

Installation Guide

McAfee® Firewall Enterprise Hardware Kit for F Model Appliances

This document provides hardware installation instructions for McAfee® Firewall Enterprise (hereinafter Firewall Enterprise) F model appliances.

You can find additional information at the following locations:

- **Support** — Visit mysupport.mcafee.com to find product documentation, announcements, and support.
- **Product updates** — Visit go.mcafee.com/goto/updates to download the latest Firewall Enterprise patches.

In this document ...

[Before you begin](#)

[Install required software](#)

[Open the appliance chassis](#)

[Determine where the hardware must be installed](#)

[Install the hardware](#)

[Verify that the hardware is correctly installed](#)

Before you begin

Before you perform the hardware installation procedure, complete the following tasks.

Schedule downtime to perform the upgrade

To install the hardware, you must shut down your appliance. Schedule a sufficient amount of downtime to install the hardware and verify that it is functioning properly.

Take steps to prevent damage from electrostatic discharge

Static electricity can harm delicate components inside your appliance. Take the following steps to prevent damage from electrostatic discharge (ESD).

Caution: To guard against electrical shock, always unplug your appliance from the electrical outlet before opening the cover.

- Do not remove components from their antistatic packing material until you are ready to install the component in your appliance. Just before unwrapping the antistatic packaging, discharge static electricity from your body by touching the power supply or an unpainted metal surface on the appliance chassis.

- Handle all electrostatic-sensitive components in a static-safe area. If possible, use antistatic floor pads and workbench pads.
- Discharge static electricity from your body before you touch any of your appliance's electronic components.

Print this document

During the installation process, you must determine where your new or replacement hardware should be installed. Print this document so that you can record hardware location information in the space provided.

Install required software

If you are installing a network interface card (NIC), perform this task to determine if additional software is required.

- 1 Examine the NIC to determine if it includes an HE, SE, or HG label near the Ethernet ports.
 - If the NIC contains any of these labels, additional software is required. Continue with [Step 2](#).
 - If the NIC does not contain any of these labels, no additional software is needed. Continue with [Open the appliance chassis](#).
- 2 Determine what software you must install based on your appliance model.

Table 1 Required software

Appliance model	Required software	KnowledgeBase article
• 1100F • 2100F • 2150F • 4150F	Hardware hotfix HW02	KB65774
2150F VX	NIC drivers for ESXi	KB69043

- 3 Find the appropriate KnowledgeBase article.
 - a In a web browser, navigate to mysupport.mcafee.com.
 - b In the User Login area, enter your credentials, then click **OK**.
 - c Click **Search the KnowledgeBase**.
 - d In the **Ask a Question** field, type the article number, then press **Enter**.
- 4 Install the required software as described in the KnowledgeBase article.

Open the appliance chassis

Caution: Observe standard ESD procedures when handling hardware.

- 1 Use the Admin Console to shut down the appliance.
- 2 Disconnect the appliance from electrical power and network cables.
- 3 If a bezel is attached to the appliance, remove it.
- 4 Remove the top cover of the appliance.

Note: Break the tamper-evident seal. A replacement seal is included in the hardware kit.

- 5 Touch the power supply to discharge static electricity.

Determine where the hardware must be installed

Note: If you are replacing a PCI card that is currently installed in your appliance, go to [Install the hardware on page 13](#).

To determine where the hardware must be installed:

- 1 Record the location and type of all PCI cards that are currently installed in your appliance. Use the information in [Table 2](#) to identify each PCI card.

Tip: You might need this information to revert to your original configuration.

Table 2 PCI cards supported by F model appliances

PCI card type	Identifying feature
6-port gigabit UTP (copper) NIC	Port count and type
6-port gigabit SFP (fiber) NIC	Port count and type
2-port 10-gigabit (fiber) NIC	Port count and type
6-port 10-gigabit SFP+ (fiber) NIC	"Tambora" label
SSL accelerator	"CAVIUM NETWORKS" label
IPS engine accelerator	"LSI" label
Note: Supported at version 7.0.1.00 or later.	

