How to Deploy a CloudGen Firewall Vx using Firewall Install on a VMware Hypervisor

https://campus.barracuda.com/doc/96026597/

The OVA package uses a default configuration that may not be suitable for your deployment. If you want to use multiple network interfaces, a different type of network adapter, or a bigger size for the virtual disk, use Barracuda Firewall Install to create the custom configuration files that you need to deploy the Barracuda CloudGen Firewall Vx with your specific settings.

Before You Begin

- From the Barracuda Download Portal, download the following:
  - The ISO image for the Barracuda CloudGen Firewall Vx version that you want to install. There is only one ISO for the Barracuda CloudGen Firewall and Barracuda Firewall Control Center.
  - Barracuda Firewall Install for the firmware version that you are going to install.
- Download and install WinImage or a comparable utility to create *flp* floppy images.
- You must install the Visual C++ Redistributable for Visual Studio 2012 on your computer to use Barracuda Firewall Install.
- Decide on the sizing requirements for your Barracuda CloudGen Firewall Vx. For more information, see Virtual Systems (Vx).

Step 1. Create Configuration Files with Barracuda Firewall Install

Create the configuration files with Barracuda Firewall Install.

1. Start Barracuda Firewall Install.
2. Select the **Full** wizard mode, and then click **Next**.
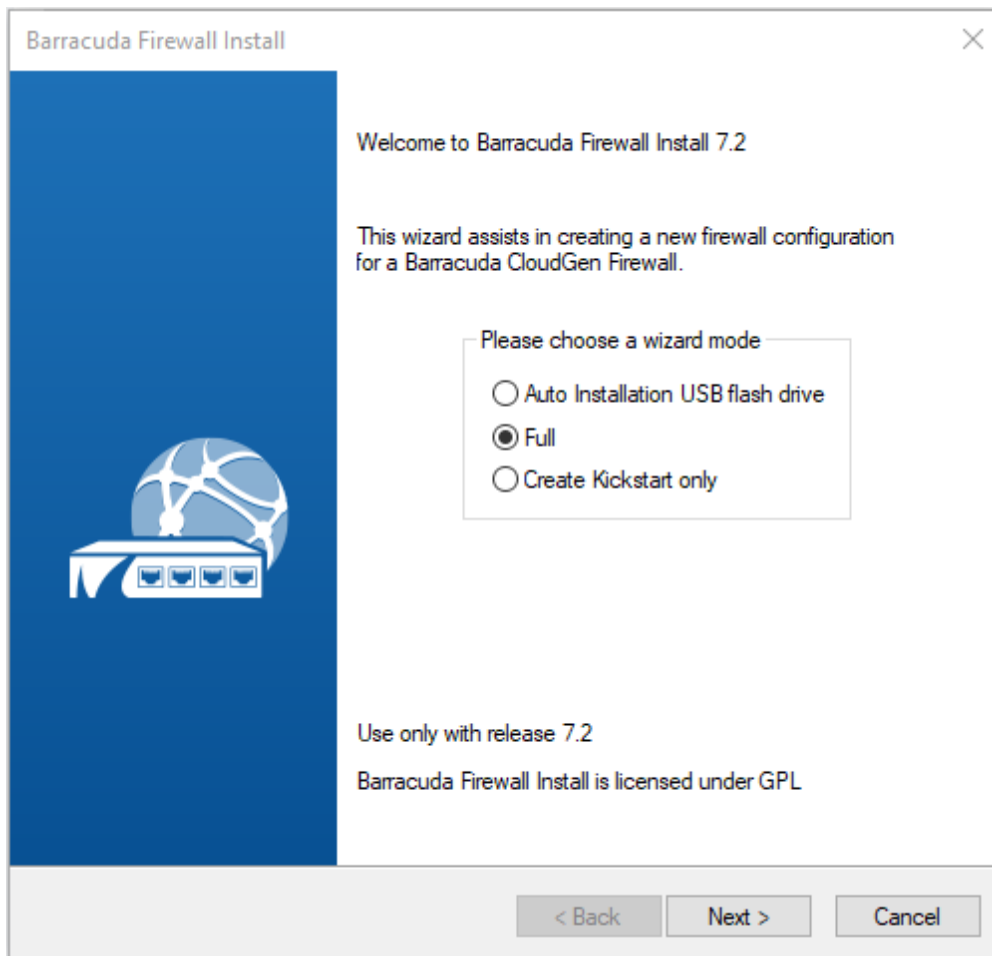
3. On the **Box Type Settings** page, select the **Product Type** and **Model** for your virtual appliance. You can configure Barracuda CloudGen Virtual Appliances and Barracuda Firewall Control Centers. After making your selections, click **Next**.
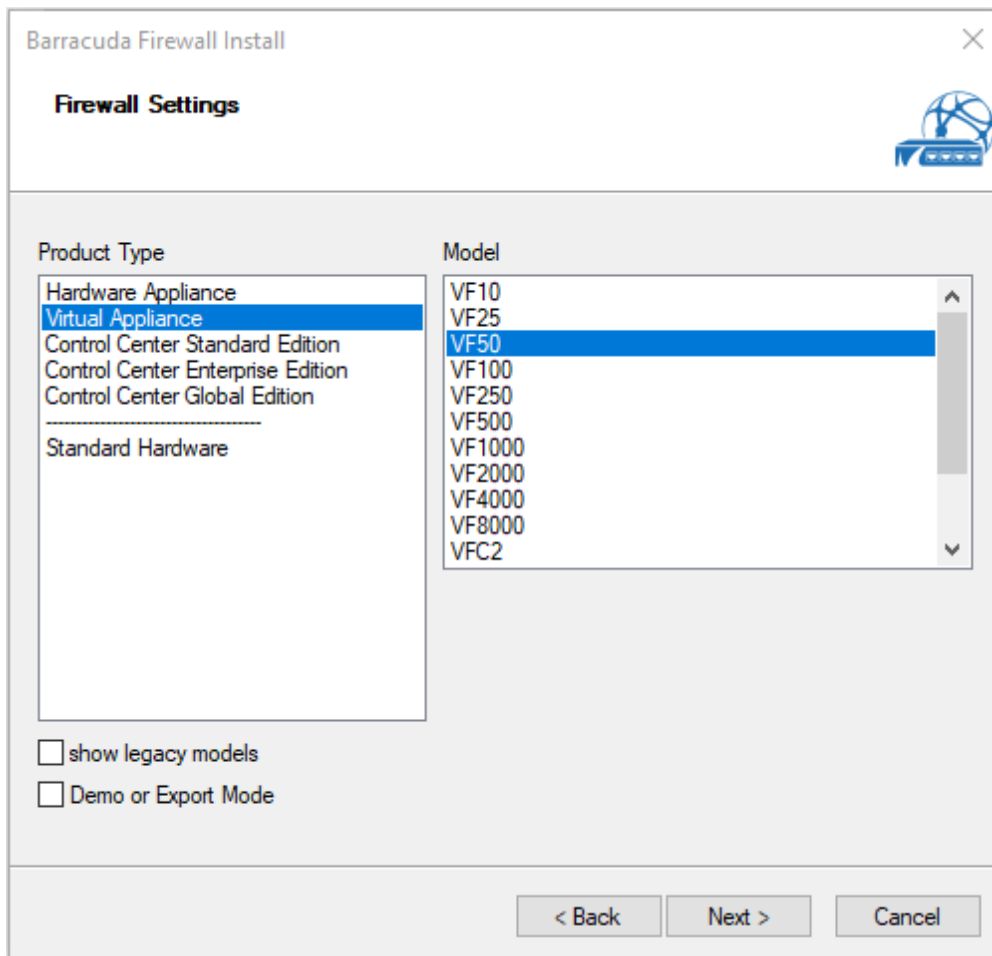
4. On the **Systems Settings** page:
    1. Enter the following settings:
        - **Hostname** – Enter a hostname (e.g., `CloudGen Firewall VF50`).
        - **Timezone** – Select the timezone that the appliance is in.
        - **Keyboard Layout** – Select the keyboard layout for the console of the Barracuda CloudGen Firewall Vx.
        - **DNS** – Enter the DNS servers for your network.
        - **Domain Suffix** – Enter the domain that your appliance is in.
        - **Use NTP & IP** – Enable NTP and enter the IP address for the NTP server.
    2. Click **Next**.
5. On the **Partition Settings** page:
    1. In the **Fixed Disk Capacity** field, enter the virtual disk size in gigabytes. Barracuda Networks recommends that you use disks that are at least the sizes recommended in Firewall Settings.
    2. Click **Suggest** to adjust the partitions to your disk size.

