

CARBONITE[®]
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*Carbonite Availability and
Carbonite Migrate*

*Installation, Licensing, and
Activation Guide*



Notices

Carbonite Availability and Carbonite Migrate Installation, Licensing, and Activation Guide, version 8.4.2, Wednesday, September 15, 2021

If you need technical assistance, you can contact CustomerCare. All basic configurations outlined in the online documentation will be supported through CustomerCare. Assistance and support for advanced configurations may be referred to a Pre-Sales Systems Engineer or to Professional Services.

Man pages are installed and available on Carbonite Availability and Carbonite Migrate Linux servers. These documents are bound by the same license agreement as the software installation.

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Chapter 1 Overview

Welcome to Carbonite Availability and Carbonite Migrate. Before you can begin protecting or migrating your data, you must first begin with your Carbonite Availability and Carbonite Migrate installation. There are several installation methods available to meet varying needs. See *Installation* on page 5 for complete installation details.

If you did not license and activate your servers during installation, you will have to license and activate them using the Carbonite Replication Console. There are several licensing and activation methods that depend on the Carbonite Availability and Carbonite Migrate product you are using, your license agreement, and your Internet connection (or lack thereof). See *Licensing and activation* on page 31 for complete details.

There are two ways to reuse a Carbonite Availability license. (Carbonite Migrate licenses cannot be reused.) For details on reusing a license, see *Deactivation and host-transfers* on page 44.

Chapter 2 Installation

Review the *Installation and upgrade notes* on page 6 before beginning your installation. Then choose from one of the following installation methods.

Client installation

- *Installing the Carbonite Replication Console* on page 9—Install the Carbonite Replication Console on a Windows machine.

Server installations

- *Installing on Windows using the installation wizard* on page 11—Install on a single Windows server using the installation wizard. The wizard will guide you step by step through the installation process.
- *Installing on Windows using the command line utility* on page 14—Install on a single or multiple Windows server using the command line utility. This utility automates the installation process by running an unattended, or silent, installation. It allows you to pass parameters through to the installation program instead of entering information manually through the wizard.
- *Installing on Linux* on page 23—Install on a single Linux server using the .rpm file. The .rpm file can be launched from a Linux console or from a command prompt.
- *Installing on Windows or Linux using the Carbonite Replication Console* on page 19—Once you have the Carbonite Replication Console installed on a Windows machine, you can use it to push the installation out to your other servers. The push installation is a full, client and server installation on Windows servers and a full server installation on Linux servers.

Appliance installations

- *Installing a Linux virtual recovery appliance* on page 25—Install a Linux virtual recovery appliance by installing an OVF (Open Virtualization Format) pre-packaged virtual machine or installing the software on your own pre-formatted virtual machine.

Installation and upgrade notes

Review the installation notes below before beginning an installation or upgrade.

- **Requirements**—Although the installations are shared between Carbonite Availability and Carbonite Migrate products, the requirements for each Carbonite Availability and Carbonite Migrate product and each job type within each product are unique. Be sure and review the requirements for your product and job type in that product's *User's Guide* or in the Carbonite Replication Console help.
- **Prerequisites**—Installation prerequisites depend on your operating system.
 - **Windows**—The Carbonite Availability and Carbonite Migrate Windows installation will automatically install the following software, if they are not installed already.
 - **Microsoft .NET 4.5.1 Full Setup**—This package is installed on all supported Windows operating systems.
 - **Visual C++ Runtimes**—One or more of these packages are installed on all supported Windows operating systems. The packages that may need to be installed will depend on your Windows version and what is already installed.
 - **Linux**—Each Linux server must have the following packages and services installed before you can install and use Carbonite Availability and Carbonite Migrate. See your operating system documentation for details on these packages and utilities.
 - sshd (or the package that installs sshd)
 - lsb
 - parted
 - dmidecode
 - scp
 - which
 - libnsl (only required for Red Hat Enterprise Linux, Oracle Enterprise Linux, and CentOS version 8.0 and later)
- **Operating system upgrade**—Because Carbonite Availability and Carbonite Migrate have operating system dependent files, if you are upgrading your operating system (to a new major version, not a service pack) and have Carbonite Availability and Carbonite Migrate installed, you must remove Carbonite Availability and Carbonite Migrate prior to the operating system upgrade. Uninstall Carbonite Availability and Carbonite Migrate, perform the operating system upgrade, and then reinstall Carbonite Availability and Carbonite Migrate. Also, if you have upgraded the guest Windows operating system on a Hyper-V virtual machine that you intend to protect or migrate, you must also upgrade Integration Services on that virtual machine.
- **Windows servers**—The following notes are specific to Windows servers.
 - Since Carbonite Availability and Carbonite Migrate install device drivers, it is recommended that you update your Windows Recovery Disk, before installing or making changes to your servers. For detailed instructions on creating a recovery disk, see your Windows reference manuals. Make sure that you select the option to back up the registry when building the repair disks.
 - If you are installing to a drive other than the drive which contains your system TEMP directory, the Microsoft Windows Installer will still load approximately 100 MB of data to the TEMP directory during the installation. If you do not have enough disk space on the drive that contains the TEMP directory, you may need to change where it is located.

- If during the installation you receive the message that the wizard was interrupted before the installation could be completed, you will need to delete the registry value DefaultAccessPermissions under the HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Ole key in order to install Carbonite Availability and Carbonite Migrate. This registry setting denies permissions for retrieving and setting property values. Deleting this registry setting will not have a negative impact on your server.
- **Version interoperability**—Carbonite Availability and Carbonite Migrate have different interoperability requirements for different products.
 - **Carbonite Availability**—Version 8.4 is interoperable back to version 8.2 but is restricted to the following limitations. The Carbonite Availability clients can only control the same or older releases. To accommodate rolling upgrades, older sources can connect to newer targets, but newer sources cannot connect to older targets.
 - **8.2 console**—Supports 8.2 source and target, but does not support 8.3 or 8.4 source or target
 - **8.3 console**—Supports 8.2 or 8.3 source and target as long as the target is the same or newer than the source, but does not support 8.4 source or target
 - **8.4 console**—Supports 8.2, 8.3, or 8.4 source and target as long as the target is the same or newer than the source
 - **Carbonite Migrate**—Interoperability for this product is dependent on the type of job you will be creating.
 - **Files and folders and full server jobs**—These job types are not interoperable between versions. Each source, target, and Carbonite Replication Console must be running the same version of Carbonite Migrate.
 - **Full server to ESX and full server to Hyper-V jobs**—These jobs are interoperable between versions. Version 8.4 is interoperable back to version 8.2 but is restricted to the following limitations. The Carbonite Migrate clients can only control the same or older releases. To accommodate rolling upgrades, older sources can connect to newer targets, but newer sources cannot connect to older targets.
 - **8.2 console**—Supports 8.2 source and target, but does not support 8.3 or 8.4 source or target
 - **8.3 console**—Supports 8.2 or 8.3 source and target as long as the target is the same or newer than the source, but does not support 8.4 source or target
 - **8.4 console**—Supports 8.2, 8.3, or 8.4 source and target as long as the target is the same or newer than the source
 - **Carbonite Replication Console**—Options available in a newer console will not be functional when creating jobs for servers running older versions.
- **Upgrades**—Keep in mind the following caveats when upgrading.
 - **Rolling upgrade**—When performing a rolling upgrade, update the target servers first. After the upgrade is complete, the sources will automatically reconnect to the targets. Upgrade the sources when convenient.
 - **Chained upgrades**—If you are using a chained configuration, update the last target first, then update the middle server acting as both a source and target, and update the production source last.
 - **Restore and reverse**—If you are using a configuration where the source is an older version than the target, you will not be able to restore or reverse from the newer version

target back to the older version source. You must upgrade the source to the same version as the target before restoring or reversing.

Installing the Carbonite Replication Console

Use these instructions to install the Carbonite Replication Console on a Windows machine.

