsoft.SystemCenter.SecureReferenceOverride` management pack. To do this perform the following steps:
  - a. Identify which included management packs are referenced. In the **Administration > Management Packs** context of the SCOM Operations console, right-click **Microsoft.SystemCenter.SecureReferenceOverride** and select **Properties**. In the dialog box, click the **Dependencies** tab.

- b. For each such referenced management pack, find out its ID. Right-click the referenced management pack. In the dialog box, take note of the value in the ID text box on the General tab.
  - c. Export the `Microsoft.SystemCenter.SecureReferenceOverride` management pack.
  - d. Make a copy of the file you exported the management pack to.
  - e. Edit the originally exported file: use the IDs to find and remove all dependencies to the management packs from the `Manifest > References` context (the `<Reference>` elements) and the `Monitoring > Overrides` context (the `<SecureReferenceOverride>` elements).
  - f. Import back the altered `Microsoft.SystemCenter.SecureReferenceOverride` management pack from the modified file.
5. In the middle pane, right-click **Citrix Management Pack for XenApp 6.x Reports**, and then select **Delete**.
  6. On the message stating that deleting the management pack might affect the scoping of some user roles, click **Yes**.
  7. Repeat steps 4 and 5 with **Citrix Management Pack for XenApp 6.x**.
  8. Check if other Citrix SCOM Management Pack products are installed on the management server computer. If none of them is installed, repeat steps 4 and 5 with **Citrix Management Pack Library**.

### Uninstalling XenApp Management Pack from the SCOM management server computer

To uninstall XenApp Management Pack from the SCOM management server computer, do the following:

1. Log on to the management server computer. Use a user account from the local `Administrators` user group that has administrative privileges in SCOM.
2. Make sure no other users are logged on to the computer.
3. Go to **Start > Control Panel**, click **Programs**, and then click **Programs and Features**.
4. Right-click **Citrix SCOM Management Pack for XenApp 6.x** and select **Uninstall**. Wait for the Setup Wizard to appear.

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**Important:** If a warning informs you about other logged on users, the program might not uninstall completely.

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5. In the Welcome page of the Setup Wizard, click **Next**.
6. In the Product Configuration page, click **Next**.
7. In the Confirm Uninstall dialog box, click **OK**.
8. In the Completion page of the Setup Wizard, click **Finish**.
9. Check if other Citrix SCOM Management Pack products are installed on the management server computer. If none of them is installed, follow the steps:
  - a. Stop sharing the `CitrixMPShare` shared folder.
  - b. Delete the `%ProgramData%\Citrix\CitrixMPShare` folder.
  - c. Using an operating system administrative tool, delete the local `CitrixMPShareUsers` user group.

## Chapter 4: Usage

### Optional configuration

#### *Tuning thresholds for performance monitors and rules*

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, see the *Citrix SCOM Management Pack for XenApp Reference Guide*, which you can find in the `Citrix_MPXA_ReferenceGuide.html` file.






#### *Discovering objects*

For general information about discovering objects in SCOM, see the [Object Discoveries in Operations Manager 2007](#) webpage on the Microsoft TechNet website.

The following table lists the object types that XenApp Management Pack discovers in the managed environment.

**Table 4.1** Discovered XenApp object types

Object type	Description
 Application	A published application.
 Application Folder	A folder that contains published applications.
 Farm	A XenApp farm.
 Services Group	A folder that contains Terminal Server and XenApp services.
 Terminal Server Service	A Terminal Server service.
 XenApp	A XenApp server.
 XenApp Availability	An object used for monitoring availability of XenApp servers.
 XenApp Farms	The root object for the XenApp Management Pack topology.
 XenApp Folder	A folder that contains XenApp servers.

 XenApp Service	A XenApp service.
 XenApp TCP Probe	An object used for probing various ports on XenApp server.
 Zone	A XenApp zone.
 Zone Data Collector	A special XenApp server that holds information about the zone and published applications.
 Zone Group	A folder that contains zone objects.

---

**Important:** It can take up to 1 hour for objects to be discovered for the first time.

---

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

1. Log on to the management server computer.
2. Launch the SCOM Operations console.
3. In the **Monitoring** view, type `XenApp` 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.