3. Click **Next**.

6. On the **Network Device Settings** page:

   1. Click **Add** and then specify these settings in the **NIC reseller list** window:
      - **Reseller** – Select **Virtual**.
      - **Network adapter** – **Automatic driver selection**.
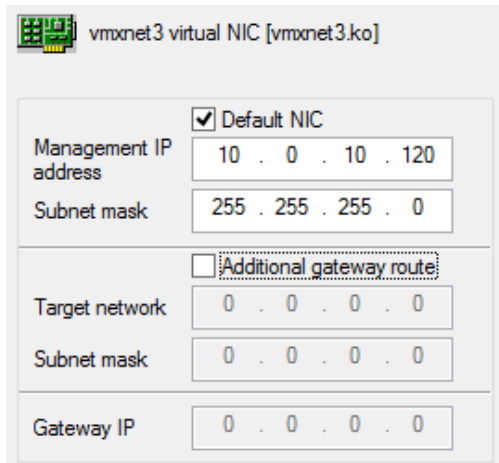   - **Number** – Select the numberof network interfaces.

   2. Click **OK**.
   3. Double-click the **eth0** network interface in the **Network Adapter** table and then specify these settings in the **NIC adapter configuration** window:
      - **Management IP address** – Enter the IP address that you want to use as the management IP address.
      - **Subnet mask** – Enter the subnet mask.
      - (Optional) Configure an **Additional Gateway route**.

4. Click **OK**.

5. Click **Next**.

7. On the **Security Settings** page, enter the **Password** and **Service Login Password** and then click **Next**.

8. On the **Software Packages** page, click **Next**.

9. On the **Script Settings** page, enter the destination for your configuration files in the **Save to** field.

10. Click **Next**.

11. Click **Finish**.

After the configuration files are created, a message appears confirming that the configuration files were written successfully.

The following configuration files are created in the destination that you selected:

| Name	Date modified	Type
bootloader.conf	12.12.2013 14:19	CONF File
box.conf	12.12.2013 14:19	CONF File
boxadm.conf	12.12.2013 14:19	CONF File
boxlic.conf	12.12.2013 14:19	CONF File
boxnet.conf	12.12.2013 14:19	CONF File
boxpriv.pem	12.12.2013 14:19	Privacy Enhanced ...
ks.cfg	12.12.2013 14:19	CFG File

Step 2. Create a Floppy Image with WinImage

Add the configuration files that you created with Barracuda Firewall Install to a floppy image FLP file. You will attach this image to the VMware virtual machine during installation.

