CITRIX®

XenClient Enterprise Upgrade Guide

Version 5.1.0

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Table of Contents

About this Document **4**

Step 1: Get the Updated Software **4**

Step 2: Upgrade XenClient Enterprise Synchronizer **4**

Step 2.1: Copy or Download the XenClient Enterprise Synchronizer Install Program to the Server 4

Step 2.2: XenClient Enterprise Synchronizer Backup 4

Step 2.3: Cancel All Running Tasks 5

Step 2.3: Shutdown all Remote XenClient Enterprise Synchronizer Installations 6

Step 3: Republish all VM Images **6**

Step 4: Import XenClient Enterprise Engine Installer into the XenClient Enterprise Synchronizer **7**

Step 5: Assign New Engine Version to Computers **9**

Step 6: Upgrade XenClient Enterprise Engine Installations Using Optical or USB Media **10**

Step 7: Upgrade PV Drivers for Local or Deployed Custom VMs **10**

What Happens Next **11**

Effect of Remote Office Servers **11**

Tracking Status for VM Image Updates **11**

Tracking Status for XenClient Enterprise Engine Updates **12**

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About this Document

This document provides information about upgrading XenClient Enterprise Synchronizer and XenClient Enterprise Engine. For specific information regarding upgrading to this release, refer to the *Release Notes*.

For comprehensive information about installing an Engine and Synchronizer, refer to the *XenClient Enterprise Engine Installation Guide and XenClient Enterprise Synchronizer Installation Guide*.

Step 1: Get the Updated Software

XenClient Enterprise software components are available on the software download page. New versions will usually include updates to the Engine and Synchronizer, but Engine-only versions are sometimes released, in which case steps 2, 3, and 7 can be skipped.

Step 2: Upgrade Synchronizer

Upgrading Synchronizer is fairly straightforward but steps must be done in a certain order. For a distributed XenClient Enterprise environment with one or more remote Synchronizer installations, the primary server and all remote servers must be upgraded together, but in the correct sequence, as outlined in steps 2.4 and 2.5.

Step 2.1: Copy or Download the Synchronizer Install Program to the Server

The Synchronizer install 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 Synchronizer server and all remote Synchronizer servers.

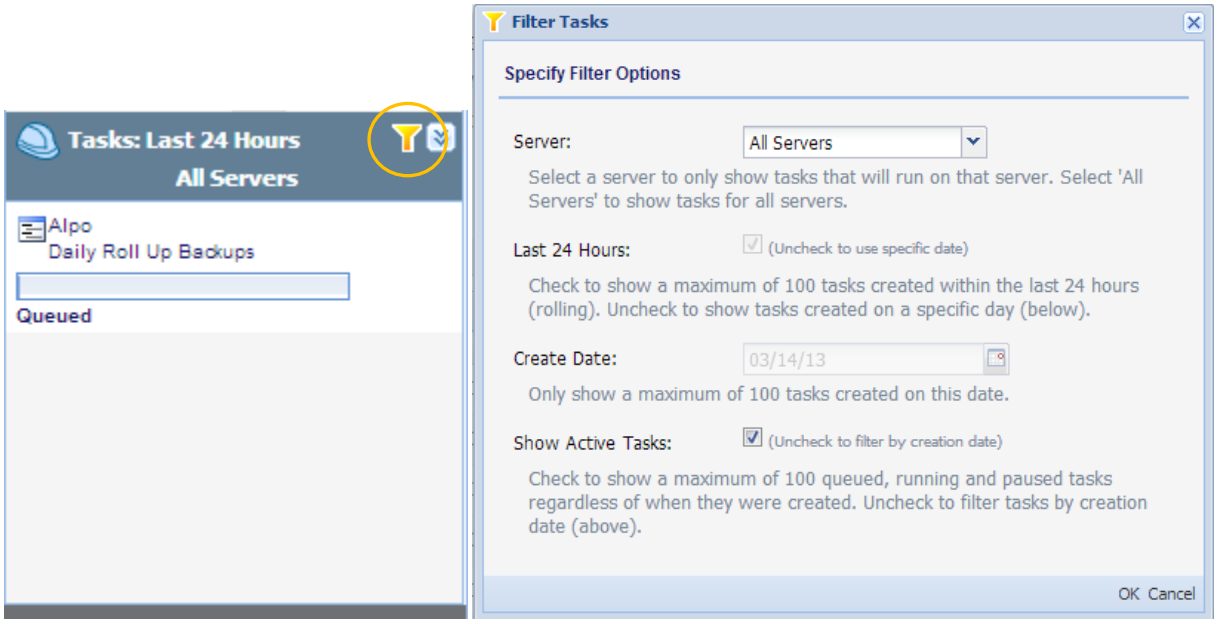
Running the install program from network or USB storage is not recommended.