- 2 Create a list of all PCI cards that will be installed in your appliance when the installation is complete. Include:
 - PCI cards that you recorded in [Step 1](#)
 - PCI card(s) that you received with the upgrade kit (identify using the information in [Table 2](#))
- 3 Based on your appliance model, refer to the appropriate section to determine where the PCI cards that you listed in [Step 2](#) must be installed in your appliance.
 - [1100F hardware configurations on page 4](#)
 - [2100F and 2150F hardware configurations on page 5](#)
 - [2150F VX hardware configurations on page 9](#)
 - [4150F hardware configurations on page 10](#)

1100F hardware configurations

Determine where your PCI cards must be installed in your 1100F appliance.

- 1 In the first column of [Table 3](#), find the row that corresponds to the list of hardware that you created in [Step 2 on page 3](#).

Note: If you cannot find your combination of hardware in the table, it is not supported. You might need to remove one or more of your existing cards to install the upgrade hardware.

- 2 In [Figure 1](#), record the contents of each PCI slot for your list of hardware.

- **1** – Slot 1 column of [Table 3](#)
- **2** – Slot 2 column of [Table 3](#)

After you record the contents of each PCI slot, continue with [Install the hardware on page 13](#).

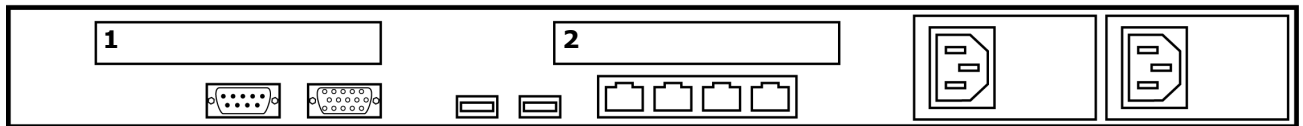


Figure 1 1100F PCI slots

Table 3 1100F supported hardware configurations

Supported hardware configurations	Slot 1	Slot 2
(1) 6-port gigabit UTP NIC	6-port gigabit UTP NIC	empty
(2) 6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit SFP NIC
• (1) 6-port gigabit UTP NIC • (1) SSL accelerator	6-port gigabit UTP NIC	SSL accelerator
• (1) 6-port gigabit UTP NIC • (1) IPS engine accelerator	6-port gigabit UTP NIC	IPS engine accelerator
• (1) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC	6-port gigabit UTP NIC	2-port 10-gigabit NIC
• (1) 6-port gigabit SFP NIC • (1) IPS engine accelerator	6-port gigabit SFP NIC	IPS engine accelerator
• (1) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC	6-port gigabit UTP NIC	6-port 10-gigabit SFP+ NIC

2100F and 2150F hardware configurations

Determine where your PCI cards must be installed in your 2100F or 2150F appliance.

- 1 In the first column of [Table 4](#), find the row that corresponds to the list of hardware that you created in [Step 2 on page 3](#).

Note: If you cannot find your combination of hardware in the table, it is not supported. You might need to remove one or more of your existing cards to install the upgrade hardware.

- 2 In [Figure 2](#), record the contents of each PCI slot for your list of hardware.

- **1** – Slot 1 column of [Table 4](#)
- **2** – Slot 2 column of [Table 4](#)
- **3** – Slot 3 column of [Table 4](#)
- **4** – Slot 4 column of [Table 4](#)

After you record the contents of each PCI slot, continue with [Install the hardware on page 13](#).

