

# Upgrading to a 64-bit ExtremeControl Engine

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Beginning in NetSight version 6.3, the 32-bit ExtremeControl engine image is no longer supported. Any ExtremeControl engine currently running a 32-bit OS image must be upgraded to the newer 64-bit image prior to upgrading to Extreme Management Center 8.4.

The following 32-bit engines must be upgraded to a 64-bit image:

- NAC-A-20
- ExtremeControl Virtual Engine

This document provides instructions for upgrading an existing 32-bit ExtremeControl hardware or virtual engine to the new 64-bit ExtremeControl software.

Instructions on:

- [Determining If You Have a 32-bit ExtremeControl Engine](#)
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## Determining If You Have a 32-bit ExtremeControl Engine

You can use the following information to determine if you are running a 32-bit or 64-bit ExtremeControl engine.

If the ExtremeControl engine is currently running version 4.4 or earlier, it is a 32-bit engine.

For ExtremeControl engines running version 5.0 or later, run the following command from the client command line:

```
more/etc/os-version
```

If the contents of the file say "Ubuntu 12.04lts (64bit)", you have a 64-bit engine. If the contents of the file say "Slackware 12.2 (32bit)", you have a 32-bit engine.

## Determining if You Have Proxy DNS Enabled

You can use the following information to determine if you have Proxy DNS enabled on your ExtremeControl engine.

Open the `/opt/nac/server/config/config.properties` file. Check the `DNS_PROXY_ENABLE=true` line:

- If the line begins with a #, Proxy DNS is not enabled.
- If the line does not begin with a #, Proxy DNS is enabled.

## Upgrading a Hardware Engine

This section describes the procedure to install 64-bit software on a 32-bit ExtremeControl hardware engine.

1. On a Windows platform system, go to the Extreme Management Center web page to download the ExtremeControlEngine Image 64bit (ZIP) file to your system:  
<http://extranet.extremenetworks.com/downloads>.

After entering your email address and password, follow this path to the Software page: Software & Security > NetSight (NMS) > Software > select a version of Extreme Management Center > ExtremeControl.

2. Extract the file to a directory on your system.
3. Insert a 4 GB USB flash drive into the USB port on your system and note the drive letter it is assigned.
4. Open a Command Prompt window and cd to the directory where you extracted the file. Be sure to use the "Run as administrator" option when launching the Command Prompt. You can access this option by right-clicking on the Command Prompt icon.

5. Type `make_disk.bat <drive letter>:` and press **Enter**. Be sure you have specified the correct drive letter.

The files are copied to the USB flash drive. When the copy is complete you see the message "Successfully installed into <drive letter>: Press any key to continue."

6. Remove the USB flash drive from your system.
7. Insert the USB flash drive into a USB port on the ExtremeControlengine.
8. Press the power button, and then press F2 to go to the BIOS setup.
9. Configure the engine to boot from the USB flash drive. The process for each engine hardware type is as follows:

- **NAC-A-20**

- a. Use the arrow keys and navigate to the Boot Settings option and press **Enter**.
- b. Go to the Hard-Disk Drive Sequence option and press **Enter**. Ensure that the USB flash drive is listed at top. If it is not, move it to the top.
- c. Hit **ESC** to exit and select **Save Changes** and **Exit** option.

- **SNS-TAG-ITA**

- a. Use the arrow keys to navigate to the Hard-Disk Drive Sequence option and press **Enter**.
- b. Ensure that the USB flash drive is listed at top. If it is not, move it to the top.
- c. Hit **ESC** to exit and select **Save Changes** and **Exit** option.

- **SNS-TAG-HPA/LPA**

- a. Use the arrow keys to navigate to Boot Options and press **Enter**.
- b. Ensure that the USB flash drive is listed in the Boot Option #1. If it is not, change it to the USB flash drive.
- c. Select **Save Changes** and **Exit** option.

10. The engine starts booting from the USB flash drive.
11. When the boot is complete, the Engine Installation screen appears. Press **Enter** and the installation begins.
12. After the installation completes, reboot the engine and then remove the USB flash drive.
13. Configure the new 64-bit software using the instructions in Chapter 2, Configuration, in the *IA-A-20 and IA-A-300 Engine Installation Guide*. When

configuring the engine, be sure to use the same IP address and hostname used before. That way you don't have to add and configure a new engine in NAC Manager.

You can find the installation guide on the Extreme Management Center Documentation web page:  
<http://extranet.extremenetworks.com/downloads>.

After entering your email address and password, follow this path to the document: Software & Security > NetSight (NMS) > Documentation > Manuals & Release Notes > select a version of Extreme Management Center > ExtremeControlEngines.

14. Complete the following steps if [DNS proxy is enabled](#) on the original ExtremeControl Engine, otherwise proceed to [Step 15](#):
  - a. Uncomment the `#DNS_PROXY_ENABLE=true` line using vi or your preferred editor by deleting the “#” symbol in the `/opt/nac/server/config/config.properties` file .
  - b. Enter the following command:  
`/opt/nac/server/dnsProxy.sh start`
15. Enforce the ExtremeControl Gateway engine (using NAC Manager) following the software installation operation. Enforcing writes your NAC Manager configuration information to the engine.