Step 2.2: XenClient Enterprise Synchronizer Backup

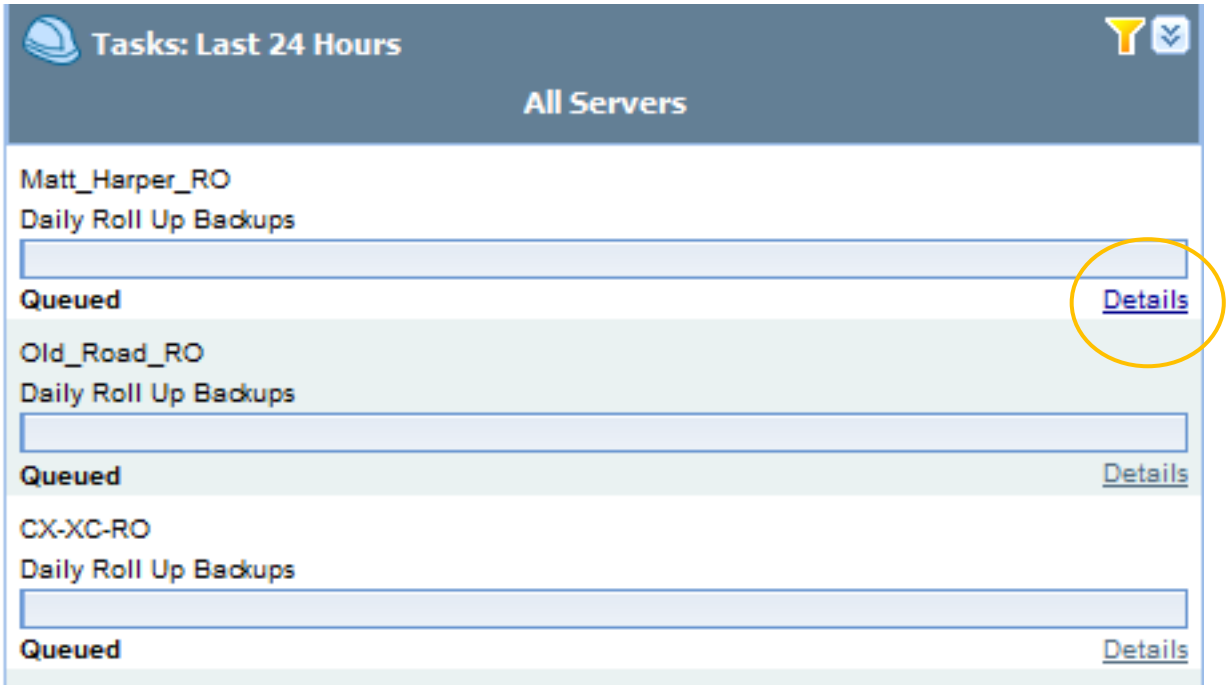
For production systems, Synchronizer (including the database) and all remote Synchronizer installations should be backed up before upgrading to a new version.