1. Close any open applications.
2. Launch the .exe file that you downloaded from the web.
3. Select your installation language.
4. When the installation program begins, the Autorun appears allowing you to install software and view documentation and online resources. To install the console, select any of the product installation links.
5. Depending on your version of Windows and the components you have installed, you may be prompted to install one or more Visual C++ security updates. These components are required. If you do not see this screen, you already have these security updates.
6. Also depending on your version of Windows and the components you have installed, you may need to install or enable Microsoft .NET Framework. If you do not see this screen, your server already has the appropriate version of Microsoft .NET. You must install or enable Microsoft .NET before installing Carbonite Replication Console. Select **Yes** to install or enable Microsoft .NET and click **Continue**.
7. You will be given the opportunity to check for a more recent version of the software.
 - If you do not want to check for a later version, select **No** and click **Next**.
 - If you want to check for a later version, select **Yes** and click **Next**. The installation program will establish an Internet connection from your server to the Carbonite web site.
 - If later versions are found, they will be listed. Highlight the version you want and either download that version and install it automatically or download that version and exit the installation. (If you exit the installation, you can run the updated installation later directly from the location where you saved it.)
 - If no later versions are found, continue with the current installation.
 - If an Internet connection cannot be established, continue with the current installation or install a previously downloaded version.
8. A copy of the latest Carbonite license agreement will be downloaded from the web. If you do not have an Internet connection, the license agreement from the time the software was built will be displayed. Review the license agreement. You must accept the license agreement in order to continue with the installation program. Click **Next** to continue.
9. Review the activation notice. Most source server licenses require activation after installation for full product functionality. Failure to activate licenses that require it will cause your Carbonite Availability and Carbonite Migrate jobs to fail. Click **Next** to continue.
10. Select the **Client Components Only** installation option.
11. If desired, specify where the Carbonite Replication Console files will be installed by clicking **Change**, specifying a location, and then clicking **OK**.
12. Click **Next** to continue.
13. If the machine where you are installing has Windows Firewall enabled, you will be given the opportunity to open and reassign any firewall ports for Carbonite Replication Console use.
 - **Open only the ports that are not in use**—This option will open any firewall ports that are not in use. The ports that are opened will be assigned to Carbonite Replication Console.

- **Open all ports, reassigning the ports in use to Carbonite Replication**—This option will open all necessary firewall ports, reassigning any to Carbonite Replication Console as needed.
 - **Do not configure the Windows Firewall at this time**—This option will not modify any firewall ports. If you select this option, you will have manually modify your firewall settings for Carbonite Replication Console processing.
14. Click **Next** to continue.
 15. If you are satisfied with the selections you have made and are ready to begin copying the Carbonite Replication Console files, click **Install**.
 16. After the files have completed copying, click **Finish** to exit the installation program.

Installing on Windows using the installation wizard

Use these instructions to install on a single Windows server using the installation wizard. The wizard will guide you step by step through the installation process.

1. Close any open applications.
2. Launch the .exe file that you downloaded from the web.



If you are installing on Server Core, copy the web download file to the Server Core machine using a UNC share, and then launch the installation program from the Server Core machine. The installation screens will display on the Server Core machine.

3. When the installation program begins, the Autorun appears allowing you to install software and view online resources. Select the appropriate link for the Carbonite Availability and Carbonite Migrate product you want to install.
4. Depending on your version of Windows and the components you have installed, you may be prompted to install one or more Visual C++ security updates or Microsoft .NET Framework. These components are required. If you do not see this screen, your server already has them. Select **Install** to continue.
5. You will be given the opportunity to check for a more recent version of the software.
 - If you do not want to check for a later version, select **No** and click **Next**.
 - If you want to check for a later version, select **Yes** and click **Next**. The installation program will establish an Internet connection from your server to the Carbonite web site.
 - If later versions are found, they will be listed. Highlight the version you want and either download that version and install it automatically or download that version and exit the installation. (If you exit the installation, you can run the updated installation later directly from the location where you saved it.)
 - If no later versions are found, continue with the current installation.
 - If an Internet connection cannot be established, continue with the current installation or install a previously downloaded version.
6. A copy of the latest Carbonite license agreement will be downloaded from the web. If you do not have an Internet connection, the license agreement from the time the software was built will be displayed. Review the license agreement. You must accept the license agreement in order to continue with the installation program. Click **Next** to continue.
7. Review the activation notice. Most source server licenses require activation after installation for full product functionality. Target license activation depends on the source license you are using. Failure to activate licenses that require it will cause your Carbonite Availability and Carbonite Migrate jobs to fail. Click the FAQ link if you want more information about licensing and activation. Click **Next** to continue.
8. Select the type of installation you would like to perform on this machine.
 - **Client and Server Components**—This option installs both the client and server components. The server components are required for systems that will function as a source or target. All source servers require a license key for the service to run. Target licensing depends on the source license you are using. The client does not require a license key, but it is required to administer this and other Carbonite Availability and Carbonite Migrate servers throughout the organization.

- **Client Components Only**—This option installs only the client components. The client components do not require a license key, but are required to administer Carbonite Availability and Carbonite Migrate servers throughout the organization.
 - **Server Components Only**—This option installs only the server components. The server components are required for systems that will function as a source or target. All source servers require a license key for the service to run. Target licensing depends on the source license you are using.
-



If you are installing on Server Core, you will only be able to select the **Server Components Only** installation. You will not be able to run the client components from the Server Core machine. The client will have to be run from another machine.

9. If desired, specify where the files will be installed by clicking **Change**, specifying a location, and then clicking **OK**.
 10. Click **Next** to continue.
 11. If the machine where you are installing has Windows Firewall enabled, you will be given the opportunity to open and reassign any firewall ports for Carbonite Availability and Carbonite Migrate use.
 - **Open only the ports that are not in use**—This option will open any firewall ports that are not in use. The ports that are opened will be assigned to Carbonite Availability and Carbonite Migrate.
 - **Open all ports, reassigning the ports in use to Carbonite Replication**—This option will open all necessary firewall ports, reassigning any to Carbonite Availability and Carbonite Migrate as needed.
 - **Do not configure the Windows Firewall at this time**—This option will not modify any firewall ports. If you select this option, you will have manually modify your firewall settings for Carbonite Availability and Carbonite Migrate processing.
 12. Click **Next** to continue.
-



If you selected a client only installation, skip the remaining steps.

13. You will be prompted to enter your license key information. Your license key is a 24-character, alpha-numeric license key which applies the appropriate license to your installation. Enter your key and click **Add**.
14. You can activate your license key at the end of the installation. The activation requires Internet access. If you choose not to have the installation activate your license, you will have to activate it through the Carbonite Replication Console.
15. Click **Next** to continue.
16. Carbonite Availability and Carbonite Migrate uses system memory for Carbonite Availability and Carbonite Migrate processing. The maximum amount is dependent on the server hardware and operating system. **Specify the Amount of system memory to use**, which is the maximum amount of system memory that Carbonite Availability and Carbonite Migrate can use.
17. When the allocated Carbonite Availability and Carbonite Migrate system memory is exhausted, Carbonite Availability and Carbonite Migrate will queue to disk. If you want to disable disk queuing, select **Do not use disk queue**. Ideally, you should use disk queuing. Specify the **Queue folder**, which is the location of the disk queue. By default, the size of the disk queue is set

to **Unlimited disk queue**, which will allow the queue usage to automatically expand whenever the available disk space expands. If desired, you can select **Limit disk space for queue** and specify a fixed disk space amount. You can also specify the **Minimum free disk space**, which is the minimum amount of disk space in the specified **Queue folder** that must be available at all times. This amount should be less than the amount of physical disk space minus the disk size specified for **Limit disk space for queue**.

18. Click **Next** to continue.
19. The Carbonite Availability and Carbonite Migrate security information screen appears next. Review this information and click **Next** to continue with the installation.
20. Anti-virus and anti-malware applications can cause issues with Carbonite Availability and Carbonite Migrate functionality. You should add Carbonite Availability and Carbonite Migrate to the approved list for any of these types of applications you are running. During the installation, you may be prompted to configure Windows Defender, if it is installed, to create exclusions for the Carbonite Availability and Carbonite Migrate folders and processes. Click **Yes** to add the exclusions or **No** to skip the exclusions. See the [anti-virus knowledge base article](#) for details to manually configure Windows Defender using PowerShell.
21. If you are satisfied with the selections you have made and are ready to begin copying the Carbonite Availability and Carbonite Migrate files, click **Install**.
22. After the files have completed copying, click **Finish** to exit the installation program.



For Windows servers, if you want to use your own secure certificate, you should obtain and install a certificate from an enterprise or commercial Certificate Authority. Once a certificate is installed in the Windows certificate store, you can select it from the **Certificate Subject Name** list in the **Server Properties General** section in the Carbonite Replication Console. You will be responsible for updating an expired certificate as needed. If you want to revoke a certificate, you must remove it from the server. If a selected certificate is expired or revoked, Carbonite Availability and Carbonite Migrate will not replicate data.

Installing on Windows using the command line utility

Use these instructions to install on a single or multiple Windows server using the command line utility. This utility automates the installation process by running an unattended, or silent, installation. It allows you to pass parameters through to the installation program instead of entering information manually through the wizard.

Since the automated process does not prompt for settings, the settings are manually defined in a configuration file called DTSetup.ini. By default, DTSetup.ini contains two sections. The second section can be duplicated as many times as necessary. The first section, [Config], applies to any server not defined in the second (or duplicate of second) sections. The second (or duplicate of second) section, [MachineName], allows you to specify unique settings for individual servers. You have to modify the heading name (case-sensitive) to identify the server.