1. Start WinImage.
2. Locate the configuration files that you created with Barracuda Firewall Install.
3. Select all the Barracuda Firewall Install configuration files and drag them to the WinImage window.
4. In the **Format selection** window, select **1.44 MB** from the **Standard format** list and then click **OK**.
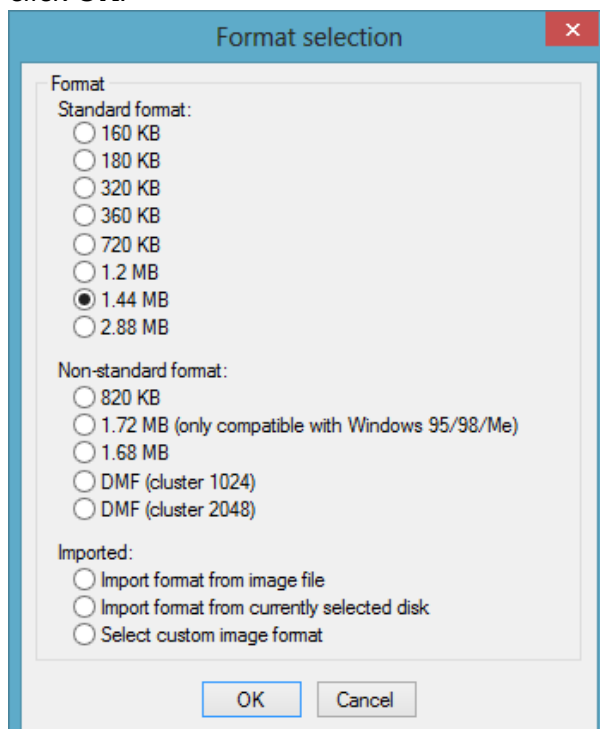
5. In the **Inject** window, click **Yes**.
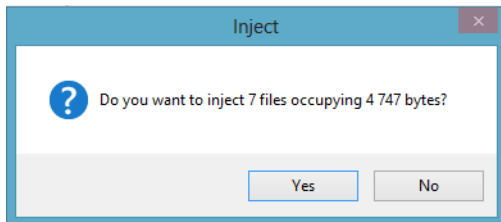
6. Click the **Save** icon.
7. In the **Save as** window:
    1. Select **Virtual floppy Image (*.vfd,*.flp)** from the **Save as type** list.
    2. Enter a **File name** with the `.flp` extension (e.g., `NGInstallFloppy.flp`). Otherwise, WinImage saves the floppy image with the `.vfd` extension, which cannot be used by the VMware hypervisor.
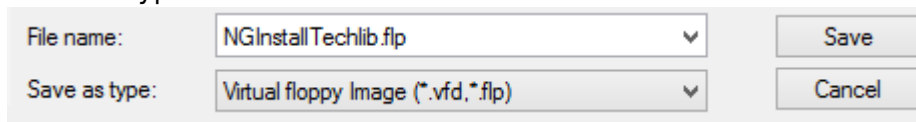

