



## Installing LANGuardian on VMware Workstation

26 July 2012

*This document describes the steps required to install LANGuardian on a system running VMware Workstation. VMware Workstation is an ideal platform to use for evaluating LANGuardian because it contains a Virtual Network Editor utility, which can be used to bridge physical network adapters to virtual appliances. This functionality allows the traffic from a monitoring session on a network switch to be bridged to the virtual LANGuardian appliance.*

### Before you begin

The following table summarizes the installation method and requirements for installing LANGuardian on VMware Workstation:

Requirements	VMware Workstation
System Requirements	A system with VMware Workstation installed.
Network Requirements	Two physical network interface cards (NICs).
Software Requirements	A copy of the LANGuardian ISO image, which you can download from <a href="http://www.netfort.com/software-download">http://www.netfort.com/software-download</a> .

The steps required to install and configure LANGuardian on a VMware Workstation are outlined in the following table:

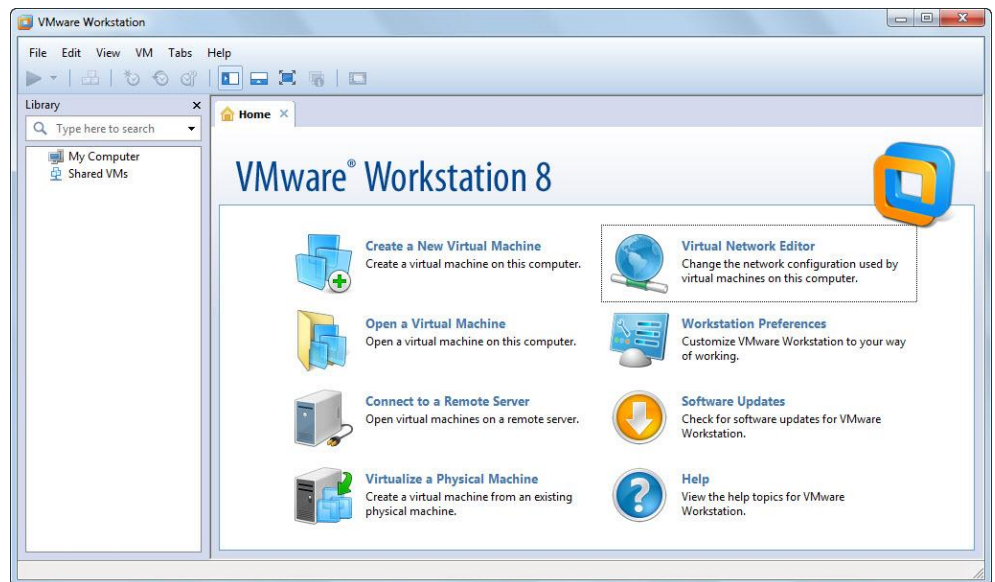
Step	Description	Refer to the section entitled...
1.	Configure the physical to virtual interface mapping.	Configure the physical to virtual interface mapping
2.	Create a LANGuardian virtual appliance.	Create a LANGuardian virtual appliance
3.	Install the LANGuardian ISO image.	Install the LANGuardian ISO image

4.	Access the LANGuardian user interface via a web browser and use the Configuration Wizard to complete the installation.	Access the LANGuardian user interface
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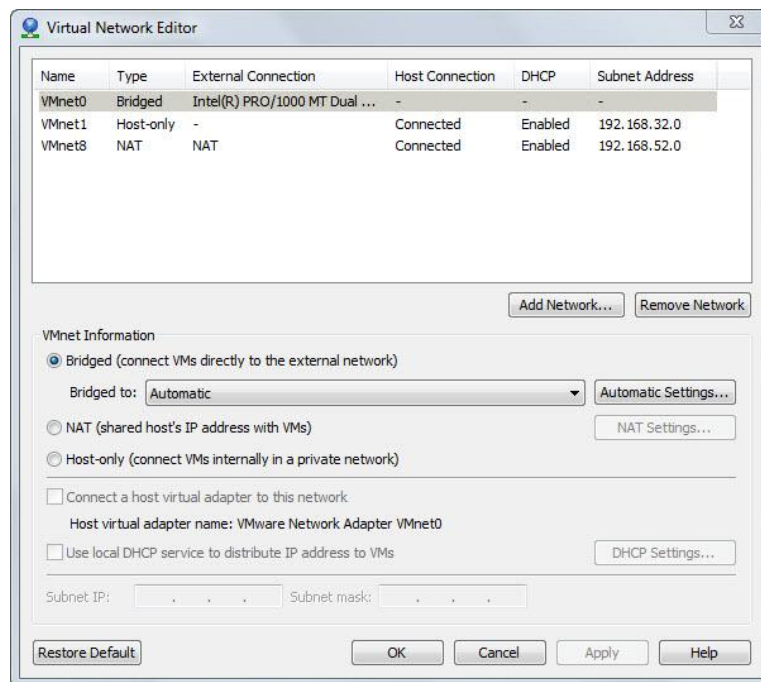
## Configure the physical to virtual interface mapping