Sample DTSetup.ini

```
[Config]
DTSETUPTYPE=DTNT
DTACTIVATIONCODE=123456789012345678901234
DOUBLETAKEFOLDER="C:\Program Files\Carbonite\Replication"
QMEMORYBUFFERMAX=1024
DISKQUEUEFOLDER="C:\Program Files\Carbonite\Replication"
DISKQUEUEMAXSIZE=UNLIMITED
DISKFREESPACEMIN=50
PORT=6320
WINFW_CONFIG_OPTION=NOT_INUSE_ONLY
LICENSE_ACTIVATION_OPTION=1

[Alpha]
DTSETUPTYPE=DTNT
DTACTIVATIONCODE=987654321098765432109876
DOUBLETAKEFOLDER="C:\Program Files\Carbonite\Replication"
QMEMORYBUFFERMAX=2048
DISKQUEUEFOLDER="C:\Program Files\Carbonite\Replication"
DISKQUEUEMAXSIZE=UNLIMITED
DISKFREESPACEMIN=5000
PORT=6320
WINFW_CONFIG_OPTION=NOT_INUSE_ONLY
LICENSE_ACTIVATION_OPTION=1

[Beta]
DTSETUPTYPE=DTNT
DTACTIVATIONCODE=567890123456789012345678
DOUBLETAKEFOLDER="C:\Program Files\Carbonite\Replication"
QMEMORYBUFFERMAX=2048
DISKQUEUEFOLDER="C:\Program Files\Carbonite\Replication"
DISKQUEUEMAXSIZE=UNLIMITED
DISKFREESPACEMIN=2500
PORT=6320
WINFW_CONFIG_OPTION=NOT_INUSE_ONLY
LICENSE_ACTIVATION_OPTION=1
```

In the sample DTSetup file, the server Alpha would use the parameters defined under the [Alpha] heading. The server Beta would use the parameters defined under the [Beta] heading. All other servers would use the configuration under the [Config] section.



Do not leave any parameter blank in the Config or MachineName sections. Otherwise, a hard-coded default stored in a Carbonite Availability and Carbonite Migrate .dll file will be used.

Review the following table to understand the different parameters available in DTSetup.ini.

DTSetupType

- **DTNT**—Both the Carbonite Availability and Carbonite Migrate server and client components will be installed.
- **DTCO**—Only the Carbonite Availability and Carbonite Migrate client components will be installed.
- **DTSO**—Only the Carbonite Availability and Carbonite Migrate server components will be installed.

If you are installing on Server Core or Windows Hyper-V Server (standalone), the setup type will be server components only regardless of your setting.

DTActivationCode

A 24 character, alpha-numeric license key which applies the appropriate license to the server. Multiple license keys can be separated by a semi-colon.

DoubleTakeFolder

Any valid path specifying the location of the Carbonite Availability and Carbonite Migrate files

QMemoryBufferMax

Any integer representing the amount of system memory, in MB, that Carbonite Availability and Carbonite Migrate can use

DiskQueueFolder

Any valid path to the location of the disk-based queue

DiskQueueMaxSize

Any integer representing the amount of disk space, in MB, to use for disk-based queuing or the keyword **UNLIMITED** which will allow the queue usage to automatically expand whenever the available disk space expands

DiskFreeSpaceMin

Any integer representing the amount of disk space, in MB, that must remain free at all times

Port

Any integer between 1024 and 65535 that identifies the primary port used for Carbonite Availability and Carbonite Migrate communications

WINFW_CONFIG_OPTION

- **NOT_INUSE_ONLY**—Open any firewall ports that are not in use. The ports that are opened will be assigned to Carbonite Availability and Carbonite Migrate
- **ALL**—Open all necessary firewall ports, reassigning any to Carbonite Availability and Carbonite Migrate as needed.

- **NONE**—Do not modify any firewall ports. You will have manually modify your firewall settings for Carbonite Availability and Carbonite Migrate processing.

LICENSE_ACTIVATION_OPTION

- **1**—Activate the specified license keys at the end of the installation. You must have Internet access from the machine where you are running this installation
 - **0**—Do not activate the specified license keys at the end of the installation. You will have to activate your licenses through the Carbonite Replication Console.
-



You must have Microsoft .NET installed or enabled (depending on your operating system) on the server before starting the automatic installation.

If you are not using the built-in administrator account, User Access Control will prompt you to confirm you want to install Carbonite Availability and Carbonite Migrate. To work around this issue, use the built-in administrator account when you are installing to each server. You may also disable User Access Control, if that is acceptable for your environment.

Installing or upgrading automatically to a local machine

1. Create a temporary installation directory on the server. For example, create c:\temp_install.
2. If you downloaded your software from the web, unzip the .exe file that you downloaded to another temporary directory.
3. Copy the files from the \setup\dt\x64 directory to your temporary installation directory.
4. Remove the read-only attributes from the files in the temporary installation directory.
5. Make a backup copy of the default DTSetup.ini file in the temporary installation directory.
6. Edit DTSetup.ini as needed using the values described in the previous table.
7. Run the following case-sensitive command from the temporary installation directory.

```
setup /s /v"DTSETUPINI="c:\temp_install\DTSetup.ini" /qn"
```



The command must be run from the temporary installation directory as well as specifying the temporary installation directory for the .ini file.

Spacing is critical with this command. A space should precede /s, /v, and /qn but should not appear anywhere else for the command to work correctly.

Installing or upgrading automatically to a remote machine

1. Create a temporary installation directory on the primary site server. For example, create z:\temp_install.
2. Share the temporary installation directory.
3. If you downloaded your software from the web, unzip the .exe file that you downloaded to another temporary directory.
4. Copy the files from the \setup\dt\x64 directory to your temporary installation directory.
5. Remove the read-only attributes from the files in the shared temporary installation directory.
6. Make a backup copy of the default DTSetup.ini file in the shared temporary installation directory.
7. Edit DTSetup.ini as needed using the values described in the previous table.
8. From each server where you want to install Carbonite Availability and Carbonite Migrate, map a drive to the shared temporary installation directory. For example, you might map your m: drive to the share.
9. Run the following case-sensitive command from the mapped drive.

```
setup /s /v"DTSETUPINI=\"m:\DTSetup.ini\" /qn"
```



The command must be run from the shared drive as well as specifying that shared drive for the .ini file.

Spacing is critical with this command. A space should precede /s, /v, and /qn but should not appear anywhere else for the command to work correctly.

```
C:\>net use m: \\server_name\share
The command completed successfully
C:\>M:
M:\>setup /s /v"DTSETUPINI=\"m:\DTSetup.ini\" /qn"
```



For Windows servers, if you want to use your own secure certificate, you should obtain and install a certificate from an enterprise or commercial Certificate Authority. Once a certificate is installed in the Windows certificate store, you can select it from the **Certificate Subject Name** list in the **Server Properties General** section in the Carbonite Replication Console. You will be responsible for updating an expired certificate as needed. If you want to revoke a certificate, you must remove it from the server. If a selected certificate is expired or revoked, Carbonite Availability and Carbonite Migrate will not replicate data.

Installing on Windows or Linux using the Carbonite Replication Console

Once you have the Carbonite Replication Console installed on a Windows machine, you can use it to push the installation out to your other servers. The push installation is a full, client and server installation on Windows servers and a full server installation on Linux servers.



Keep in mind the following items for Windows servers.

- If you are using the Carbonite Replication Console to push installations out to your Windows servers, you will have to open firewall ports for WMI (Windows Management Instrumentation), which uses RPC (Remote Procedure Call). By default, RPC will use ports at random above 1024, and these ports must be open on your firewall. RPC ports can be configured to a specific range by specific registry changes and a reboot. See the [Microsoft Knowledge Base article 154596](#) for instructions. Additionally, you will need to open firewall ports for SMB (server message block) communications which uses ports 135-139 and port 445, and you will need to open File and Printer Sharing. As an alternative, you can disable the Windows firewall temporarily until the push installations are complete.
- Because the installation is pushed to your server using an administrative share, you must perform the installation with a domain administrator account. You will get access denied errors if you are using a local account.

Keep in mind the following items for Linux servers.

- The push installation process uses a combination of SSH (secure shell) and SCP (secure copy) to copy the installation binary files and execute them. SCP is not installed by default on certain configurations of version 6.x of Red Hat Enterprise Linux, Oracle Enterprise Linux, and CentOS. You will need to install it manually to use the push installation process. See your Linux documentation for installation details.
- You can use a non-root user to perform the push installation, as long as the account has sudo permissions to dpkg.
- You can only push the installation process. You cannot push an upgrade.

-
1. If you are going to be installing on Linux servers, you must copy the Linux .deb or .rpm files from your download to a \Linux subdirectory in your Carbonite Replication Console installation location. By default the console installation location is \Program Files\Carbonite\Replication. Make sure you only have a single version of Linux installation files. The push installation cannot determine which version to install if there are multiple versions in the \Linux subdirectory.
 2. Add the servers where you want to install Carbonite Availability and Carbonite Migrate to your console session.
 3. From the **Servers** page, highlight all of the servers where you want to install Carbonite Availability and Carbonite Migrate, and select **Install** from the toolbar.
 4. Each source server needs a license key before you can create a job. Target licenses depend on the source license you are using. If you are upgrading and your server already has a license key that is valid for the current version, you can either skip this step to use the existing license key or you can complete this step to replace the existing license key.

