Next Generation Firewall

Hardware Guide

Models 1101, 1105, 2101, 2105
Revision E

Contents

Introduction

Thank you for choosing a Forcepoint Next Generation Firewall (Forcepoint NGFW) appliance.

Familiarize yourself with the appliance ports and indicators and learn how to install the appliance safely.

Find product documentation

On the Forcepoint support website, you can find information about a released product, including product documentation, technical articles, and more.
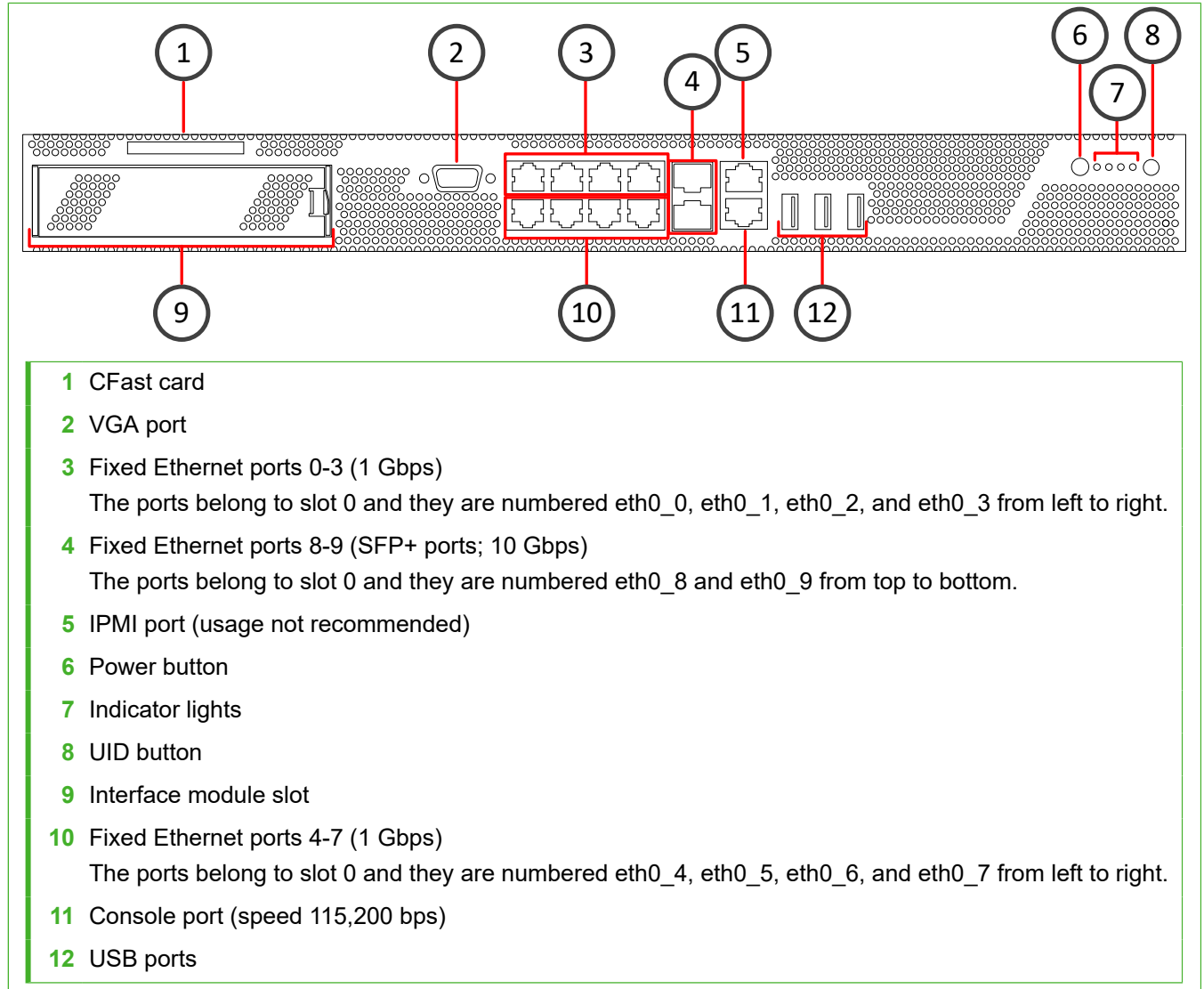
You can get additional information and support for your product on the Forcepoint support website at https://support.forcepoint.com. There, you can access product documentation, Knowledge Base articles, downloads, cases, and contact information.