    3. Click **Save**.

Step 3. Create a New Virtual Machine

On the VMware server, create a new virtual machine for the Barracuda CloudGen Firewall Vx.
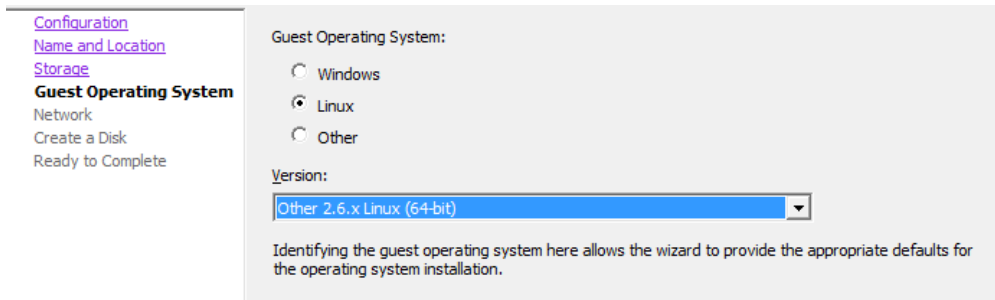
1. Using VMware vSphere Client, log into your VMware hypervisor.
2. Right-click the VMware server that you want to deploy the Barracuda CloudGen Firewall Vx image on and select **New Virtual Machine**. The **Create New Virtual Machine** window opens.
3. On the **Configuration** page, select **Typical** and then click **Next**.
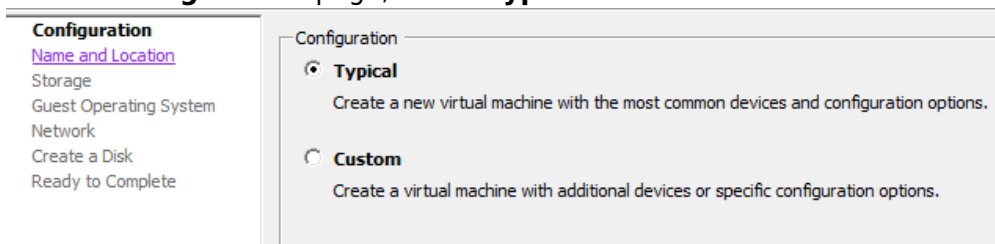
4. On the **Name and Location** page, enter a **Name** for the virtual machine (e.g., `BarracudaNGFirewallVF50`) and then click **Next**.
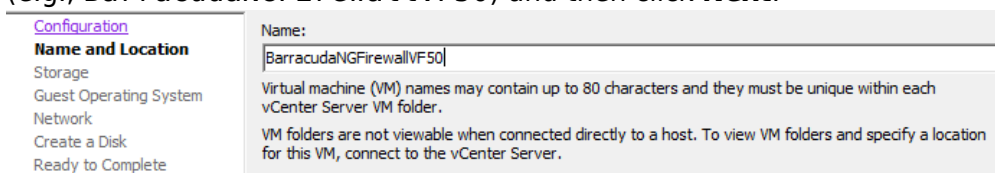
5. On the **Storage** page, select the datastore where the virtual disk should be created and then click **Next**.
6. On the **Guest Operating System** page:
    1. From the **Guest Operating System** list, select **Linux**.
    2. From the **Version** list, select **Other 2.6.x Linux (64-bit)**.
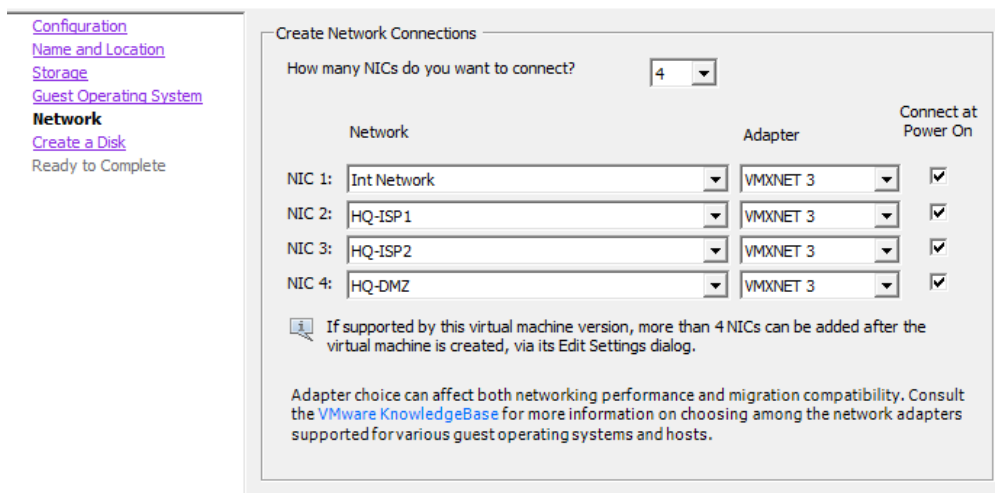   3. Click **Next**.

7. On the **Network** page:
   1. Select the number of network interfaces from the **How many NICs do you wan to connect** list. The number must match the number of network interfaces that you selected in Step 1. Create Configuration Files with Barracuda Firewall Install.
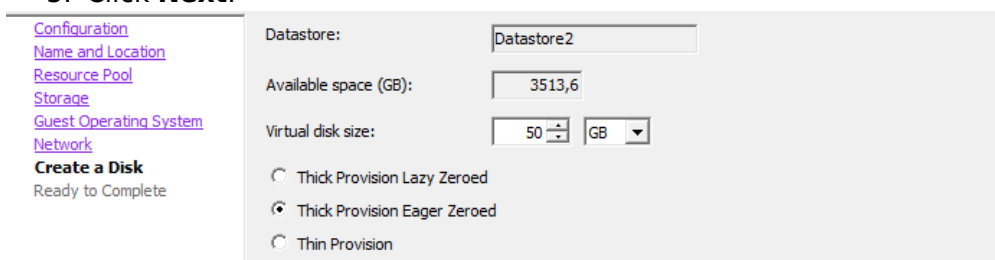
      You can only add four network interfaces in the **Create New Virtual Machine** wizard. If you need more than four virtual network interfaces, add the additional NICs by editing the finished virtual machine configuration. VMware limits the number of virtual network interfaces per guest OS to 10.
   2. For every NIC, specify these settings:
      - **Network** – Select the virtual network that the virtual interface will connect to.
      - **Adapter** – Select **VMXNET 3**. The adapter must match the Barracuda Firewall Install configuration. Barracuda Networks recommends using the VMXNET3 driver.
      - **Connect at Power On** – Select this check box to connect the NIC to the VM.
   3. Click **Next**.