- a. If you have a single license key that can be used on multiple servers, such as a site license or an evaluation key, highlight all of the servers where you want to apply the same license key and click **Set License keys**. If you have unique license keys for each of your servers, highlight just one server and click **Set License keys**.
 - b. Type in your license key or click **Choose from inventory** to open the **License Keys** dialog box where you can select the license key you want to apply.
 - c. Click **OK** to configure the installation or upgrade for the selected license key.
 - d. Repeat steps a-c for any additional servers that are using unique license keys.
5. Set your **Default Installation Options**, which are used for both Windows and Linux installations.
- **Activate online after install completes**—Specify if you want to activate your Carbonite Availability and Carbonite Migrate licenses at the end of the installation. The activation requires Internet access from the console machine or the machine you are installing to. Activation will be attempted from the console machine first and if that fails, it will be attempted from the machine you are installing to. If you choose not to have the installation activate your licenses, you will have to activate them through the console license inventory or the server's properties page.
 - **Location of install folders**—Specify the parent directory location where the installation files are located. The parent directory can be local on your console machine or a UNC path.
 - **Windows**—Specify the parent directory where the Windows installation file is located. The default location is where the Carbonite Replication Console is installed, which is \Program Files\Carbonite\Replication. The console will automatically use the \x64 subdirectory which is populated with the Windows installation files when you installed the console. If you want to use a different location, you must copy the \x64 folder and its installation file to the different parent directory that you specify.
 - **Linux**—Specify the parent directory where the Linux installation files are located. The default location is where the Carbonite Replication Console is installed, which is \Program Files\Carbonite\Replication. The console will automatically use the \Linux subdirectory, however that location will not be populated with the Linux installation files when you installed the console. You must copy the Linux .deb or .rpm files from your download to the \Linux subdirectory in your Carbonite Replication Console installation location. Make sure you only have a single version of Linux installation files. The push installation cannot determine which version to install if there are multiple versions in the \Linux subdirectory. If you want to use a different location, you must copy the \Linux folder and its installation files to the different parent directory that you specify.
6. If you are installing on Windows servers, specify your **Default Windows Installation Options**.
- **Temporary folder for installation package**—Specify a temporary location on the server where you are installing Carbonite Availability and Carbonite Migrate where the installation files will be copied and run.
 - **Installation folder**—Specify the location where you want to install Carbonite Availability and Carbonite Migrate on each server. This field is not used if you are upgrading an existing version of Carbonite Availability and Carbonite Migrate. In that case, the existing installation folder will be used.
 - **Queue folder**—Specify the location where you want to store the Carbonite Availability and Carbonite Migrate disk queue on each server.

- **Amount of system memory to use**—Specify the maximum amount of memory, in MB, that can be used for Carbonite Availability and Carbonite Migrate processing.
 - **Minimum free disk space**—This is the minimum amount of disk space in the specified **Queue folder** that must be available at all times. This amount should be less than the amount of physical disk space minus the disk size specified for **Limit disk space for queue**.
 - **Do not use disk queue**—This option will disable disk queuing. When system memory has been exhausted, Carbonite Availability and Carbonite Migrate will automatically begin the auto-disconnect process.
 - **Unlimited disk queue**—Carbonite Availability and Carbonite Migrate will use an unlimited amount of disk space in the specified **Queue folder** for disk queuing, which will allow the queue usage to automatically expand whenever the available disk space expands. When the available disk space has been used, Carbonite Availability and Carbonite Migrate will automatically begin the auto-disconnect process.
 - **Limit disk space for queue**—This option will allow you to specify a fixed amount of disk space, in MB, in the specified **Queue folder** that can be used for Carbonite Availability and Carbonite Migrate disk queuing. When the disk space limit is reached, Carbonite Availability and Carbonite Migrate will automatically begin the auto-disconnect process.
-



If the servers you are pushing to do not have a C drive, make sure you update the folder fields because the Carbonite Replication Console will not validate that the fields are set to a volume that does not exist and the installation will not start.

7. If you are installing on Linux servers, specify your **Default Linux Installation Options**.
 - **Temporary folder for installation package**—Specify a temporary location on the server where you are installing Carbonite Availability and Carbonite Migrate where the installation files will be copied and run.
 8. Linux installations will occur immediately. If you are installing on Windows servers, specify your **Installation Schedule**.
 - **Install now**—Select this option to complete the installation immediately.
 - **Install later**—Select this option and specify a date and time to complete the installation then.
 - **Reboot automatically if needed**—If selected, the server will automatically reboot after the installation, if a reboot is required.
 9. After you have configured your installation options, click **Install**.
-



During an upgrade, any existing jobs on the **Jobs** page may disappear and then reappear. This is expected while certain Carbonite Availability and Carbonite Migrate files are updated.

If there are errors with the push installation before the installation is executed on the server, check the console log on the machine where you are pushing the installation from. Once the installation execution has started, the installation log will be written on the server where you are installing and then copied back to the console machine. The installation log file will contain the server name, date, and time in the following format: servername YYYY-MM-DD_HH-mm.ss.log. The date and time is when the installation was attempted.

You can set your own default settings for the three default installation sections from the console's **Options** page. To access these console options, select **Options** from the toolbar. The defaults you set on the **Options** page will appear each time you open the **Install** page. You can then modify any of the settings on the **Install** page before beginning the installation.

If you want to use your own secure certificate, see the instructions for your operating system.

- **Windows**—For Windows servers, if you want to use your own secure certificate, you should obtain and install a certificate from an enterprise or commercial Certificate Authority. Once a certificate is installed in the Windows certificate store, you can select it from the **Certificate Subject Name** list in the **Server Properties General** section in the Carbonite Replication Console. You will be responsible for updating an expired certificate as needed. If you want to revoke a certificate, you must remove it from the server. If a selected certificate is expired or revoked, Carbonite Availability and Carbonite Migrate will not replicate data.
 - **Linux**—If you want to use your own secure certificate, you should obtain a certificate from an enterprise or commercial Certificate Authority. Once a certificate is available on your Linux server, you will need to update `/opt/dbtk/etc/dtssl.conf` with the path and file name of your certificate and the certificate password, if your certificate file has a password. If you want to enable verification, you will need to identify your PEM file or the directory that contains all certificates in the verification chain. See the instructions in the `dtssl.conf` file. You will be responsible for updating an expired certificate as needed. If you want to revoke a certificate, you must remove it from the server. If a specified certificate is expired or revoked, Carbonite Availability and Carbonite Migrate will not replicate data.
-

Installing on Linux

Use these instructions to install on a single Linux server using the .rpm file. The .rpm file can be launched from a Linux console or from a command prompt.



The instructions below are formatted for Red Hat and similar operating systems. You may need to modify the commands to fit your operating system. For example, on Ubuntu you should use `dpkg -i` to install the .deb file. See your operating system reference documentation for appropriate installation commands for your server.

1. You can install the software from the user interface or from the command line.
 - **UI installation**—Double-click the .rpm file from the UI and confirm the installation or upgrade.
 - **Command line installation**—Use the following steps to install from a command line.
 - a. Make sure you are a root/uid 0 user. You can also use a non-root user to perform the installation, as long as the account has sudo permissions to dpkg.
 - b. Go to a shell prompt by launching a terminal application from your UI or logging in via the Linux virtual console.
 - c. If you are installing from a DVD, mount the file ISO 9660 or UDF file system.
 - d. To run the installation use `rpm -i` with the installation file name to install the software or `rpm -U` with the installation file name to upgrade the software.

A successful installation returns you to the shell prompt.

2. After the installation on the Linux server is complete, you will need to review and accept the license agreement.
 - a. Run the `DTSetup` command from the shell prompt to start DTSetup. The command is case-sensitive.



Do not run DTSetup using the `sudo` command. Use a real root shell to launch DTSetup instead, either by logging in as root on the console or by using the login session of a non-privileged user to run `su -` to start a root shell.

- b. Review the license agreement and accept the terms of agreement by typing `yes`.

Once the license has been accepted, you can exit DTSetup. For more information, on DTSetup, see the *Linux User's Guide*.



If you want to use your own secure certificate, you should obtain a certificate from an enterprise or commercial Certificate Authority. Once a certificate is available on your Linux server, you will need to update `/opt/dbtk/etc/dtssl.conf` with the path and file name of your certificate and the certificate password, if your certificate file has a password. If you want to enable verification, you will need to identify your PEM file or the directory that contains all certificates in the verification chain. See the instructions in the `dtssl.conf` file. You will be responsible for updating an expired certificate as needed. If you want to revoke a certificate, you must remove it from the server. If a specified certificate is expired or revoked, Carbonite Availability and Carbonite Migrate will not replicate data.

