COMMVAULT

Documentation PDF

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CommServe Server Installation

Complete the following tasks to install the CommServe server in your environment:

1. **Plan the installation.**

   Review general guidelines to prepare your environment for the installation. For more information, see Planning the CommServe Server Installation. and

2. **Review the preinstallation checklist.**

   Download the software and gather the information that you must provide during the installation. For more information, see Preinstallation Checklist for the CommServe Server.

3. **Install the software.**

   Install the CommServe server by using the installation package that was created from the Download Manager. For instructions, see Installing the CommServe Server.

4. **Perform postinstallation tasks.**

   Review the tasks that you must perform after the installation in Postinstallation Tasks for the CommServe Server.

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Planning the CommServe Server Installation

Careful planning is required to ensure that Commvault installs successfully and integrates seamlessly with your environment.

Use the following checklist to prepare the computer where the CommServe server will be installed:

Verify System Requirements

Make sure that the computer's operating system and hardware are supported by the CommServe server. For more information, see System Requirements.

Verify License Requirements

The CommServe server does not require a license. Other packages that are installed along with the CommServe server might require a license. To review the list of packages, see Additional Packages Installed with the CommServe Server.

Verify Requirements for Installation Environments

If you plan to install the CommServe server on a virtual machine, in a cluster environment, or in a disaster recovery environment, review the following requirements:

Virtual Machine

If you plan to install the CommServe server on a virtual machine, the virtual machine must be configured with fast-access storage media. Ensure that the CPU and memory resources recommended in System Requirements are always available for the virtual machine.

Cluster Environment

If you plan to install the CommServe server in a cluster environment, you must install the software on the active node of the cluster first, and then on the passive nodes of the cluster. For more information, see Installing Server Packages in a Cluster Environment.

Additional cluster environment scenarios include the following:

- If you plan to configure an active-active cluster environment, you must install the CommServe server as described in Setting Up the CommServe Server in an Active-Active Cluster Environment.
- If Microsoft SQL Server is already installed on the computer where you plan to install the CommServe server, review the following requirements:
  - The user account that is configured for the SQL Server service must have permissions on the drive or parent folder where you plan to install the CommServe software.
  - The physical nodes that host the cluster server must have the same port numbers configured. For example, if you have a cluster server *VS1* and three physical computers configured to host *VS1*, then the three physical computers must have the same network TCP port numbers configured on the network interface used by *VS1*.

Disaster Recovery Environment

To review the available disaster recovery solutions, see CommServe Disaster Recovery Solutions.

Prepare the Computer for Restart

During the CommServe server installation, you might be required to restart the computer after installing the Microsoft .Net Framework and Microsoft SQL Server software. Therefore, plan the installation for a time when a restart can occur.

Determine the Configurations that Meet Your Requirements

Every environment has different requirements. Consider the following additional configurations prior to completing your installation planning:

Configure Internet Information Services (IIS)

If you plan to install the Web Server and Web Console along with the CommServe server, enable Internet Information Services (IIS) on the computer. By default, the Web Server and Web Console are automatically installed when IIS is enabled.

The Web Console and Web Server are not supported on cluster environments. If you plan to install the CommServe server on a cluster environment, either disable IIS or clear the selection of the Web Server and Web Console components during the CommServe server installation.

Configure a Floating Host Name

A floating host name is a virtual host name that is useful in scenarios when the CommServe server needs to be moved or changed at some point in time. For example, the floating name eliminates the need to redirect all clients after moving the CommServe server to a new computer (hardware refresh). For more information, see Configuring a Floating Host Name for the CommServe or MediaAgent Software.

Install the CommServe Database on an Existing SQL Server Instance

If you want to install the database on an existing SQL instance, you must configure Commvault to use the instance that you want. For more information, see Configuring an Existing SQL Instance for Server Packages.

Install Commvault in a Different Language

If you want to install the software in a different language, you can configure the installation program to list the supported language options. For more information, see Changing the Display Language of the Commvault Software on Windows Computers.

For the list of software that can be installed in a different language, see Language Support.

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CommServe Server: System Requirements

The following requirements are for the CommServe server.

Best Practice

Use the latest version of the operating system software listed in the Operating System table. Commvault software fully supports the latest version of an operating system until the vendor ends support. Newer versions of Commvault software might not install on operating systems for which vendor support has ended. For information about the Microsoft support lifecycle, go to the Microsoft Support website, *Microsoft Support Lifecycle*. For support lifecycle information for other operating systems, contact the appropriate software vendor.

Operating Systems

Windows
Microsoft Windows Server 2019 Editions
Microsoft Windows Server 2019 Core Editions
Microsoft Windows Server 2016 Editions *See Considerations for Microsoft Windows Server 2016 for more information.
Microsoft Windows Server 2012 Editions *See Considerations for Microsoft Windows Server 2012, 2012 R2, and Windows 8.x for more information.
Microsoft Windows Server 2012 R2 Editions *See Considerations for Microsoft Windows Server 2012, 2012 R2, and Windows 8.x for more information.