8. On the **Create a Disk** page:
   1. Enter the **Virtual disk size**. For more information, see Firewall Settings.
   2. Select **Thick Provision Eager Zeroed**.
   3. Click **Next**.

9. On the **Ready to Complete** page, click **Finish**. Depending on your virtual disk size, it can take a couple of minutes for the VM to be created. You can view the status of the **Create Virtual Machine** task in the **Recent Tasks** pane at the bottom of the **vSphere Client** window.
10. Right-click the VM that you created and then select **Edit Settings**.
11. In the **Virtual Machine Properties** window:
    1. Configure the **Memory** and **CPUs** according to your Barracuda CloudGen Firewall Vx model.
       > Do not assign more than the licensed number of vCPUs to your virtual machine. For more information, see How to License a CloudGen Firewall.
   2. Click **OK**.

Your virtual machine is now listed in the left pane under the VMware server that you created it on.
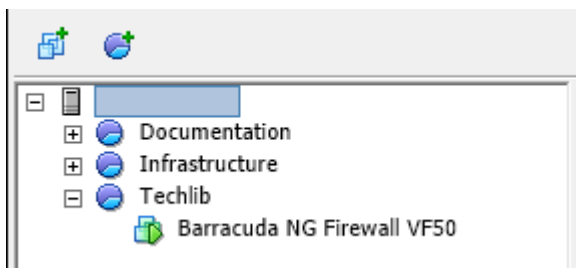

Step 4. Start the Virtual Machine

Connect the Barracuda CloudGen Firewall Vx ISO and the floppy image to the virtual machine for the automated installation.

1. Using VMware vSphere Client, log into your VMware hypervisor.
2. Power on your Barracuda CloudGen Firewall Vx virtual machine.
3. From the taskbar, click the **CD** icon ( ), click **CD/DVD Drive 1**, and then select **Connect to ISO image on local disk**.
4. Select the Barracuda CloudGen Firewall Vx ISO file on the local hard disk and then click **Open**.
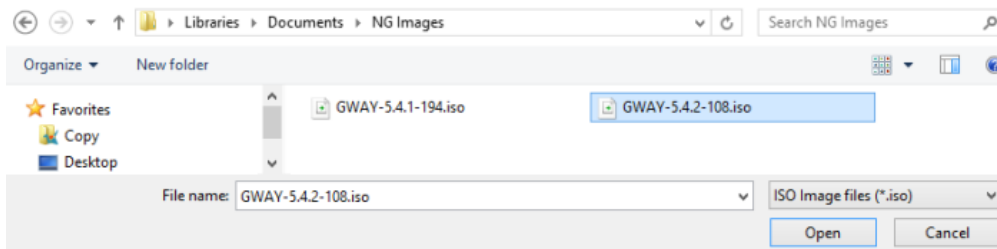