### *Data warehouse sizing*

XenApp Management Pack publishes various data in SCOM data warehouse for reporting purposes. Data is stored in the following datasets:

- Event dataset
- Logon Details dataset (XenApp MP)
- Performance dataset
- Process Details dataset (XenApp MP)

- Session Details dataset (XenApp MP)
- State dataset

There are many factors that affect the space consumption on SCOM data warehouse. The amount of data depends on the size of monitored XenApp environment and on the number of enabled data collecting rules.

## About XenApp Management Pack datasets

Datasets store data in raw and aggregated form. XenApp Management Pack introduces three custom datasets for detailed user session information, for the user logons and for the detailed process information. All other data is stored in default SCOM datasets. Data retention settings are different for each dataset. For information about default SCOM dataset configuration, see [How to Configure Grooming Settings for the Reporting Data Warehouse Database](#).

### Logon Details dataset

Logon Details dataset stores information about user logons (logon time, logon duration, individual logon phase duration etc.). The default data retention is 400 days.

The following reports use user logon details information:

- XenApp logons and published application usage per user
- Server logons
- User logons

User logon information is collected by the `Publish XenApp User Logon Details DW` rule.

### Session Details dataset

Session Details dataset stores detailed information about user sessions (usernames, client info, session names, application names, session CPU, memory and other metrics). The default data retention is 400 days.

The following reports use user session details information:

- XenApp logons and published application usage per user
- XenApp user activity (on published application)
- XenApp user activity (on server)

User session details information is collected by the `Publish XenApp User Session Details DW` rule. The rule is disabled by default with a parameter override. To enable it, create an override and set

the `Enabled` parameter to `true`. The rule is targeted on XenApp server and collects detailed session information for each user session every 300 seconds.

## Process Details dataset

Process Details dataset stores detailed information about system processes (process name, PID, user name, session ID, CPU usage, page file bytes, working set size, IO operations and page faults). The default data retention is 15 days.

The following reports use process details information:

- XenApp server process performance

Process details information is collected by the `Publish XenApp Process Details DW` rule. The rule is disabled by default with a parameter override. To enable it, create an override and set the `Enabled` parameter to `true`. The rule is targeted on XenApp server and collects detailed process information for a set of processes every 300 seconds. The set of processes is defined by the `CollectionType` rule parameter. For more information, see the rule's product knowledge.

## Grooming settings for the Logon Details, Session Details and Process Details datasets

To change grooming settings, do the following:

1. Open **SQL Server Management Studio** and connect to the reporting data warehouse.
2. In the Object Explorer pane, expand **Databases**, expand **OperationsManagerDW** database, and then expand **Tables**.
3. Right-click **dbo.Dataset** and then select **Open Table**.
4. Make a note of DatasetID GUID values for rows with DatasetDefaultName equal to each of the following values:
  - XenApp Logon Details DataSet
  - XenApp Process Details DataSet
  - XenApp Session Details DataSet
5. In the Object Explorer pane, right-click **dbo.StandardDatasetAggregation** and then select **Open Table**.
6. In the DatasetID column, locate the dataset GUID noted in step 4.
7. Locate the MaxDataAgeDays column and edit the value to set the grooming interval.

8. Repeat steps 6 and 7 for the other two GUID values.

### Calculating data warehouse space consumption

Size of published data in the SCOM data warehouse is different for each dataset.

#### Performance Dataset

Most data collection rules in XenApp Management Pack publish data to the performance dataset. Performance dataset keeps hourly and daily aggregated data. SCOM default retention times are as follows:

Raw data	10 days
Hourly aggregations	400 days
Daily aggregations	400 days

Estimated size (data and index size) of each record in Performance dataset is:

Raw data	68 bytes / record
Hourly aggregations	162 bytes / record
Daily aggregations	162 bytes / record

#### Logon Details Dataset

Logon Details dataset does not aggregate data. Retention time is 400 days.

Estimated size (data and index size) of each record in Logon Details dataset is:

Raw data	131 bytes / record
----------	--------------------

#### Session Details Dataset

Session Details dataset keeps raw session data and aggregated billing daily data. Retention time is 400 days.

Estimated size (data and index size) of each record in Session Details dataset is:



Raw data	212 bytes / record
Billing daily aggregations	106 bytes / record

Bear in mind that collecting detailed user session information can significantly impact your SCOM data warehouse size if there are many users using your XenApp environment.

### Process Details Dataset

Process Details dataset does not aggregate data. Retention time is 15 days.