Cluster - Support

The software can be installed on a Cluster if clustering is supported by the above-mentioned operating systems.

For information on supported cluster types, see Clustering - Support.

Processor

All Windows-compatible processors are supported.

Hardware Specifications

The hardware requirements for CommServe installed on either physical or virtual machines is explained in Hardware Specifications for CommServe.

Note:

- The software installation requires 10 GB of disk space on the operating system drive. This space is used for temporary files copied during the installation or upgrade of the CommServe and Microsoft SQL Server software.
- For hard drive requirements details of other components (such as the Deduplication Mode), see the corresponding system requirements pages.

Database Engine

The Microsoft SQL Server application that is installed on the computer must be dedicated to support the software and cannot be shared by other applications.

Microsoft SQL Server 2019 Enterprise, Standard, and Express Editions

Microsoft SQL Server 2019 Enterprise, Standard, and Express editions are supported. Microsoft SQL Server must be manually installed. For information about pre-installing Microsoft SQL Server, see Pre-Installing the Microsoft SQL Server Software on a Non-Cluster Environment. For information about scalability (such as CPU, socket, and memory limits), performance, and other supported features, go to the Microsoft website, *Editions and supported features of Microsoft SQL Server*.

Microsoft SQL Server 2017 Enterprise, Standard, and Express Editions

Microsoft SQL Server 2017 Enterprise, Standard, and Express editions are supported. Microsoft SQL Server must be manually installed. For information about pre-installing Microsoft SQL Server, see Pre-Installing the Microsoft SQL Server Software on a Non-Cluster Environment. For information about scalability (such as CPU, socket, and memory limits), performance, and other supported features, go to the Microsoft website, *Editions and supported features of Microsoft SQL Server*.

Microsoft SQL Server 2016 Standard Edition

Microsoft SQL Server 2016 Standard edition is automatically installed during the installation of the CommServe software. Later SQL Server service packs and updates must be installed manually. You must update the SQL Server with any important updates released by Microsoft. For information about scalability (such as CPU, socket, and memory limits), performance, and other features supported by the standard edition, go to the Microsoft website, *Features Supported by the Editions of SQL Server 2016*.

If you set up the CommServe in a virtual environment and use Microsoft SQL Server 2016, set the socket count to four and the core count to 24.

Microsoft SQL Server 2016 Express Edition

Microsoft SQL Server 2016 Express edition is automatically installed during the installation of Commvault solutions packages, such as the Virtual Server Protection package. For information about the solutions packages, see Commvault Data Protection Solutions - Deployment.

The maximum database size for Microsoft SQL Server 2016 Express edition is 10 gigabytes. If your Express edition database approaches the 10 gigabyte limit, a critical event will appear in the Event Viewer. To increase the size of the database, you can upgrade to Microsoft SQL Server 2016 Standard edition. For information about upgrading your database, see Upgrading Microsoft SQL Server Express to Microsoft SQL Server 2016 Standard Edition.

Microsoft SQL Server 2014 Standard Edition

Microsoft SQL Server 2014 Standard edition is supported and must be manually installed. For information about scalability (such as CPU, socket, and memory limits), performance, and other features supported by the standard edition, go to the Microsoft website, *Features Supported by the Editions of SQL Server 2014*.

If you set up the CommServe in a virtual environment and use Microsoft SQL Server 2014, set the socket count to four and the core count to four.

Microsoft SQL Server 2012 Enterprise Edition

Microsoft SQL Server 2012 Enterprise edition with Service Pack 2 (SP2) and Cumulative Update 4 (CU4) is also supported. If you plan to use SQL Server 2012, review important recommendations listed in Considerations for SQL Server 2012.

Recommended SQL Server Settings

The database instance used by the software requires specific SQL server settings. Using the SQL Management Studio, verify the SQL properties listed below.

SQL Memory Size

Access the server properties and navigate to the **Memory** page. The maximum server memory should be 50% of the physical memory available in the computer on which the software is installed.

Server Collation

Run the sp_helpsort system stored procedure, and verify that the server default collation has the following properties:

- Character Set is 1252/ISO (default)

- Sort Order is Dictionary order, and case is Insensitive

Unicode Collation includes General Unicode, case Insensitive, width Insensitive

Service Accounts

For Service Accounts, use the same Local System account for each service and enable auto-start for SQL services.

On clustered environments, use an account with administrator privileges (such as, a member of the Administrator local group of the computer or domain).

Note:

- For SQL Server 2014, use a maximum of 4 sockets for a total not more than 16 physical cores.
- For SQL Server 2016/2017/2019, use a maximum of 4 sockets for a total not more than 24 physical cores.
- For SQL Server scheduler, use NUMAs for distributing or scheduling SPID load.
- For VMs with more than 4 sockets, SQL Server uses only the first 4 sockets and considered as a bad VM configuration.
- Each VM socket should have its own NUMA association for SQL Server Schedulers and CPUs with more than 4 per NUMA.
- SQL Server VMs should have matching, dedicated physical CPUs on the VM Host. The VMs must not be shared for best performance.
- SQL Server VMs for database IO drives should have 30 IOPS or better performance.

