CiTRIX®

Exporting a VM to a USB Mass Storage Device

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About this Guide

This document provides information about installing XenClient Engine and importing VMs (virtual machines) using a USB mass storage device; the VM can be installed on any platform.

ℹ️ Use Citrix's centralized management application (XenClient Synchronizer) to first export the VM; once exported, use the USB Installer to import the VM, or use the Engine to import it.

This document includes the following sections:

❶ Export a virtual machine

❷ Download the latest ISO file containing the Engine

❸ Create a USB Installer

❹ Install XenClient Enterprise Engine using a USB memory stick

Export a Virtual Machine using Synchronizer

Synchronizer allows you to export VHD files for a VM image so they can be imported into the Engine using USB storage media. This process saves network bandwidth by facilitating the transfer of large VHD files. Consider the following when exporting a VM:

- The VM is exported in chunks less than 2GB in size. This is done because the default format for a USB stick is FAT32 and a 2GB file is the largest that can be put into a FAT32 formatted partition.
- Any additional changes to the VM after exporting it results in the Engine downloading the extra versions, unless a new export is done and the USB memory stick is updated accordingly.

About VM Image Assignment

Importing VHD files from USB storage into the Engine will only function if the VM is not yet present on the system.

ℹ️ If a VM is assigned by the Administrator and the user does not execute a **Check for Updates** from the platform's Engine within 2 days the imported files will be deleted; this prevents the disk from having an extraneous amount of unused files.

This method can't be used to create personal VMs on the Engine from images exported from Synchronizer. Usually the Engine will try to download the VM image from Synchronizer as soon as the VM image is assigned. The Engine should automatically clean up the download task when the import is complete.
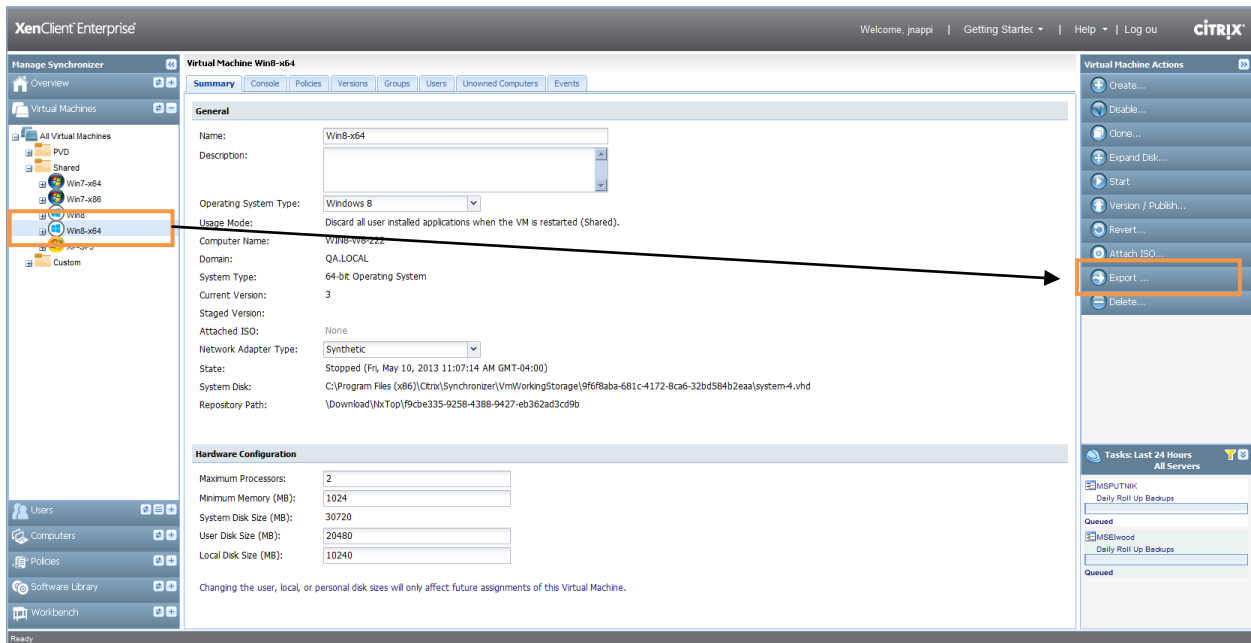
To export a virtual machine:

1. In Synchronizer, expand the Virtual Machines banner to display a list of All Virtual Machines.

ℹ️   Virtual machines are classified as *Shared* or *Custom*.

