Citrix SCOM Management Pack for Provisioning Services User Guide

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This document provides installation, configuration, and usage instructions for Citrix SCOM Management Pack for Provisioning Services.

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Chapter 1: Brief introduction

About Provisioning Services Management Pack

Citrix SCOM Management Pack for Provisioning Services (**Provisioning Services 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 Provisioning Services (**Provisioning Services**) infrastructure.

With Provisioning Services Management Pack, you can:

- Improve the Provisioning Services infrastructure availability and health

  If any important part of Provisioning Services environment is not available, the user may not be able to use its resources or use them with degraded performance. Provisioning Services Management Pack actively monitors the availability and performance of many Provisioning Services components, such as Provisioning Servers, stores, network services, and so on.

- Gain more insight into the Provisioning Services performance

  Performance degradation detection before the degradation affects end users is of great importance. With the Provisioning Services Management Pack, you have the overall view of Provisioning Server resource consumption, store disk space availability, target device utilization, and so on.
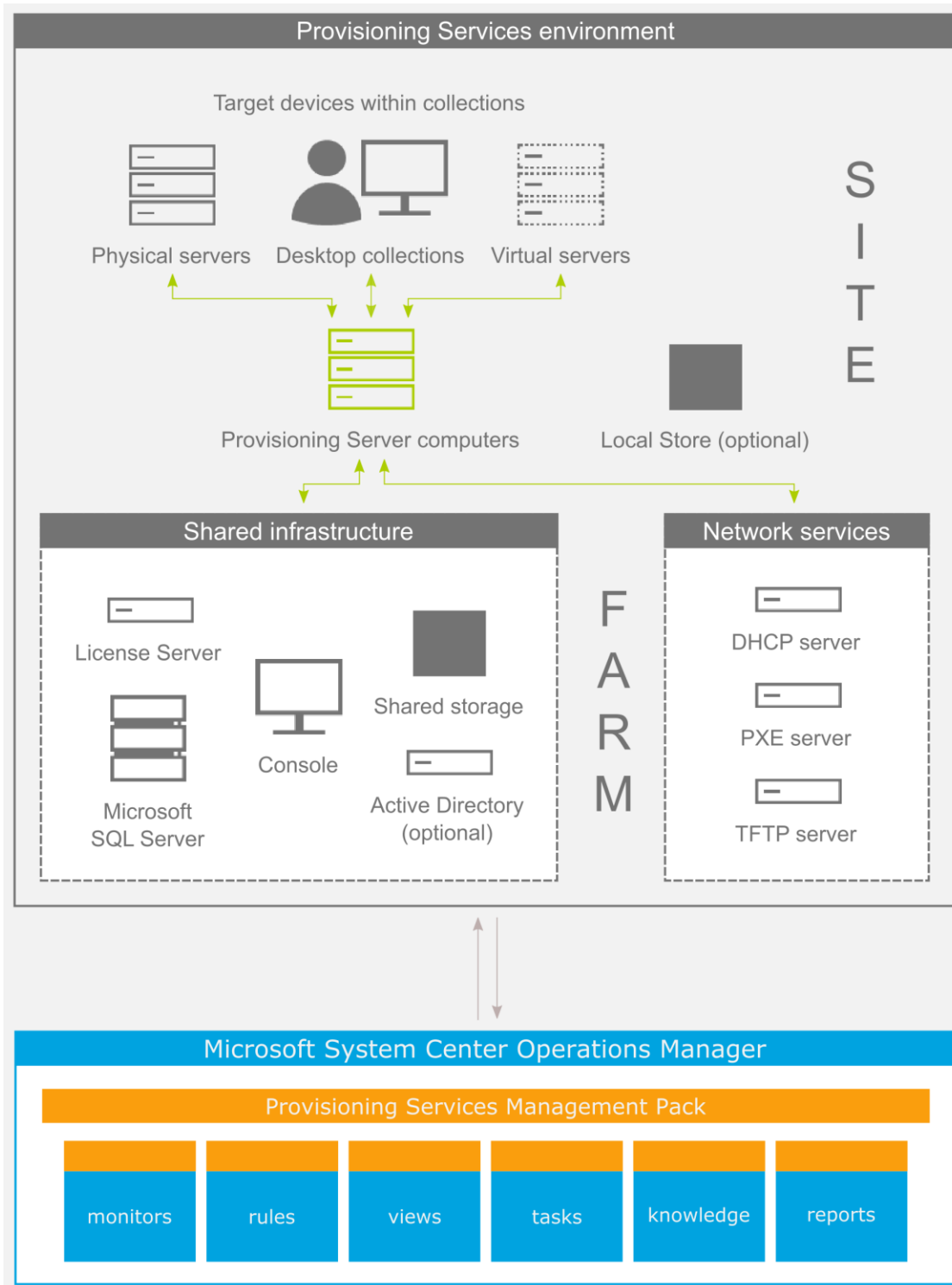
Provisioning Services Management Pack fully integrates topology, health, and performance data into SCOM, providing an end-to-end operations overview across the entire Provisioning Services estate, and enabling delivery of effective business service management. It covers the following key scenarios:

- Are all Provisioning Services instances running?
- If disk image streaming gets slower than expected, servers having CPU or network interfaces overloaded are pinpointed.
- Are store paths and store write cache paths accessible and to which degree the stores are utilized?
- If a farm is not fully operational, non-operational sites and servers causing the problem are identified.
- How much are device collections utilized and how many target devices are connected to vDisks?
- Identify which crucial Provisioning Server services are not operational and get errors from Provisioning Server log files and Windows event logs.

Product architecture

The following diagram shows how Provisioning Services Management Pack connects to the SCOM management platform and the Provisioning Services estate.

Figure 1.1 A high-level view of the Provisioning Services Management Pack architecture

Chapter 2: Installation and configuration

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

Preparing for the installation

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

- Your environment meets the software requirements.

  For software requirements, see *Citrix SCOM Management Pack for Provisioning Services Compatibility Matrix*.
- A computer is chosen on which a SCOM management server resides and where the server side of Provisioning Services Management Pack will be installed. This computer is referred to as **SCOM management server**.
- SCOM agent is installed on all the computers that host Provisioning Server, and these computers are configured as **agent-managed computers** in the SCOM management group.
- The Action Account of SCOM agent has administrative privileges on all the computers that host Provisioning Server.

Installing the product on the SCOM management server

The server-side part of Provisioning Services Management Pack must be installed on the SCOM management server.

To install Provisioning Services Management Pack 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_ProvisioningServices_<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 Provisioning Services Management Pack

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**.