CommServe Database on CIFS

The CommServe SQL database is not supported on a CIFS share.

Miscellaneous

Internet Explorer

Microsoft Internet Explorer (IE) version 11.0

.NET Framework

Microsoft .NET Framework 4.6 is required and is automatically installed.

Internet Information Services IIS

By default, the Web Server and Web Console packages are installed with the CommServe. To install this software, IIS must be enabled on the CommServe computer and meet the following requirements:

- Microsoft Internet Information Services (IIS) Manager version 10.0 (on Windows 2016 only)
- Microsoft Internet Information Services (IIS) Manager version 8.0 or 8.5 (on Windows 2012 only)
- Microsoft Internet Information Services (IIS) Manager version 7.5

CommServe Name

By default, the Commvault software uses the name of the server computer (where the CommServe component is being installed) as the CommServe name. During the installation of the CommServe component, the software also allows you to specify a different CommServe name.

Note: The CommServe name cannot be "CommCell". If you change the CommServe name during installation, do not change it to "CommCell".

Java SE Platform

The software supports Java 11.

The Java version is installed automatically during the installation of this software. If you already have a system installed Java version, the software will install another instance of the supported Java version in the software installation path.

Note: Manually upgrading the Java version installed by the software is not supported. We always update the Java version with the latest security updates, so that the components using Java are free from any vulnerabilities reported by the open source community.

Microsoft Visual C++ Redistributable 2017 is Automatically Installed

Starting in Service Pack 18, Microsoft Visual C++ Redistributable 2017 (vcredist2017.exe) is automatically installed. If a computer does not have the latest Windows updates, the installation of Microsoft Visual C++ Redistributable 2017 will fail in installing Universal C Runtime.

The following Windows updates must be installed to prevent the installation failure:

KB2919355

KB2939087

KB2975061

KB2999226

Updates are not required on latest Windows operating system versions, such as Microsoft Windows 10 and Microsoft Windows Server 2016, as these versions come with the Universal C Runtime already installed.

Notes on Combined Installations

Installing more than one Commvault package on a single computer is a common practice. For example, if the computer has an Exchange and an Oracle database, you will install the Exchange Database Agent and the Oracle Agent to protect the data from both databases.

When you combine multiple functions on a single computer, the storage resources required to support the software for that computer are not essentially cumulative. This is because Commvault packages share some of the same software. As a result, combined installations require about 30 MB less disk space than installations where the software resides on separate computers.

Disclaimer

Third-party maintenance (minor) releases or service packs that are supported by the Commvault software may not be listed in our System Requirements. When possible, Commvault provides information on any known issues related to these minor releases or service packs. In some cases, these minor releases or service packs affect how the Commvault software works. Commvault software may experience changes in functionality as the result of the third-party minor release or service pack. These changes are beyond the control of Commvault. Platforms that are supported in the current version of Commvault software may not be supported in earlier versions of the software. Contact your software provider to ensure that third-party minor releases or service packs are compatible with the Commvault software.

Additional considerations regarding minimum requirements and End-of-Life policies from third-party vendors also apply.

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Configuring an Existing SQL Instance for Server Packages

By default, when you install a server package, such as the CommServe server and Web Server, for the first time on a computer, the installation program creates a dedicated Microsoft SQL Server instance for the Commvault software.

If you want to use an existing SQL Server instance that was not created by the Commvault software, you can configure the szUserSQLInstanceName registry key to specify the instance on which you want to install the server package. The instance must reside on the computer where you plan to install the server package.

Before You Begin

- You must use a named SQL Server instance. Default, unnamed SQL Server instances are not supported.
- Check the Microsoft SQL Server versions supported by the Commvault software. See the **Database Engine** section in System Requirements - CommServe.

Procedure

1. On the computer where you plan to install the server package, open the Windows **Registry Editor**.
2. In the **Registry Editor** window, expand to the **HKEY_LOCAL_MACHINE\SOFTWARE** folder.
3. Right-click the SOFTWARE parent registry key and click **New > Key**.
4. Type the following name for the new key: **GalaxyInstallerFlags**.
5. Right-click the GalaxyInstallerFlags key, click **New > String Value**, and then type **szUserSQLInstanceName**.
6. Double-click the szUserSQLInstanceNamekey, and in the **Value data** box, type the name of the SQL instance that you want to use, and then click **OK**.

   When you run the installation program, the server package is installed on the instance that you specified.

Last modified: 11/6/2019 8:53:15 PM

Pre-Installing the Microsoft SQL Server Software on a Non-Cluster Environment

Based on your environment requirements, you may need to install the SQL Server before installing Commvault server packages. In this case, you must install the SQL Server manually. By default, Commvault installs the Microsoft SQL Server 2016 Standard Edition during the installation of the CommServe software or other server packages.