2. Select the VM you want to export.
3. Click the **Export Virtual Machine** action. A confirmation dialog appears; once the VM is exported, one or more export files are created in the FileExport directory (specifically, the VHD files will be exported to a multi-part .ZIP file in the Synchronizer\FileExport directory).
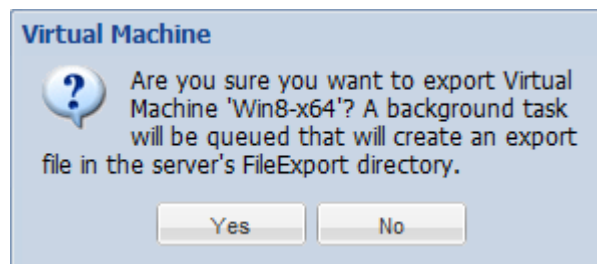
This will start a background task to export the VHD files for the VM image, which appears in the task window located in the lower right portion of the Synchronizer UI.

When the export task is complete, the VHD files will be exported to a multi-part zip file. The file names are based on the name of the VM image in Synchronizer.

4. Copy the exported files to a USB mass storage device. Use a storage device with enough free space to hold the exported files. Both NTFS and FAT32 file systems are supported. Create a new

folder for the exported VM image then copy all parts of the multi-part zip file into the folder. This process may take several minutes.

5. Attach USB media to the computer running the Engine. If it's already running VMs, be sure to bring the Engine Dock screen into the foreground before attaching the USB storage device (typically, default hot keys can be used: CTRL+down arrow to display the Launcher screen, CTRL+up arrow to display the VM). If the VM is in the foreground when the USB storage device is attached, the USB storage device will be assigned to the VM; usually when attaching USB storage device this is the desired result, but in the case of importing a VM image from USB storage, the disk should be mounted by the Engine not passed through.