Estimated size (data and index size) of each record in Process Details dataset is:

Raw data	166 bytes / record
----------	--------------------

### Calculating data warehouse growth with default XenApp Management Pack configuration

Default XenApp Management Pack configuration includes 15 enabled performance collecting rules, which are targeted on XenApp server. Rules execute every 5 minutes. Most rules collect data for 1 instance per rule. Some rules collect data for multiple instances.

Performance data size per day for *one* XenApp server is calculated with the following formulas:

+ <RAW\_Perf\_record\_size> \* <#\_raw\_samples\_per\_day> \* <#\_of\_1instance\_rules>

+ <HOURLY\_Perf\_record\_size> \* <#\_hourly\_samples\_per\_day> \* <#\_of\_1instance\_rules>

+ <DAILY\_Perf\_record\_size> \* <#\_daily\_samples\_per\_day> \* <#\_of\_1instance\_rules>

+ <RAW\_Perf\_record\_size> \* <#\_raw\_samples\_per\_day> \* <#\_of\_multiple\_instance\_rules> \* <#\_of\_instances>

+ <HOURLY\_Perf\_record\_size> \* <#\_hourly\_samples\_per\_day> \* <#\_of\_multiple\_instance\_rules> \* <#\_of\_instances>

+ <DAILY\_Perf\_record\_size> \* <#\_daily\_samples\_per\_day> \* <#\_of\_multiple\_instance\_rules> \* <#\_of\_instances>

To get the size for the entire environment, multiply this result with the number of XenApp servers.

Sample calculation for a XenApp environment with 10 XenApp servers and 50 published applications is as follows (*we used 11 rules that collect XenApp server related metrics and 4 rules that collect data for all local Applications (instances) on XenApp server*):

```

(      68bytes * 288 samples * 11 rules
+     162 bytes * 24 samples * 11 rules
+     162 bytes * 1 sample * 11 rules
+     68 bytes * 288 samples * 4 rules * 50 applications (instances)
+     162 bytes * 24 samples * 4 rules * 50 applications (instances)
+     162 bytes * 1 sample * 4 rules * 50 applications (instances)
)
* 10 servers
= 47.56 MB per day

```

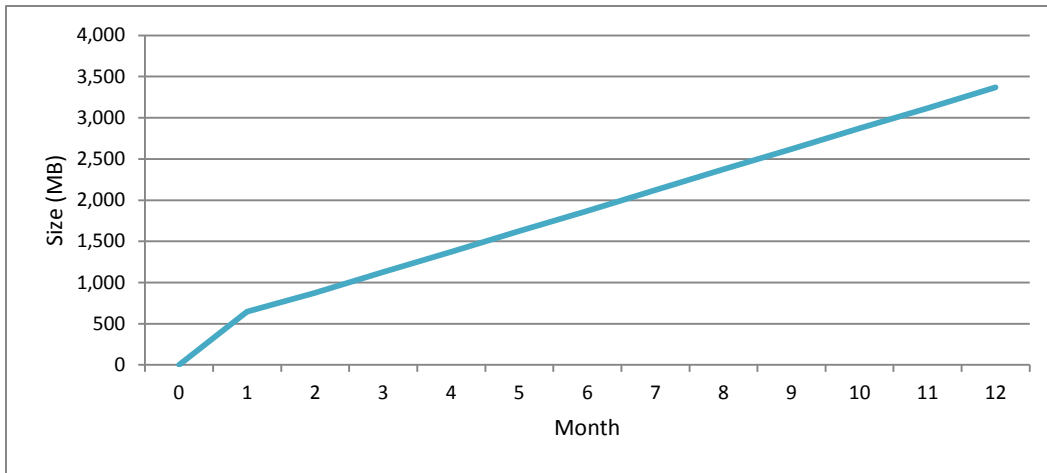
Because raw data remains in the data warehouse only for 10 days, calculation for long term data consumption should not include size of the RAW data:

```

(      162 bytes * 24 samples * 11 rules
+     162 bytes * 1 sample * 11 rules
+     162 bytes * 24 samples * 4 rules * 50 applications (instances)
+     162 bytes * 1 sample * 4 rules * 50 applications (instances)
)
* 10 servers
= 8.15MB per day

```

**Figure 4.1** Data warehouse performance data growth monthly chart (based on a XenApp environment with 10 XenApp servers and 50 applications)



User logon detailed data consumption per day is not very space consuming. This rule intercepts and collects all user logons that occur on a XenApp server.

