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Site server high availability - Configuration Manager | Microsoft Learn

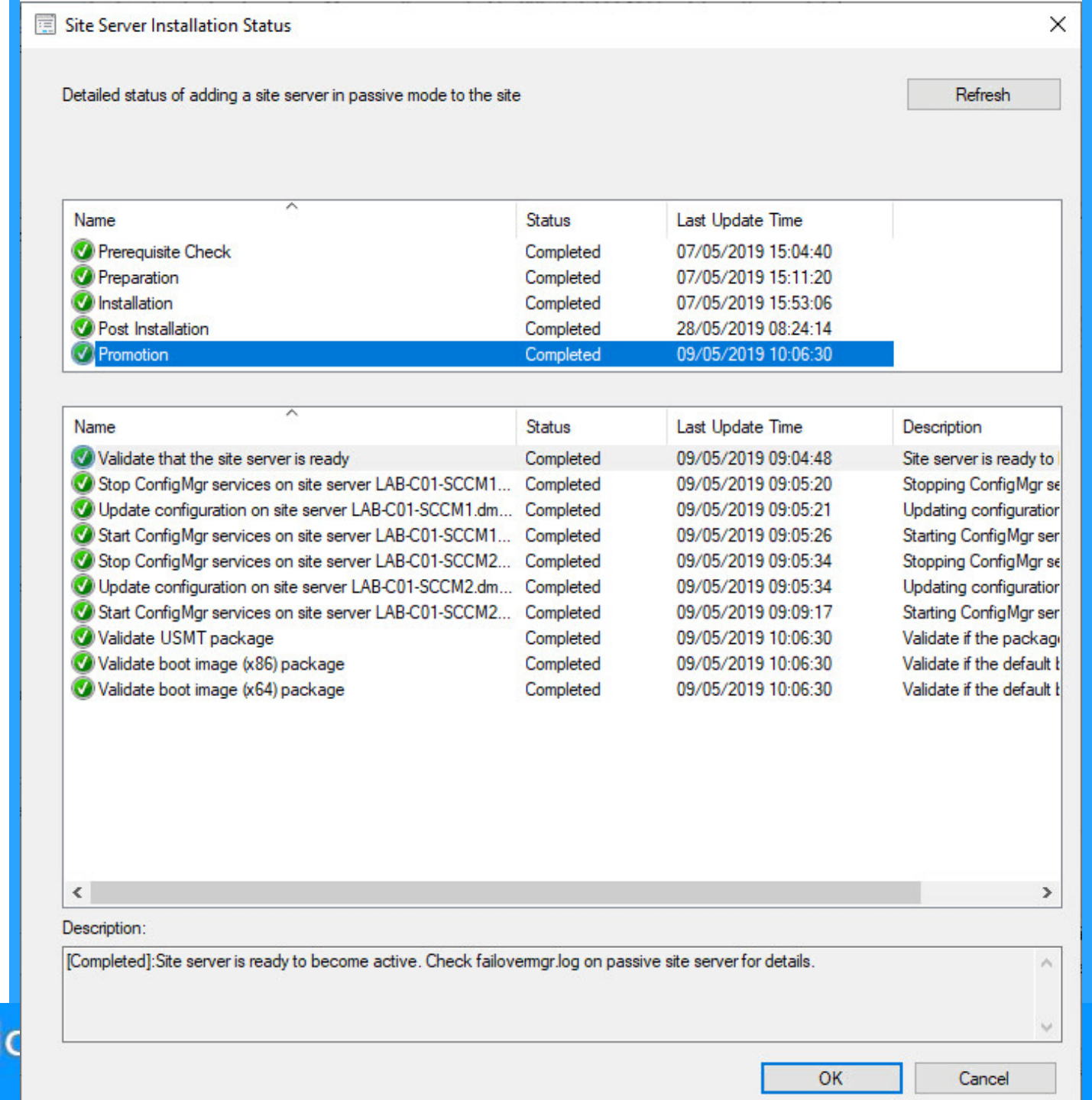
We could add redundancy to most of the roles in Configuration Manager by having multiple instances of these roles in your environment. Except for the site server itself.

High availability for the site server role is a Configuration Manager-based solution to install another site server in *passive* mode.

The central administration site (CAS) and child primary sites can have another site server in passive mode. The site server in passive mode can be on-premises or cloud-based in Azure.