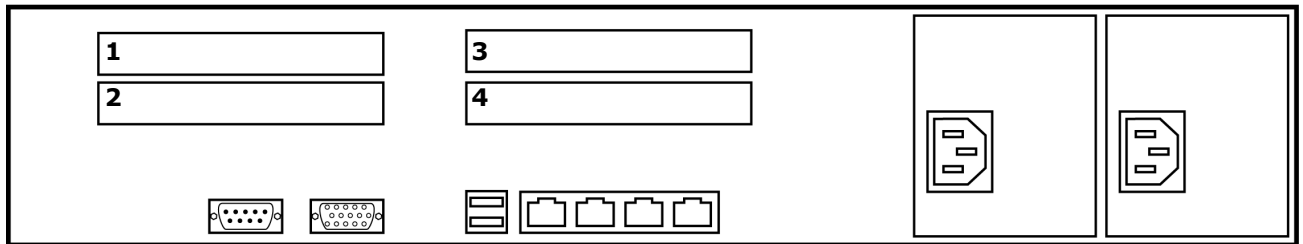


Figure 2 2100F and 2150F PCI slots

Table 4 2100F/2150F supported hardware configurations

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4
One PCI card				
(1) 6-port gigabit UTP NIC	empty	6-port gigabit UTP NIC	empty	empty
Two PCI cards				
(2) 6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	empty	empty
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC	empty	6-port gigabit UTP NIC	empty	6-port gigabit SFP NIC
• (1) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC	empty	6-port gigabit UTP NIC	empty	6-port 10-gigabit SFP+ NIC
• (1) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC	empty	6-port gigabit UTP NIC	2-port 10-gigabit NIC	empty
• (1) 6-port gigabit UTP NIC • (1) SSL accelerator	empty	6-port gigabit UTP NIC	SSL accelerator	empty
• (1) 6-port gigabit UTP NIC • (1) IPS engine accelerator	empty	6-port gigabit UTP NIC	IPS engine accelerator	empty
Three PCI cards				
(3) 6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	empty	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	empty	6-port gigabit SFP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	empty	6-port 10-gigabit SFP+ NIC

Table 4 2100F/2150F supported hardware configurations (continued)

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4
(2) 6-port gigabit UTP NIC (1) 2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	2-port 10-gigabit NIC	empty
(2) 6-port gigabit UTP NIC (1) SSL accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	SSL accelerator	empty
(2) 6-port gigabit UTP NIC (1) IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	IPS engine accelerator	empty
(1) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC (1) 6-port 10-gigabit SFP+ NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	empty	6-port 10-gigabit SFP+ NIC
(1) 6-port gigabit UTP NIC (2) 6-port gigabit SFP NIC	empty	6-port gigabit UTP NIC	6-port gigabit SFP NIC	6-port gigabit SFP NIC
(1) 6-port gigabit UTP NIC (1) 2-port 10-gigabit NIC (1) 6-port gigabit SFP NIC	empty	6-port gigabit UTP NIC	2-port 10-gigabit NIC	6-port gigabit SFP NIC
(1) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC (1) SSL accelerator	empty	6-port gigabit UTP NIC	SSL accelerator	6-port gigabit SFP NIC
(1) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC (1) IPS engine accelerator	empty	6-port gigabit UTP NIC	IPS engine accelerator	6-port gigabit SFP NIC
(1) 6-port gigabit UTP NIC (2) 2-port 10-gigabit NIC	empty	6-port gigabit UTP NIC	2-port 10-gigabit NIC	2-port 10-gigabit NIC
(1) 6-port gigabit UTP NIC (1) 2-port 10-gigabit NIC (1) SSL accelerator	empty	6-port gigabit UTP NIC	SSL accelerator	2-port 10-gigabit NIC
(1) 6-port gigabit UTP NIC (1) 2-port 10-gigabit NIC (1) IPS engine accelerator	empty	6-port gigabit UTP NIC	IPS engine accelerator	2-port 10-gigabit NIC
(1) 6-port gigabit UTP NIC (1) 6-port 10-gigabit SFP+ NIC (1) SSL accelerator	empty	6-port gigabit UTP NIC	SSL accelerator	6-port 10-gigabit SFP+ NIC
(1) 6-port gigabit UTP NIC (1) 6-port 10-gigabit SFP+ NIC (1) IPS engine accelerator	empty	6-port gigabit UTP NIC	IPS engine accelerator	6-port 10-gigabit SFP+ NIC
(1) 6-port gigabit UTP NIC (1) SSL accelerator (1) IPS engine accelerator	empty	6-port gigabit UTP NIC	IPS engine accelerator	SSL accelerator
Four PCI cards				
(3) 6-port gigabit UTP NIC (1) SSL accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	SSL accelerator	6-port gigabit UTP NIC
(3) 6-port gigabit UTP NIC (1) IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	IPS engine accelerator	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC (1) SSL accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	SSL accelerator	6-port gigabit SFP NIC

Table 4 2100F/2150F supported hardware configurations (continued)