Step 2.3: Cancel All Running Tasks

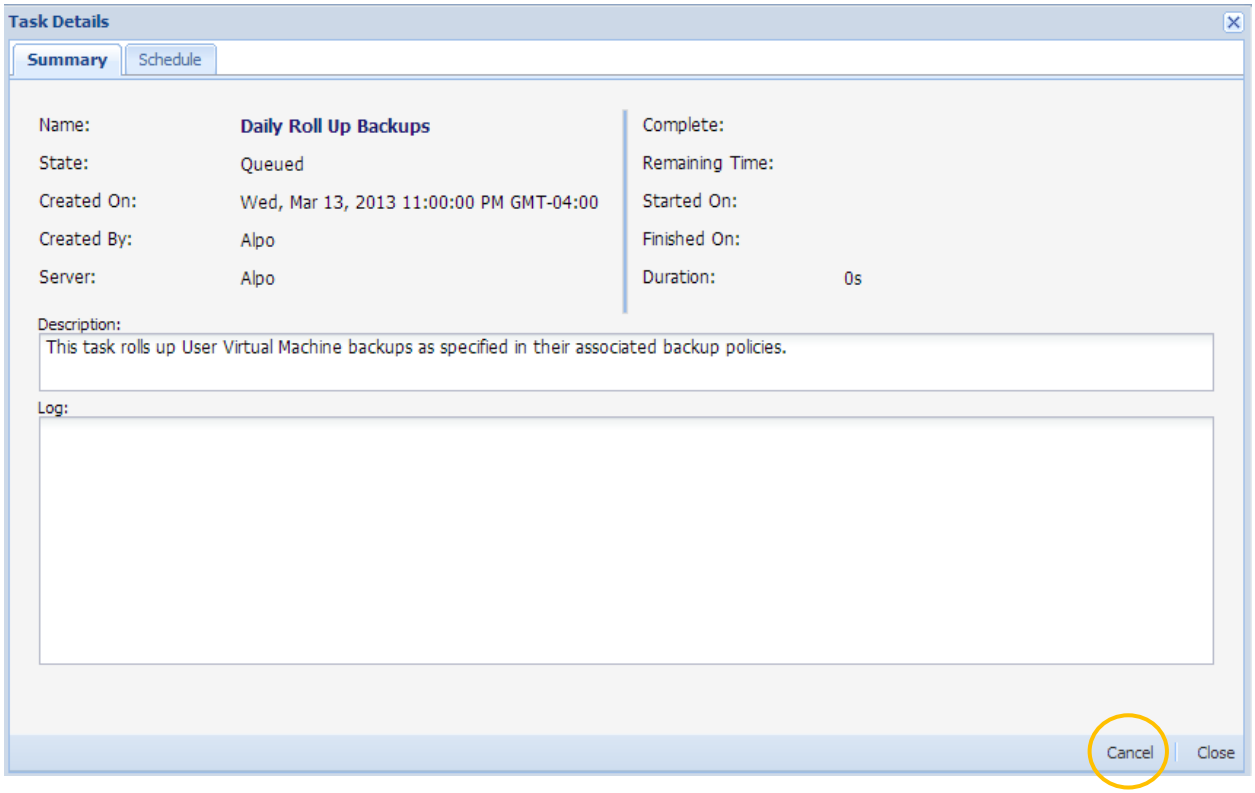
Login to Synchronizer and change the Task Filter to show All Active Tasks:



This will update 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:



and cancel the task:



If the Daily Roll-Up Backup task is canceled then it should be rescheduled.

Step 2.3: Shutdown all Remote Synchronizer Installations

It is important that there be 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 server is being upgraded.

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.

Step 3: Republish all VM Images

After Synchronizer installations are upgraded, all VM images should be republished to pick up the new version of the PV drivers. As with all publish operations, best practice is to publish for staged deployment so a few users can get the updated image and test it before it is deployed to a broader distribution.