6. In the Engine, access the Control Panel, choose the **Tools by Category** view; click the Activity Center Control Panel icon.
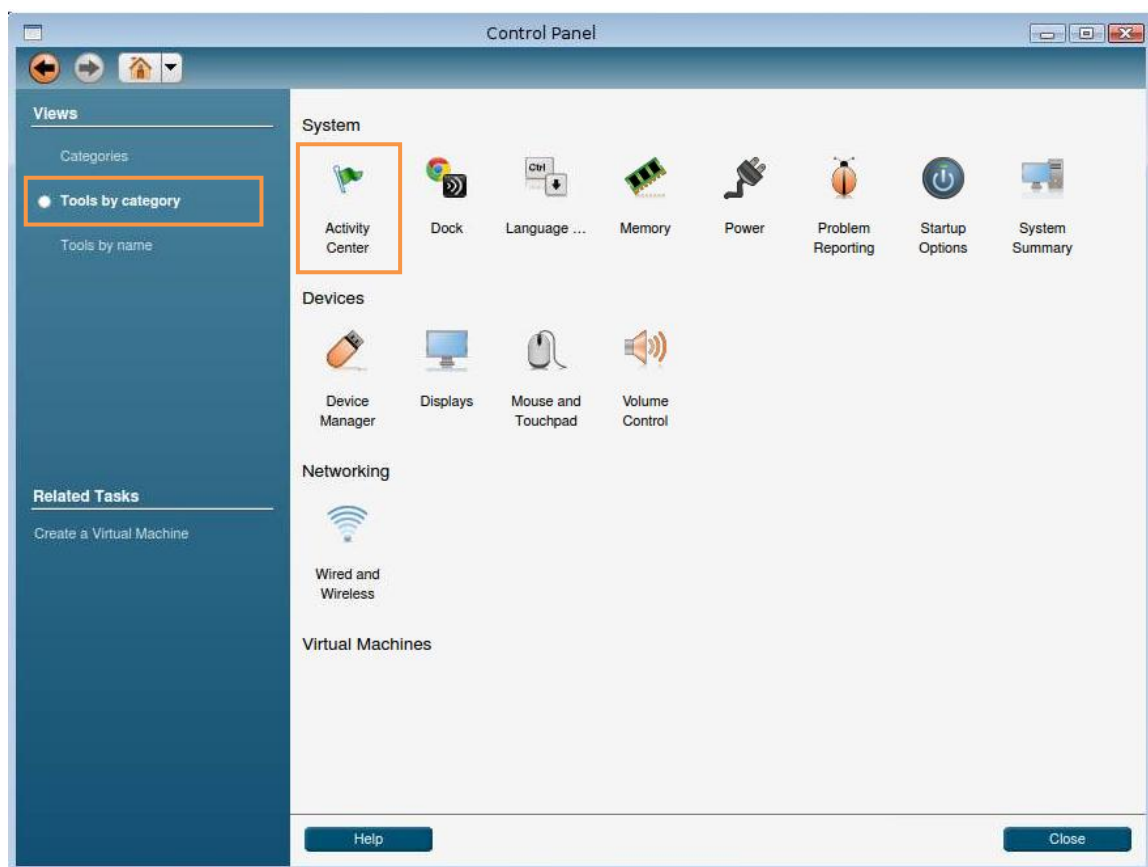
7. In the Activity Center Control Panel, click the **Import a Virtual Hard Disk** link.
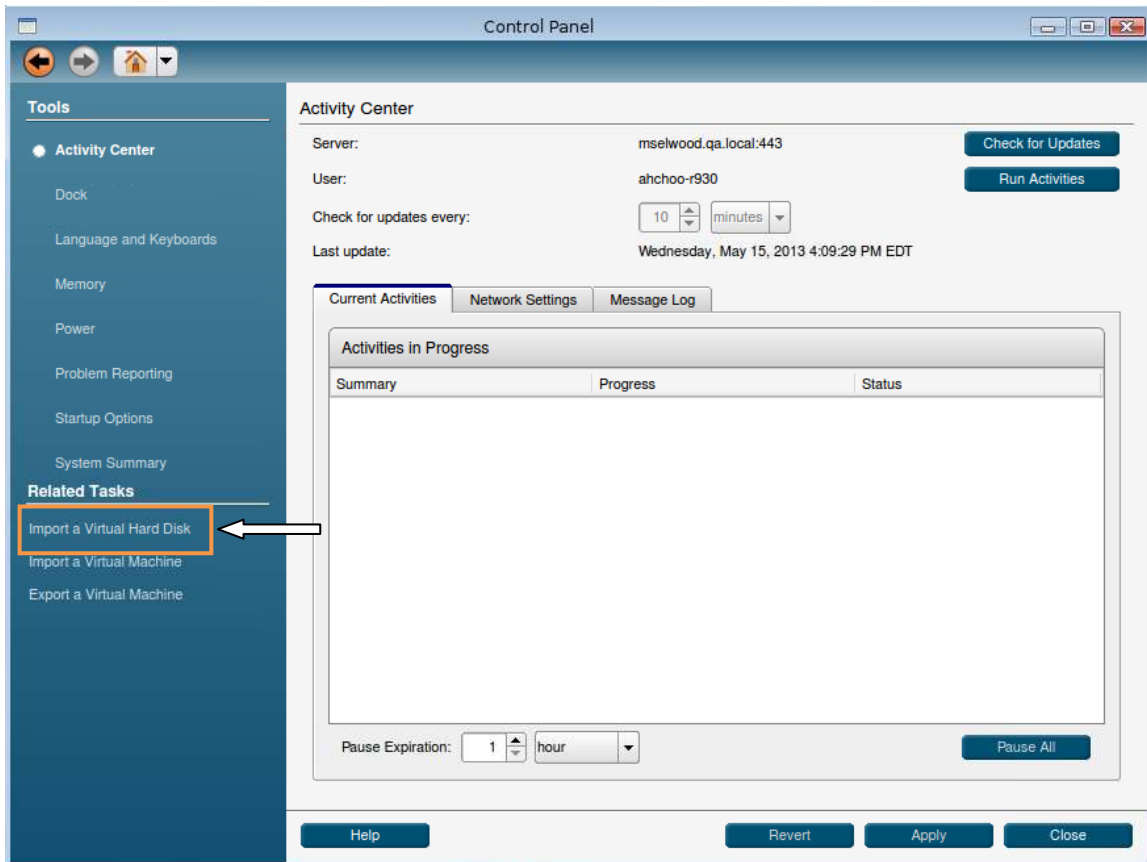
8. This will pop up a new window where you can browse to the location of the files that were exported from Synchronizer. Once the local import is complete, the Engine will verify the imported files then go through the normal NxPrep process to install the update. Note that for multi-part zip files, only the first part is displayed in the browse window.