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	IPS engine accelerator	6-port gigabit SFP NIC
• (2) 6-port gigabit UTP NIC • (2) 2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	2-port 10-gigabit NIC	2-port 10-gigabit NIC
• (2) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC • (1) SSL accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	SSL accelerator	2-port 10-gigabit NIC
• (2) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC • (1) IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	IPS engine accelerator	2-port 10-gigabit NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) SSL accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	SSL accelerator	6-port 10-gigabit SFP+ NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	IPS engine accelerator	6-port 10-gigabit SFP+ NIC
• (2) 6-port gigabit UTP NIC • (1) SSL accelerator • (1) IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	IPS engine accelerator	SSL accelerator
• (1) 6-port gigabit UTP NIC • (2) 6-port gigabit SFP NIC • (1) SSL accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	SSL accelerator	6-port gigabit SFP NIC
• (1) 6-port gigabit UTP NIC • (2) 6-port gigabit SFP NIC • (1) IPS engine accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	IPS engine accelerator	6-port gigabit SFP NIC
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (2) 2-port 10-gigabit NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	2-port 10-gigabit NIC	2-port 10-gigabit NIC
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 2-port 10-gigabit NIC • (1) SSL accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	SSL accelerator	2-port 10-gigabit NIC
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 2-port 10-gigabit NIC • (1) IPS engine accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	IPS engine accelerator	2-port 10-gigabit NIC
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) SSL accelerator • (1) IPS engine accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	IPS engine accelerator	SSL accelerator
• (1) 6-port gigabit UTP NIC • (2) 2-port 10-gigabit NIC • (1) SSL accelerator	2-port 10-gigabit NIC	6-port gigabit UTP NIC	SSL accelerator	2-port 10-gigabit NIC
• (1) 6-port gigabit UTP NIC • (2) 2-port 10-gigabit NIC • (1) IPS engine accelerator	2-port 10-gigabit NIC	6-port gigabit UTP NIC	IPS engine accelerator	2-port 10-gigabit NIC

Table 4 2100F/2150F supported hardware configurations (continued)

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) SSL accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	SSL accelerator	6-port 10-gigabit SFP+ NIC
• (1) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) IPS engine accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	IPS engine accelerator	6-port 10-gigabit SFP+ NIC
• (1) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC • (1) SSL accelerator • (1) IPS engine accelerator	2-port 10-gigabit NIC	6-port gigabit UTP NIC	IPS engine accelerator	SSL accelerator
• (1) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) SSL accelerator • (1) IPS engine accelerator	IPS engine accelerator	6-port gigabit UTP NIC	SSL accelerator	6-port 10-gigabit SFP+ NIC

2150F VX hardware configurations

Determine where your PCI cards must be installed in your 2150F VX appliance.

- 1 In the first column of [Table 5](#), find the row that corresponds to the list of hardware that you created in [Step 2 on page 3](#).

Note: If you cannot find your combination of hardware in the table, it is not supported. You might need to remove one or more of your existing cards to install the upgrade hardware.

- 2 In [Figure 3](#), record the contents of each PCI slot for your list of hardware.

- **1** – Slot 1 column of [Table 5](#)
- **2** – Slot 2 column of [Table 5](#)
- **3** – Slot 3 column of [Table 5](#)
- **4** – Slot 4 column of [Table 5](#)

After you record the contents of each PCI slot, continue with [Install the hardware on page 13](#).

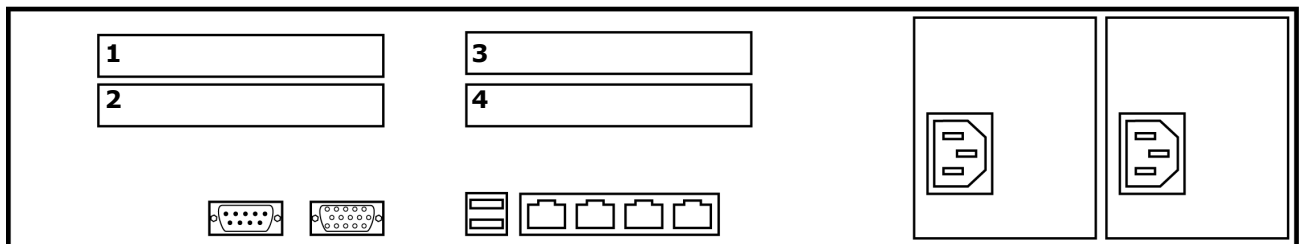


Figure 3 2150F VX PCI slots

Table 5 2150F VX supported hardware configurations

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4
(2) 6-port gigabit SFP NIC	6-port gigabit SFP NIC	6-port gigabit SFP NIC	empty	empty
(3) 6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	empty	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	2-port 10-gigabit NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port 10-gigabit SFP+ NIC	6-port gigabit UTP NIC

4150F hardware configurations

Determine where your PCI cards must be installed in your 4150F appliance.

