

Provisioning Server Service Template

Provisioning Server 7.1 Service Template Technology Preview for System Center - Virtual Machine Manager

The Citrix Provisioning Server System Center - Virtual Machine Manager (VMM) Service Template provides administrators with a reproducible and consistent method to deploy Provisioning Server.

The Service Template uses the VMM service model deployment to provision machines, install Provisioning Server server roles, and perform the initial configuration of a new Provisioning Server Site, making it useful for simple proof of concept deployments or larger deployments that require scaling-out for added capacity.

How it works

The Service Template is a feature introduced in VMM 2012. It supports modeling and managing a distributed enterprise application as a unit rather than as individual machines.

After importing a Service Template into a VMM Library, a VMM Cloud User, Delegated Administrator, or Administrator can provision a Provisioning Server by deploying a single template. This template instantiates and configures the Provisioning Server role.

When you need additional capacity to support additional desktops, the Service owner can scale out the tier that is provisioned and configured in the Site.

Provisioning Server Service Template system requirements

The Provisioning Server Service Templates are available in an Evaluation and Enterprise version.

The Evaluation template creates a minimal proof of concept deployment of Provisioning Server using SQL Express. This template is not designed to support scaling-out.

The Enterprise template creates a deployment of Provisioning Server that supports scaling-out and requires SQL Server.

The minimum environment for the Evaluation template:

- Provisioning Server 7.1 Service Template
- Server 2012 Evaluation VHD
- VMM 2012 SP1 Server, Library, and a VM Network with a static IP Pool.
- Hyper-V Servers.

- Active Directory

The minimum environment for the Enterprise template:

- Provisioning Server 7.1 Service Template
- Server 2012 Evaluation VHD
- VMM 2012 SP1 Server, Library, and a VM Network with a static IP Pool.
- Hyper-V Servers.
- Active Directory
- SQL Server

Software	Description
VMM 2012 SP1 UR3	<p>VMM 2012 SP1 must be patched with Update Rollup 3 or later for successful deployment.</p> <p>VMM 2012 R2 is supported.</p>
Hyper-V Server or Windows Server with Hyper-V	<p>Windows Server with Hyper-V provides the greatest support for Service Templates and support deployment into DMZ and disconnected network scenarios.</p> <p>Hyper-V Server only supports deploying into environments where the deployed virtual machines (VMs) have network connectivity to the VMM Library.</p> <p>The hypervisor must have adequate storage to support the deployed VMs.</p>
VMM Configuration	Description
Cloud or Host Group	<p>The Self Service user, Delegated Administrator, or Administrator in VMM require an associated Cloud or Host group to which machines are deployed.</p>

VM Networks	<p>There must be two VM Networks defined in VMM:</p> <p>Management Network - The management VM Network requires a static IP Pool for VMM to manage the IP addresses of the virtual machines, and must have access to Active Directory, DNS, and SQL services.</p> <p>Isolated Streaming Network - A VM Network dedicated to PVS streaming traffic. The PVS Server will provide DNS and DHCP services on this network.</p> <p>Note: Provisioning Server streaming is not compatible with Network Virtualization Generic Route Encapsulation (NVGRE) based VM Networks; use VLANs or other options to isolate the streaming traffic.</p>
Server 2012 VHD Image	<p>A VHD image of Server 2012 or Server 2012 R2 that is prepared with sysprep and stored in the VMM Library.</p> <p>This image can be the Windows Server Evaluation VHD or can be prepared by the administrator.</p> <p>Note: Antivirus agents installed in the base image may interfere with the automated deployment and configuration.</p>
VMM installation media ISO image (optional)	<p>An ISO image of the VMM installation media stored in the VMM Library. This is required for integration configuration between Provisioning Server and VMM.</p> <p>Note: If this is not provided; integration with SCVMM will not be performed.</p>
VMM RunAs accounts	<p>Provisioning Site Administrator - This is a domain user Run As Account that is used to join the domain, install and configure Provisioning Server, and become the first PVS administrator. This account must also have permissions to create computer accounts in Active Directory, the SQL Server (dbcreator, securityadmin), and to authorize DHCP in the domain.</p> <p>The permissions are documented in the Provisioning Server requirements, configure authentication section.</p> <p>Local Administrator (.administrator) -This account sets the local administrator password.</p>
Supporting Infrastructure	Description