Before You Begin

- Obtain the installation package for the appropriate version of Microsoft SQL Server:
  - Microsoft SQL Server 2016 Standard: Create an installation package by using the Download Manager. The installation package must include the Microsoft SQL Server and the necessary Commvault server packages, such as the CommServe or Workflow Engine. For instructions about creating the package, see Downloading Software for Windows Computers Using the Download Manager.
  - Microsoft SQL Server 2017, and 2019 Enterprise, Standard, and Express editions or higher: Contact Microsoft.
  - Microsoft SQL Server 2012 Enterprise Edition or higher: Contact Microsoft.
  - Microsoft SQL Management Studio 2016: Contact Microsoft.
- The computer on which you want to install the SQL Server must have the following properties:
  - The latest Microsoft ODBC Driver for SQL Server must be installed.
  - The computer must have a static IP address.

Procedure

Installing the SQL Server and Creating the Commvault Instance

1. Log on to the client computer as an Administrator or as a member of the Administrator group on that computer.
2. From the installation package, run **Setup.exe**.

   For example, if you created the package from the Download Manager, run the following program WinX64\ThirdParty\MSSQL\SQL_Standard_Edition\Setup.exe.

   The **SQL Server Installation Center** wizard is displayed.
3. From the left-hand navigation area, click **Installation**. Then, on the right pane, click **New SQL Server stand-alone installation or add features to an existing installation**.
4. On the **Product Key** page, click **Next**. The product key is already provided.
5. On the **License Terms** page, select the **I accept the license terms** check box and then click **Next**.
6. On the **Microsoft Update** page, determine whether you want to enable the Microsoft Update feature and then click **Next**.

   The **Install Setup Files** page is displayed, where the setup files are copied and then the installation automatically starts.
7. On the **Setup Role** page, click **Next** to proceed with the SQL Server Feature Installation.
8. On the **Feature Selection** page, from the features to install, select **Database Engine Services**, and then click **Next**.
9. On the **Instance Configuration** page, click **Named Instance**, type **Commvault**, and then click **Next**.

10. On the **Server Configuration** page, complete the following steps:
    a. In the **Services Accounts** tab, click the **Account Name** cell that corresponds to the **SQL Server Database Engine** service, and from the list, click **More** to specify the local system account. The account name for the service should display NT AUTHORITY\SYSTEM.

       Keep the default account names for the **SQL Server Agent** and **SQL Server Browser** services.
    b. Click the **Collation** tab, and make sure the collation of the TEMPDB is set to **SQL_Latin1_General_CP1_CI_AS**.
    c. Click **Next**.
11. On the **Database Engine Configuration** page, complete the following steps in the **Server Configuration** tab:
    a. Click **Mixed Mode (SQL Server authentication and Windows authentication)**.
    b. Enter and confirm the password for 'sa' SQL user in the **Enter Password** and **Confirm password** boxes.
    c. Click the **Add Current User** button.

       In the **Data Directories** and **FILESTREAM** tabs, accept the default values and then click **Next**.
12. On the **Feature Configuration Rules** page, check whether the rules ran successfully and then click **Next**.
13. On the **Ready to Install** page, verify the features to be installed and then click **Install**.

    The **Installation Progress** page is displayed indicating the installation process.
14. On the **Complete** page, click **Close**.

    The SQL Server is successfully installed.

Postinstallation Tasks

The following sections describe the tasks that you must perform to complete the Microsoft SQL Server installation:

- **Apply latest SQL Server updates**

  Install the latest cumulative updates and service packs provided by Microsoft. As a best practice, keep the SQL Server software up-to-date.
- **Install the Microsoft SQL Server Management Studio (SSMS) software**

  Go to the Microsoft website to download SSMS. Install the SSMS software on the computer where the SQL Server software is installed.
- **Tune the SQL Server memory usage**

  The maximum memory used by the SQL Server should be 50% of the physical memory available in the computer.

  Use the following steps to tune the SQL Server memory usage for Commvault:

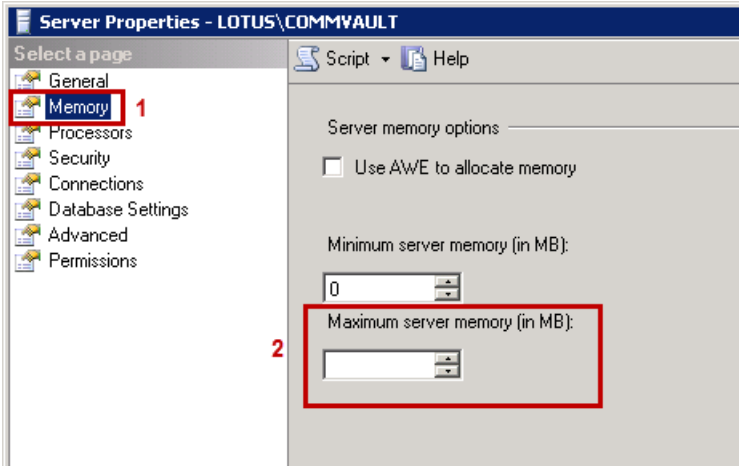
  a. On the CommServe computer, open the **Microsoft SQL Server Management Studio**.

  b. Right-click the server instance, and then click **Properties**.

  c. From the **Server Properties** dialog box, on the left pane, select the **Memory** page.

  d. In the **Maximum server memory (in MB)** box, specify 50% of the physical memory available in the computer.

  e. Click **OK**.