Figure 2.2 The License Agreement page
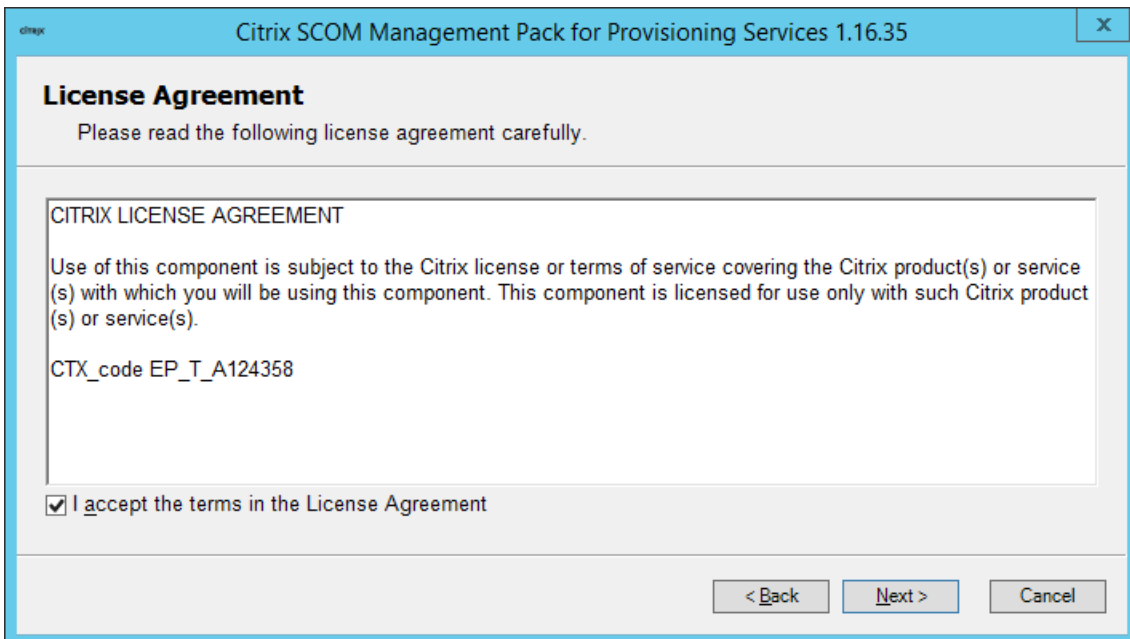
6. In the Destination Folder page, define the Provisioning Services Management Pack installation folder. Citrix recommends that you install Provisioning Services Management Pack to the default folder.

    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 substeps:
    a. Click **Change**.
    b. 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.

    Figure 2.3 The Configure Post-Install Actions page
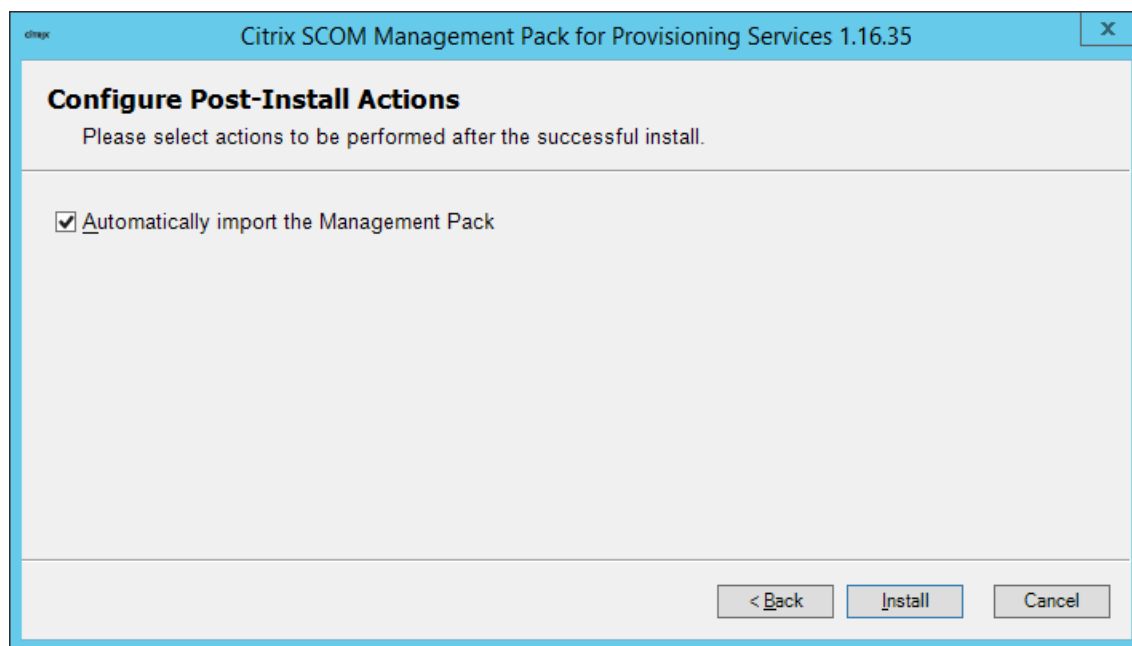
    To let the Setup Wizard import the management packs, select the **Automatically import the Management Pack** option. Citrix recommends this choice.

    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.

10. If you let the Setup Wizard to automatically import the management packs, it displays the Executing post-install actions page. Attend the import process.

11. In the post-installation completion page, review the management packs import log, and click **Finish** to close the Setup Wizard.