## Upgrading a Virtual Engine

This section describes the procedure for deploying the 64-bit ExtremeControl engine image on a VMware server. The ExtremeControl virtual engine is packaged in the .OVA file format defined by VMware and must be deployed on either a VMware ESX™ 4.0, 4.1, 5.0, or 5.1 server, or a VMware ESXi™ 4.0, 4.1, 5.0, or 5.1 server with a vSphere™ 4.0, 4.1, 5.0, or 5.1 client.

The ExtremeControl virtual engine comes configured with 12 GB of memory, four CPUs, two network adapters, and 40 GB of thick provisioned hard drive space.

It is recommended that you keep your 32-bit image on the VMware server until after you have successfully installed the new 64-bit image. That way, if any problems are encountered, you can fall back to the 32-bit engine.

## Determining Your Virtual Engine License Type

Legacy ExtremeControl virtual engine licenses require you to manually enter the number in Extreme Management Center, while current virtual engines automatically apply appropriate licenses.

ExtremeControl engines with legacy licenses must be manually captured and applied to your new virtual engine

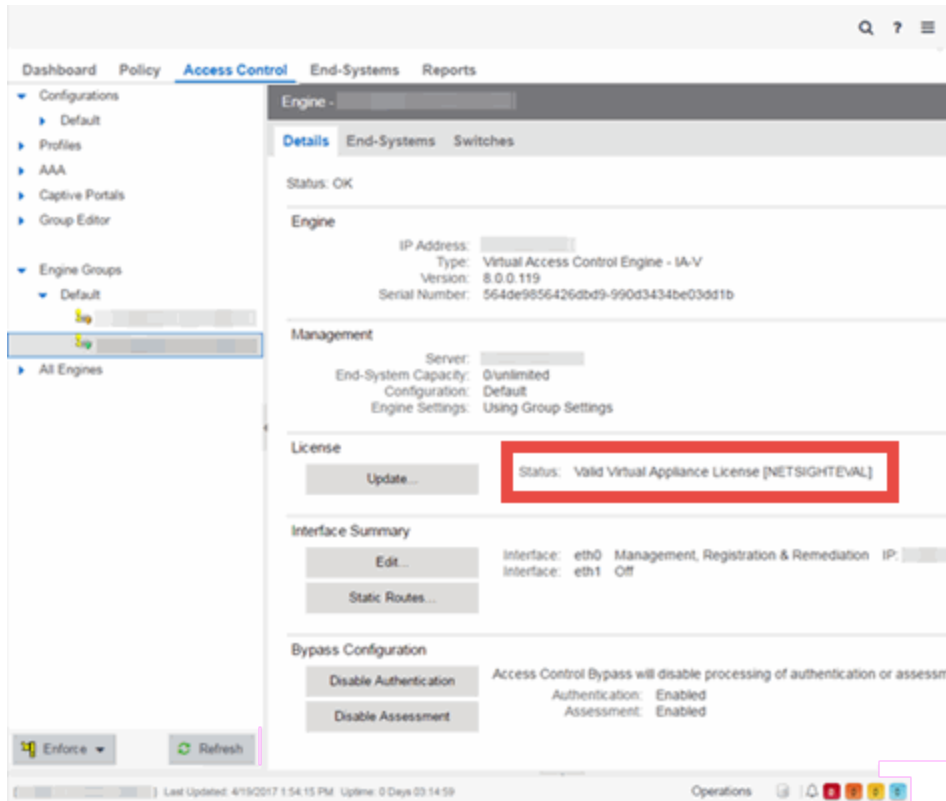
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**NOTE:** Licenses for physical engines are also automatically migrated.

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To determine if your ExtremeControl engine uses the legacy license model, follow the instructions in this section.

1. Open the **Control** > **ExtremeControl** tab in Extreme Management Center.
2. Expand the **All Engines** tree in the left-panel.
3. Open the **Details** tab in the right-panel.
4. Check the **Status** field in the License section of the tab.
  - If the Status shows **NAC-V-20** or **NAC-VX-5**, the license must be [captured](#) and [applied](#) to your new engine.
  - If the **Status** shows anything other than NAC-V-20 or NAC-VX-5, the license updates automatically. Continue to [Downloading, Installing, and Configuring Your Virtual Engine Image](#).

