# Procedure

To install, import and configure the NetScaler VPX instance, complete the following procedure:

- 1. Installing and Configuring ESXi 4.0 on the Server
- 2. Deploying a NetScaler VPX Instance
- 3. Adding More Ports to the NetScaler VPX VM
- 4. NetScaler VM Shutdown Procedure

## Installing and Configuring ESXi 4.0 on the Server

If you do not have a server with VMware ESX 4.0 installed, then you can get a 60 day evaluation version of VMware ESX 4.0:

- 1. Make a CD of the EXSi 4.0 VMVisor evaluation (60 day) installer located at <u>http://www.vmware.com/products/esxi/</u>.
- 2. Open the VGA console and install the .iso on the server. The installation takes about 40 minutes.

Note: You must change the BIOS to enable virtualization.

- 3. After the installation is complete, open the VGA console to configure the IP address of the hypervisor.
- 4. Install the vSphere client on the Windows workstation or server. You can download the client from <u>http://www.vmware.com/products/esxi/</u>.
- 5. After the installation is complete, use the IP address of the hypervisor (username = root, blank password) to access the client. If the vSphere client and hypervisor are separated by a firewall, then you must open TCP ports 80, 443, and 902.
- 6. On the vSphere client, select the **Configuration** tab.
- 7. Click Networking.

| Hardware                          | View: Wrtual Switch        |                          |                          |
|-----------------------------------|----------------------------|--------------------------|--------------------------|
| Health Status                     | Networking                 |                          | Refreshill Add Networkin |
| Processors.                       |                            |                          |                          |
| Memory                            | Virtual Switch: vSwitch0   | Remove Properties        |                          |
|                                   | Virtual Machine Port Group | Physical Adapters        |                          |
| Networking                        | VM Network                 | • • 🖼 vmnic4 1000 Full 🖓 |                          |
| Choracte Addresses                | I virtual machine(s)       |                          |                          |
| Network Adapters                  | Netscaler 🗇                | •                        |                          |
| Advanced Settings                 | VMoenal Port               |                          |                          |
| Software                          | vmk0 : 10.217.20.29        |                          |                          |
| Licensed Features                 | 1                          |                          |                          |
| Time Configuration                | Virtual Switch: vSwitch1   | Remove Properties        |                          |
| DNS and Routing                   | Vistual Machina Port Group | Physical Adapters        |                          |
| Virtual Machine Startup/Shutdown  | RS_NC_1_1 Q                | 🗤 🗤 😳 vmnic0 1000 Full 🖓 |                          |
| Virbual Machine Swapfile Location | I virtual machine(s)       |                          |                          |
| Security Profile                  | Netscaler 🙃                | • ·                      |                          |
| System Resource Allocation        |                            |                          |                          |
| Advanced Settings                 | Virtual Switch: vSwitch2   | Remove, Properties       |                          |
|                                   | Virtual Machine Port Group | Physical Adapters        |                          |
|                                   | ♥ N5_NIC_1_2               | e ன vmnic1 1000 Full 🖓   |                          |
|                                   | I virtual machine(s)       |                          |                          |
|                                   | Netscaler                  | 611                      |                          |

- 8. Click on Add Networking on the top right corner to start the Add Network Wizard.
- 9. Select Virtual Machine as the Connection Type.

#### 10. Click Next.

| Add Network Wizard  |   |
|---|---|
| Connection Type<br>Networking hardware of                           | an be partitioned to accommodate each service that requires connectivity.   |
| Connection Type<br>Network Access<br>Connection Settings<br>Summary | Virtual Machine     Acute a nace of network to handle virtual machine network traffic.     VMkernel     The VMkernel TCP/IP stack handles traffic for the following ESXi services: VMware VMotion, iSCSI, NFS, and host management. |
| Reb   |   |

11. Scroll down the list of vSwitch physical adapters and select the physical port to map to interface 1/1 on the NetScaler VPX virtual appliance.