If you need to uninstall Carbonite Availability and Carbonite Migrate from your Linux server, make sure you are a root/uid 0 user and remove (erase) Carbonite Availability and Carbonite Migrate by using the command `rpm - e DoubleTake`. A successful uninstall returns you to the shell prompt. After completing the uninstall, some files may not be completely removed until the server has been rebooted.

Installing a Linux virtual recovery appliance

Use these instructions to install a Linux virtual recovery appliance by installing an OVF (Open Virtualization Format) pre-packaged virtual machine or installing the software on your own pre-formatted virtual machine.



If you already have an existing Linux virtual recovery appliance that you want to upgrade, use the instructions *Installing the appliance manually* on page 27 to install the latest .deb files on your existing appliance.

Use the instructions below as a general guideline. The options and workflow are slightly different when deploying directly on ESX versus using a vSphere client or a web client.

Deploying the OVF virtual machine

1. Locate the .ova installation file. For example, for version 8.4.2, the installation file name might be dtvra_8.4.2.1124.0.ova. If necessary, copy this file to a location that is accessible from your vSphere client.
2. From your vSphere client, select the root of your tree, select **File, Deploy OVF Template**, and specify the dtvra_<version_number>.ova file. Click **Next** to continue.
3. Review the OVF template details and click **Next** to continue.
4. If you are connected to a vCenter, review the Carbonite license agreement. You must accept the license agreement by clicking **Accept**. If you do not have vCenter, you will need to accept the license agreement when the appliance first starts. Click **Next** to continue.
5. Specify the name and location where you want to install the appliance. This should be the same datacenter where your target ESX host is located. Click **Next** to continue.
6. Select the ESX host where you want to install the appliance. This is your target ESX host. Click **Next** to continue.
7. If desired, select the resource pool where you want to install the appliance. You will not have this option if you do not have resource pools. Click **Next** to continue.
8. Select the datastore where you want to store the appliance files. Make sure the datastore has at least 16 GB of space available. Click **Next** to continue.
9. Select the type of disk to create. The names you see displayed will be dependent on your vSphere client.
 - **Flat or Thick Provision Lazy Zeroed**—This disk type allocates the full amount of the disk space immediately, but does not initialize the disk space to zero until it is needed.
 - **Thick or Thick Provision Eager Zeroed**—This disk type allocates the full amount of the disk space immediately, initializing all of the allocated disk space to zero.
 - **Thin Provision**—This disk type does not allocate the disk space until it is needed.
10. Click **Next** to continue.
11. If your selected ESX host has multiple networks, map the network on the appliance to a network on your ESX host, and click **Next** to continue.
12. If you are connected to a vCenter, assign the virtual machine and networking properties. If you do not have vCenter, you will need to configure these settings after the appliance starts.

- **Root password**—Set a password for the root login. If you do not make a change, the default password will be used. The default password is carbonite.
 - **Time zone setting**—Select the virtual machine's time zone. The default setting is UTC.
 - **Hostname**—Specify the hostname or full qualified domain name to assign to the virtual machine. If you leave this option blank, Carbonite Availability and Carbonite Migrate will use reverse DNS lookup for the identification.
 - **Default gateway**—Specify the virtual machine's default gateway.
 - **DNS server**—Specify the virtual machine's DNS server.
 - **Network IP address**—Specify the IP address to assign to the virtual machine. You must use an IPv4 address.
 - **Network subnet mask**—Specify the subnet mask for the assigned IP address.
13. Click **Next** to continue.
 14. Review the **Deployment settings**. If you want to make any changes, click **Back**. If not, enable the **Power on after deployment** option, and click **Finish**.
 15. After the appliance deployment is complete, click **Close**.
 16. If you did not use vCenter, log in to the appliance to finish configuring the settings you could not complete above. You will have ten minutes to complete the configuration process. If you do not complete it within that time period, reboot the appliance and start again.

After the appliance has been installed, you will need to install the Carbonite Replication Console on a Windows machine, if you haven't already. See the instructions *Installing the Carbonite Replication Console* on page 9. Make sure you select the **Client Components Only** installation option.



Once the appliance has been installed and configured, you should not need to access or use it. However, if you need to change any network settings, you can modify them using the **Configure Network** menu on the appliance.

You should not change the hostname after deployment because the name change will not be persisted if the appliance is rebooted.

The appliance menu runs as root, so make sure you take advantage of VMware security to restrict access to the appliance. See your VMware documentation for details on limiting access to the appliance's console.

If you want to use your own secure certificate, you should obtain a certificate from an enterprise or commercial Certificate Authority. Once a certificate is available on your Linux server, you will need to update `/opt/dbtk/etc/dtssl.conf` with the path and file name of your certificate and the certificate password, if your certificate file has a password. If you want to enable verification, you will need to identify your PEM file or the directory that contains all certificates in the verification chain. See the instructions in the `dtssl.conf` file. You will be responsible for updating an expired certificate as needed. If you want to revoke a certificate, you must remove it from the server. If a specified certificate is expired or revoked, Carbonite Availability and Carbonite Migrate will not replicate data.

Installing the appliance manually

Before you begin the manual appliance installation, you must have an existing VMware hosted virtual machine that meets the following requirements.

- **Operating system**—The virtual machine must be running a 64-bit version of one of the following operating systems.
 - Ubuntu version 18.04.1 through 18.04.3
 - Red Hat Enterprise Linux or CentOS version 7.7 through 7.9
 - Red Hat Enterprise Linux or CentOS version 8.2 through 8.4
 - SUSE Linux Enterprise version 12.3 through 12.5



A SLES appliance can only protect source servers running a Carbonite Availability and Carbonite Migrate supported SLES version. You cannot protect other Linux operating systems to a SLES appliance.

You cannot protect Btrfs to a Red Hat or CentOS appliance.

- **Memory**—The virtual machine must have at least 4 GB of virtualized physical RAM.
- **CPUs**—The virtual machine must have at least two CPUs (two virtual sockets, not two virtual cores).
- **Disk space**—The virtual machine must have at least 16 GB of disk space available.
- **SCSI controller**—The virtual machine must be configured to use LSI Logic Parallel controllers. For every 10 source disks you are protecting, you should add another controller.
- **Networking**—The virtual machine must have a valid, working network configuration, including DNS.
- **Function**—The virtual machine must be dedicated to Carbonite Availability and Carbonite Migrate processing only. Do not use the virtual machine for any other activity (web server, database server, and so on).
- **Volume group name**—If your virtual machine is running Red Hat or CentOS and is using an LVM setup, you must make sure the volume group on the virtual machine is using a unique name. If the same volume group name is used as any volume group name from a protected source, failover will fail because of a name conflict. Refer to your Red Hat documentation for details on renaming a volume group.
- **SELinux policy**—SELinux is supported on the source and appliance, except for SLES 11.x sources. If you are using a SLES 11.x source, then SELinux must be disabled on the target appliance.
- **Packages**—You will need specific packages installed on your appliance depending on the operating system of your source servers.
 - **Ext**—If the source server you will be protecting has the ext file system, you must have the e2fsprogs package on your appliance.
 - **Xfs**—If the source server you will be protecting has the xfs file system, you must have the xfsprogs package on your appliance.
 - **LVM**—If the source server you will be protecting has an LVM setup, you must have the lvm2 package on your appliance.

- **Btrfs**—If the source server you will be protecting has the Btrfs file system and you are using an Ubuntu appliance, the appliance must have the btrfs-tools package. If the source server you are protecting is SLES 12.x with Btrfs and you are using a SLES appliance, the btrfsprogs package should already be on the SLES appliance by default. You cannot protect Btrfs to a Red Hat or CentOS appliance.

Make sure you review the *Linux User's Guide* for any other requirements not specifically defined here.

1. Locate the .deb or .rpm installation file either on your Carbonite Availability and Carbonite Migrate DVD or from the location where you downloaded it. For example, for version 8.4.2, the installation file might be doubletake_8.4.2.1124.0_amd64.deb. If necessary, copy the installation file to a location that is accessible from your virtual machine.
2. Install the .deb or .rpm file on your virtual machine.

After the appliance has been installed, you will need to install the Carbonite Replication Console on a Windows machine, if you haven't already. See the instructions *Installing the Carbonite Replication Console* on page 9. Make sure you select the **Client Components Only** installation option.



If you want to use your own secure certificate, you should obtain a certificate from an enterprise or commercial Certificate Authority. Once a certificate is available on your Linux server, you will need to update `/opt/dbtk/etc/dtssl.conf` with the path and file name of your certificate and the certificate password, if your certificate file has a password. If you want to enable verification, you will need to identify your PEM file or the directory that contains all certificates in the verification chain. See the instructions in the `dtssl.conf` file. You will be responsible for updating an expired certificate as needed. If you want to revoke a certificate, you must remove it from the server. If a specified certificate is expired or revoked, Carbonite Availability and Carbonite Migrate will not replicate data.