Figure 2.4 The post-installation completion page
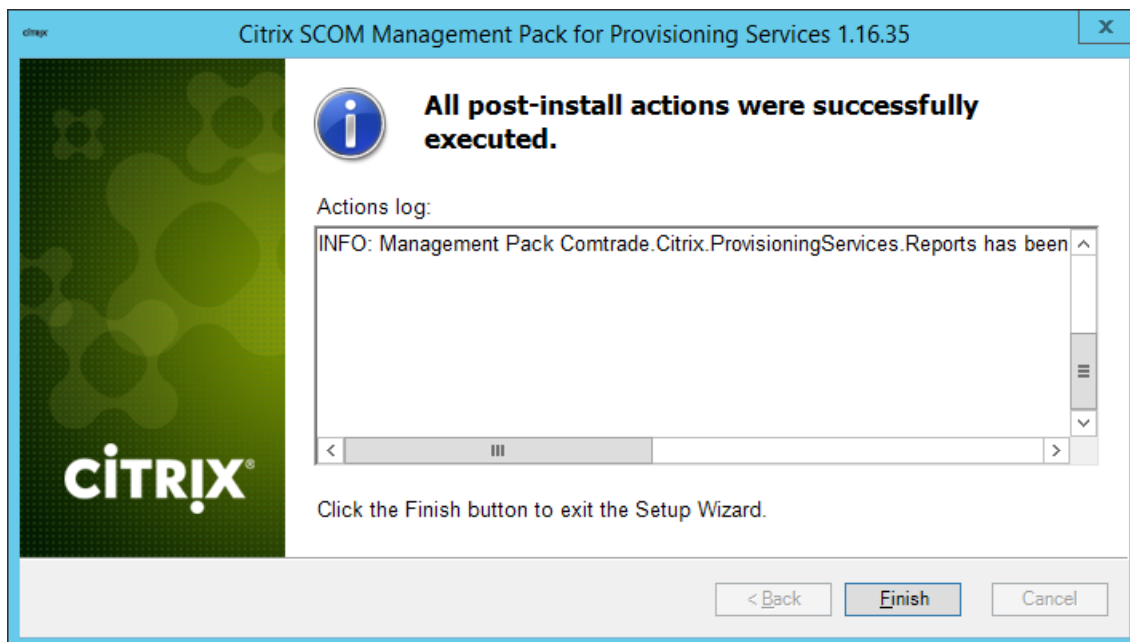
Configuring access to the shared folder for agent installation

Note Steps of this procedure must be followed only once on a SCOM management server. 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:

- ShareFile Management Pack
- StoreFront Management Pack
- Web Interface Management Pack
- XenApp/XenDesktop Management Pack

- XenApp Management Pack
- XenMobile Management Pack

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

1. Log on to the SCOM management server. Use a user account that has local administrative privileges.

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, for the purpose of agent deployment and configuration.

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

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 2.5 The General Properties page
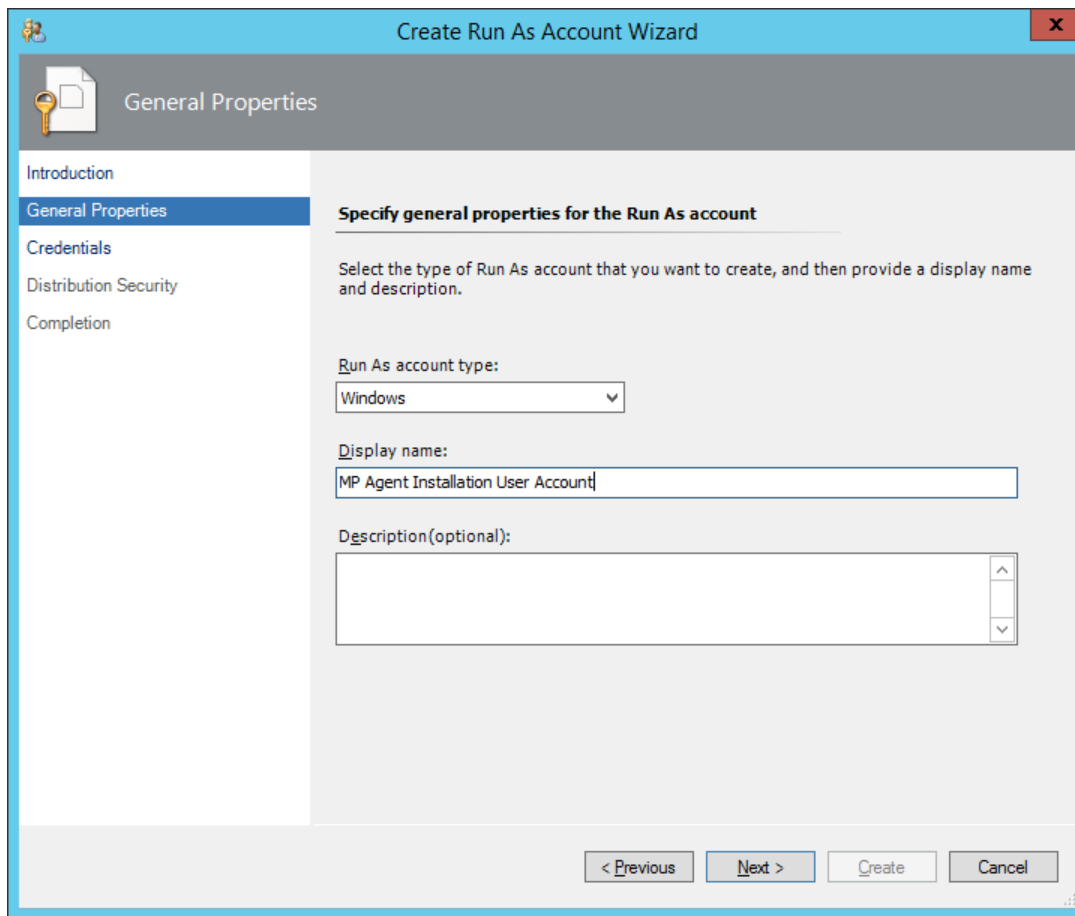
9. In the **Display name** text box, type a name that the SCOM Operations console will use to refer to the newly created SCOM user account. Click **Next**.