This feature brings the following benefits

- Redundancy and high availability to the site server role
- More easily change the hardware or OS of the site server
- More easily move your site server to Azure IaaS



Supported configurations

- Configuration Manager supports site servers in passive mode in a hierarchy. The CAS and child primary sites can have another site server in passive mode.
- The site server in passive mode can be on-premises or cloud-based in Azure.

Note

- A cloud-based site server in passive mode uses Azure infrastructure as a service (IaaS). For more information, see the following articles:
  - Azure virtual machines (for cloud-based infrastructure)
  - FAQ for Configuration Manager on Azure

- **Prerequisites**

Active Directory

- Both site servers must be joined to the same Active Directory domain.

- If you've extended the Active Directory schema for Configuration Manager, both site servers need Full Control permissions to Active Directory's System - System Management container and all descendant objects.

General configurations for both site servers

•Both site servers can run different OS or service pack versions, as long as both are supported by Configuration Manager.

•Don't host the service connection point role on either site server configured for high availability. If it's currently on the original site server, remove it, and install it on another site system server. For more information, see About the service connection point.

Configurations for the site server in passive mode

- Must meet the prerequisites for installing a primary site.

- This requirement includes components like .NET Framework, Remote Differential Compression, and the Windows ADK. For the complete list, see Site and site system prerequisites.

Note

- Make sure to install the SQL Server Native Client. If you don't install it, the prerequisite checker during Configuration Manager setup will report an error about missing SQL Server permissions.
- Must have its computer account in the local **Administrators** group on the site server in active mode.
- Must install using source files that match the version of the site server in active mode.
- Can't have a site system role from any site installed on it before you install the site server in passive mode role.
- Make sure the computer account for the site server in passive mode has the same permissions as the site server in active mode. For example, it may need permission to content source files, such as boot image source directories.

• Permissions for the site system installation account

- By default, many of us use the site server's computer account to install new site systems. The requirement is then to add the site server's computer account to the local Administrators group on the remote site system. If your environment uses this configuration, make sure to add the computer account of the new site server to this local group on all remote site systems. For example, all remote distribution points.

- The more secure and recommended configuration is to use a service account for installing the site system. The most secure configuration is to use a local service account. If your environment uses this configuration, no change is needed.

Content library

The site content library must be on a remote network share. Both site servers need Full Control permissions to the share and its contents. For more information, see Configure a remote content library for the site server.

- The site server computer account needs Full control permissions to the network path to which you're moving the content library. This permission applies to both the share and the file system. No components are installed on the remote system.
- The site server can't have the distribution point role. The distribution point also uses the content library, and this role doesn't support a remote content library. After moving the content library, you can't add the distribution point role to the site server.

Site database

- Both site servers must use the same site database.
- The database can be remote from each site server. The Configuration Manager setup process doesn't block installation of the site server role on a computer with the Windows role for Failover Clustering. SQL Server Always On availability groups require this role, so previously you couldn't colocate the site database on the site server. With this change, you can create a highly available site with fewer servers by using an availability group and a site server in passive mode. Only an active server can be installed to a node in an Always On availability group. Passive servers must be installed to standalone servers that do not have any existing site roles on them.
- The SQL Server that hosts the site database can use a default instance, named instance, failover cluster instance, or an availability group.

- Both site servers need the sysadmin security role on the instance of SQL Server that hosts the site database. The original site server should already have these roles, so add them for the new site server. For example, the following SQL script adds these roles for the new site server VM2 in the Contoso domain:

SQLCopy

```
USE [master]
GO
CREATE LOGIN [contoso\vm2$] FROM WINDOWS WITH DEFAULT_DATABASE=[master], DEFAULT_LANGUAGE=[us_english]
GO
ALTER SERVER ROLE [sysadmin] ADD MEMBER [contoso\vm2$]
GO
```

- Both site servers need access to the site database on the instance of SQL Server. The original site server should already have this access, so add it for the new site server. For example, the following SQL script adds a login to the CM_ABC database for the new site server VM2 in the Contoso domain:

SQLCopy

```
USE [CM_ABC]
GO
CREATE USER [contoso\vm2$] FOR LOGIN [contoso\vm2$] WITH DEFAULT_SCHEMA=[dbo]
GO
```

- The site server in passive mode is configured to use the same site database as the site server in active mode. The site server in passive mode only reads from the database. It doesn't write to the database until after it's promoted to active mode.