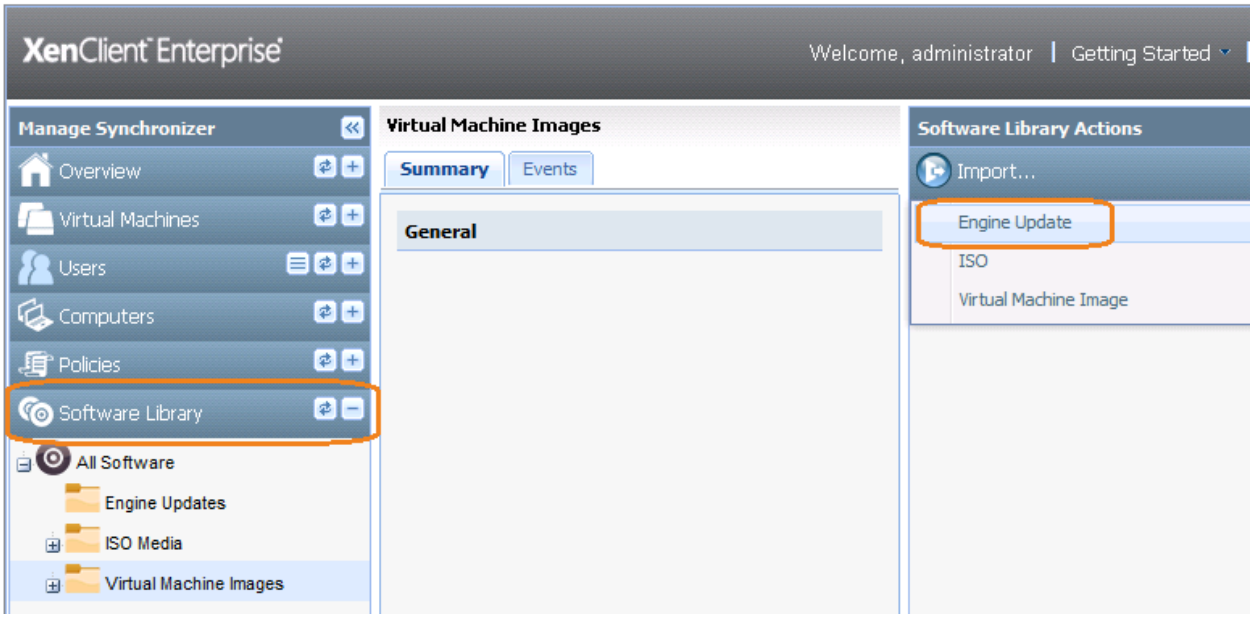
Step 4: Import Engine Installer into Synchronizer

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:

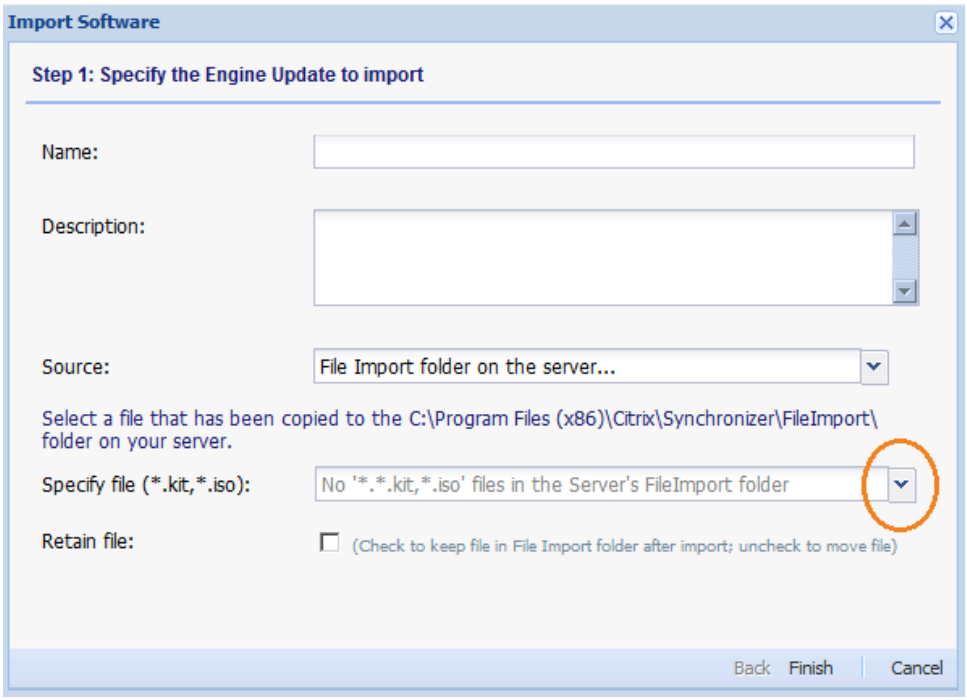
C:\Program Files\Citrix\Synchronizer\FileImport

Then perform the following actions in the Synchronizer Console:

