



XenClient Upgrade Guide



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This document provides information about upgrading XenClient components. It includes guidelines for VM updates, and how to track changes using Synchronizer.

Retrieving the latest XenClient Enterprise Version

XenClient Enterprise software components are available on the [Citrix software download page](#). New versions will usually include updates to the Engine and Synchronizer, but Engine-only versions are sometimes released.

Upgrading Synchronizer

Upgrading Synchronizer is generally a straight forward process, however, the steps for upgrading must be followed in the specified order. For a distributed XenClient Enterprise environment with one or more remote Synchronizer installations, the primary (central) server and all remote servers must be upgraded together, but in the correct sequence.

Copy or Download the Synchronizer Install Program to the Server

The Synchronizer installation program can also be used to upgrade an existing installation. The install program should be downloaded or copied to the local disk of the primary (central) Synchronizer server and all remote servers.

Note: Running the installation program from a network or USB storage is not recommended.

Synchronizer Backup

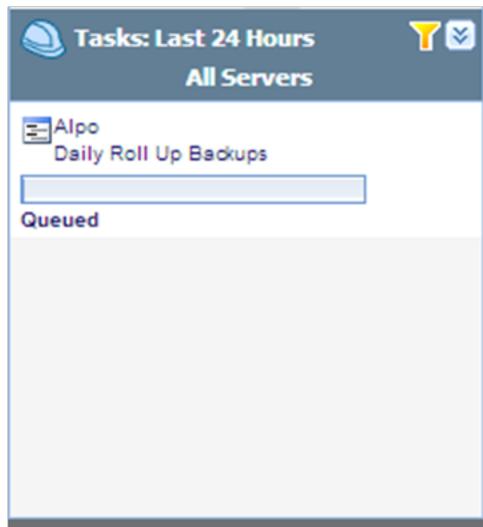
For production systems, the primary (central) Synchronizer (including the database) and all remote Synchronizer installations should be backed up before upgrading to a new version.

Cancel all Running Tasks

After backing up all Synchronizer servers, you must cancel all running tasks.

Login to Synchronizer and change the Task Filter to show **All Active Tasks**.

1. In the Tasks window, select the filter icon in the upper right portion of the screen:



2. In the Filter Tasks screen, use the default values, or select which server to display tasks and change the time frame for active tasks:

Filter Tasks

Specify Filter Options

Server:
Select a server to only show tasks that will run on that server. Select 'All Servers' to show tasks for all servers.