| onnection Type<br>etwork Access | Select which virtual switch will hand<br>using the unclaimed network adapt | le the network<br>ers listed below | traffic for this connection. You may also create a new virtual switch v. |
|---------------------------------|--|------------------------------------|--|
| onnection Settings<br>ummary    | Create existual switch   | Speed                              | Networks   |
|                                 | Vinnic3  | down                               | None   |
|                                 | VITACS   | down                               | None   |
|                                 | 🗔 📟 vmnic6   | down                               | None   |
|                                 | 🗖 📟 vmnic7   | down                               | None   |
|                                 | C Use vSwitch0   | Speed                              | Networks   |
|                                 | m 🐨 vmnic4   | 1000 Full                          | 10.217.20.1-10.217.20.15   |
|                                 | C Use vSwitch1   | Speed                              | Networks   |
|                                 | Preview:   |                                    |  |
|                                 | -Virtual Machine Pert Group<br>Virtual Machine Network                     | 2                                  | hysical Adapters<br>● 100 vmnic3   |

12. Enter a name for the vSwitch to associate with interface 1/1 of the NetScaler VPX VM, for instance **NS\_NIC\_1\_1**.

| dd Network Wizard                                    |  |                                     |   | _ 0 |
|--|--|-------------------------------------|---|-----|
| Virtual Machines - Conne<br>Use network labels to id | ction Settings<br>entify migration compatible connec | ctions common to two or more hosts. |   |     |
| Connection Type<br>Vetwork Access                    | Port Group Properties                                |                                     |   | Ì   |
| Connection Settings                                  | Network Label:                                       | NS_NIC_1_1                          |   |     |
| Summary  | VLAN ID (Optional):                                  |                                     | 1 |     |
|  | Preview:   |                                     |   |     |
|  | -Virtual Machine Port Group<br>NS_NIC_1_1            | Physical Adapters                   |   |     |
|  |  |                                     |   |     |
|  |  |                                     |   |     |
|  |  |                                     |   |     |
|  | <u> </u>   |                                     |   |     |

- 13. Click **Next** to finish the vSwitch creation.
- 14. Repeat steps 6 through 13 to add additional interfaces for the NetScaler VPX virtual appliance to use. When adding a second interface, select another physical adapter and create a unique name label such as NS\_NIC\_1\_2. [Top]

### **Deploying a NetScaler VPX Instance**

 A NetScaler VPX instance for VMware ESX VM follows the Open Virtual Machine format standard. You can download the necessary files from My Account on Citrix.com. If you do not have My Account on Citrix.com credentials, then access the home page at <u>www.citrix.com/account</u> click the Log In link and follow the instructions for New Users.

NetScaler VPX Platinum Evaluation/VMware ESX Tech Preview download page https://www.citrix.com/English/ss/downloads/details.asp?downloadId=1857217&prod uctId=21679

Or follow this path from the My Account on Citrix.com home page: My Account on Citrix.com > Downloads > NetScaler > NetScaler VPX Platinum Evaluation/VMware ESX Tech Preview

Copy the following three files to a location on the same network as the hypervisor. You must copy all files into the same folder.

- NetScaler-VPX-disk1.vmdk or NetScaler-VPX-disk1.vmdk.gz
- NetScaler-VPX.ovf
- NetScaler-VPX.mf

- 2. On the vSphere client, select the Virtual Machine tab.
- 3. Select **File** > **Deploy OVF Template** > **Deploy from file** and browse to the location of the .ovf file downloaded in step 1.
- 4. Click Next.

| Deploy OVF Template  |  | _ 🗆 🗙  |
|--|--|--------|
| Source<br>Select the source location.                                    |  |        |
| Source<br>OVF Template Details<br>Name and Location<br>Ready to Complete | <ul> <li>Deploy from file:         <ul> <li>Cishare/vmware esx/Wetscaler/Wetscaler.ovf</li> <li>Browse</li> <li>Choose this option if the source OVF template (*.ovf) is on the local file system. For example, your C: drive, a network share, or a CD/DVD drive.</li> </ul> </li> <li>Deploy from URL:         <ul> <li>Choose this option to download the OVF template from the Internet and enter a URL such as http://www.example.com/template.ovf</li> </ul> </li> </ul> |        |
| Help   | <u>≤</u> Back Next ≥   | Cancel |

 In the Network Mapping screen, verify if the NetScaler VPX instance networking information matches that of the hypervisor. Initially, one NetScaler VPX interface (NS\_NIC\_1\_1) is sufficient.

In the following example, the VM Network maps to port 0/1 on the NetScaler VPX instance, which is same port used for hypervisor management. The current NetScaler VPX for ESX virtual appliance supports up to four interfaces, including the management port 0/1.