If the VM has not yet been assigned, the files will be stored locally for 2 days; a VM medallion for the imported VM will not appear on the Dock screen until it has been assigned; additionally, NxPrep will not occur unless it has been assigned. If the VM has been published since the export occurred the Engine proceeds to download any newer versions created since the export was done.
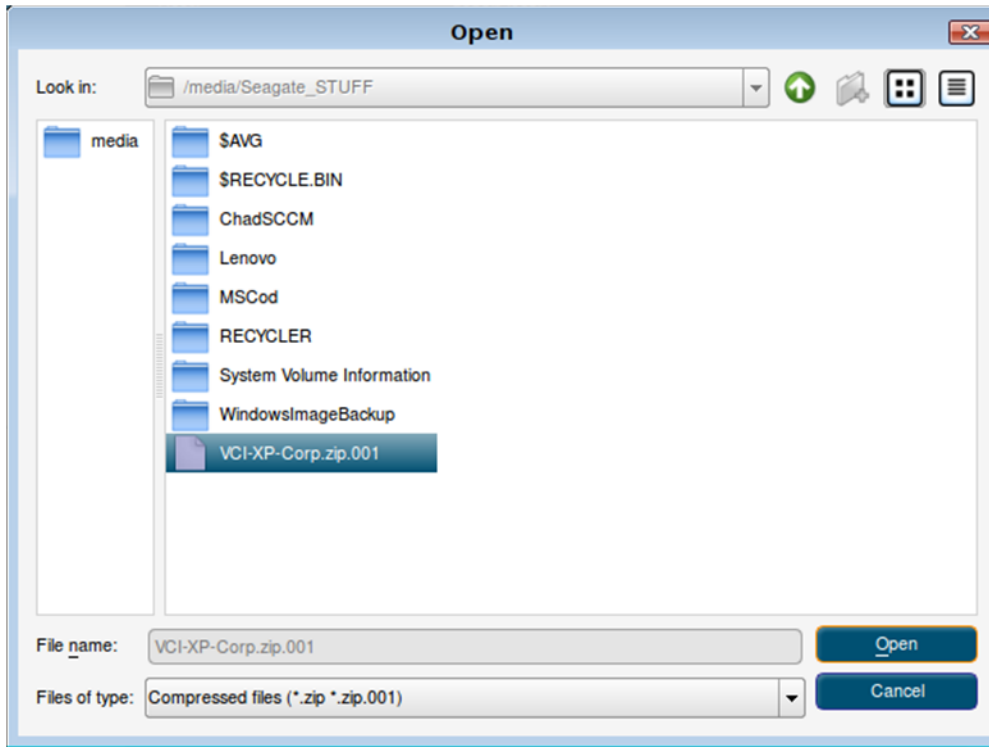
9. After selecting the files, click Open. The Activity Center Control Panel displays the progress:
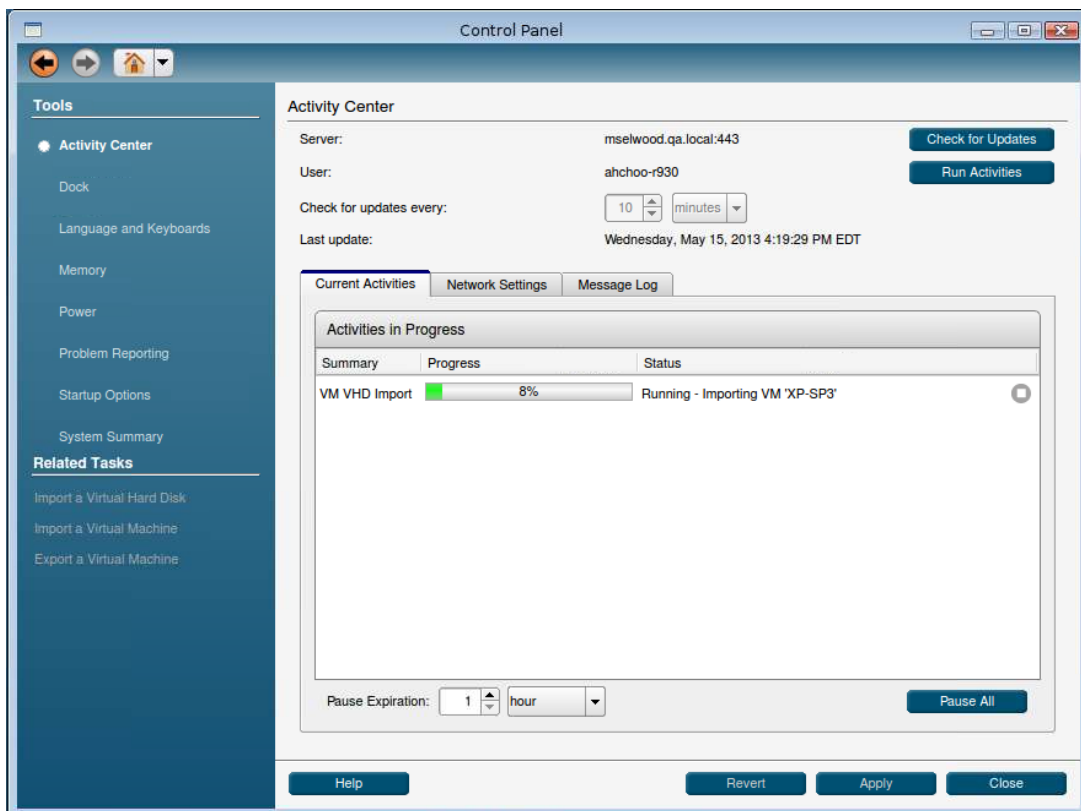
Installing an Engine Using a USB Mass Storage Device