To configure the physical to virtual interface mapping, take the following steps:

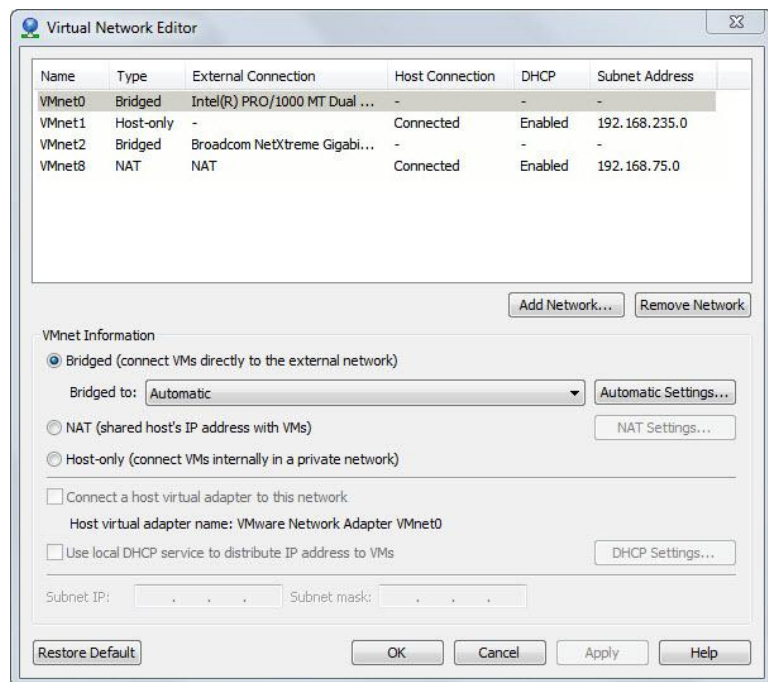
1. Start the VMware Workstation. The **VMware Workstation** window is displayed.



2. Click on **Virtual Network Editor** in the right pane of the **VMware Workstation** window. A list of virtual interfaces and the external connection to which they should be mapped is displayed.



3. We recommend that the physical network interface card (NIC) that will be connected to the monitoring (SPAN) port on the physical network switch is bridged to VMnet0. This allows the VMnet0 interface to be bridged automatically.
4. To access the LANGuardian Management Interface, you need to configure a second physical NIC to map it to a virtual interface. To do this, take the following steps:
  - a) Click on the **Add Network...** button.
  - b) Select the virtual network to add and click **OK**. By default VMnet2 is displayed. The new virtual network is added to the list.
  - c) Select the new virtual network and change the VMNet type from **Host-only** to **Bridged**.
  - d) From the **Bridged to** drop-down list, select the physical NIC that is currently used to connect the host to your network.
  - e) Click **OK**. The image below is an example of how the physical to virtual interfaces should be mapped.



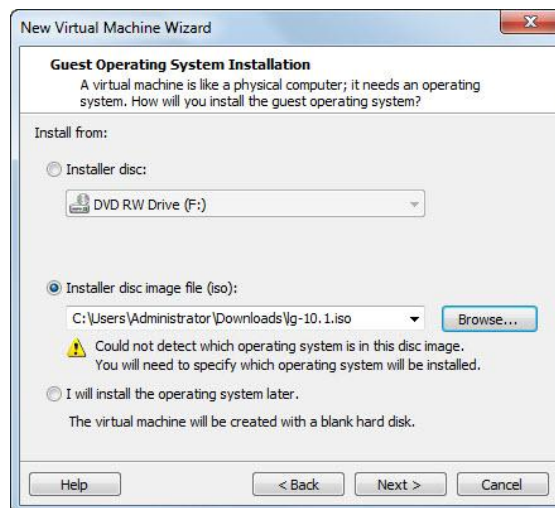
## Create a LANGuardian virtual appliance

To create a LANGuardian virtual appliance, take the following steps:

1. In the **VMware Workstation** window, click on **Create a New Virtual Machine**. The **New Virtual Machine Wizard** is displayed.