- 1 In the first column of [Table 6](#), find the row that corresponds to the list of hardware that you created in [Step 2 on page 3](#).

Note: If you cannot find your combination of hardware in the table, it is not supported. You might need to remove one or more of your existing cards to install the upgrade hardware.

- 2 In [Figure 4](#), record the contents of each PCI slot for your list of hardware.

- **1** – Slot 1 column of [Table 6](#)
- **2** – Slot 2 column of [Table 6](#)
- **3** – Slot 3 column of [Table 6](#)
- **4** – Slot 4 column of [Table 6](#)
- **5** – Slot 5 column of [Table 6](#)

After you record the contents of each PCI slot, continue with [Install the hardware on page 13](#).

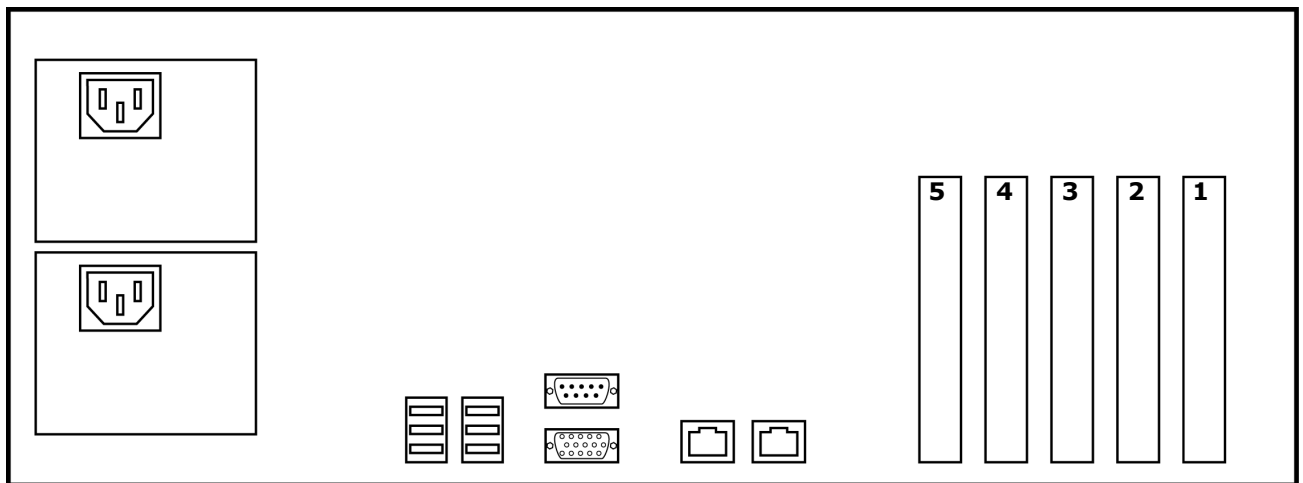


Figure 4 4150F PCI slots

Table 6 4150F supported hardware configurations

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
Two PCI cards					
(2) 6-port gigabit UTP NIC	empty	empty	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
Three PCI cards					
(3) 6-port gigabit UTP NIC	empty	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC	empty	empty	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC	empty	2-port 10-gigabit NIC	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) SSL accelerator	SSL accelerator	empty	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC	empty	6-port 10-gigabit SFP+ NIC	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC

Table 6 4150F supported hardware configurations (continued)