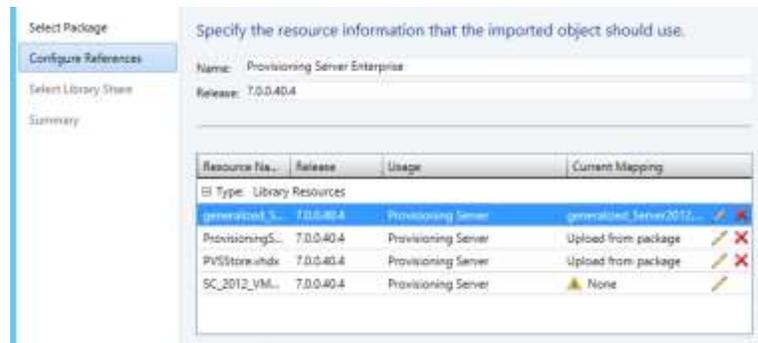
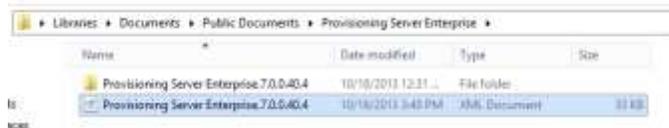
Active Directory Domain and DNS	<p>The Provisioning Server requires domain membership and Kerberos authentication for security and DNS for machine name resolution.</p> <p>This domain must be accessible by VMs over the management VM Network.</p>
SQL Server / SQL Server Instance	<p>Provisioning Server requires a SQL Server database for management databases.</p> <p>Note: The Evaluation template uses SQL Express instead of SQL Server. And does not prompt for or require a SQL Administrator or database.</p>
VMM Server	<p>In large desktop environments, there may be an instance of VMM dedicated to managing desktops.</p> <p>The user account needs to be a VMM Delegated Administrator or Administrator.</p>
Citrix License Server	<p>The template requires that an existing Citrix License Server is active and has a license file registered.</p>

Before you begin

Check the configuration of your VMM Server, the Hyper-V Servers, the RunAs accounts, and the VMM Users to make sure that configuration is correct.

Import the Service Template

1. Unzip the downloaded package to a folder.
2. Select a destination and extract files.
3. From the Library view in VMM, select **Import Template** from the Ribbon.
4. Browse to the folder where the package was extracted to and select the XML file at the top of the folder structure.
5. Select the option to Import Sensitive Template Settings
6. Select the VHD and ISO objects in the VMM Library by clicking the pencil icon and browsing to the existing objects in the VMM Library.

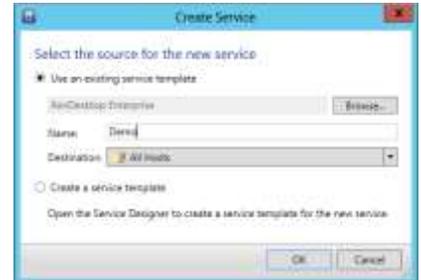


7. Select the destination in the VMM Library (The objects in the package are copied to and registered with the VMM Library).
8. Complete the import.

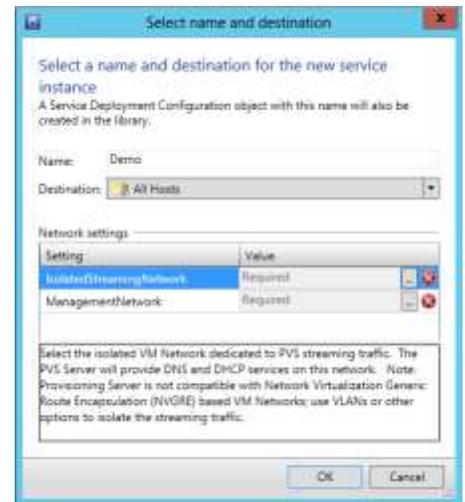
Deploy the Provisioning Server Service Template

Deploy a Service instance by either:

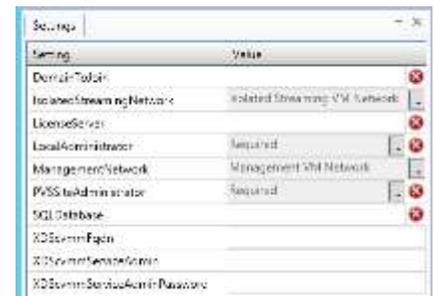
- Selecting **Create Service** from the VMs and Service view ribbon.



