



# Casper NetBoot Automator Action

Version 1.1

November 2011

# Overview

The Casper NetBoot Automator Action was developed to assist with the creation of a NetBoot image. A NetBoot image with Casper installed can be used for imaging computers in an efficient manner without requiring the use of Restore partitions or external drives.

## Requirements

Building your OS package and NetBoot image on the newest version of hardware available to you ensures all drivers and resources are installed for backward compatibility with old hardware.

This tool is designed specifically to create Mac OS X 10.7 NetBoot images. To create a NetBoot image for an older version of Mac OS X, please use Casper NetInstall Image Creator.

The following items are required to use the Casper NetBoot Automator Action:

- A bootable Mac OS 10.7 disk image or partition
- System Image Utility version 10.7
- Casper Imaging version 8.2 or later

## Concepts

Before using this tool, make sure you are familiar with the following tools and services: System Image Utility and NetBoot.

### System Image Utility

To understand how NetBoot images are created, you should be familiar with System Image Utility included in the Mac OS X Server Tools.

System Image Utility creates NetBoot images by:

- Converting the images to read/write format
- Modifying the images to utilize the Bootp (NetBoot) protocol
- Placing the images in a location that can be served using the NetBoot server

The Casper NetBoot Automator Action modifies a NetBoot image and can be chained inside a System Image Utility or Automator workflow.

### NetBoot

For detailed information on managing and troubleshooting NetBoot, refer to Apple's Mac OS X Server Administrator's Guide.

# Installing the Automator Action

Prior to running the Casper NetBoot Automator Action, it must be installed into the Mac OS X Automator Library.

**To install the automator action:**

- 1 Locate the **Configure Casper for NetBoot.action** file inside the Resource Kit.
- 2 Double click the automator action.
- 3 Click **Install**. The automator action will be added to ~/Library/Automator and can now be used with **Automator** or **System Image Utility**.

## Creating a NetBoot Image

The Casper NetBoot Automator Action modifies an existing NetBoot image built with System Image Utility by performing the following actions:

- Mount the enclosed NetBoot.dmg file to a temporary volume
- Apply options as selected in the Automator action interface:
  - Copy Casper Imaging.app
  - Set the root user to automatically log in
  - Set Casper Imaging to automatically launch on login
  - Create a preferences file for Casper Imaging
- Un-mount the volume

**To create a new NetBoot image:**

- 4 Mount a bootable disk image or partition with Mac OS X 10.7 or higher installed.
- 5 Launch System Image Utility.
- 6 Expand the **Sources** option in System Image Utility's left pane.
- 7 Select the image you'd like to use as your image source.
- 8 Select the **NetBoot Image** option, then click **Customize**.
- 9 Agree to the Mac OS X License Agreement.
- 10 Select and drag the **Configure Casper for NetBoot** automator action from the **Workflow Library** to the end of the System Image Utility workflow.

### Configure Options in the "Create Image" Automator Action

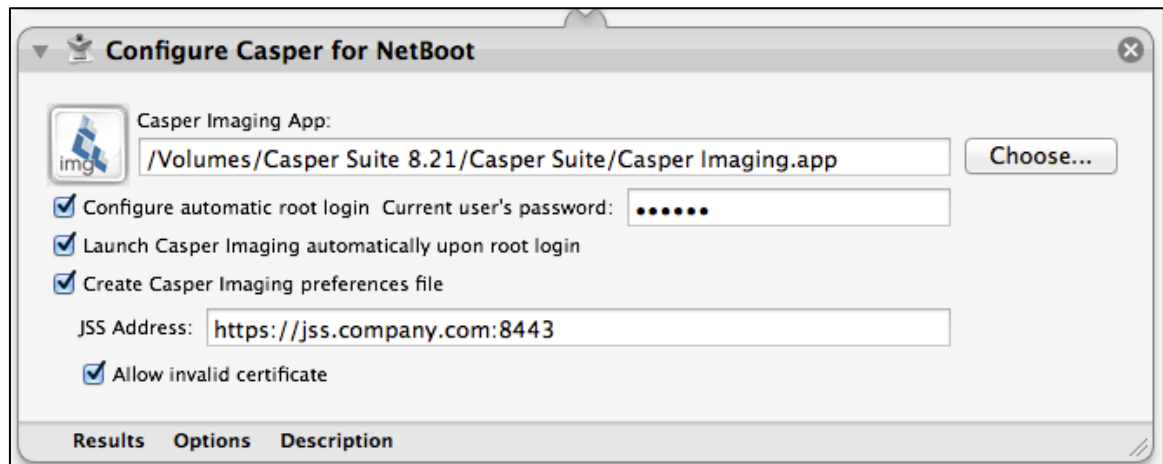
Ensure the NetBoot option is selected and enter the rest of the information as desired for your NetBoot server configuration. Enter the image index as follows:

- If you are not planning to host the image on multiple servers for load balancing, select an index between 1-4001.

- If you are going to host the image on multiple servers, select an index between 4002–9999.

### Configure Options in the “Configure Casper for NetBoot” Automator Action

- 1 Click the **Choose** button and choose the version of Casper Imaging you want to include in the NetBoot image.  
To ensure the best performance, choose the latest version of the application.
- 2 If desired, select the **Configure automatic root login** checkbox. Enter the current user's password to bypass authentication prompting.
- 3 If desired, select the **Launch Casper Imaging automatically upon root login** checkbox. This will add Casper Imaging to the dictionary of auto-launched apps at login.
- 4 If desired, select the **Create Casper Imaging preferences file** checkbox and enter the address for the JSS that Casper Imaging should contact at launch.
- 5 Click **Save**, then **Run**.



### To modify an existing NetBoot image:

- 1 Launch Automator.
- 2 Select **Workflow** and click **Choose**.
- 3 Drag the following actions to the workflow in order:
  - Ask for Finder Items
  - Configure Casper for NetBoot
- 4 Select the options for the Casper NetBoot Automator Action as outlined above.
- 5 Run the process. When prompted for Finder items, select the folder containing the NetBoot image – it should end in “.nbi”.

**Note:** If this image was already running under the NetBoot service, it will remain enabled. Otherwise, use Server Admin to enable it.

# Troubleshooting

## Connection Issues

If clients fail to boot when connected to the NetBoot server, verify NetBoot is started on the server and serving over the connection on which the clients are booting. Then, verify your image is enabled and set as the default image on the server.

If NetBoot was started prior to using this tool, you may need to stop the service and restart it for the server to recognize the recently created image.

If you are unable boot clients to NetBoot by holding down the N key during startup, try booting the client to a valid operating system. Then, navigate to **System Preferences > Startup Disk** and verify that the NetBoot server is displayed as an available startup disk. If the NetBoot server is not displayed as an available startup disk, there could be a firewall or the layer-3 device on the network may not be configured to pass Bootp packets to the NetBoot server.

This issue may occur if clients are booted in a subnet other than the one on which the NetBoot server resides. It can usually be resolved by creating an “IP Helper” address on the layer-3 device. For more information on this issue, refer to the following article from Apple:

<http://docs.info.apple.com/article.html?artnum=107655>

If the NetBoot server is displayed as an available startup disk and the client starts to boot but doesn't complete the process or kernel panics, press Command + V immediately after the globe begins to blink to NetBoot via verbose mode. This provides step-by-step feedback during the boot process.

If none of these resolutions are successful, check the NetBoot logs on the server through Server Admin using the NetBoot service.

## Release History

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Version	Change
v1.0	■ First Release
V1.1	■ Added error reporting ■ Fixed an issue that occurred when running the Casper NetBoot Automator Action twice on the same computer