2. Select **Typical**, then click **Next**.
3. Select the location of the LANGuardian ISO image, then click **Next**.

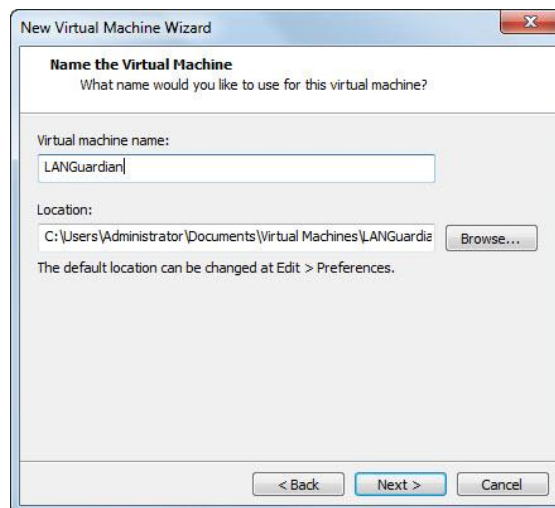


4. In the **Select a Guest Operating System** window:

- a) Select **Other** from the **Guest Operating Systems** list.
- b) Select **FreeBSD** from the **Version** drop-down list, then click **Next**.

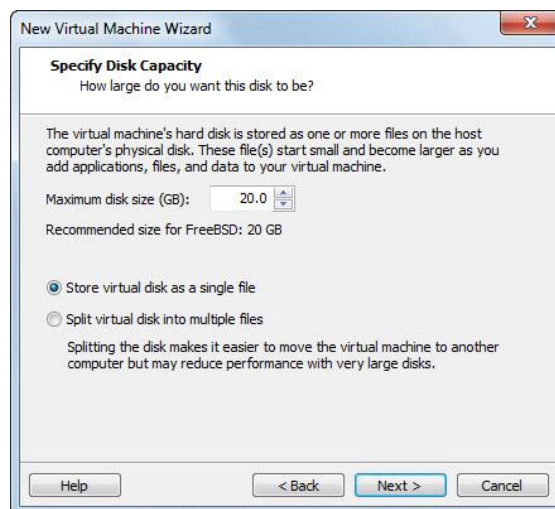


5. Specify a name for the virtual appliance in the **Virtual machine name** text box, then click **Next**.



6. In the **Specify Disk Capacity** window:

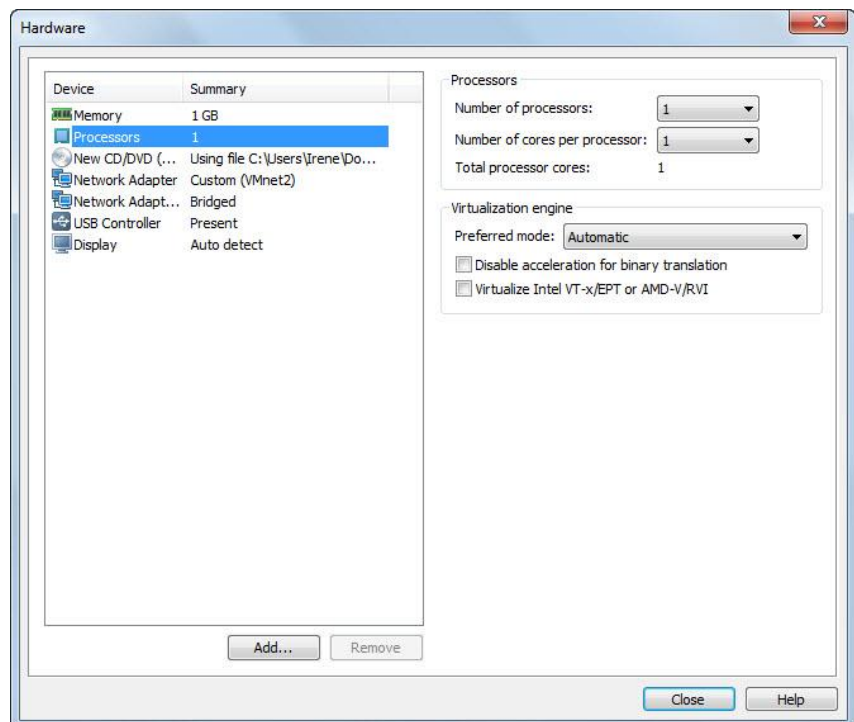
- a) Set the **Maximum disk size** to be at least 20GB. The larger the disk space assigned to the LANGuardian virtual appliance, the longer the data can be retained in the database.
- b) Select **Store virtual disk as a single file**, then click **Next**.