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
(2) 6-port gigabit UTP NIC (1) IPS engine accelerator	IPS engine accelerator	empty	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
Four PCI cards					
(3) 6-port gigabit UTP NIC (1) SSL accelerator	SSL accelerator	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(3) 6-port gigabit UTP NIC (1) IPS engine accelerator	IPS engine accelerator	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC (1) SSL accelerator	SSL accelerator	empty	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 6-port 10-gigabit SFP+ NIC (1) SSL accelerator	SSL accelerator	6-port 10-gigabit SFP+ NIC	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC (1) IPS engine accelerator	IPS engine accelerator	empty	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 6-port 10-gigabit SFP+ NIC (1) IPS engine accelerator	IPS engine accelerator	6-port 10-gigabit SFP+ NIC	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 2-port 10-gigabit NIC (1) SSL accelerator	SSL accelerator	2-port 10-gigabit NIC	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 2-port 10-gigabit NIC (1) IPS engine accelerator	IPS engine accelerator	2-port 10-gigabit NIC	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) SSL accelerator (1) IPS engine accelerator	IPS engine accelerator	SSL accelerator	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(4) 6-port gigabit UTP NIC	empty	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(3) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC	empty	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(3) 6-port gigabit UTP NIC (1) 6-port 10-gigabit SFP+ NIC	empty	6-port 10-gigabit SFP+ NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (2) 6-port gigabit SFP NIC	empty	6-port gigabit SFP NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(3) 6-port gigabit UTP NIC (1) 2-port 10-gigabit NIC	empty	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 6-port gigabit SFP NIC (1) 2-port 10-gigabit NIC	empty	2-port 10-gigabit NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (1) 6-port 10-gigabit SFP+ NIC (1) 6-port gigabit SFP NIC	empty	6-port 10-gigabit SFP+ NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
(2) 6-port gigabit UTP NIC (2) 2-port 10-gigabit NIC	empty	2-port 10-gigabit NIC	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC

Table 6 4150F supported hardware configurations (continued)

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
Five PCI cards					
• (4) 6-port gigabit UTP NIC • (1) SSL accelerator	SSL accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (4) 6-port gigabit UTP NIC • (1) IPS engine accelerator	IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) SSL accelerator	SSL accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) SSL accelerator	SSL accelerator	6-port 10-gigabit SFP+ NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) IPS engine accelerator	IPS engine accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) IPS engine accelerator	IPS engine accelerator	6-port 10-gigabit SFP+ NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (2) 6-port gigabit SFP NIC • (1) SSL accelerator	SSL accelerator	6-port gigabit SFP NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (2) 6-port gigabit SFP NIC • (1) IPS engine accelerator	IPS engine accelerator	6-port gigabit SFP NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (2) 2-port 10-gigabit NIC	2-port 10-gigabit NIC	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (2) 2-port 10-gigabit NIC	2-port 10-gigabit NIC	2-port 10-gigabit NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC • (1) SSL accelerator	SSL accelerator	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (3) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC • (1) IPS engine accelerator	IPS engine accelerator	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 2-port 10-gigabit NIC • (1) SSL accelerator	SSL accelerator	2-port 10-gigabit NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) SSL accelerator	SSL accelerator	6-port 10-gigabit SFP+ NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 2-port 10-gigabit NIC • (1) IPS engine accelerator	IPS engine accelerator	2-port 10-gigabit NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC

Table 6 4150F supported hardware configurations (continued)

Supported hardware configurations	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
• (2) 6-port gigabit UTP NIC • (1) 2-port 10-gigabit NIC • (1) SSL accelerator • (1) IPS engine accelerator	IPS engine accelerator	SSL accelerator	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (3) 2-port 10-gigabit NIC	2-port 10-gigabit NIC	2-port 10-gigabit NIC	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (2) 2-port 10-gigabit NIC • (1) SSL accelerator	SSL accelerator	2-port 10-gigabit NIC	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (2) 2-port 10-gigabit NIC • (1) IPS engine accelerator	IPS engine accelerator	2-port 10-gigabit NIC	2-port 10-gigabit NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) IPS engine accelerator	IPS engine accelerator	6-port 10-gigabit SFP+ NIC	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port gigabit SFP NIC • (1) SSL accelerator • (1) IPS engine accelerator	IPS engine accelerator	SSL accelerator	6-port gigabit SFP NIC	6-port gigabit UTP NIC	6-port gigabit UTP NIC
• (2) 6-port gigabit UTP NIC • (1) 6-port 10-gigabit SFP+ NIC • (1) SSL accelerator • (1) IPS engine accelerator	SSL accelerator	6-port 10-gigabit SFP+ NIC	IPS engine accelerator	6-port gigabit UTP NIC	6-port gigabit UTP NIC

Install the hardware

Note: If you are installing or moving SFP or SFP+ NICs, remove all SFP modules from each card before installing or moving it. When installation is complete, re-insert the SFP modules into each card.