Uninstalling

There are multiple processes you can use to uninstall.



Do not uninstall Carbonite Availability and Carbonite Migrate on a server that has an active job. You should delete the job before uninstalling and then re-create the job after installing.

- **Windows installations**—Use one of the following methods for uninstalling Carbonite Availability and Carbonite Migrate on Windows.
 - **Windows Programs and Features**—You can uninstall from individual servers using Windows Control Panel, Programs and Features. Highlight **Carbonite Replication** and click **Uninstall**. Follow the on-screen prompts to keep or remove components as desired.
 - **Carbonite Replication Console**—You can uninstall from one or more servers using the Carbonite Replication Console. On the **Servers** page, highlight the servers you want to uninstall from and click **Uninstall** in the toolbar.
 - **PowerShell**—You can use the Carbonite Availability and Carbonite Migrate PowerShell module to uninstall from one or more servers using the cmdlet `Uninstall-DoubleTake - RemoteServer <Server_Name>`. See the latest PowerShell documentation in the documentation library for more details on using the Carbonite Availability and Carbonite Migrate PowerShell module.
 - **Command line**—You can uninstall from a command line using the original setup.exe that you used to install with or using the Windows Installer command line.
 - **Carbonite Availability and Carbonite Migrate setup**—Use this option if you want to uninstall using the same setup.exe that you used to install.
 1. Open a command prompt and go to the \X64 directory where you have Carbonite Availability and Carbonite Migrate installed. By default, this will be `\Program Files\Carbonite\Replication\X64`.
 2. Enter the command `setup.exe /x /s /v /qn`. Spacing is critical with this command. A space should precede `/x /s`, and `/v`. There should be no space before `/qn`.
 - **Windows Installer**—Use this option if you want to uninstall using Windows Installer and the Carbonite Availability and Carbonite Migrate unique installation ID.
 1. Open the Windows registry and locate `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall`.
 2. Right-click on that registry folder and select **Find**.
 3. Search for the name Carbonite Replication. The search results should locate a registry key with an entry called **DisplayName** with the value Carbonite Replication.
 4. In that same registry key where you found the Carbonite Replication **DisplayName**, locate the **ModifyPath** entry.
 5. Copy the value of the **ModifyPath** entry. For example, you might have the following **ModifyPath** value.
`MsiExec.exe /X{5F728CBD-52DA-4B9F-AB20-172C5D025F8C}`

6. Once you have copied the value of the **ModifyPath** entry, go to **Start, Run** and enter the following command using the copied text and appending a space followed by /qn. For example, your command might be the following.

```
MsiExec.exe /X{5F728CBD-52DA-4B9F-AB20-172C5D025F8C} /qn
```

You can reuse the same command on other Carbonite Availability and Carbonite Migrate servers as long as the other servers have the same major and minor version number (the first two numbers of the Carbonite Availability and Carbonite Migrate version, for example 8.4).



If you want to use either of the command line options remotely, you can pass in the command to the Invoke-Command PowerShell cmdlet, which allows you to specify a remote machine. For example, you may use Invoke-Command -ComputerName <computer_name> -ScriptBlock { Invoke-expression "C:\Program Files\Carbonite\Replication\X64\setup.exe /x /s /v/qn"} or Invoke-Command -ComputerName <computer_name> -ScriptBlock { Invoke-expression "MsiExec.exe /X'{5F728CBD-52DA-4B9F-AB20-172C5D025F8C}' /qn". (The ID used in the second example must be escaped with ' in order for the curly brace to be evaluated properly.)

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- **Linux installations**—Use one of the following methods for uninstalling on Linux.
 - **Linux shell prompt**—You can uninstall from individual servers from the Linux shell prompt. Determine your package by using rpm -qa | grep DoubleTake or dpkg -l | grep DoubleTake. Then use the resulting package name to remove Carbonite Availability and Carbonite Migrate. Use a superuser and uninstall using rpm -e package_name or dpkg -P package_name. For example, you may use rpm -e DoubleTake-8.4.2.1124.0-1.x86_64 or dpkg -P doubletake_8.4.2.1124.0_amd64.
 - **Carbonite Replication Console**—You can uninstall from one or more servers using the Carbonite Replication Console. On the **Servers** page, highlight the servers you want to uninstall from and click **Uninstall** in the toolbar.
 - **PowerShell**—You can use the Carbonite Availability and Carbonite Migrate PowerShell module to uninstall from one or more servers using the cmdlet Uninstall-DoubleTake -RemoteServer <Server_Name>. See the latest PowerShell documentation in the documentation library for more details on using the Carbonite Availability and Carbonite Migrate PowerShell module.

Chapter 3 Licensing and activation

If you did not license and activate your servers during installation, you will have to license and activate them using the Carbonite Replication Console. There are several licensing and activation methods that depend on the Carbonite Availability and Carbonite Migrate product you are using, your license agreement, and your Internet connection (or lack thereof).

- **Licensing**—You can manage your licenses as well as apply them to servers using the Carbonite Replication Console.
 - *Managing the license inventory* on page 33—You can centrally manage your Carbonite Availability and Carbonite Migrate licenses through the license inventory feature in the Carbonite Replication Console. Ideally, you should select one machine in your organization where you want to maintain the license inventory because the license inventory does not communicate between machines.
 - *Licensing a server* on page 36—If you did not license your server during the installation, you can apply a Carbonite Availability and Carbonite Migrate license using the console.
- **Activation**—Review *Licensing and activation terminology* on page 32 for details on the amount of time you have to activate your license. When you are ready to activate your licenses, you can chose to activate them one at a time or in groups.
 - *Activating a single license* on page 38—Activate a license on a single server. You can repeat this process for other servers.
 - *Activating multiple licenses* on page 41—Activate licenses on more than one server.



If you are participating in the Carbonite On Demand program, your licensing and activation is different. For basic information, see *Preparing a target server for On Demand usage* on page 43. For complete details, see the help link in the On Demand web portal.

Licensing and activation terminology

Review the following lists to help you understand the licensing and activation terminology that Carbonite Availability and Carbonite Migrate uses. You will also find activation information below.

- **Terminology**—The following licensing and activation terms are used in the Carbonite Availability and Carbonite Migrate products. For definitions of other Carbonite Availability and Carbonite Migrate terms, such as source, target, appliance, and so on, see the documentation for your product.
 - **Serial number**—This is a unique identifier assigned to your organization. It associates your organization to your license keys.
 - **License Key**—This is the key that you receive when you buy or upgrade Carbonite Availability and Carbonite Migrate. You may receive one or more keys depending on the Carbonite Availability and Carbonite Migrate product you have purchased and your server operating systems.
 - **Activation Key**—This is the key that activates the license on a particular server. Once a license key is activated, it cannot be used on any other server without first deactivating from the server where it is currently activated.
- **Servers that need to be licensed**—All source servers need to be licensed. Target server licensing, including Windows or Linux virtual recovery appliances on an ESX host, depends on the source license you are using. A Carbonite Availability and Carbonite Migrate Reporting Service server does not need to be licensed.
- **Licenses that need to be activated and time period for activation**—Not all licenses require activation. For example, an evaluation license does not need to be activated. If your license requires activation, the amount of time you have to activate your license depends on the product you are using.
 - **Carbonite Availability**—For those Carbonite Availability licenses that require activation, you have 14 days to activate the license. Any jobs created with a license that has not been activated will automatically stop after the 14 day grace period has expired.
 - **Carbonite Migrate**—Carbonite Migrate licenses do not have a grace period. Your source licenses must be activated and they must be activated before they can be used to create a job. Once a source license is activated, you will have a specific number of days (generally 30 days) to complete your migration, depending on your license type.

Managing the license inventory

You can centrally manage your Carbonite Availability and Carbonite Migrate licenses through the license inventory feature in the Carbonite Replication Console. Ideally, you should select one machine in your organization where you want to maintain the license inventory because the license inventory does not communicate between machines.

By default, the license inventory feature is enabled. You can, and should, disable it on machines that are not maintaining your license inventory. To disable the license inventory, select **Options** from the console toolbar, deselect **Enable license inventory**, and click **Save**.

To manage your license inventory, select **License Inventory** in the toolbar.



The license inventory feature may not appear in your console if your service provider has restricted access to it.

On the **License Inventory** page, you can sort the data within a column in ascending and descending order. You can also move the columns to the left or right of each other to create your desired column order. The list below shows the columns in their default left to right order.

Warning or error icon

Warnings indicate the license has not been activated, or it is temporary and will expire. Errors indicate the license has expired.

Serial Number

The serial number associated with the license

Product

The Carbonite Availability and Carbonite Migrate product associated with the license

License Type

A short description of the type of license, including any expiration date or quantity information

Version

The product version number associated with the license

Server

The name of the server the license has been applied to, if any. If the same license key is used on multiple servers, for example with evaluation licenses, you will see multiple entries in the license inventory for each server that is using that license key.