After deployment, you can change the number of ports assigned to the NetScaler VPX. When adding interfaces to the NetScaler VPX VM, you must allocate a new license from the My Account on Citrix.com licensing portal and copy it to the virtual appliance. You can download evaluation licenses any number of times during the Tech Preview. For more information on licensing NetScaler VPX products, see CTX122426-Citrix NetScaler VPX and CloudBridge VPX Licensing Guide.

Click Next.

| Deploy O¥F Template   |  |                                     |        |
|---|--|-------------------------------------|--------|
| Network Mapping<br>What networks should th                        | ne deployed template use?              |                                     |        |
| <u>Source</u><br><u>OVF Template Details</u><br>Name and Location | Map the networks used in this OVF temp | plate to networks in your inventory |        |
| Network Mapping   | Source Networks                        | Destination Networks                | 1      |
| Ready to Complete   | VM Network                             | VM Network                          |        |
|   | NS_NIC_1_1                             | NS_NIC_1_1                          | 0      |
|   | NS_NIC_1_2                             | NS_NIC_1_2                          |        |
|   |  |                                     |        |
|   | Description:                           |                                     |        |
|   |  |                                     | ×      |
|   |  |                                     |        |
| Help  |  | <u>≤</u> Back Next ≥                | Cancel |

After successful deployment the following screen appears. A pop-up Window reports success as well.



If you do not need more than two ports (0/1 and 1/1), then you can remove the unwanted ports from the Virtual Machine tab (select Properties).

| 1  |  | - Device Status  |
|--|--|--|
| Show All Devices   | Add Remove   |  |
| ardware  | Summary  | Connect at power on  |
| Memory<br>CPUs<br>Video card<br>VMCI device<br>Hard disk 1<br>Network adapter 1<br>Network adapter 2<br>Network adapter 3<br>Network adapter 4 | 1024 MB<br>1<br>Video card<br>Restricted<br>Virtual Disk<br>VM Network<br>NS_NIC_1_1<br>NS_NIC_1_3 | Adapter Type<br>Current adapter: E1000<br>MAC Address<br>00:0c:29:2b:a5:9b<br>C Automatic C Manual<br>Network Connection<br>Network label: |
|  |  | NS_NIC_1_2   |

- 6. You are now ready to start the NetScaler VPX for ESX virtual appliance. Start the VM and click on the **Console** tab to emulate a console port. You are prompted with a Configuration Wizard. Follow the prompts to provide the necessary network addresses. When finished, login with the default credentials: nsroot / nsroot.
- To fully utilize the platinum edition features of the NetScaler VPX, you must copy a license to the virtual appliance. For instructions on NetScaler VPX license allocation and installation, see CTX122426 - [entryID]CTX122426[/entryID]. Citrix recommends you use the NetScaler VPX-1000 Platinum 90 day Evaluation license for the Tech Preview. You can download this license from: <u>https://www.citrix.com/English/ss/downloads/details.asp?downloadId=1857217&prod</u> uctId=21679
- 8. For further instructions to configure the NetScaler VPX virtual appliance, see CTX121819-[entryID]CTX121819[/entryID].

### Adding More Ports to the NetScaler VPX VM

- 1. Follow the instructions in the <u>Installing and Configuring ESXi 4.0 on the Server</u> section to add vSwitches and NetScaler VPX ports (NS\_NIC\_1\_2... NS\_NIC\_1\_3).
- 2. Follow the steps in the <u>NetScaler VM Shutdown Procedure</u> section to shut down the NetScaler VPX instance.
- 3. After shutdown, open the Virtual Machines tab.
- 4. Select the **NetScaler VPX VM** and click **Properties**.
- 5. Click Add.