10. In the **User name** text box, type the user name of the operating system user account that you chose in step 2.

Figure 2.6 The Credentials page
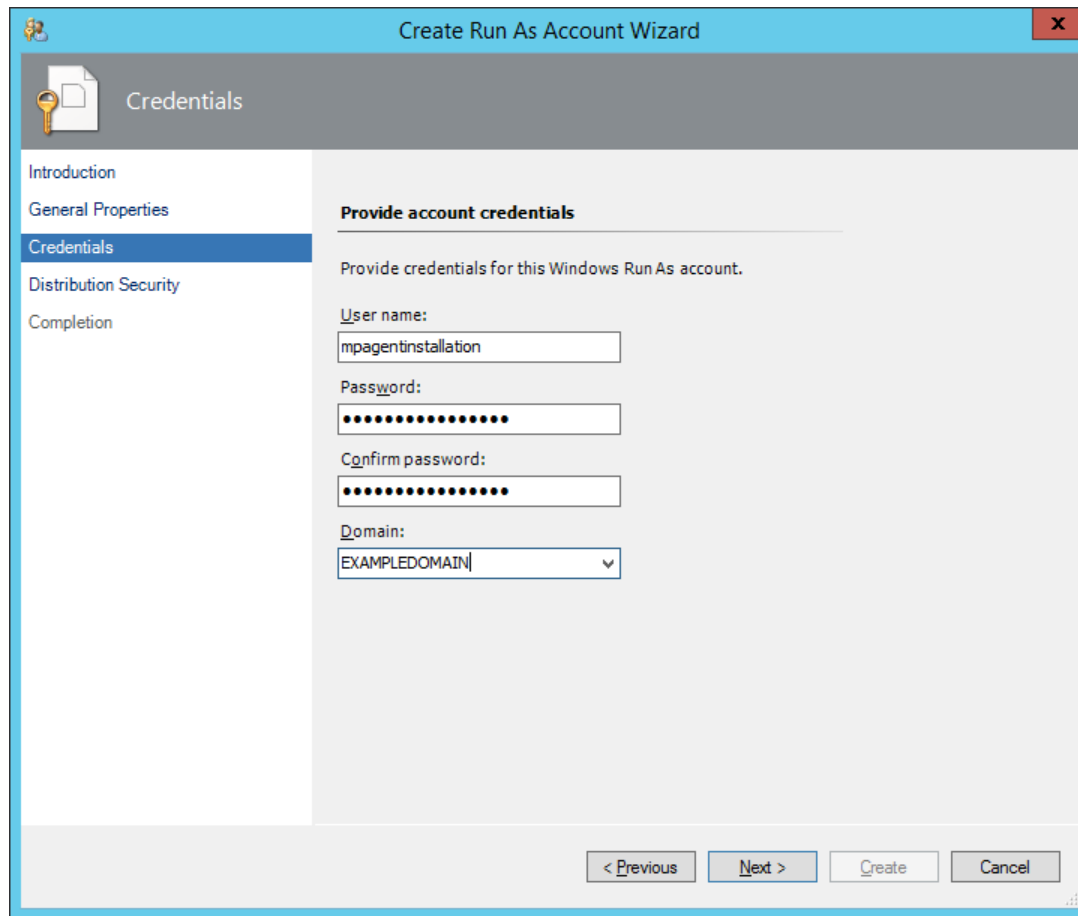
11. In the **Password** and **Confirm password** text boxes, type the valid password of the operating system user account.

12. In the **Domain** text box, update the value if needed. Click **Next**.

13. Depending on the effective security policy in your SCOM environment, select either the **Less secure** or **More secure** option.

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

14. Click **Create**.

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

Figure 2.7 The Completion page
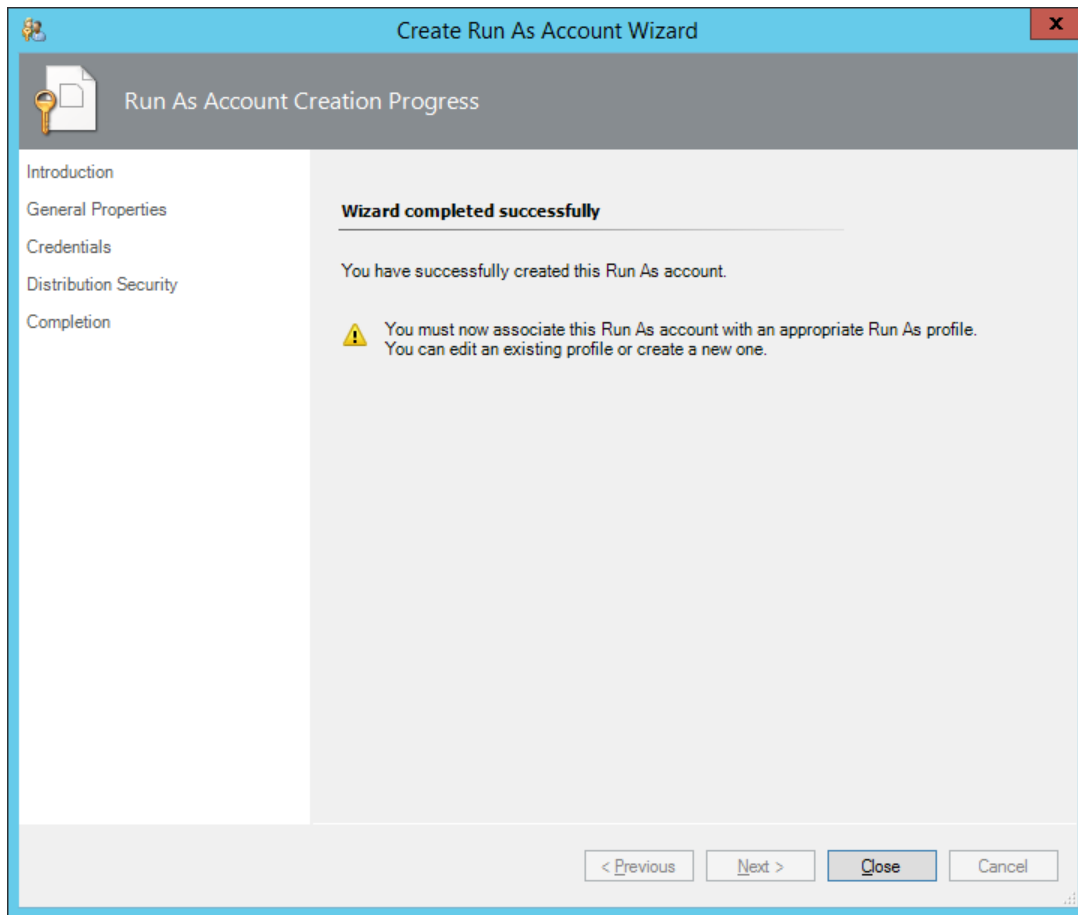
16. In the left pane, under Run As Configuration, click **Profiles**.