- **Install the server package**

  You can now install the CommServe software or the appropriate server package on the computer where you installed the SQL Server software.

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Pre-Installing the Microsoft SQL Server Software on a Cluster Environment

By default, Commvault installs the Microsoft SQL Server 2016 Standard Edition during the installation of the CommServe software or other server packages. For more information on scalability, performance, and other features supported by the standard edition, refer to the Microsoft documentation.

Based on your environment requirements, if you need to install the SQL Server before installing Commvault server packages, use the steps in this procedure to install the SQL Server manually.

Note: The Microsoft SQL Server Express Edition is not supported on clustered environments.

Use this procedure to perform the following tasks:

- Install the SQL Server in the active node and passive nodes of a cluster group.
- Create the **Commvault** instance in the cluster group.

Before You Begin

- Obtain the installation package for the appropriate version of Microsoft SQL Server:
  - Microsoft SQL Server 2016 Standard: Create an installation package by using the Download Manager. The installation package must include the Microsoft SQL Server and the necessary Commvault server packages, such as the CommServe or Workflow Engine. For instructions about creating the package, see Downloading Software for Windows Computers Using the Download Manager.
  - Microsoft SQL Server 2017 and 2019 Enterprise, Standard, and Express editions or higher: Contact Microsoft.
  - Microsoft SQL Server 2012 Enterprise Edition or higher: Contact Microsoft.
  - Microsoft SQL Management Studio 2016: Contact Microsoft.
- Review the following cluster environment requirements:
  - Verify that the latest service packs for the operating system are installed on all the nodes of the cluster group.
  - The latest Microsoft ODBC Driver for SQL Server must be installed on all the nodes of the cluster group.
  - You will need to add a Group in Active Directory, and then add a user to that group that will have full access to both nodes of the cluster. For more information on the Microsoft SQL Server Group, see http://technet.microsoft.com/en-us/library/ms345196.aspx. This account could be the same account that the cluster services run under, but must be added to a Group.
  - The cluster should be functional, and the cluster group to which you want to install Microsoft SQL Server should be configured with a disk resource. Review http://technet.microsoft.com/en-us/library/ms189910.aspx for the full set of prerequisites to installing Microsoft SQL Server on a cluster.
  - To avoid a failure of installation on Windows Server 2008 R2, install Windows Service Pack 1.

Installing the SQL Server and Creating the Commvault Instance

1. Log on to the active node of the cluster group as an Administrator or as a member of the Administrator group on that computer.
2. From the installation package that was created using the Download Manager, run the following program:

   WinX64\ThirdParty\MSSQL\SQL_Standard_Edition\Setup.exe

   The **SQL Server Installation Center** wizard is displayed.
3. In the left-hand navigation area, click **Installation**. Then, on the right-hand navigation area, click **New SQL Server**

failover cluster installation.

4. On the **Product Key** page, click **Next**. The product key is already provided.
5. On the **License Terms** page, select the **I accept the license terms** check box and then click **Next**.
6. On the **Microsoft Update** page, determine whether you want to enable the Microsoft Update feature, and then click **Next**.

   The **Install Setup Files** page is displayed, showing where the setup files are copied, and then the installation automatically starts.
7. On the **Setup Role** page, click **Next** to proceed with the SQL Server Feature Installation.
8. On the **Feature Selection** page, from the features to install, select **Database Engine Services**, and then click **Next**.
9. On the **Instance Configuration** page, complete the following steps:
   - Enter the **SQL Server Network Name**. This is the name of the CommServe client, which you will see in the CommCell Browser pane of the CommCell Console.
   - Click **Named Instance** and specify a name for the instance (for example, **Commvault**).
   - Click **Next**.
10. On the **Cluster Resource Group** page, accept the default options, and then click **Next**.
11. On the **Cluster Disk Selection** page, select the shared disks to be included in the SQL Server resource cluster group, and then click **Next**.
12. On the **Cluster Network Configuration** page, you should select, at a minimum, the **IPv4** check box.
13. If you want the SQL Server to use a specific IP address, clear the **DHCP** check box for the **IP Type** you selected, and then specify the **IP Address** and **Subnet Mask**.
14. Click **Next** to continue.
15. On the **Server Configuration** page, complete the following steps:
    a. In the **Account Name** and **Password** boxes for each SQL Server service, enter the username and password of the domain account that you used to log on to the computer.

       Note: Make sure that the user account that you specify for the SQL Server service has permissions on the drive or parent folder where you plan to install the CommServe software.

    b. Click the **Collation** tab, and then set the collation of the TEMPDB to **SQL_Latin1_General_CP1_CI_AS**.
    c. Click **Next**.
16. On the **Database Engine Configuration** page, complete the following steps in the **Server Configuration** tab:
    a. Click **Mixed Mode (SQL Server authentication and Windows authentication)**.
    b. Enter and confirm the password for 'sa' SQL user in the **Enter Password** and **Confirm password** boxes.
    c. Click the **Add Current User** button.