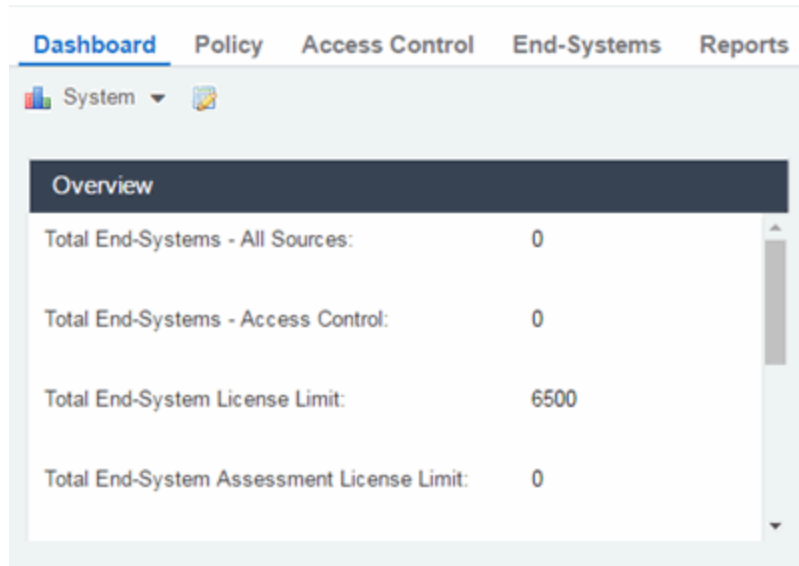


## Capturing Your Legacy ExtremeControl Engine License

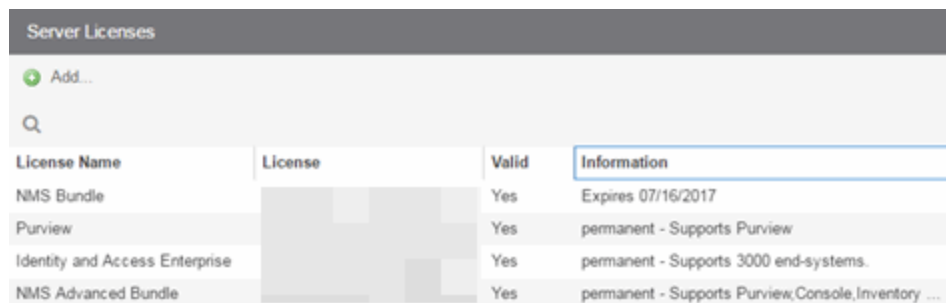
ExtremeControl licenses are based on the number of unique end-systems accessing your network in a 24-hour period. The total number of end-systems included in your license limit include all of the end-systems authenticating on all of your ExtremeControl engines.

If your virtual ExtremeControl engine uses the legacy licensing model, copy that number from your old engine to apply it to the new engine by following the instructions in this section.

1. Ensure your current ExtremeControl license is sufficient for the number of end-systems accessing your network.
  - a. Open the **Control > Dashboard** tab in Extreme Management Center and select **System** from the drop-down list to view your end-system license limit as well as the number of end-systems accessing your network.



- b. Compare the **Total End-System License Limit**, which displays the maximum number of end-systems your license allows, to the **Total End-Systems - All Sources**, which displays the end-systems seen on your network to determine if your license is sufficient for the end-system traffic on your network.
  - c. Contact Extreme Networks Sales department to change your ExtremeControl licensing, if necessary.
2. Copy your existing ExtremeControl license number.
  - a. Open the **Administration > Diagnostics** tab.
  - b. Select **Server > Server Licenses** in the left-panel. The Server Licenses tab opens in the right-panel.



- c. Copy the entire license that corresponds to the Identity and Access Enterprise row.
3. Paste the license in Notepad or another text editor.

## Downloading, Installing, and Configuring Your Virtual Engine Image

1. Go to the Extreme Management Center (NetSight) (NMS) web page to download the Virtual Engine 64bit (OVA) image to your local machine where the vSphere client is installed and running:  
<http://extranet.extremenetworks.com/downloads>.

After entering your email address and password, follow this path to the download page: Software & Security > NetSight (NMS) > Software > select a version of Extreme Management Center > ExtremeControl.

2. Open the vSphere client and deploy the virtual engine. For complete instructions, refer to Chapter 1, Engine Deployment, in the *Extreme Management Center, ExtremeControl, and Analytics Virtual Engine Installation Guide*.

You can find the installation guide on the Extreme Management Center (NMS) Documentation web page:  
<http://extranet.extremenetworks.com/downloads>.

After entering your email address and password, follow this path to the document: Software & Security > NetSight (NMS) > Documentation > Manuals & Release notes > select a version of Extreme Management Center (NetSight) > NetSight and ExtremeControl (NAC) Virtual Engines.

3. Once the engine has been deployed, you must configure the engine using the instructions in Chapter 3, ExtremeControlEngine Configuration, in the *Extreme Management Center, ExtremeControl, and Analytics Virtual Engine Installation Guide*. When configuring the engine, be sure to use the same IP address and hostname you previously used. That way you do not need to add and configure a new engine in NAC Manager.
4. Enforce the ExtremeControl Gateway engine (using NAC Manager) following the software installation operation. Enforcing writes your NAC Manager configuration information to the engine.



## Applying Your ExtremeControl Engine License

- a. Open the **Administration > Diagnostics** tab in Extreme Management Center.
- b. Select **Server > Server Licenses** in the left-panel.  
The Server Licenses tab opens in the right-panel.
- c. Click **Add** at the top of the tab to open the **Add License** window.
- d. Paste the license you saved in Notepad or other text editor in the window.
- e. Click **OK**.

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