This section describes how to configure a USB stick to become an installation device for the Engine. You should have at least a 2GB USB stick in order to install the Engine using this method. In addition, you will need to download the UNetbootin software from the Citrix Website in order to use the instructions in this section.

⚠ Installing the Engine on a computer can remove the native operating system and any data. **Before installing, back up any data from the computer that you want to preserve.**

1. Download the Engine Installation ISO file.

ℹ In some cases it may be necessary to check the validity of the ISO file by verifying the MD5 checksum. A number of free ware tools are available for calculating and comparing MD5 files (for example: http://download.cnet.com/MD5-Checksum-Calculator/3000-2092_4-10964258.html).

2. Create a USB installer using UNetbootin (there are a number of such utilities available as freeware or shareware); instructions are provided below.

Creating a USB Installer

First, download the current Engine ISO and UNetbootin from the Citrix download portal: www.mycitrix.com.

⚠ If you retrieve the UNetbootin distribution from another location, ensure that it is at least version 549 or newer.

ℹ You will need to register on the site to gain access to the Downloads page.

Once you have downloaded the ISO and UNetbootin you can begin the process of creating a USB installer.

To create a USB installer:

1. Format the USB storage device using a Windows-based utility.

2. Launch UNetbootin and select **DiskImage**:
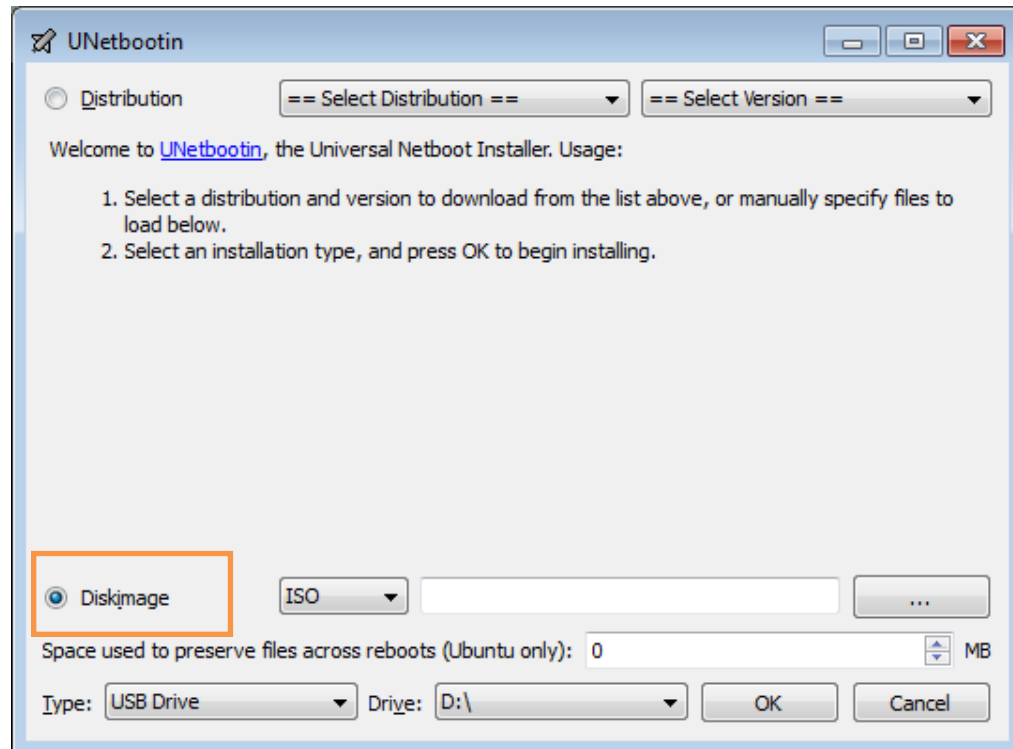
3. Select the ISO location.

4. Once you have selected the ISO location, use the drop-down menu to select the drive letter of the USB stick on which you are going to create the installer.

5. When you click **OK** you will see the progress of your installer being built:
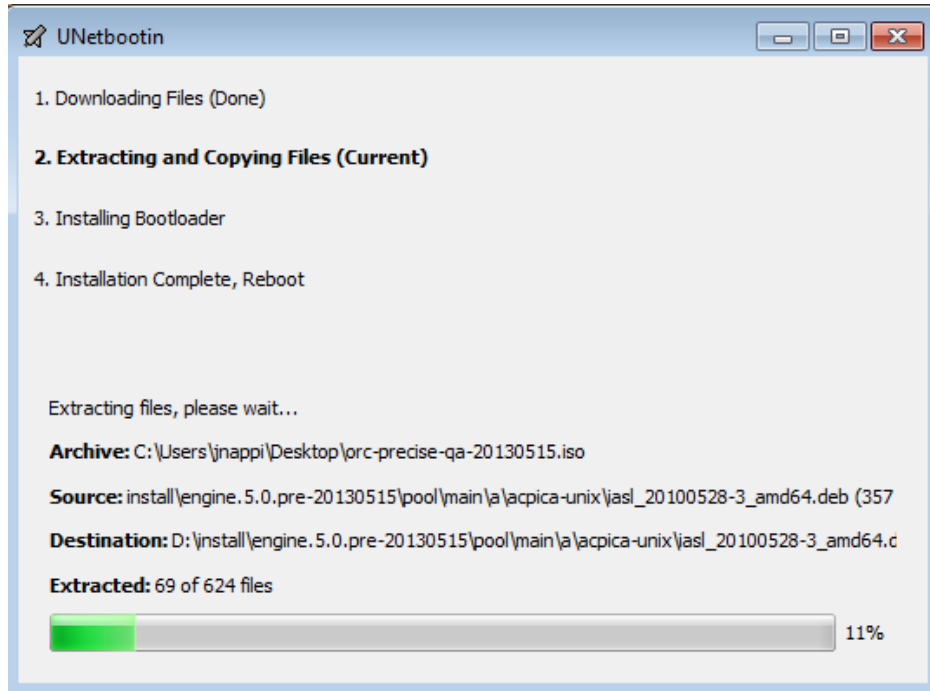
6. Once the build is complete, click **Exit**.
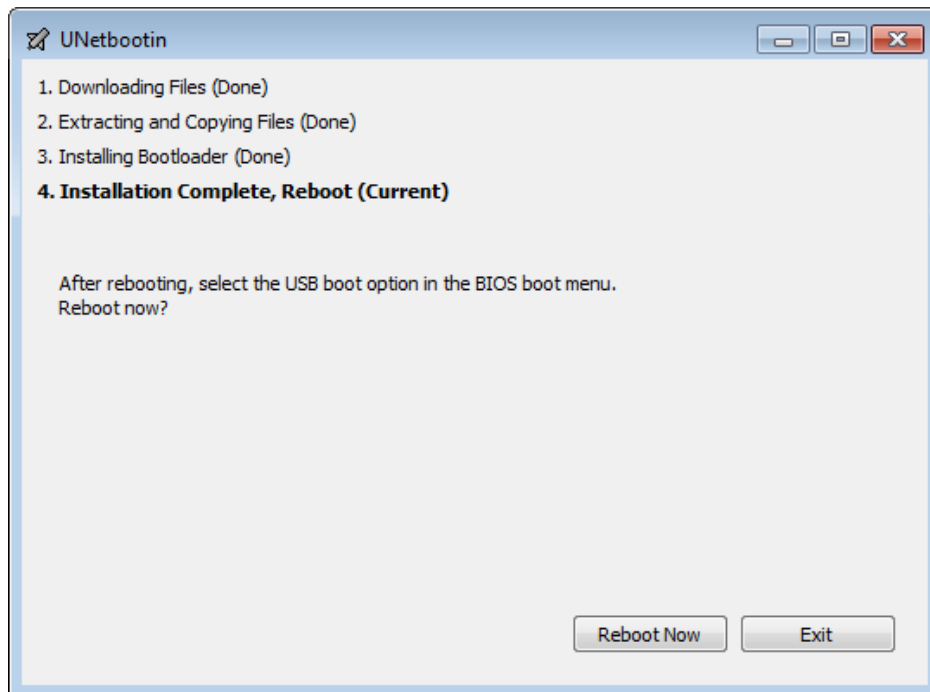
After completing the UNetbootin process, you can now choose USB from the boot menu on your desktop or laptop and it will install the Engine.