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

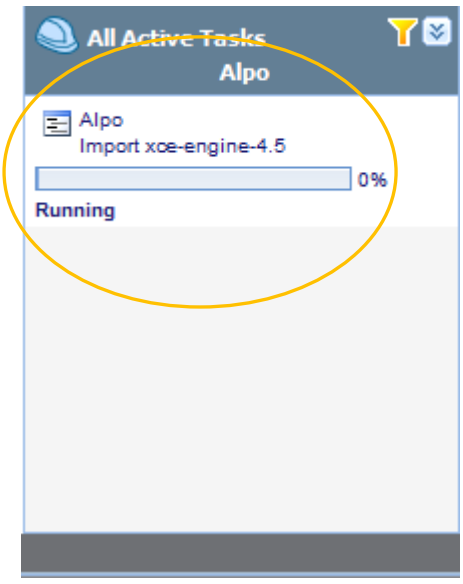


2. Select the **Engine Update** radio button option:



3. Click the drop-down menu by the **Specify file** label (see the image above).
4. The engine ISO file should appear in the list, select it.
5. Click **Finish** to begin the import.

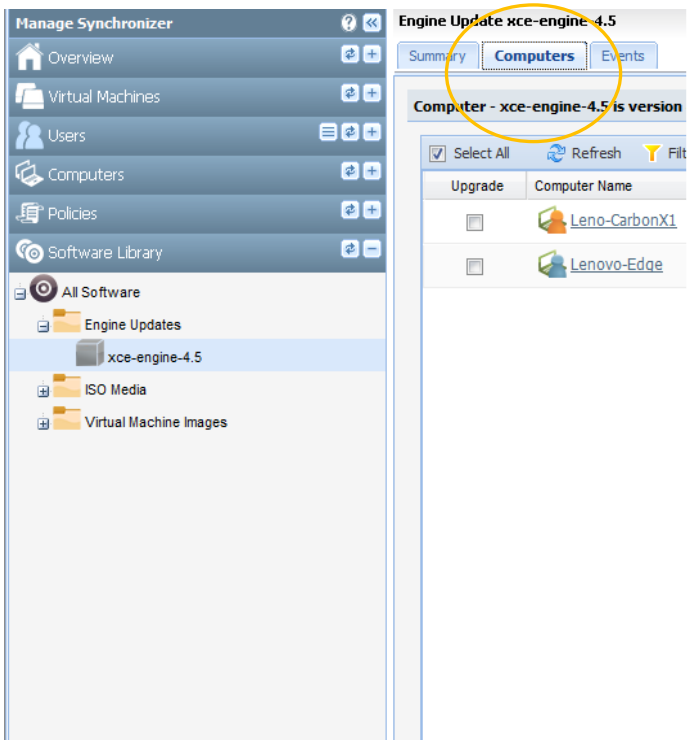
A new background task should be created to handle the import:



When the task is complete, the new engine version will be available for assignment to computers.