1 Install the PCI card(s).

- If you are replacing a card, remove it, then install the replacement card in its place.
- If you are installing a new card, install your PCI cards in the PCI slots that you recorded.

Note: You might need to move some or all of the PCI cards that are currently installed in your appliance to achieve the correct configuration.

2 Replace the appliance cover, then re-attach the bezel.

3 Connect the appliance to power and network cables.

Note: If you added or moved any NICs, the location of your network ports might have shifted.

4 Connect the appliance to a keyboard and a monitor.

Verify that the hardware is correctly installed

To verify that the hardware is correctly installed, follow the procedure that is appropriate for your appliance model.

- [Verify hardware installation for models 1100F, 2100F, 2150F, and 4150F on page 14](#)
- [Verify hardware installation for model 2150F VX on page 15](#)

Verify hardware installation for models 1100F, 2100F, 2150F, and 4150F

To verify that the hardware is correctly installed:

- 1 Turn on the appliance.
- 2 When the `login` prompt appears, log on directly to the appliance, then run the `srole` command.
- 3 Ping a host in your management network to verify that the appliance has connectivity to your management network.
 - If the ping is successful, continue with [Step 4](#).
 - If the ping is unsuccessful, perform troubleshooting to resolve the connectivity issue.
 - Verify that the management network cable is connected to the correct port on the appliance.
 - Verify that the network interface connected to the management network is configured correctly.
- 4 At your Windows-based management computer, use the McAfee Firewall Enterprise, Virtual Appliance Admin Console to connect to the appliance.
- 5 [Conditional] If you installed one or more NICs, verify that the additional network interfaces are detected.
 - a Select **Network | Interfaces**, then click the **NIC and NIC Group Configuration** tab.
 - b Verify that the number of NICs listed in the NIC or NIC Group column matches the number of installed network ports.

Tip: To determine which NIC corresponds to a given unconnected port, click **Show Status**, then note which interfaces are connected. Connect a network cable to an open port, and refresh the Interface and NIC Status window. The interface that is newly connected corresponds to the port you just connected a cable to.

- 6 [Conditional] If you installed one or more accelerator cards, verify that each card is detected.
 - a Select **Maintenance | File Editor**.
 - b In the right pane, click **Start File Editor**. The File Editor appears.
 - c Select **File | Open**. The Open File window appears.
 - d Select **Firewall File**, type `/var/run/dmesg.boot` in the **File** field, then click **OK**. The dmesg file opens.
 - e Verify that your accelerator card(s) are detected.
 - If you installed an SSL accelerator, find the following text in the dmesg.boot file:

```
pkp_drv0: <Cavium Networks: Nitrox-Px Device
, Driver Version - 0.99
> mem 0xd58ff000-0xd58fffff irq 40 at device 0.0 on pci9
pkp_drv0: [GIANT-LOCKED]
```

- If you installed an IPS engine accelerator, find the following text in the dmesg.boot file:

```
cpp_core0: <LSI Electra Family> mem 0xde700000-0xde7fffff irq 40 at device 0.0 on
pci11
cpp INFO at cppInitDevice:119: Reusing device
cpp_core0: [GIANT-LOCKED]
cppInitDriver: success detect CCP device
```

- 7 When you have verified that the new hardware is detected, apply the tamper-evident seal from the hardware kit over the broken seal on the appliance.

Verify hardware installation for model 2150F VX

To verify that the hardware is correctly installed:

- 1 Turn on the appliance.
- 2 At your Windows-based management computer, use the VMware vSphere client to connect to the appliance.
- 3 Click **Inventory**, then click the **Configuration** tab.
- 4 In the Hardware pane, select **Network Adapters**.
- 5 Verify that the number of devices listed in the Network Adapters table matches the number of installed network ports.
Tip: To determine which network adapter corresponds to a given port, connect the port to an active network, then examine the Observed IP ranges column of the Network Adapters table.
- 6 When you have verified that the new hardware is detected, apply the tamper-evident seal from the hardware kit over the broken seal on the appliance.

Verify that the hardware is correctly installed



For support information, visit mysupport.mcafee.com.

Copyright © 2010 McAfee, Inc. All Rights Reserved.

No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means without the written permission of McAfee, Inc., or its suppliers or affiliate companies.

700-2590A00