17. In the Profiles list, double-click **Citrix Management Pack Network Share Account**.

Figure 2.8 The Introduction page
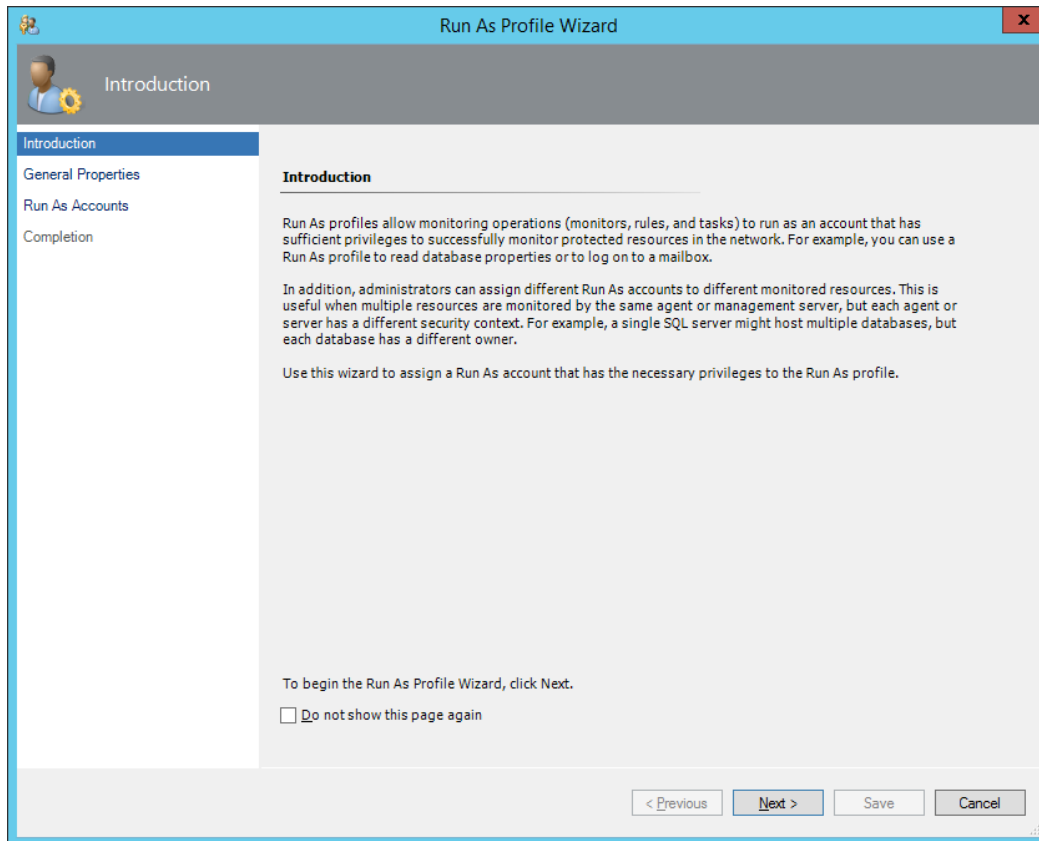
18. In the Run As Profile Wizard window, in the Introductory page, click **Next**. In the General Properties page, click **Next**.

19. In the 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 2.9 The Add a Run As Account dialog box
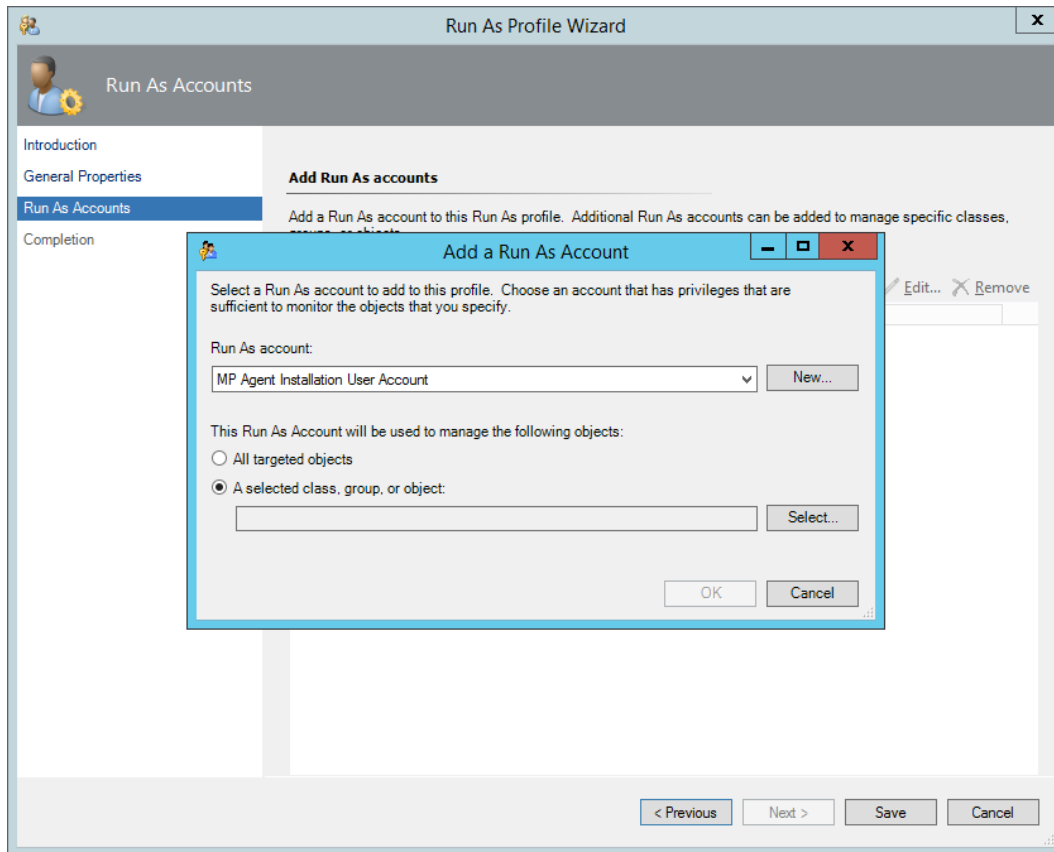
21. Select the **A selected class, group, or object** option.

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 2.10 The Class Search dialog box
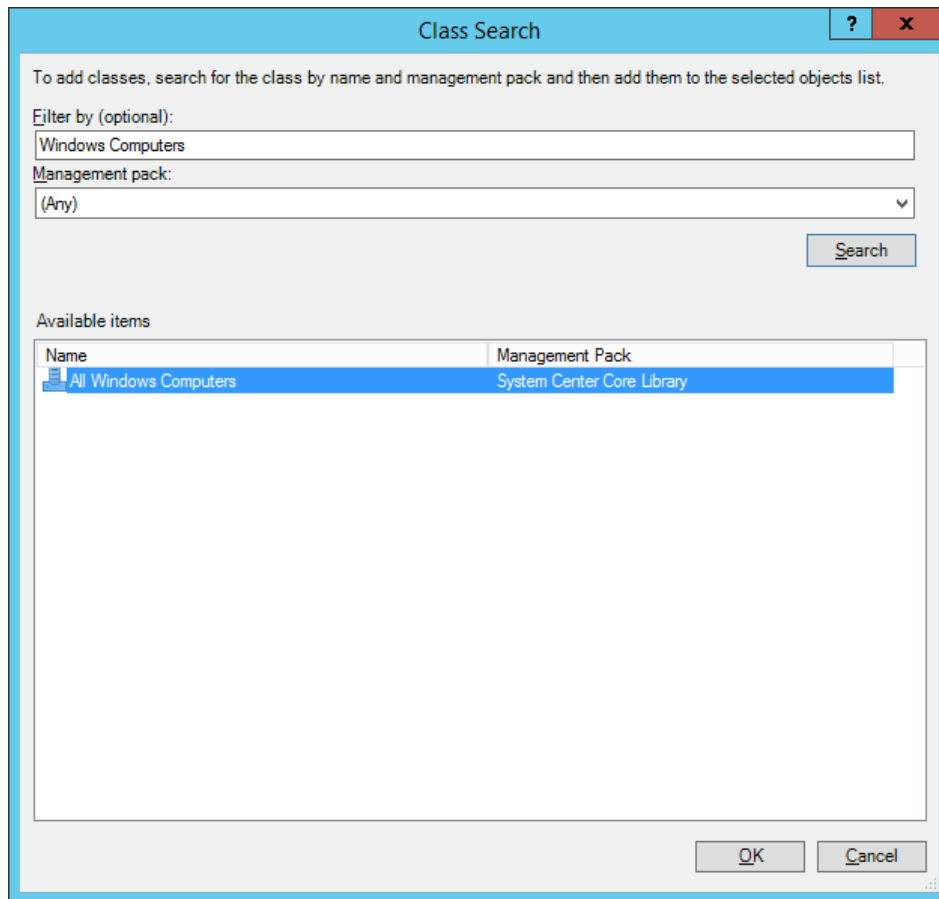
26. Click **OK** to close the Class Search dialog box.