Use the following toolbar controls to manage your licenses.

Import Licenses

Imports all of the license keys from a license inventory file into the license inventory. This is a file you may have received from Carbonite, or it may be from another Carbonite Replication Console. Depending on the information contained in the file, you may be prompted to activate some of the servers in your license inventory.

Export Licenses

Exports all of the license keys in the license inventory to a license inventory file. This is a file that you may want to send to Carbonite when upgrading keys for a newer release or when activating licenses. You may also want this file so you can store and back up your license keys.

Add Licenses

Adds license keys into your license inventory. Enter the license keys in the Add Licenses dialog box in the space provided, separating multiple keys by a comma or by putting each key on a separate line.

Remove License

Removes the selected license key from the license inventory. You can only remove license keys that are not being used by any server in the console.

Reclaim License

Returns a deactivated license key (or license keys that have not been activated or do not need activation but are no longer in use on a server) back into the console's license inventory. Reclaimed licenses can then be activated or used on another server. This process does not perform the deactivation process. See *Deactivation and host-transfers* on page 44 for that process.

Activate

Activates the license keys in the license inventory.

The activation process will automatically deactivate any licenses that have been uninstalled using the Carbonite Replication Console.

Group By

Allows you to group the list of licenses by product, version, serial number, or server. If you do not want any grouping, select **Do not group**.

Search

Allows you to search all of the columns for items in the list that match the criteria you have entered.

Licensing a server

If you did not license your server during the installation, you can apply a Carbonite Availability and Carbonite Migrate license using the console.

1. Make sure you have your server inserted in the console.
2. From the **Servers** page, double-click on the server to view the server's details.
3. From the **View Server Details** page, click on the **Edit server properties** link.
4. Expand the **Licensing** section.
5. Licensing identifies your Carbonite Availability and Carbonite Migrate license keys.



The fields and buttons in the **Licensing** section will vary depending on your Carbonite Replication Console configuration and the type of license keys you are using.

Click the FAQ link if you want more information about licensing and activation.

- **Add license keys and activation keys**—Your license key or activation key is a 24 character, alpha-numeric key. You can change your license key without reinstalling, if your license changes. To add a license key or activation key, type in the key or click **Choose from inventory** and select a key from your console's license inventory. Then click **Add**.



The license inventory feature cannot be enabled if your service provider has restricted access to it.

-
- **Current license keys**—The server's current license key information is displayed. To remove a key, highlight it and click **Remove**. To copy a key, highlight it and click **Copy**. To replace a key, enter a new key and click **Add**. If you are replacing an unexpired key with the same version and serial number, you should not have to reactivate it and any existing jobs will continue uninterrupted. If you are replacing an unexpired key with a new version or new serial number or replacing an expired key, you will have to reactivate and remirror.
6. Once you have completed your licensing, click **OK** to return to the **Servers** page.

Activating a single license

You have two options for activating a license on a single server.

1. If you have not already done so, add your server to the Carbonite Replication Console.
 - a. Click **Servers** in the toolbar.
 - b. Click **Add Servers** in the **Servers** page toolbar.
 - c. Specify the name of your server and the credentials of the account used to install Carbonite Availability and Carbonite Migrate, and click **Add**.
 - d. Click **OK**.
2. After your server has been added to the **Servers** page, you can highlight a server and click **Activate Online**. This activates the license on the selected server and applies the activated licenses to the selected server in one step. You must have Internet access for this process. You will not be able to activate a license that has already been activated. If you need to reuse a license, see *Deactivation and host-transfers* on page 44.
3. As an alternative, you can activate the license through a server's properties.
 - a. Highlight a server on the **Servers** page and click **View Server Details** in the toolbar.
 - b. On the **View Server Details** page, click **Edit server properties** under **Tasks**.
 - c. Expand the **Licensing** section.

Licensing

Add license keys and activation keys:

[Choose...](#)

Current license keys:

	Product	Serial Number	Expiration Date	Licen
⚠	DoubleTake Availability Virtual	4567	12/26/2017	knc0-

Changes to activation are applied immediately.

Activation

⚠ This server has one or more licenses that require activation. To fully activate your software you can use the activate-online feature to complete the activation process using your internet connection. Alternatively using the link below, you may obtain activation keys from our activation website and add them above to activate your software.

Server information:

[Get an activation key from our website](#)

On Demand Licensing

Configure On Demand Licensing:

Service provider account number:

Customer name:

Product:

Enable On Demand Proxy

Proxy address:

Applying an On Demand license will remove all existing licenses.

d. **Activation**—If your license key needs to be activated, you will see an additional **Activation** section at the bottom of the **Licensing** section. To activate your key, use one of the following procedures.

- **Activate online**—If you have Internet access, you can activate your license and apply the activated license to the server in one step by selecting **Activate Online**.



You will not be able to activate a license that has already been activated. If you need to reuse a license, see *Deactivation and host-transfers* on page 44.

- **Obtain activation key online, then activate**—If you have Internet access, click the hyperlink in the **Activation** section to take you to the web so that you can submit your activation information. Complete and submit the activation form, and you will receive an e-mail with the activation key. Activate your server by entering the activation key in the **Add license keys and activations keys** field and clicking **Add**.
- **Obtain activation key offline, then activate**—If you do not have Internet access, go to <https://activate.doubletake.com> from another machine that has Internet access. Complete and submit the activation form, and you will receive an e-mail with the activation key. Activate your server by entering the activation key in the **Add license keys and activations keys** field and clicking **Add**.

The activation key is specific to this server. It cannot be used on any other server. If the activation key and server do not match, Carbonite Availability and Carbonite Migrate will not run.



If your Carbonite Availability license keys needs to be activated, you will have 14 days to do so. For Carbonite Migrate, license keys do not have a grace period and must be activated in order to be used. Once the license has been activated, you will have a specific number of days (generally 30 days) to complete your migration process, depending on your license type.

If you need to rename a server that already has a Carbonite Availability license applied to it, you should deactivate that license before changing the server name. That includes rebuilding a server or changing the case (capitalization) of the server name (upper or lower case or any combination of case). If you have already rebuilt the server or changed the server name or case, you will have to perform a host-transfer to continue using that license. (Deactivation and host transfers are only available for Carbonite Availability licenses.) See *Deactivating a license* on page 45 for complete details on deactivation and host-transfers.

The activation key is specific to each server and cannot be used on any other server. If the activation key and server do not match, Carbonite Availability and Carbonite Migrate will not run.



You will not be able to activate a license that has already been activated. If you need to reuse a license, see *Deactivation and host-transfers* on page 44.

If your Carbonite Availability license keys needs to be activated, you will have 14 days to do so. For Carbonite Migrate, license keys do not have a grace period and must be activated in order to

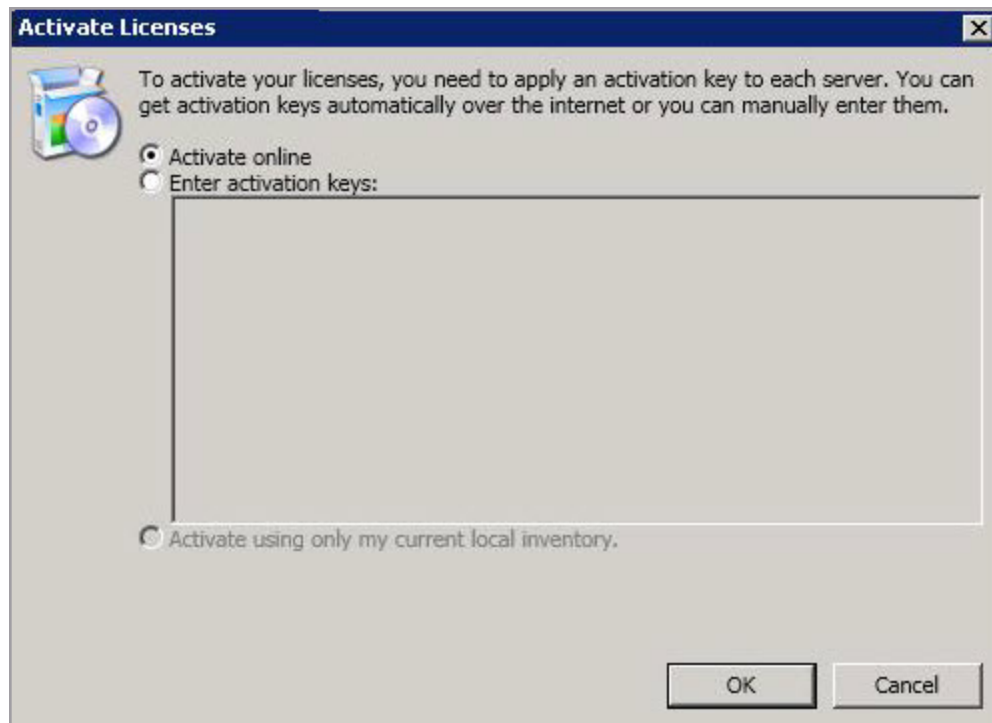
be used, and once the license has been activated, you will have a specific number of days (generally 30 days) to complete your migration process, depending on your license type.