- Selecting a **Service Template** from the Library view and then select **Configure Deployment**.



1. Name the Service (This will be the name of the Provisioning Server Site.)
2. Complete the Service settings.



The following table describes the Service settings fields.

Service Settings	Description
DomainToJoin	Enter the fully qualified domain name that the Provisioning Server service machines will join.
LocalAdministrator	<p>Select the Run As Account that sets the local administrator password of the virtual machines in the XenDesktop service.</p> <p>The local administrator Run As Account user name must be .\Administrator. Make sure to uncheck the option that validates the domain credentials when creating this account.</p>
LicenseServer	Enter the Fully Qualified Domain Name (FQDN) of the Citrix License Server.
ManagementNetwork	<p>Select the VM Network the Provisioning Server service virtual machines uses for management traffic.</p> <p>The management VM Network requires a supporting IP Pool for manual IP address assignment by VMM, and must have access to Active Directory, DNS, and SQL services.</p>
IsolatedStreamingNetwork	<p>Select the isolated VM Network dedicated to PVS streaming traffic. The PVS Server provides DNS and DHCP services on this network.</p> <p>Note: Provisioning Server streaming is not compatible with Network Virtualization Generic Route Encapsulation (NVGRE)-based VM Networks.</p> <p>Use VLANs or other options to isolate the streaming traffic.</p>
SQLDatabase	Enter the name of the SQL Server that hosts the PVS databases. Enter the <i>SQLServerName\InstanceName</i> to use a specific SQL instance or enter only the <i>SQLServerName</i> to use the default SQL instance.
XDVMMFqdn (optional)	Enter the Fully Qualified Domain Name of the VMM server to which the Provisioning Server is integrated to deploy and manage desktops.
XDVMMServiceAdmin (optional)	Enter the VMM integration administrator account (Domain\Username) that Provisioning Server uses to create and manage desktops. This account must have administrator privilege on the VMM server.

XDVMMServiceAdminPassword (optional)	Enter the password for the VMM integration administrator account that Provisioning Server uses to create and manage desktops.
PVSSiteAdministrator	<p>Select the Run As Account that installs and configures the Provisioning Server as well as becomes the first Provisioning Server administrator. This account must also have permissions to create computer accounts in Active Directory and to create databases on the SQL Server.</p> <p>After deployment, use these credentials to access the Provisioning Server Controller virtual machine and run Provisioning Server Console to begin publishing desktops.</p>

9. Select **Refresh Preview** in the Ribbon to place the machines in the service using the VMM VM Placement logic.

10. Resolve any VMM placement errors.

To view detailed information about placement issues, select the Machine instance in the diagram and then selecting **Ratings** in the Ribbon.



11. After resolving all VMM placement issues, select **Deploy Service** in the Ribbon.

VMM deploys virtual machines for each role and the Provisioning Server software is installed and configured.

Review the VMM Job log or the Status of the Properties of the individual virtual machine to review any deployment errors

After Service Deployment

After the Service has successfully deployed;

1. Open the console of the Provisioning Server virtual machine
2. Logon using the same credentials as the PVSSiteAdministrator Run As account
3. Open the Provisioning Service Console
4. Continue with creating images and providing desktops. See the [Provisioning Services Administration Guide](#).

Known issues

- VMM 2012 SP1 does not properly increment VM names when deploying additional Services or when scaling out Tiers. Two workarounds are:
 - When using the Scale Out Tier Wizard; at the Configure Settings screen, the machine name for a Tier may match a machine already deployed. If it does; Cancel the Scale Out Tier Wizard and try to scale out the tier again.

- If deploying a second Service from the Service Template, at the Deploy Service map screen, the machine name for a Tier may match a machine already deployed. Select the machines in the diagram view and edit VM name and Computer name prior to selecting Deploy Service.
- Renaming the Site of a Service causes Role scale-out or Servicing to fail. Do not rename the Site.
- VMM does not support deploying a Service to Hyper-V Server when the virtual machine network is unable to reach the VMM Library. In this isolated scenario, the target hypervisor must be Server 2012 with the Hyper-V Role (Full or Core installation) and not the free Hyper-V Server.
- The Evaluation template does not support scaling out Roles.
- High disk IO on target hypervisors or storage can cause the VMM jobs to time out. Retry the job to allow the process to continue.
- The deployment may fail if any DHCP Server had not been previously authorized in the domain the Service VMs are joining.