Installing the Engine using the USB Installer

Consider the following when installing using a USB drive:

- Ensure that the computer's BIOS setting enables booting from USB-based media.

- You can set your computer's boot sequence so that it boots automatically from any installed USB device; in the BIOS>BOOT configuration section, move the USB drive above the local disk in the machine boot order.

If you arrange the boot order so that the USB drive is the primary boot device, keep in mind that you must remove the USB stick containing the installer before you reboot the next time. Failure to do so may result in re-installing the Engine.

- If the boot order for the USB device is lower than local disk, or if it's not specified, select the boot order menu key, usually F12.

- During the installation process, the USB Installer will prompt you to import VMs. Follow the on-screen instructions to complete this portion of the installation.

To install the Engine using the USB installer:

1. Shut down the computer.

2. Plug the USB drive into an available slot.

3. Restart the computer.

To boot from the USB drive, the boot order must be modified so that the local disk is below the USB drive upon booting the system. Use F9/F12 or an equivalent to choose the boot sequence.

4. Read and accept the end-user license agreement.

5. If this installation will use the whole drive, use the tab key to select **Entire Disk** (or Stop to end the installation) and press **Enter**.

6. Use the up and down arrow keys to select a language (keyboard) for installation and press the **Enter** key.

7. If you are installing over a previous Engine, you have the choice to upgrade the version or replace the old version, including all user information and virtual machines.

8. Enter the computer name, and press the **Enter** key to advance to the next screen. This computer will be identified on Synchronizer with this name once it's registered.

    To go back a step, use the Tab key to highlight **Back**, and press **Enter**.

9. Enter the asset tag for the computer, and press **Enter.**

10. Use the arrow keys to select whether to use disk encryption, and press the **Enter** key to move to the next screen.

11. Your selections are displayed along with a warning that if you continue with a full disk installation, all data on the disk will be erased. If the summary is correct, enter **yes** and press the **Enter** key to install the Engine.

    The Engine is installed, with a progress bar displayed. Once installed, the computer reboots.

12. Enter the fully qualified domain name (FQDN). Ask your IT Administrator if you do not have this information.

13. Enter your username and password. This identifies you at the selected Synchronizer, and registers the computer.

Once the Engine is installed, it can be updated automatically. When the user logs in, Synchronizer sends down any virtual machines assigned to the user.

After installing the Engine, you can use Citrix's centralized management functionality provided by Synchronizer to export a VM.