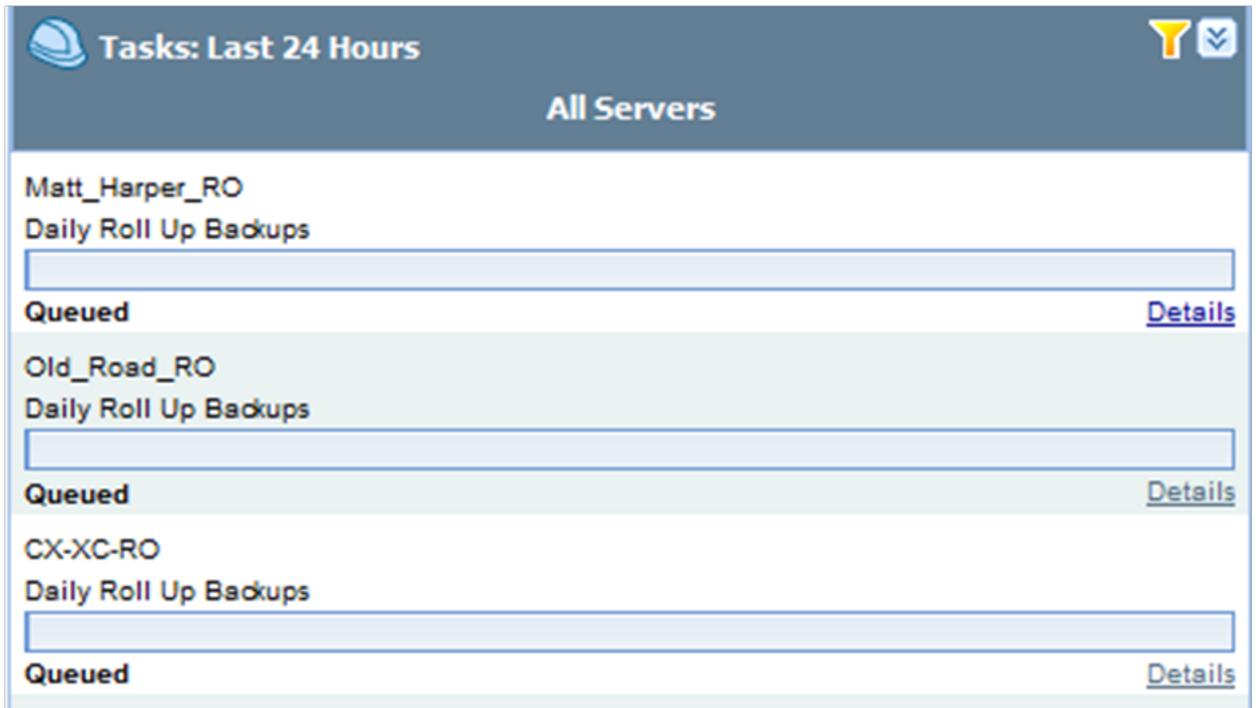
Last 24 Hours: (Uncheck to use specific date)
Check to show a maximum of 100 tasks created within the last 24 hours (rolling). Uncheck to show tasks created on a specific day (below).

Create Date:
Only show a maximum of 100 tasks created on this date.

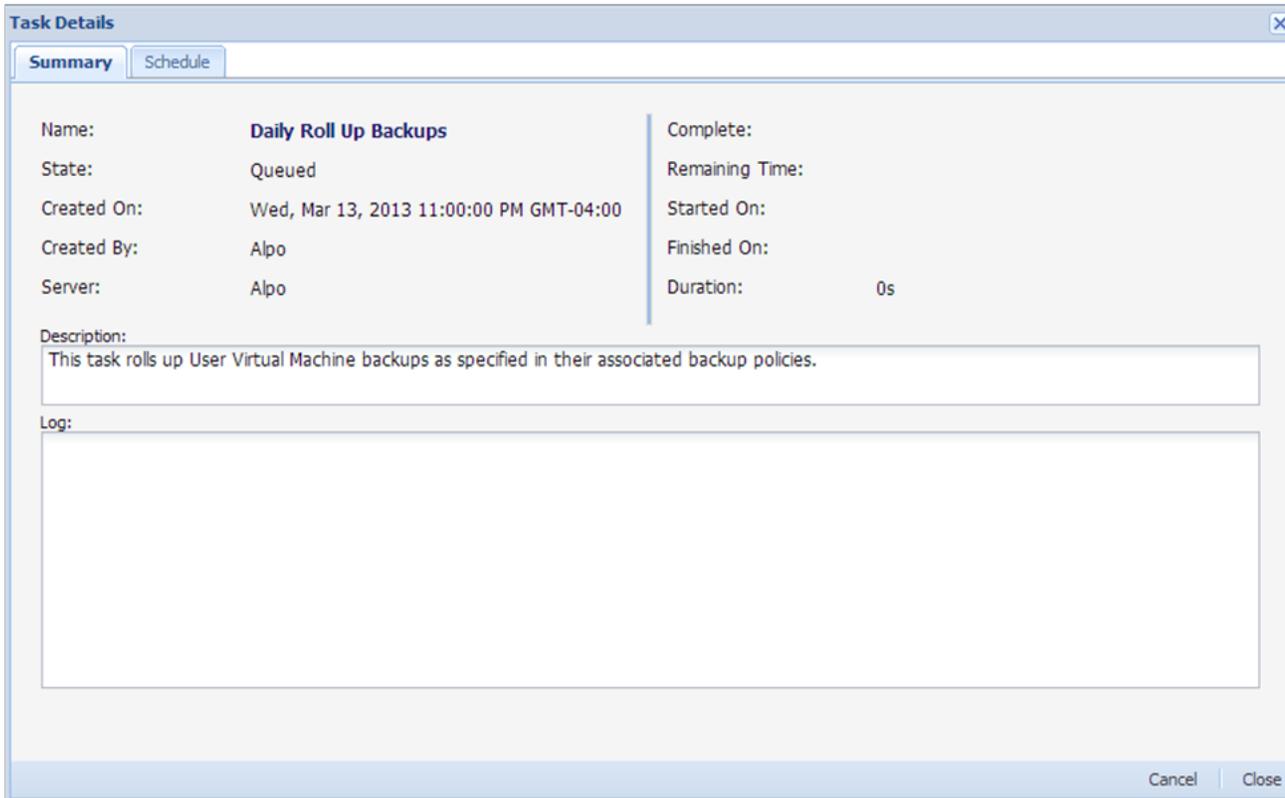
Show Active Tasks: (Uncheck to filter by creation date)
Check to show a maximum of 100 queued, running and paused tasks regardless of when they were created. Uncheck to filter tasks by creation date (above).