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.

Verifying the installation on the SCOM management server

To verify that the Provisioning Services Management Pack 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 Provisioning Services
```

4. To check if the `CitrixMPShare` shared folder is correctly configured, open a Command Prompt window and run the following commands in sequence (their outputs in case of success are also shown):

Command:
```
net share | findstr -i CitrixMPShare
```

Command output:
```
CitrixMPShare
             %ProgramData%\Citrix\CitrixMPShare
```

Command:
```
net use \\<ManagementServerHostName>\CitrixMPShare
    /USER:<DomainName>\<UserName>
```

Command output:
```
The command completed successfully
```

Command:
```
dir \\<ManagementServerHostName>\CitrixMPShare
```

Command output:
```
<FolderContents>
```

In these instances, *%ProgramData%* refers to the actual value of this operating system variable. *<ManagementServerHostName>* is the name of the SCOM management server. *<DomainName>* is the domain or computer name and *<UserName>* is the name of the user account that you chose in step 2 of the procedure documented in "Configuring access to the shared folder for agent installation." *<FolderContents>* is the list of the contents of the `CitrixMPShare` folder.

Note   The shared folder is vital for installation of the Provisioning Services Management Pack agent and deployment of its configuration to the managed computers.

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 2.11 Elements of Provisioning Services Management Pack, as seen in the SCOM
Operations console
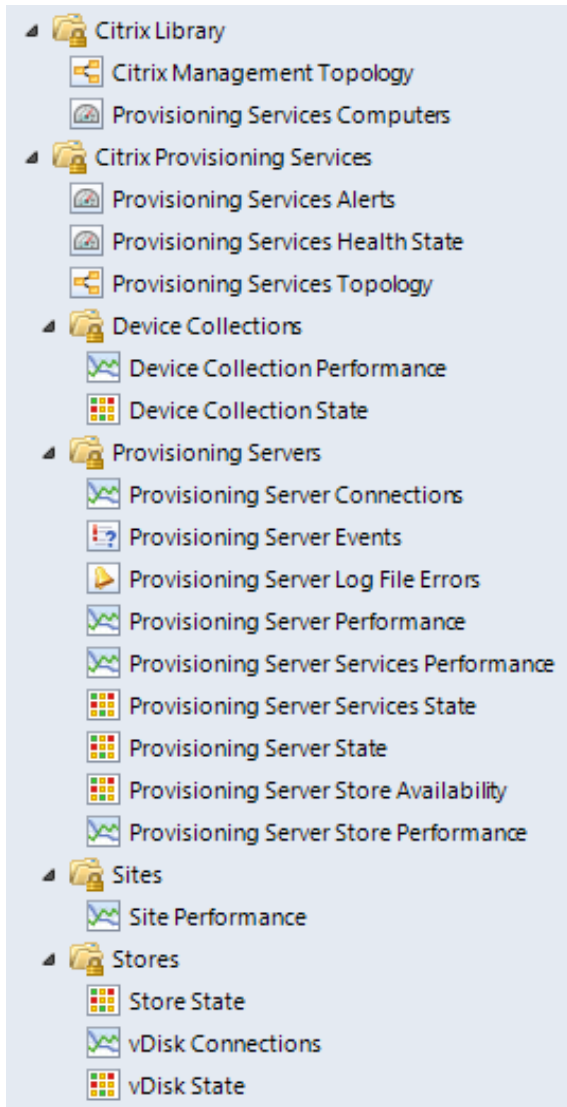
7. In the **Administration** view, expand **Administration > Management Packs** and click **Installed
    Management Packs** (the navigation pane structure may differ in SCOM versions earlier than
    2016).

8. Verify the following management pack versions are listed in the results pane:

Citrix Management Pack for Provisioning Services	1.16.35.0
Citrix Management Pack for Provisioning Services Reports	1.16.35.0
Citrix Management Pack Library	1.0.17.0

Configuring SCOM agent to act as proxy on Provisioning Server computers

SCOM agent on each computer where Provisioning Server is installed 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.

You can either configure SCOM agent instances one by one or you can configure all applicable SCOM agent instances at the same time. The latter scenario is particularly useful in large Provisioning Services environments.

To configure the SCOM agent instances one by one, 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 Provisioning Services (Provisioning Server) 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 applicable SCOM agent instances (instances on all discovered Provisioning Server computers) at the same time, do the following:

1. Log on to the SCOM management server. Use a user account that has local administrative privileges.

2. Go to **Start > All apps > Citrix** (actions of this step may differ on operating systems earlier than Windows Server 2016).

3. Click **Provisioning Services 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 Provisioning Services Computers list in the Monitoring view of the SCOM Operations console.

Note Newly added agent-managed computers may not be immediately visible in the Provisioning Services Computers list in the SCOM Operations console. Allow some time for the list to get updated.

This discovery process may take a while.

Figure 2.12 The Proxy tab of the Citrix Management Pack Configuration tool
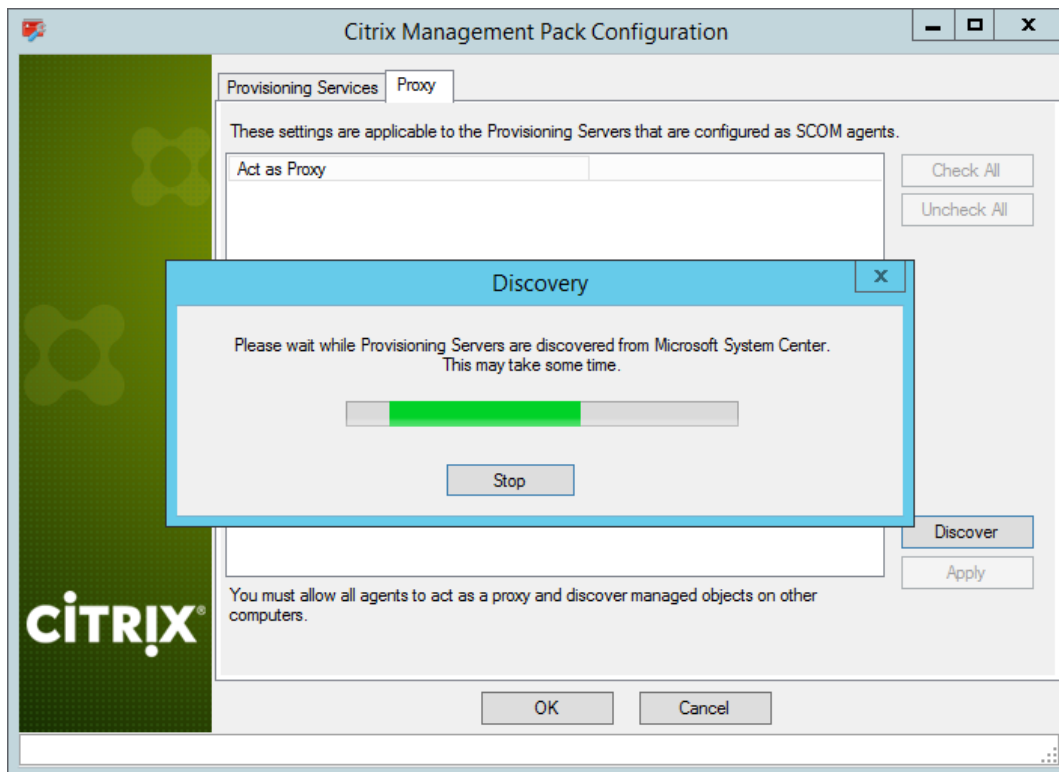
6. Select the Provisioning Services computers or click **Check All** to select all of them. Click **Uncheck All** to clear the selection.

7. Click **Apply** to update the configuration in SCOM. This may take a while.

8. *Optional.* To cease a SCOM agent instance to act as a proxy agent, 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.

Providing information about Provisioning Services farm administrator accounts

A farm administrator account must be provided to Provisioning Services Management Pack for each Provisioning Services farm that you want to manage. This user account must be the local administrator of each Provisioning Services server and must have full access granted to the farm.

To provide the farm administrator accounts, do the following:

1. Log on to the management server. Use a user account that has local administrative privileges.

2. Go to **Start > All apps > Citrix** (actions of this step may differ on operating systems earlier than Windows Server 2016).

3. Click **Provisioning Services MP Configuration**.

4. In the Citrix Management Pack Configuration window, in the Provisioning Services tab, click **Add**.

5. In the Add Provisioning Services 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 2.13 The Add Provisioning Services farm admin account dialog box
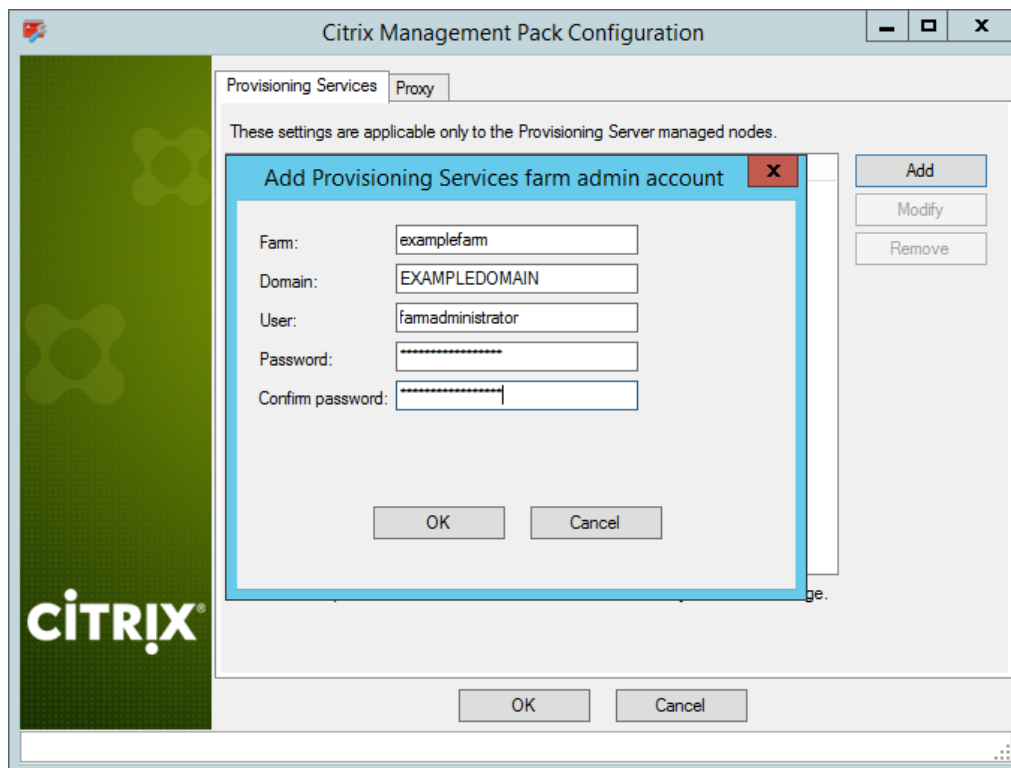
6. Click **OK**.