| Netscaler-YPX-1 - Virtual I   | Machine Properties   |   |
|---|--|---|
| lardware Options Resources  |  | Virtual Machine Version: 7  |
| Netscaler-VPX-1 - Virtual 1         Iardware       Options       Resources         Show All Devices         Hardware         Memory         CPUs         Video card         VMCI device         Hard disk 1         Network adapter 1         Network adapter 2 | Add Remove Add Remove Summary 1024 MB 1 Video card Restricted Virtual Disk VM Network N5_NIC_1_1 | Virtual Machine Version:<br>Virtual Machine Version:<br>255 GB<br>128 GB<br>4 GB<br>64 GB<br>32 GB<br>16 GB<br>8 GB<br>4 GB<br>2 GB<br>4 GB<br>2 GB<br>4 GB<br>4 GB<br>4 GB<br>4 GB<br>5 GB<br>4 GB<br>5 GB<br>4 GB<br>5 GB<br>4 GB<br>5 GB<br>5 GB<br>5 GB<br>5 GB<br>5 GB<br>5 GB<br>6 Memory Size:<br>1 ∰ GB<br>5 GB<br>6 Maximum recommended for this<br>9 guest OS: 64 GB.<br>16 GB<br>16 GB<br>16 GB<br>16 GB<br>17 GB<br>18 GB<br>18 GB<br>16 GB<br>16 GB<br>16 GB<br>16 GB<br>16 GB<br>16 GB<br>16 GB<br>16 GB<br>17 GB<br>17 GB<br>17 GB<br>17 GB<br>17 GB<br>18 GB<br>18 GB<br>18 GB<br>19 GB<br>10 G |
| Network adapter 2   | NS_NIC_1_1   | 8 GB Minimum recommended for this<br>guest OS: 32 MB.<br>4 GB -<br>2 GB -<br>1 GB -<br>512 MB -   |
|   |  | 256 MB  |
|   |  | 16 MB -<br>8 MB -<br>4 MB   |
| Help  |  | OK Cancel   |

6. Select the appropriate device type (Ethernet Adapter). Click **Next**.

| Add Hardware   |   |   |
|--|---|---|
| Device Type<br>What sort of device do                  | you wish to add to your virtual machine   | 97  |
| Device Type<br>Network connection<br>Ready to Complete | Choose the type of device you w<br>Serial Port<br>Parallel Port<br>CD/DVD Drive<br>USB Controller<br>PARCI Device (unaversite)<br>CD/DVD Drive<br>USB Controller<br>PARCI Device (unaversite)<br>CD/DVD Drive<br>SCSI Device (unaversite) | ish to add.<br>Information<br>This device can be added to this Virtual Machine. |
| Help   |   | _≤Back Next ≥ Cance   |

 Enter the type of adapter (1Gbps) and the correct Network Label which is being added (NS\_NIC\_1\_2). Click Next.

| evice Type        | Adapter Type   |                                |
|-------------------|--|--------------------------------|
| etwork connection | Typer E1000  |                                |
| eady to Complete  | Adapter choice and the sector performe                 | va and ministion connatibility |
|                   | Consult the VMware KnowledgeBase for more inform       | ation on choosing among the    |
|                   | network adapters supported for various guest operation | ng systems and hosts.          |
|                   | Network Connection                                     |                                |
|                   | C Network Label  |                                |
|                   | NS_NIC_1_2   |                                |
|                   | Port: N/A  |                                |
|                   | C Specify Port: (Himano)                               |                                |
|                   | DVSwitch:  | Ψ                              |
|                   | Port UUID:   | <u>*</u>                       |
|                   | Device Status  |                                |
|                   | Connect at power on                                    |                                |

8. Ensure that the new network adapter is successfully added. Click **OK**.

| Show All Devices  | Add Remove               | Connected                            |
|-------------------|--------------------------|--------------------------------------|
| Hardware          | Summary                  | Connect at power on                  |
| CPUs              | 1                        | Adapter Type                         |
| 📃 Video card      | Video card               | Current adapter: E1000               |
| VMCI device       | Restricted               |                                      |
| Hard disk 1       | Virtual Disk             | MAC Address                          |
| Network adapter 1 | VM Network               |                                      |
| Network adapter 2 | N5_NIC_1_1<br>N5_NIC_1_2 | Automatic     Manual                 |
|                   |                          | Network Connection<br>Network label: |
|                   |                          | NS_NIC_1_2                           |
| Help              |                          | OK Cancel                            |

### **NetScaler VM Shutdown Procedure**

- 1. From the console, type **save config** at the command line interface of the NetScaler VPX instance.
- 2. Switch to the shell prompt.
- 3. Type halt and wait for the "Please press any key to reboot" message on the screen.
- 4. From the vSphere client, select the NetScaler VPX VM and click **Power off (Ctrl+E)**.