       In the **Data Directories** and **FILESTREAM** tabs, accept the default values and then click **Next**.
17. On the **Feature Configuration Rules** page, check whether the rules ran successfully, and then click **Next**.
18. On the **Cluster Installation Rules** page, check if the rules ran successfully, and then click **Next.**
19. On the **Ready to Install** page, verify the features to be installed, and then click **Install**.

The **Installation Progress** page is displayed.

20. On the **Complete** page, click **Close**.

    After the installation is complete on the active node, install the SQL Server on the passive nodes as follows:

    a. Log on to the passive node of the cluster group as an Administrator or as a member of the Administrator group on that computer.

    b. From the installation package that was created using the Download Manager, run the following program:

    WinX64\ThirdParty\MSSQL\SQL_Standard_Edition\Setup.exe

    The **SQL Server Installation Center** wizard is displayed.

    c. In the left-hand navigation area, click **Installation**, then click **Add node to a SQL Server failover cluster** and complete the installation on the passive node.

Postinstallation Tasks

The following sections describe the tasks that you must perform to complete the Microsoft SQL Server installation:

- **Apply latest SQL Server updates**

  Install the latest cumulative updates and service packs provided by Microsoft. As a best practice, keep the SQL Server software up-to-date.

- **Install the Microsoft SQL Server Management Studio (SSMS) software**

  Go to the Microsoft website to download SSMS. Install the SSMS software on the computer where the SQL Server software is installed.

- **Tune the SQL Server memory usage**

  The maximum memory used by the SQL Server should be 50% of the physical memory available in the computer.

  Use the following steps to tune the SQL Server memory usage for Commvault:

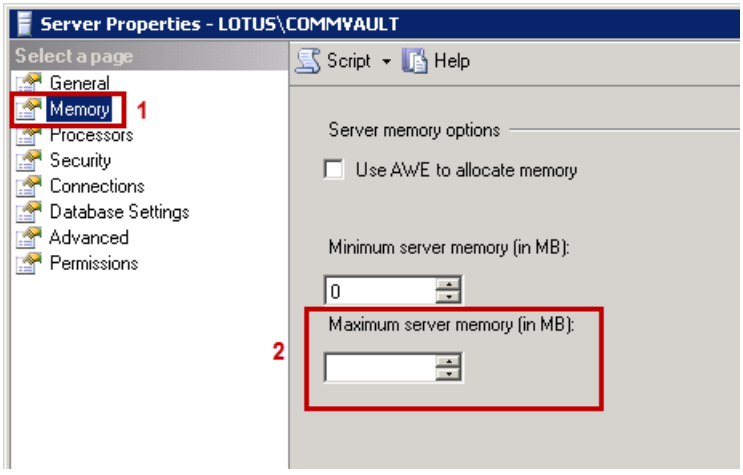
  a. On the CommServe computer, open the **Microsoft SQL Server Management Studio**.

  b. Right-click the server instance, and then click **Properties**.

  c. From the **Server Properties** dialog box, on the left pane, select the **Memory** page.

  d. In the **Maximum server memory (in MB)** box, specify 50% of the physical memory available in the computer.

  e. Click **OK**.



- **Install the server package**

  You can now install the CommServe software or the appropriate server package on the active node, and then on the passive nodes of the cluster.

Preinstallation Checklist for the CommServe Server

The CommServe computer is the command and control center of the CommCell environment.

Use this preinstallation checklist to download the software and to gather all of the information you will need during the installation.

Download the Software

Use the Download Manager application to download the latest Commvault software. During the download, the application bundles an installation package with the software you chose to download. You must use the installation package to install the CommServe software.

To download the software, see Downloading Software for Windows Computers Using the Download Manager.

Determine the Installation Location

The table below describes the appropriate machine to install the CommServe software based on your environment.

Environment	Where to install the software
Non-Clustered	Install on the computer that will host the CommServe software.
Clustered	Install on the active physical node of the cluster first, and then on the passive physical nodes. You must determine which passive nodes you want to install the software. In the event of a failure, the active node can fail over to one of the passive nodes.
Disaster Recovery	If you plan to use the disaster recovery method where the CommServe fails over to an standby host, install the CommServe on the production and standby server computers.

Review Microsoft SQL Server Considerations

The Microsoft SQL Server is automatically installed with the CommServe software. If SQL Server is already installed on the computer, the installation wizard skips the SQL Server installation.

Note: Commvault Systems, Inc. has an ISV-R royalty contract with Microsoft, allowing the Commvault software to be bundled with a full copy of the SQL Server Standard Edition. Commvault Systems, Inc. reports the license usage (per country) every month to Microsoft.