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

8. *Optional.* To modify the domain name, user name, or password of a farm administrator configuration, click **Modify**. In the Modify Provisioning Services farm admin account dialog box, modify the data as required, and then click **OK**.

9. *Optional.* To remove a farm administrator configuration, click **Remove** and then click **Yes**.

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

Note If you modify data for a Provisioning Services account where Provisioning Services Management Pack Agent is already installed on the Provisioning Services computers, run the `Update Configuration on Citrix MPPVS Agent` task from the SCOM Operations console to refresh the local configuration data.

Installing the product on the Provisioning Services computers

On the Provisioning Services computers, only Provisioning Services Management Pack Agent must be installed.

To install Provisioning Services Management Pack Agent on a Provisioning Services computer, do the following:

1. Launch the SCOM Operations console and connect to the management server.

2. In the **Monitoring** view, in the left pane, expand **Citrix Library**, and then click **Provisioning Services Computers**.

3. In the Provisioning Services Computers pane, select a Provisioning Services computer from the Provisioning Services Computers list.

4. In the Tasks pane, expand **Citrix MPPVS Agent Computer Role Tasks**, and then click **Install Citrix MPPVS Agent**.

5. In the Run Task – Install Citrix MPPVS Agent dialog box, adjust the task parameters as follows:

    ○ **UpgradeAgent**: This option, when set to `true`, causes uninstallation of the existing Provisioning Services 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`

- ○ **Debug**: You *may* not alter this option.

  Default value: `false`

- ○ **AgentInstallationSource**: This option defines location of the Management Pack agent installation package and its configuration files. Specify the value according to relationship between the agent-managed computer and the SCOM management server:

  – If SCOM agent on the agent-managed computer reports only to the management server where XenApp/XenDesktop Management Pack is installed, leave the value empty. The location is automatically determined based on data retrieved from the agent-managed computer. In most cases, the retrieved location host name matches the host name of the management server where the installation task is invoked.

  – If the agent-managed computer is managed by some other management server or the computer hosts a multi-homed SCOM agent instance, specify the host name of the management server where XenApp/XenDesktop Management Pack is installed.

  – If the agent-managed computer does not have access to the `CitrixMPShare` shared folder on the management server, specify the alternative location of the Management Pack agent installation package and its agent configuration files in the UNC format. A prerequisite is that 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's program installation folder on the agent-managed computer. If no value is specified, the Management Pack agent is installed to the `%ProgramFiles%\Citrix\Provisioning Services MP Agent` folder.

  Default value: (empty)

6. Click **Run** to invoke the installation process.

7. Observe the output the task generates. If the task reports no errors, the installation on the Provisioning Services computer is correct.

> **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 MPPVS Agent** task to pinpoint the problematic prerequisite.

Tip The Agent installation task can be run for multiple selected Provisioning Services computers.

Verifying the installation and configuration on the Provisioning Services computers

To verify that the Provisioning Services Management Pack Agent installation and configuration on a Provisioning Services computer are correct, do the following:

1. Launch the SCOM Operations console and connect to the management server.

2. In the **Monitoring** view, in the left pane, expand **Citrix Library**, and then click **Provisioning Services Computers**.

3. In the Provisioning Services Computers pane, select the Provisioning Services computer (on which Provisioning Services Management Pack Agent was just installed) from the Provisioning Services Computers list.

4. In the Tasks pane, expand **Actions**, and then click **Check Requirements and Configuration for Citrix MPPVS Agent**.

5. Observe the output the task generates. If all checks are denoted successful, the installation and configuration on the Provisioning Services computer are correct.

Chapter 3: Uninstallation

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

Uninstalling the product from the Provisioning Services computers

To uninstall Provisioning Services Management Pack Agent from a Provisioning Services computer, do the following:

1. Launch the SCOM Operations console and connect to the management server.

2. In the **Monitoring** view, expand **Citrix Library**, and then click **Provisioning Services Computers**.