If you need to rename a server that already has a Carbonite Availability license applied to it, you should deactivate that license before changing the server name. That includes rebuilding a server or changing the case (capitalization) of the server name (upper or lower case or any combination of case). If you have already rebuilt the server or changed the server name or case, you will have to perform a host-transfer to continue using that license. (Deactivation and host transfers are only available for Carbonite Availability licenses.) See *Deactivating a license* on page 45 for complete details on deactivation and host-transfers.

Activating multiple licenses

You have two options for activating a license on more than one server.

1. If you have not already done so, add your servers to the Carbonite Replication Console.
 - a. Click **Servers** in the toolbar.
 - b. Click **Add Servers** in the **Servers** page toolbar.
 - c. Specify the name of your server and the credentials of the account used to install Carbonite Availability and Carbonite Migrate, and click **Add**.
 - d. Add each server and then click **OK**.
2. After your servers have been added to the **Servers** page, you can highlight multiple servers and click **Activate Online**. This activates the license on the selected servers and applies the activated licenses to the selected servers in one step. You must have Internet access for this process. You will not be able to activate a license that has already been activated. If you need to reuse a license, see *Deactivation and host-transfers* on page 44.
3. As an alternative, you can activate the licenses through the **License Inventory** page.
 - a. Select **License Inventory** in the toolbar.
 - b. Click **Activate** in the toolbar.



- **Activate online**—If you have Internet access, you can activate all of the licenses in your license inventory in one step by selecting **Activate Online** and then click **OK**.
- **Enter activation keys**—If you do not have Internet access, you will have to use the following process.
 1. Gather the server information for each server. You can do this using either of the following methods.

- Manually record the server information text displayed in the server properties **Licensing** section for each server. (From the **Servers** page, highlight a server, click **View Server Details**, then **Edit server Properties**.)
 - Export your license inventory. (Select **License Inventory** in the toolbar and then click **Export Licenses**.)
2. From a machine with Internet access, go to <https://activate.doubletake.com>.
 3. Enter your server information manually or upload your exported license inventory file.
 4. You will receive an email with your activation keys. Manually enter the activation keys in the space provided, separating keys by a comma or by entering them on separate lines.
 5. Click **OK**.
- **Activate using only my current local inventory**—Select this option to use the current license inventory without accessing the Internet. For example, you may want to use this option if you selected not to activate the servers when you imported a license inventory file.

The activation key is specific to each server and cannot be used on any other server. If the activation key and server do not match, Carbonite Availability and Carbonite Migrate will not run.



You will not be able to activate a license that has already been activated. If you need to reuse a license, see *Deactivation and host-transfers* on page 44.

The activation process through the **License Inventory** page will also automatically deactivate any licenses that have been uninstalled using the Carbonite Replication Console.

If your Carbonite Availability license keys need to be activated, you will have 14 days to do so. For Carbonite Migrate, license keys do not have a grace period and must be activated in order to be used, and once the license has been activated, you will have a specific number of days (generally 30 days) to complete your migration process, depending on your license type.

If you need to rename a server that already has a Carbonite Availability license applied to it, you should deactivate that license before changing the server name. That includes rebuilding a server or changing the case (capitalization) of the server name (upper or lower case or any combination of case). If you have already rebuilt the server or changed the server name or case, you will have to perform a host-transfer to continue using that license. (Deactivation and host transfers are only available for Carbonite Availability licenses.) See *Deactivating a license* on page 45 for complete details on deactivation and host-transfers.

Preparing a target server for On Demand usage

Carbonite On Demand is a licensing program that enables service providers the ability to offer Carbonite Availability and Carbonite Migrate products on a subscription basis. On Demand automates the process for activating and renewing subscription Carbonite Availability and Carbonite Migrate licenses and tracks pay-as-you-go usage. Carbonite hosts and manages all of the On Demand components except the Carbonite Availability and Carbonite Migrate source and target. The service provider configures and maintains the target. Depending on the Service Level Agreement (SLA) between the service provider and their end user, the server provider or the end user may configure and maintain the source.

In order to use this program, the service provider must have a subscription license on each Carbonite Availability and Carbonite Migrate target. Use the following instructions to prepare a target server for subscription licensing. The instructions are dependent on your target server operating system.



For the latest and complete details on On Demand, see the help link in the On Demand web portal.

1. Install Carbonite Availability and Carbonite Migrate on the target server. When you are prompted for a license key, you can leave it blank.
2. Add the target servers to your console session.
3. From the **Servers** page, highlight the target server and select **Edit Server Properties** from the toolbar.
4. In the **Licensing** section, expand the **On Demand Licensing** sub-section.
5. Specify your **Service provider account number**. The account number is displayed in the upper right corner of the On Demand web portal.
6. Specify the **Customer name**. Use the customer name configured on the Customers list in the On Demand web portal.
7. Select the appropriate **Product** that corresponds with the Carbonite Availability and Carbonite Migrate product being used.
8. If you are using a proxy server, select **Enable On Demand Proxy** and specify the **Proxy address** using the value `http://xxx.xxx.xxx.xxx:yyyy` where `xxx.xxx.xxx.xxx` is the IP address of your proxy server and `yyyy` is the port number.
9. Click **Submit** to activate the subscription license on the target.

Chapter 4 Deactivation and host-transfers

There are two ways to reuse a Carbonite Availability license. Carbonite Migrate licenses cannot be reused.

- *Deactivating a license* on page 45—This process allows you to automatically deactivate a license from a server, making it available to be used on another server. In order to complete this process, you must be able to uninstall Carbonite Availability from the server you want to deactivate using the Carbonite Replication Console or the Windows uninstall applet. You can complete an unlimited number of deactivations.
- *Completing a host-transfer* on page 46—This process allows you to manually deactivate a license through the Carbonite host-transfer web page. You will have to use this process if you cannot uninstall Carbonite Availability using the Carbonite Replication Console or the Windows uninstall applet. You can complete two host transfers without intervention. Additionally, host transfer will require assistance from Carbonite.

Deactivating a license





This process allows you to automatically deactivate a license from a server, making it available to be used on another server. In order to complete this process, you must be able to uninstall Carbonite Availability from the server you want to deactivate using the Carbonite Replication Console or the Windows uninstall applet. You can complete an unlimited number of deactivations.



If you failed over a full server job but did not enable reverse protection when you configured the job, you will lose the activated target license. To workaround this situation, uninstall Carbonite Availability on the failed over source (currently on the target hardware) using the Carbonite Replication Console or Windows uninstall applet, and the uninstall process will deactivate both the source and target licenses. You can then reinstall Carbonite Availability on the failed over source (currently on the target hardware) and reactivate the source's original license.

If you are using the Windows uninstall applet, select to deactivate your licenses when prompted. You must have Internet access for the deactivation process.

Use the following instructions to uninstall using the Carbonite Replication Console.

1. Open the Carbonite Replication Console.
2. From the **Jobs** page, confirm that there are no jobs currently using the server that you want to uninstall from. If there are, stop and delete those jobs.
3. From the **Servers** page, highlight the server you want to uninstall from and click **Uninstall**  from the toolbar.
4. When the uninstallation is complete, select **License Inventory** in the toolbar.
 - **Internet access**—If you have Internet access, click **Activate** . Select **Activate online** and click **OK**. This option will contact the Carbonite activation web site to automatically deactivate the licenses that have been uninstalled through the Carbonite Replication Console.
 - **No Internet access**—If you do not have Internet access, use the following procedure.
 1. Click **Export Licenses**  and save your license inventory to a file.
 2. From a machine with Internet access, go to <https://activate.doubletake.com> and upload your exported license inventory file. You will receive an email with an updated license inventory file.
 3. Click **Import Licenses**  and specify the updated license inventory that you received. Confirm that you want to activate the licenses, which in this case is actually deactivating the licenses.

After your license has been deactivated, you can reuse it on another Carbonite Availability server.

Completing a host-transfer

This process allows you to manually deactivate a license through the Carbonite host-transfer web page. You will have to use this process if you cannot uninstall Carbonite Availability using the Carbonite Replication Console or the Windows uninstall applet. You can complete two host transfers without intervention. Additionally, host transfer will require assistance from Carbonite.

1. From your Carbonite Replication Console, select **License Inventory** in the toolbar.
2. Click **Export Licenses** and save your license inventory to a file.
3. From a machine with Internet access, go to <https://activate.doubletake.com> and upload your exported license inventory file.

After your license has been deactivated, you can reuse it on another Carbonite Availability server.