Limitations

•Only a single site server in passive mode is supported at each site.

•Passive site servers cannot be installed to nodes in the Always On availability group hosting the Configuration Manager database and must be installed on standalone servers. Moving a passive site server into the Always On availability group after installation is not currently supported.

•A site server in passive mode isn't supported at a secondary site.

Note

•Secondary sites are still supported under a primary site with highly available site servers.
•Promotion of the site server in passive mode to active mode is manual. There's no automatic failover.
•Site system roles can't be installed on the new server before you add the site server in passive mode.
• Note
•After it installs the site server in passive mode, you can add additional roles as necessary. For example, a management point at a primary site.
•For roles like the reporting point that use a database, host the database on a server that's remote from both site servers.
•The Configuration Manager console doesn't automatically install on the site server in passive mode.

Add a site server in passive mode

For more information on the general process of adding roles, see Install site system roles.

- In the Configuration Manager console, go to the **Administration** workspace, expand **Site Configuration**, select the **Sites** node, and select **Create Site System Server** in the ribbon.
- On the **General** page of the Create Site System Server Wizard, specify the server to host the site server in passive mode. The server you specify can't host any site system roles before installing a site server in passive mode.
- On the **System Role Selection** page, select only **Site server in passive mode**.

Note

The wizard performs the following initial prerequisite checks on this page:

  - The selected server isn't a secondary site server
  - The selected server isn't already a site server in passive mode
  - The site's content library is in a remote location

  If these initial prerequisite checks fails, you can't continue past this page of the wizard.
- On the **Site Server In Passive Mode** page, provide the following information that's used to run setup and install the site server role on the specified server:
  - Choose one of the following options:
    - **Copy installation source files over the network from the site server in active mode**: This option creates a compressed package and sends it to the new site server.
    - **Use the source files at the following location on the site server in passive mode**: For example, a local path to which you already copied the source files. Make sure this content is the same version as the site server in active mode.
    - (*Recommended*) **Use the source files at the following network location**: Specify the path directly to the contents of the `CD.Latest` folder from the site server in active mode. For example, `\\Server\SMS_ABC\CD.Latest` where "*Server*" is the name of the site server in active mode, and "*ABC*" is the site code.
  - Specify the local path at which to install Configuration Manager on the new site server. For example: `C:\Program Files\Configuration Manager`
- Complete the wizard. Configuration Manager then installs the site server in passive mode on the specified server.

For detailed installation status, in the console go to the **Monitoring** workspace, and select the **Site Server Status** node. The state for the site server in passive mode displays as **Installing**. For more detailed information, select the server and select **Show Status**. This action opens the Site Server Installation Status window. When the process is complete, the state shows **OK** for both servers.

For more information on the setup process, see Flowchart - Set up a site server in passive mode.

After you add a site server in passive mode, see both site servers on the **Nodes** tab in the **Sites** node of the console.

All Configuration Manager site server components are in standby on the site server in passive mode. The Windows services are still running.

Process to promote the site server in passive mode to active mode

- In the Configuration Manager console, go to the **Administration** workspace, expand **Site Configuration**, and select the **Sites** node. Select the site, and then switch to the **Nodes** tab. Select the site server in passive mode, and then select **Promote to active** in the ribbon. Select **Yes** to confirm and continue.
- Refresh the console node. The **Status** column for the server you're promoting displays in the **Nodes** tab as **Promoting**.
- After the promotion is complete, the **Status** column shows **OK** for both the new site server in active mode, and for the new site server in passive mode. The **Server Name** column for the site now displays the name of the new site server in active mode.

Daily monitoring

When you have a site server in passive mode, monitor it daily. Make sure its Status remains OK and is ready for use. In the Configuration Manager console, go to the Monitoring workspace, and select the Site Server Status node. View both site servers and their current status. Also view status in the Administration workspace. Expand Site Configuration, and select the Sites node. Select the site, and then switch to the Nodes tab.

Note

When you update the site to a new version of Configuration Manager, it also updates the site server in passive mode.

Remove a site server in passive mode

The process to remove a site server in passive mode is the same as any site system role. Remove the Site server role from the server in passive mode. For more information, see Procedure to remove a site system role.

When you remove any other site system role, the site component manager (sitecomp) processes the request. When you remove a site server in passive mode, the failover manager processes the request. For status, monitor the SMS_FAILOVER_MANAGER component.