3. In the Provisioning Services Computers pane, select a Provisioning Services computer from the Provisioning Services Computers list.

4. In the Tasks pane, expand **Actions**, and then click **Uninstall Citrix MPPVS Agent**.

5. In the Run Task – Uninstall Citrix MPPVS Agent dialog box, click **Run** to invoke the uninstallation process.

6. Repeat steps 3 to 5 for each additional Provisioning Services computer.

   Tip The Agent uninstallation task can be run for multiple selected Provisioning Services computers.

Removing dependent management packs (customizations)

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 Provisioning Services Management Pack, 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 Provisioning Services Management Pack.

4. For each such dependent management pack (except for `Microsoft.SystemCenter.SecureReferenceOverride`), 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 Provisioning Services Management Pack, 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. 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), and then save the changes.

> **Tip** For better tracking, increase the management pack version by adjusting the value of the `Version` element within the `Identity` element.

f. Import back the altered `Microsoft.SystemCenter.SecureReferenceOverride` management pack from the modified file.

4. In the results pane, right-click **Citrix Management Pack for Provisioning Services Reports**, and then select **Delete**.

5. On the message stating that deleting the management pack might affect the scoping of some user roles, click **Yes**.

6. Repeat steps 4 and 5 with **Citrix Management Pack for Provisioning Services**.

7. Check if other Citrix SCOM Management Pack products are installed on the management server. If none of them is installed, repeat steps 4 and 5 with **Citrix Management Pack Library**.

Uninstalling the product from the SCOM management server

To uninstall Provisioning Services Management Pack 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 Provisioning Services** 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**.

8. Delete the `%ProgramData%\Citrix\CitrixMPShare\Provisioning Services MP` folder.

   Caution This action permanently deletes the Agent configuration data. You will be unable to reuse it at a later time.

9. Check if other Citrix SCOM Management Pack products are installed on the management server. 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

Operating principles

For a general overview of Citrix Provisioning Services, see "Provisioning Services Product Overview" in the Citrix Provisioning Services documentation.

Provisioning Services Management Pack is able to actively monitor the availability of Provisioning Servers and their dependent components. For this purpose, a Provisioning Services farm administrator account is required by Provisioning Services Management Pack to be able to log on to the farm.

With Provisioning Services Management Pack, you can monitor:

- Provisioning Server availability
- All Provisioning Server operating system services
- Local and shared stores accessibility
- Free disk space and write cache size on the stores
- Provisioning Server log files and entries in the operating system event log

- Provisioning Server resource consumption
- Target device activity on vDisks and device collections
- vDisk availability

Provisioning Services Management Pack also collects data, gathered from Provisioning Services environment, such as

- CPU and memory consumption on Provisioning Server host computers
- Network traffic on Provisioning Servers
- Number of all and active devices, and device utilization on device collections
- Number of all and active devices, and device utilization on site
- Number of connected target devices on Provisioning Servers
- Number of connected target devices on vDisks
- Store free space and free space utilization (from each Provisioning Server perspective)
- Store write cache size (from each Provisioning Server perspective)

All collected data is available in Performance views for short periods of time (depends on the effective settings for SCOM database grooming), and also through reports for extended periods of time.

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 Provisioning Services 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. In the Tasks pane, expand **Actions**, and then click **Import Management Packs**.

5. In the Import Management Packs dialog box, click **Add**, and then select **Add from disk**.

6. In the Online Catalog Connection, click **No**.

7. 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.ProvisioningServices.mp`

- o `Comtrade.Citrix.ProvisioningServices.Reports.mp`

8. Click **Install**.

Customizing sealed management packs

Customization of the sealed management packs that Provisioning Services Management Pack 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.

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.