OK Cancel

This action updates the task list to display running, queued, and paused tasks regardless of when they were created. For each running task, either wait for it to complete or display the task properties by clicking the **Details** link in the right portion of the screen:



3. In the Task Details screen, click Cancel in the lower right portion of the screen:



Note: If the Daily Roll Up Backup task is canceled, it should be rescheduled.

Shutdown all Remote Synchronizer Installations

It is important that there are no running remote servers with a software version that doesn't match the primary server version. All remote servers should be shutdown while the primary (central) server is being upgraded.

Note: It is only necessary to shut down the Synchronizer service (Apache Tomcat service), not the entire Windows server. When performing a new upgrade, the service is automatically stopped.

Republishing Virtual Machines

After successfully upgrading all Synchronizer installations (remote and primary/central servers), all virtual machine images should be republished to pick up the new version of the PV drivers. As with all publish operations, the best practice is to publish for staged deployment so a limited number of users can receive the updated image and test it before it is deployed to a broader distribution.

Importing the Engine Installer into Synchronizer

The Engine installer ISO file can be imported into Synchronizer as an Engine update kit. To do this, the ISO file must first be copied to the Synchronizer file import folder. The default location is:

C:\Program Files\Citrix\Synchronizer\FileImport

After copying the ISO file to the **FileImport** directory, perform the following actions in the Synchronizer Console:

1. Open the Software Library section and click the **Import** action button:

IMAGE HERE

2. Select the **Engine Update** radio button option:

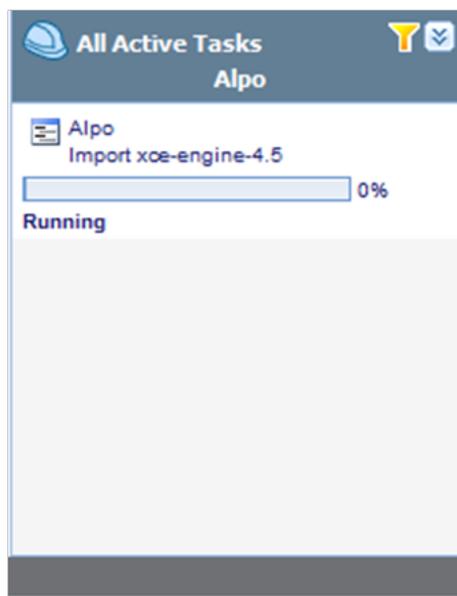
IMAGE HERE

3. In the Import Software screen, click the drop-down menu in the Specify file field. The Engine ISO file should appear in the list. Select it.