When the Microsoft SQL Server is installed as part of the CommServe installation, the Commvault software automatically sets the system administrator (sa) password. If SQL Server was installed separately and if the sa password does not match the default password set by Commvault, the installation wizard will prompt you for the password.

Additional Packages Installed with the CommServe

The table below lists the packages that are installed by default during the CommServe installation.

Packages automatically selected	Notes	Additional information
CommCell Console	The CommCell Console requires Java Runtime Environment (JRE). If JRE is not installed on the computer, it will be installed along with the CommCell Console. For more information about the JRE requirements, see System	Preinstallation Checklist for the CommCell

	Requirements - CommCell Console.	Console on Windows
File System Core	None.	Preinstallation Checklist for the Windows File System Agent
File System	Consumes a license. The File System agent requires Microsoft Visual C++. If Microsoft Visual C++ is not installed on the computer, it will be installed along with the File System agent. For more information about the requirements, see System Requirements - Windows File System Agent.	Preinstallation Checklist for the Windows File System Agent
Metrics Server	The Metrics Server package is automatically selected when you select the CommServe package. The Metrics Server package allows you to view Metrics Reports.	Preinstallation Checklist for Metrics Reporting Server
• Web Console • Web Server	The Web Server and Web Console packages are automatically selected if IIS is enabled on the computer. There are additional packages installed with the Web Server. Review the Web Server preinstallation checklist for details.	• Preinstallation Checklist for the Web Console • Preinstallation Checklist for the Web Server
Workflow Engine	None.	Preinstallation Checklist for the Workflow Engine

Gather Installation Data

Refer to the items below to gather the information that you will need during the installation. Record the information before you begin installing the software, so you can refer to it during the installation.

Commvault package to install

Install the **CommServe** package, which is listed under the **Server** category.

Destination folder for the Commvault software

By default, the software is installed in **C:\Program Files\CommVault\ContentStore**. You can change the destination folder, but it cannot be on a mapped network drive.

The installation program uses the **C:\%allusersprofile%** folder as a temporary location to copy the installation files. This location does not change, even if you choose to install the software on a drive other than **C:**.

Destination folder for the Database Engine

The database engine is the Microsoft SQL Server software. By default, the software binaries are installed in **C:\Program Files\Microsoft SQL Server**. You can change the destination folder, but it cannot be on a mapped network drive.

Note: If you plan to perform VSS enabled backups on the CommServe computer, do not install SQL Server on the system drive. VSS restores might cause system state restore issues.

Destination folder for the CommServe database

By default, the database files are installed in **C:\Program Files\CommVault\ContentStore**. The drive must have at

least 1 GB of free space. You can change the destination folder, but the folder cannot reside on the following types of drives:

- Mapped network drive
- FAT drive (as it does not allow temporary sparse files to be generated when creating the database snapshot, which is required for data verification)
- Compressed drive

Destination folder for disaster recovery files

Determine the location where you want to store the disaster recovery files. The destination folder can be a local path or a network path. If you decide to use a network path, you must have a user account with sufficient privileges to access the network.

Software cache

The CommServe cache stores the updates, service packs, and packages released by the software provider, which you can install on client computers from the CommCell Console. By default, the CommServe cache directory is stored in **C:\Program Files\CommVault\ContentStore\SoftwareCache**. The drive must have at least 5 GB of free space.

You can change the default location of the CommServe cache.

CommServe name

The default names shown below are provided by the installation wizard, but you can provide different names during installation.

- The default CommServe Client Name is the local (NetBIOS) name of the computer where the CommServe package will be installed.
- The default CommServe Host Name is the fully qualified domain name of the computer where the CommServe package will be installed.

  If the CommServe computer has multiple network interface cards, the first network interface bound to the network must be used in the CommServe installation.

Windows firewall exclusion list

If the computer has Windows Firewall turned on, you can add the Commvault programs and services to the Windows Firewall exclusion list during the installation. We recommend this configuration which enables CommCell operations across the firewall.

CommServe database (new or existing)

By default, the installation wizard creates a new CommServe database.

If you are reinstalling the CommServe package, you can use the CommServe database dump file that was created during a disaster recovery backup. This is useful if you need to perform one of the following tasks:

- Rebuild your CommServe computer as part of a disaster recovery scenario.
- Move the CommServe database to another computer as part of a hardware refresh process.

> Note: If the new computer uses different IP settings than the old CommServe computer, contact your software provider to request a new CommServe license configured with the new IP address.

If you reinstall the CommServe package with other server packages, you can also submit the database dump files for the Web Server (shown as DM2) and Workflow Engine.

Commvault ID

The Commvault ID is the email address and password associated with the CommCell administrator account. You must enter an email address and password to finish the installation process.

Important: You will create the Commvault ID and the CommCell administrator account during the installation process. During this process, a user account for the Cloud Services website is also created and associated with the CommCell environment. The Commvault ID functions as the logon credentials for the Cloud Services website.