7. Click on the **Customize Hardware...** button. The **Hardware** window is displayed. You need to make the following changes:

- a) Select **Memory** and use the slider control to set the memory to at least 1GB.
- b) Select the **Floppy** device and click **Remove**.
- c) Select the **Sound Card** device and click **Remove**.
- d) Click **Add...** to add a new network adapter. The **Add Hardware Wizard** dialog is displayed. Take the following steps:

- i. Select **Network Adapter** and click **Next**.
  - ii. Select the **Bridged: Connected directly to the physical network** option. When you select this option the VMnet0 (Bridged) virtual interface is assigned to this new network adapter. In step 3 of the previous procedure (Configure the physical to virtual interface mapping), you mapped this virtual interface to the physical interface on which the traffic being monitored will be detected.
  - iii. Click **Finish** to save the changes and close the **Add Hardware Wizard** dialog.
- e) In the **Hardware** window, select the original **Network Adapter** device in the left pane, then:
- i. Select the **Custom: Specific virtual network** option.
  - ii. Select **VMnet2 (Bridged)** from the drop-down list.
- f) The final hardware settings should match those shown in the following screenshot.



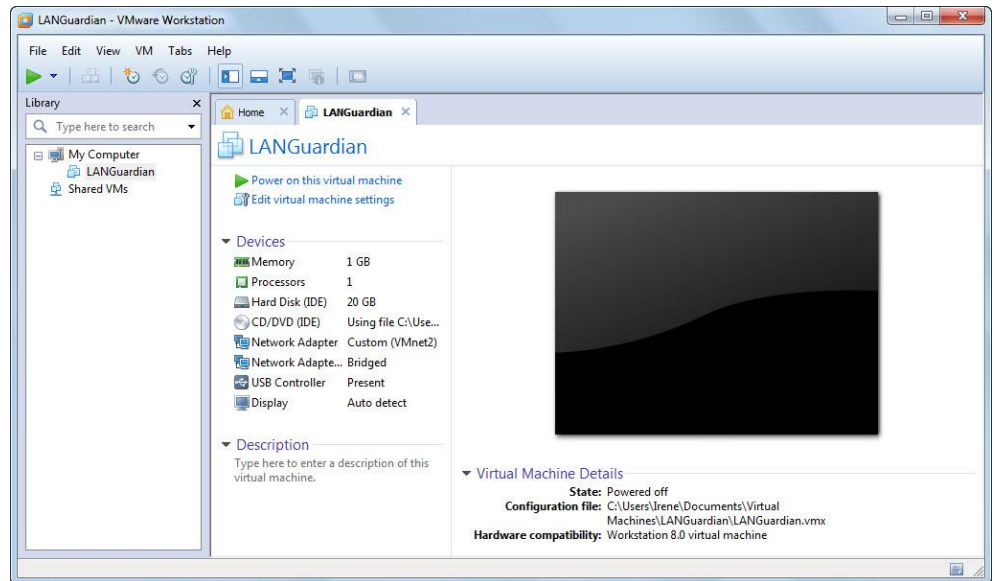
Click **Close** to save the changes and close the **Hardware** dialog.

8. Click **Finish** to complete the **New Virtual Machine Wizard**.

## Install the LANGuardian ISO image

To install the LANGuardian ISO image, you power on the new LANGuardian virtual appliance that you created in the previous procedure. To do this, take the following steps:

1. In the **VMware Workstation** window, select the new LANGuardian virtual appliance in the left pane. For example, select **LANGuardian**.



2. Select **Power on this virtual machine**. The installation of LANGuardian begins automatically and the LANGuardian Setup Utility is displayed.

```
LANGuardian Setup
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Welcome to the setup utility for LANGuardian.

This utility will guide you through the LANGuardian installation process. The
installation takes less than five minutes.

+-----+
| PLEASE NOTE:                                     |
| |                                                 |
| | This installation will overwrite any data or operating |
| | system that exists on the selected hard disk.         |
| |                                                 |
+-----+

Type YES to continue with the installation. Type NO to quit the setup program
without installing LANGuardian.

Do you want to continue with the installation [NO]?
```

Enter **YES** to continue with the installation.