IMAGE HERE

4. Click **Finish** to begin the import.

A new background task should be created to handle the import:

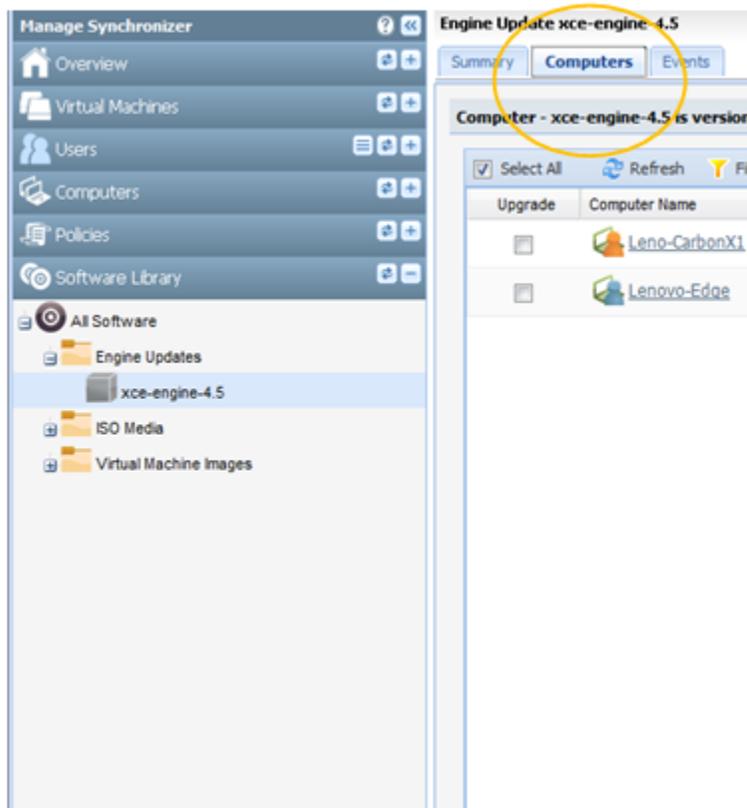


Importing the Engine Installer into Synchronizer

When the task is complete, the new Engine version is available for assignment to individual computers.

Assigning an Engine Version

In the Synchronizer Console, open the **Software Library** tab in the navigation panel, then select the new Engine update kit created in the previous step. Then select the **Computers** tab:



The new Engine version can be assigned to individual computers by selecting the **Upgrade** checkbox.

Alternately, to assign the new Engine version to a specific computer, locate the computer in the Computers section, then select the **Software** tab in the middle, and assign the new version of the Engine to the computer.

NEW IMAGE HERE

Upgrading Engine Installations using Optical or USB Media

Direct upgrade of the Engine from optical or USB media is required for computers not registered to Synchronizer. This can also be done for computers registered to Synchronizer if desired, although upgrading through Synchronizer as outlined in the step [Assigning an Engine](#) is usually more convenient.

Burn the ISO file to DVD media (it is too big for a CD) or create a bootable USB storage device from the Engine ISO using the procedure outlined in the [Create USB Installation Media](#).

After creating the bootable USB device (or CD media), boot the computer. It should boot up into the Engine installer, which can also be used to upgrade an existing installation. Consider the following notes on specific installer screens:

- ◆ Screen 1: Choose the Install Engine option. There is no Upgrade Engine option, but the install option can handle both a new install or an upgrade.
- ◆ Screens 2-4: Welcome, EULA, and keyboard layout screens; proceed to the next screen.
- ◆ Screen 5: This might take a few seconds to display. It should detect the existing Engine installation, and give an option to either upgrade the existing installation or delete it so it can be reinstalled. Choose the upgrade option.

Proceed through the remaining installation screens and the Engine installer will upgrade the existing installation.