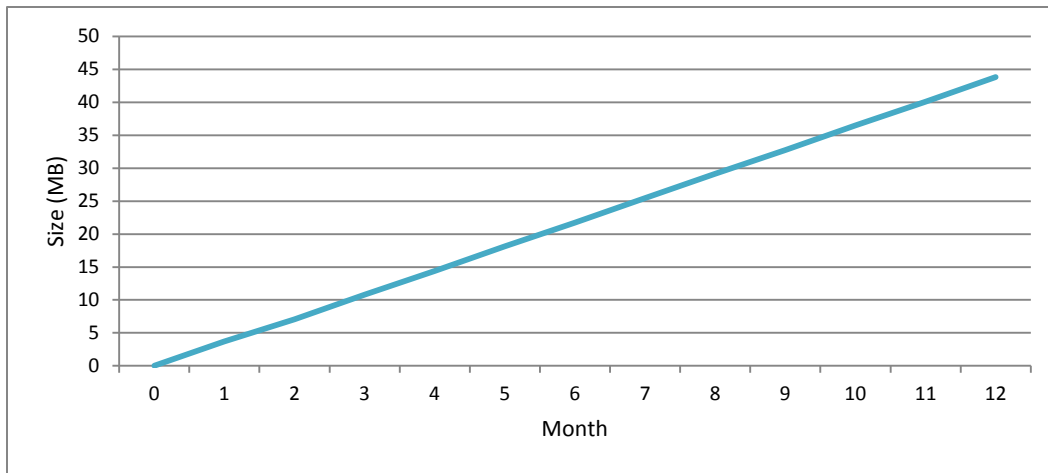
Formula for DW data size calculation is as follows:

<RAW\_Logon\_record\_size> \* <#\_of\_users> \* <#\_avg\_logons\_per\_user>

Sample calculation for a XenApp environment with 10 XenApp servers and 50 published applications is as follows (we assume that on average each user performs 2 logons per day):

```
131 bytes * 2 logons * 500 users  
= 0.12 MB per day
```

**Figure 4.2** Data warehouse logon data growth monthly chart (based on a XenApp environment with 500 users)



User session detailed data consumption per day is calculated with a different formula. Because collecting session detailed information can be space consuming, the rule for collecting user session details (Publish XenApp User Session Details DW) is disabled by default with an override.

The rule executes every 300 seconds and collects all active user sessions on the server. It also tracks all published applications that the user has been using in that session.

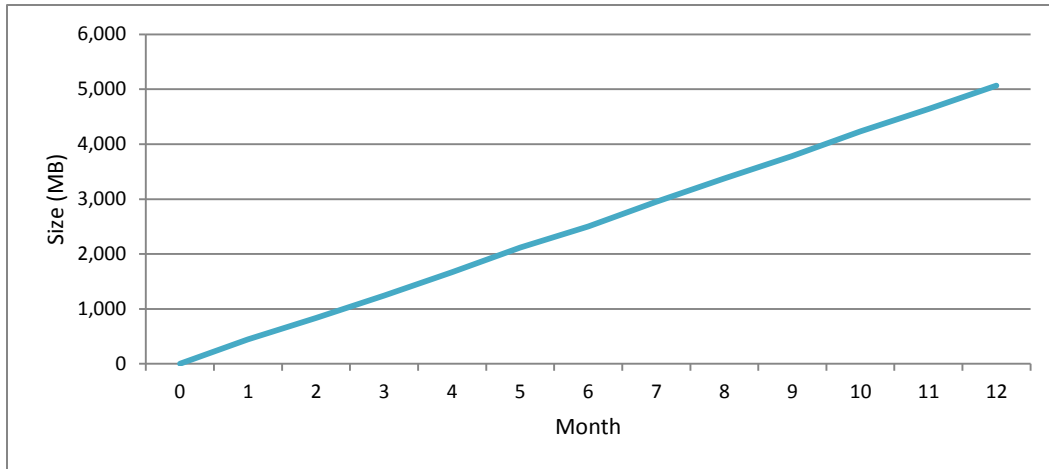
Formula for data size calculation is as follows:

```
<RAW_Session_record_size> * <#_raw_samples_per_day> * <#_user_sessions> * <#_avg_application_per_user>  
+ <DAILY_Billing_Aggregation_record_size> * <#_avg_daily_users> * <#_avg_application_per_user>
```