3. Complete the LANGuardian Setup process. There are six steps as follows:

```
LANGuardian Setup
-----

Step 1 of 6: Select the installation disk

The following list shows the existing disks on this computer.

Disk ID  Description                                     Size
-----
1        ad0: VMware Virtual IDE Hard Drive                 50 GB

Please select the disk on which you want to install LANGuardian.

Enter the disk ID number:
```

Enter the disk ID number for the disk on which you want to install LANGuardian (note that any data already on the disk will be deleted).

```
LANGuardian Setup
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Step 2 of 6: Confirm the installation disk

You have chosen to install LANGuardian on this disk:

Description                                     Size
-----
ad0: VMware Virtual IDE Hard Drive                 50 GB

If you proceed with the installation, all data on this disk will be erased.
Type YES to continue with the installation. Type NO to quit the setup utility
without installing LANGuardian.

Do you want to continue [NO]?
```

Confirm the installation disk before continuing.

```
LANGuardian Setup
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Step 3 of 6: Select a network device for the LANGuardian user interface

LANGuardian requires at least two network interface cards (NICs). One NIC will
be assigned to the browser-based user interface. LANGuardian will use the
other NICs to capture network traffic data.

The following NICs are available on your system:

NIC ID  Description                                     Status
-----
1        Intel PRO/1000 Network Connection                 Connected
2        Broadcom NetXtreme Gigabit Adapter                Connected

Please select a NIC to assign to the user interface.

If you want to be sure of the ID of each NIC, disconnect all network cables
and reconnect them one at a time, pressing the R key after you connect each one.

Enter the NIC ID number or press the R key to refresh the list [R]:
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Enter the NIC ID number for the management interface or press R to refresh the list.

```
LANGuardian Setup
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Step 4 of 6: Configure the user interface network device

You have chosen to assign this device to the LANGuardian user interface:

Description                                     Status
-----
Intel PRO/1000 Network Connection                Connected

Please enter the following network settings:

LANGuardian computer IP address:    192.168.10.200
LANGuardian computer network mask:  255.255.255.0
Default gateway IP address:         192.168.10.1
DNS server IP address:              16.1.20.232

Press any key to continue with the installation.
```

Enter the following network settings:

- IP address – the static IP address of the management interface (this will be the address you enter in your web browser to access the LANGuardian home page).
- Subnet mask
- Gateway address
- DNS server address

At this stage in the installation process, no changes have been made to your system and your disk has not been modified. LANGuardian asks you to confirm your settings once again before beginning the installation.

```
LANGuardian Setup
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Step 5 of 6: Confirm settings

LANGuardian Setup will now complete the installation using these settings:

Disk Description                                     Size
-----
1    ad0: VMware Virtual IDE Hard Drive                50 GB

NIC Description                                     Status
-----
1    Intel PRO/1000 Network Connection                Connected

        LANGuardian computer IP address:  192.168.10.200
        LANGuardian computer network mask: 255.255.255.0
        Default gateway:
        DNS server

Type YES to continue with the installation. Type NO to quit the setup program
without installing LANGuardian.

Are you sure you want to install LANGuardian using these settings [YES]?
```

Enter YES to complete the installation.

```
LANGuardian Setup
-----

Step 6 of 6: Complete the installation

Please wait while LANGuardian Setup completes the installation.

LANGuardian Setup
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Finished!

LANGuardian has been installed successfully. Please remove the LANGuardian
CD and restart the system to complete the installation. After restart, you
can use the LANGuardian Management Utility on this console to change the
operating mode and network settings.

You can access the main LANGuardian user interface via a web browser at:

https://192.168.10.200

The first time you visit this URL, LANGuardian will display the Configuration
Wizard, which will guide you through the remaining configuration steps.

We hope you enjoy using LANGuardian.

The NetFort team (support@netfort.com)

Press any key to restart...
```

Wait for the installation to complete. When completed, the LANGuardian virtual machine will automatically reboot.

## Access the LANGuardian user interface

To access the LANGuardian user interface, do the following:

1. Start your preferred web browser and go to the LANGuardian home page at the IP address you specified during the installation. For example, if the IP address you specified during the installation is 192.168.10.200, go to <https://192.168.10.200>.
2. The first time you go to the LANGuardian URL, it displays the Configuration Wizard.
3. Follow the steps described in the document entitled *Using the LANGuardian Configuration Wizard* to complete the LANGuardian installation and begin monitoring traffic data. You can find the document at:

<http://www.netfort.com/downloads/documentation>

## Need help?

Please contact us if you need help installing or configuring NetFort LANGuardian. You can avail of free no-obligation technical support by contacting our helpdesk on [support@netfort.com](mailto:support@netfort.com). See also the NetFort discussion forum – <http://forum.netfort.com> – for technical tips and usage information.