Installing PV Drivers

PV driver installation is only required if a computer possesses a custom virtual machine (VM) image deployed from Synchronizer, or local VMs installed directly on the computer. It is not necessary to do this for deployed shared VM images.

What Happens Next

Once the virtual machine (VM) images are republished in Synchronizer, the new version of the VM image will be downloaded and installed on client computers following the normal process. The Engine update kit is also downloaded by the client computers. These downloads may take considerable time to complete, possibly many hours, if there are many client computers or if there are low-bandwidth WAN links between Synchronizer and some computers. But eventually all client computers should automatically upgrade to the new version of the Engine and the new version of the VM image containing the updated PV drivers.

Note: The only real downtime for the end user is a restart of the VM to pick up the new image version and a reboot of the computer to pick up the new Engine software version.

Effect of Remote Office Servers

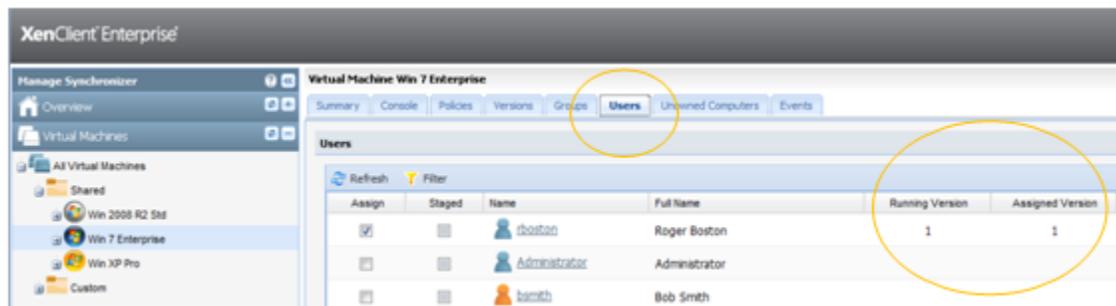
In a distributed deployment with remote office servers, the virtual machine (VM) image update and the Engine update kit must be downloaded by the remote office server from the primary server before any remote client computers can download them from the remote office server.

Single remote office servers are typically connected to the primary server over WAN links, there may be a significant delay before the updates are available on the remote server. During this time, the remote client computers may enter a Ready to Download Update state, which means the Engine is aware that an update exists, but it isn't available on the remote server yet.

Note: Download status from the primary (central server) to the remote server can be tracked as a task in the Synchronizer console.

Tracking Status for Virtual Machine Image Updates

To track the status of a virtual machine (VM) update, in the navigation panel click Virtual Machines in the navigation panel. Find the VM image that was published, then select the **Users** tab. The following columns show the upgrade status:



This screen includes the following:

- ◆ **Assigned Version.** The VM image version assigned to the user in Synchronizer.
- ◆ **Running Version.** The version that was actually running on the computer when it last checked in with Synchronizer. There are several reasons why the running version may be different from the assigned version:
 - The computer hasn't checked in with Synchronizer since the new VM image version was assigned.
 - The computer is in the process of downloading or installing the update.
 - The computer has installed the update but it is waiting for a VM restart to pick up the new version.
 - An error occurred that prevented the new version from being downloaded or installed.

Tracking Status for Engine Updates

To track the status of an Engine update delivered from Synchronizer, open the Software Library node in the Synchronizer navigation panel. Find the entry for the Engine update, then select the Computers tab. The Upgrade column shows the upgrade status:

- ◆ Blank. No upgrade in progress, or upgrade complete.
- ◆ Pending. The computer hasn't checked in to get the Engine update yet.
- ◆ Signalled. The computer knows an update is available and is downloading or installing it.

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- ◆ Installed (Reboot Required). The update is installed but the computer must be rebooted to pick up the new version.
 - ◆ Failed. An error occurred while downloading or installing the Engine update.