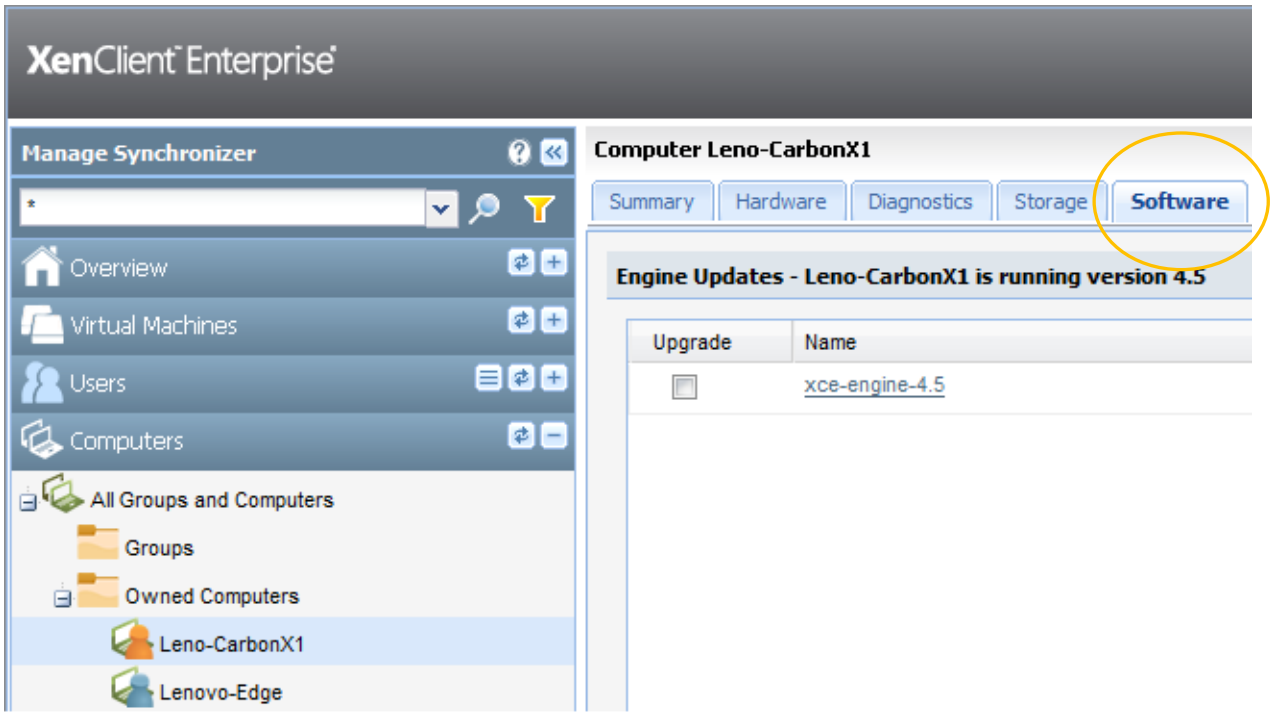
Step 5: Assign New Engine Version to Computers

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



The new Engine version can be assigned to individual computers by checking 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:



Step 6: Upgrade 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 previous steps 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 here. Then boot the computer from optical or USB media. 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 rest of the screens and the Engine installer will upgrade the existing installation.

Step 7: Upgrade PV Drivers for Local or Deployed Custom VMs

This step is only required if any computers have custom VM images 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

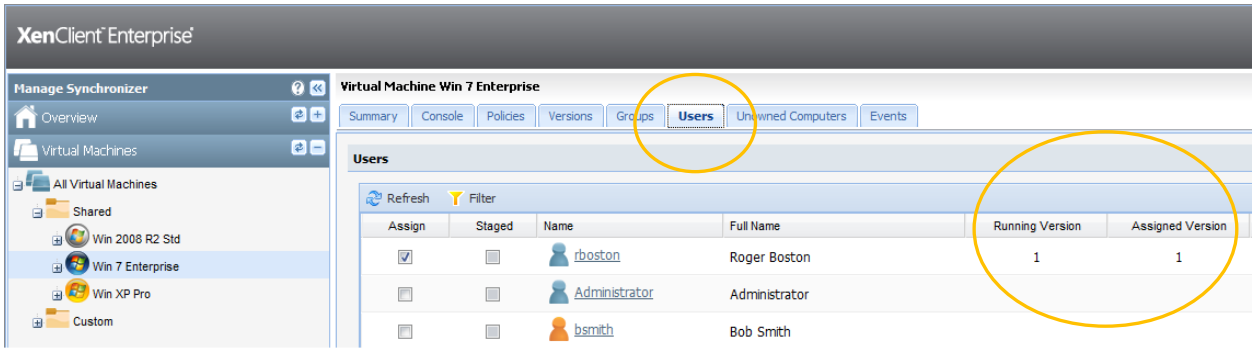
Once the VM images are republished in Synchronizer, the new version of the VM image will be downloaded and installed on client computers following the normal process. The Engine update kit is also downloaded by the client computers. These downloads may take a while to complete, possibly many hours, if 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. The only real downtime for the end-user is a restart of the VM to pick up the new VM 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 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. Since 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. Download status from primary to remote server can be tracked as a task in the Synchronizer console.

Tracking Status for VM Image Updates

To track the status of a VM image update, in the navigation panel open the Virtual Machines section of Synchronizer console. 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 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.

Further information can be obtained from the client computer. The VNC remote helpdesk feature is often very useful to determine why a VM image update hasn't been installed.

Tracking Status for Engine Updates

To track the status of an Engine update delivered from Synchronizer, open the **Software Library** section of Synchronizer console. 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.
- **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.