5. Press **Ctrl + Alt + Ins** to reboot the VM.
6. At the **Welcome to Barracuda CloudGen Firewall** boot prompt, press any key except <Enter> to stop the 10 second timeout.
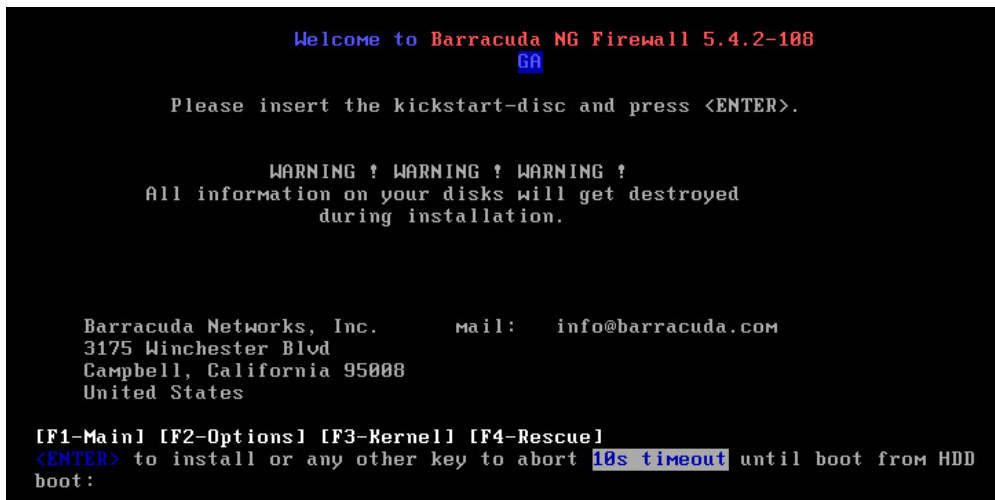
7. From the taskbar, click the **Floppy** icon ( ) and select **Connect to floppy image on local disk**.
8. From your local hard disk, select the floppy image (e.g., `NGInstallFloppy.flp`) that you created in Step 2. Create a Floppy Image with WinImage.
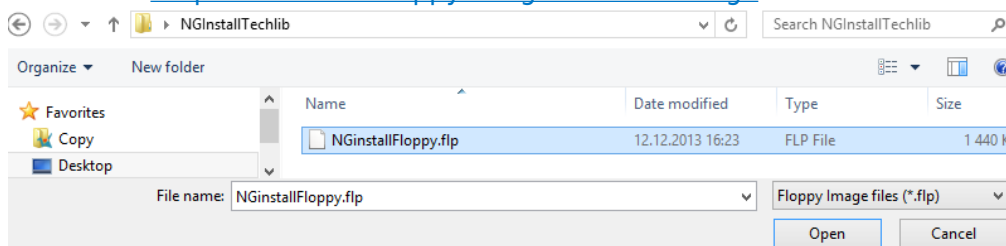
9. Press **Enter** to start the installation.
10. After the installation completes, press **Enter** to reboot.
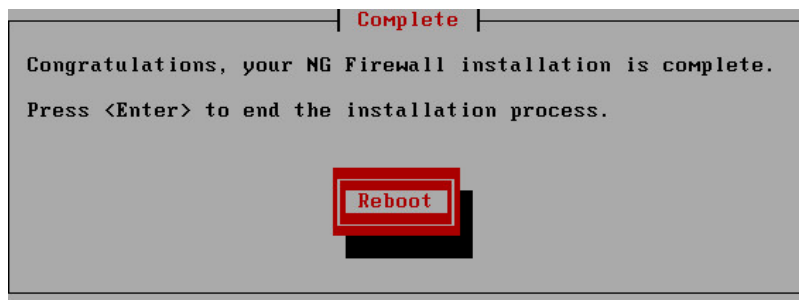
Adding or Removing a Network Interfaces on a Virtual Firewall on the VMware Hypervisor

If you are required to add or remove a network interface on the virtual firewall, the initial order of the interfaces might get disrupted. This happens because the assignment of interfaces to MAC addresses causes these interfaces to be sorted differently on the hypervisor.

For more information on how to handle network interfaces of a CloudGen firewall in conjunction with a

VMware hypervisor, see How to Add or Remove Network Interfaces on a Virtual Firewall on the VMware Hypervisor.

Next Step

After you deploy the Barracuda CloudGen Firewall Vx unit, continue with Get Started and optionally Best Practice - Performance Tuning on VMware Hypervisors.

Figures

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2. NGISelectModel.png
3. NGIDiskSize.png
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5. NGIEnterMIP.png
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