By default, the installation program defines **admin** as the user name of the CommCell administrator account. The password associated with the **admin** user must meet the following strength requirements:

- A minimum of eight characters
- One uppercase letter
- One lowercase letter
- One number
- One special character

After the installation, you can use the **admin** credentials to access the CommCell Console, Web Console, and Command Center. You can use your Commvault ID to log on to the Cloud Services website.

Last modified: 5/20/2020 8:00:17 PM

Installing the CommServe Server

Install the CommServe server by using the installation package that was created from the Download Manager application.

If you want to install the CommServe server in a cluster environment, see Installing Server Packages in a Cluster Environment.

Before You Begin

1. Prepare your environment for the installation as described in Planning the CommServe Server Installation.
2. Download the software and gather the information that you must provide during the installation. For more information, see Preinstallation Checklist for the CommServe Server.

Procedure

1. Log on to the computer as an Administrator or as a member of the Administrator group on that computer.
2. Run **Setup.exe** from the installation package.

   The installation wizard opens.
3. On the welcome page, select the **I Agree** check box, and then proceed to the next page.
4. On the **Choose the Installation Type** page, click **Install packages on this computer**, and then proceed to the next page.
5. On the **Select Packages** page, select the **CommServe** check box, and then proceed to the next page.

   Caution: If you are going to use an existing CommServe database, select the same packages that are present in the old CommServe environment, or else the installer will fail.
6. Follow the instructions in the installation wizard.
7. If you want to use an existing CommServe database, complete the following steps on the **Database Install Option** page:
   a. Click **Use Existing Database**, select the **CommServ** check box, and then proceed to the next page.

      Note: If you are installing other server packages with the CommServe server, such as the Web Server, and you want to use an existing database, select the check box that corresponds to the database.

   b. On the **Database Dump Location** page, specify the path to the CommServe database dump file (and to any other database that you selected).

      The dump files are located in your Disaster Recovery (DR) folder, along with other DR backup files.

   c. On the **Database Restore Options** page, select one of the following options:
      - If you want the client name to be the same as the production CommServe host name instead of the one that is provided during installation, select **Rebuild Production Commserve database**.
      - If you want to use the client name and the host name provided during installation, select **Stage Commserve database**.

   d. Continue to follow the installation wizard.

8. If you need assistance on the **Commvault ID** page, refer to the following instructions:
    - If you have a Commvault ID, click **Use existing account**, and then type the email address and password associated with your account.
    - If you do not have a Commvault ID, click **Create a new account**, and then specify the account details as described in Preinstallation Checklist for the CommServe (refer to the **Commvault ID** description).
9. Continue to follow the installation wizard.

Note: To troubleshoot errors that occur before the installation summary page, check the **%allusersprofile%\Commvault Systems\Galaxy\LogFiles\Install.log** file. If the error occurs after the summary page, then check the installation logs in the s*oftware_installation_directory***Log Files** folder.

What to Do Next

See Postinstallation Tasks for the CommServe Server.

Last modified: 2/13/2020 8:46:16 PM

Postinstallation Tasks for the CommServe Server

Depending on your environment settings and requirements, you may need to perform additional tasks to complete the CommServe server installation process.

Note: Some of the tasks listed in this section must be performed from the CommCell Console. To access the CommCell Console, see Opening the CommCell Console.

Add Commvault to the Windows Firewall Exclusion List

If you did not add the Commvault programs and services to the Windows Firewall exclusion list during the installation, you can add them later by using a batch file.

For more information, see Configuring Windows Firewall to Allow CommCell Communication.

Download the Software to the CommServe Cache

If you plan to perform installations from the CommCell Console in the future, the Commvault software must be available in the CommServe cache directory. Note the following:

- If the CommServe computer has Internet connectivity, no action is required. The Commvault software is automatically downloaded to the CommServe cache as part of the installation job.
- If the CommServe server has Internet connectivity with restrictions, or if there is no internet connectivity, you can adjust the download settings in the CommCell Console. For more information, see Configure Download Settings in the CommCell Console.
- If the CommServe server does not have internet connectivity, and the download settings do not satisfy your requirements, create a new installation package with all the software needed by your organization, and then copy the package to the CommServe cache. For instructions, see the download software procedures for Windows or UNIX, Linux, and Macintosh computers.

Configure Automatic Installation of Updates

To keep the Commvault software up-to-date on the CommServe server and on the clients in your CommCell environment, you can configure the CommCell to install updates automatically. For instructions, see Configuring Automatic Service Pack Installations.

Update the Installation Package

To continue using the installation package as a media resource, verify that the package contains all of the software needed by your organization. If any software is missing, you must create a new installation package with the required software.

The installation package is also useful if you plan to install the following server packages (as they can only be installed from the package):

- Metrics Reporting
- Web Server
- Workflow Engine

To create the installation package, see Downloading Software for Windows Computers Using the Download Manager. If you need to create an installation package for UNIX computers, see Downloading Software for UNIX, Linux, and Macintosh Computers Using the Download Manager.

Note: As a best practice, keep the installation package up to date, or at the same service pack level as that of the CommServe server.

Last modified: 11/6/2019 9:04:54 PM

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COMMVAULT

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