Sample calculation for XenApp environment with 10 XenApp servers, 50 Applications and 500 users is as follows (we assume that each user is using on average 2 applications for 8 hours per day, 5 days per week):

```
212 bytes * 96 samples * 2 applications * 500 user sessions  
+ 106 bytes * 2 applications * 500 users  
= 19.56 MB per day = 97.80 MB per week
```

**Figure 4.3** Data warehouse session data growth monthly chart (based on XenApp environment with 500 users running average 2 applications for 8 hours per day, 5 days per week)



Calculating process detailed data consumption per day

Because collecting process detailed information can be space consuming, the rule for collecting process details (Publish XenApp Process Details DW) is disabled by default with an override.

The rule executes every 300 seconds and collects performance metrics for a set of processes on the server.

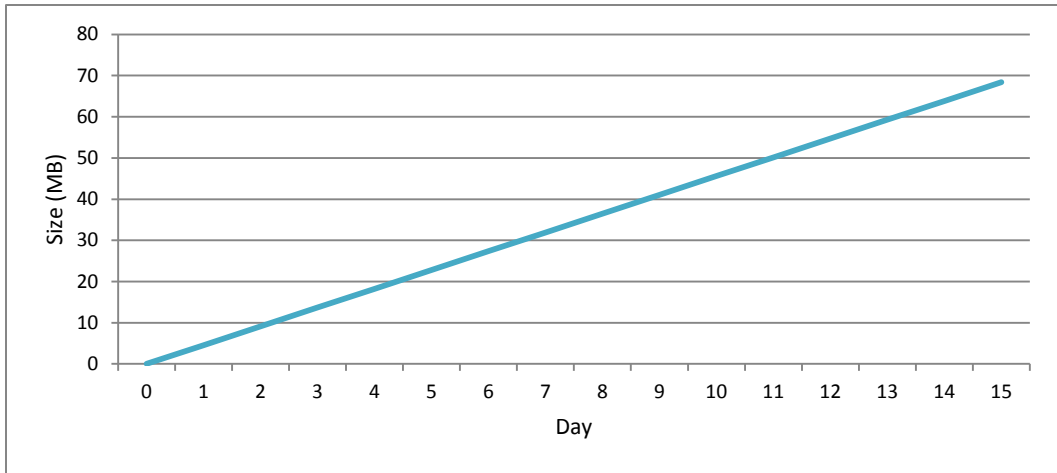
Formula for data size calculation is as follows:

$\langle \text{RAW\_Process\_record\_size} \rangle * \langle \#\_raw\_samples\_per\_day \rangle * \langle \#\_processes \rangle * \langle \#\_servers \rangle$

Sample calculation for XenApp environment with 10 XenApp servers, collecting performance metrics for top 10 processes, is as follows (*we assume that each XenApp server is running 24 hours per day, 7 days per week*):

$166 \text{ bytes} * 288 \text{ samples} * 10 \text{ processes} * 10 \text{ servers}$   
 $= 4.56 \text{ MB per day}$

**Figure 4.4** Data warehouse process data growth daily chart (based on XenApp environment with 10 servers, collecting top 10 processes per server)



### 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 XenApp manually, do the following:

1. Log on to the management server computer.
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 middle 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.XenApp.mp

- Comtrade.Citrix.XenApp.Reports.mp

## 9. Click **Install**.

### **Customizing sealed management packs**

Similarly to customizing the default SCOM management pack, you can customize the sealed management packs that XenApp Management pack provides. 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.

## Chapter 5: Support

### **General support resources**

Citrix® offers a variety of resources for support with your Citrix environment, including the following:

- The Knowledge Center is a self-service, Web-based technical support database that contains thousands of technical solutions, including access to the latest hotfixes, service packs, and security bulletins.
- Technical Support Programs for both software support and appliance maintenance are available at a variety of support levels.
- The Subscription Advantage program is a one-year membership that gives you an easy way to stay current with the latest product version upgrades and enhancements.
- Citrix Education provides official training and certification programs on virtually all Citrix products and technologies.

For more information about Citrix services and support, see the [Citrix Support Services and Resources](#) website.

You can also participate in and follow technical discussions offered by the experts on various Citrix products at the [Welcome to the Citrix Community](#), [Citrix Discussions](#), and [Citrix Services](#) websites.

### **Contacting Citrix Customer Service**

To contact Citrix Customer Service, see the [Contact Support](#) website.