Series 1100 features

The figures and tables show the Series 1100 (1101 and 1105) appliance components.

Front panel

The front panel has ports and indicator lights.

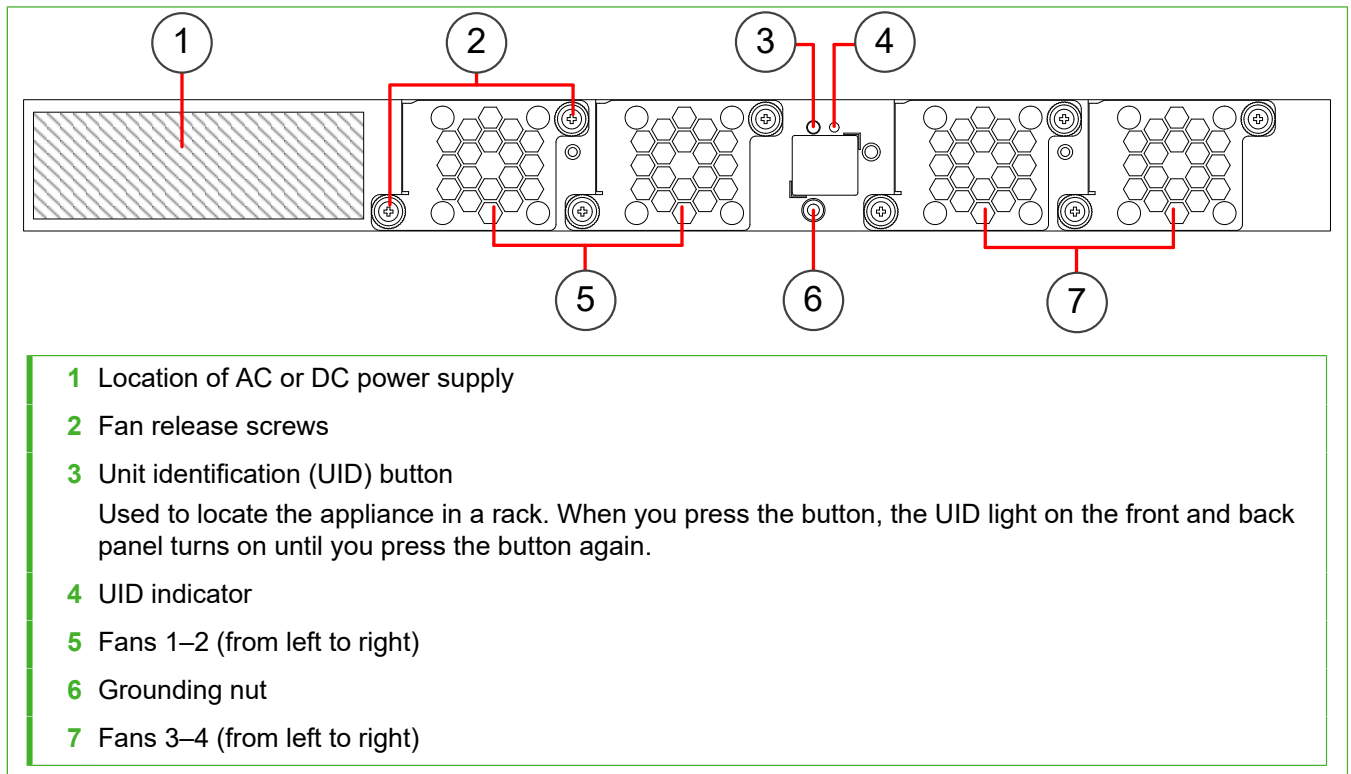|	
1	CFast card
2	VGA port
3	Fixed Ethernet ports 0-3 (1 Gbps)
	The ports belong to slot 0 and they are numbered eth0_0, eth0_1, eth0_2, and eth0_3 from left to right.
4	Fixed Ethernet ports 8-9 (SFP+ ports; 10 Gbps)
	The ports belong to slot 0 and they are numbered eth0_8 and eth0_9 from top to bottom.
5	IPMI port (usage not recommended)
6	Power button
7	Indicator lights
8	UID button
9	Interface module slot
10	Fixed Ethernet ports 4-7 (1 Gbps)
	The ports belong to slot 0 and they are numbered eth0_4, eth0_5, eth0_6, and eth0_7 from left to right.
11	Console port (speed 115,200 bps)
12	USB ports

Ethernet port names

Ethernet port names for the ports on the front panel are based on the slot and port numbers.

The first number in the name represents the slot on the appliance. The second number represents the port on the slot.
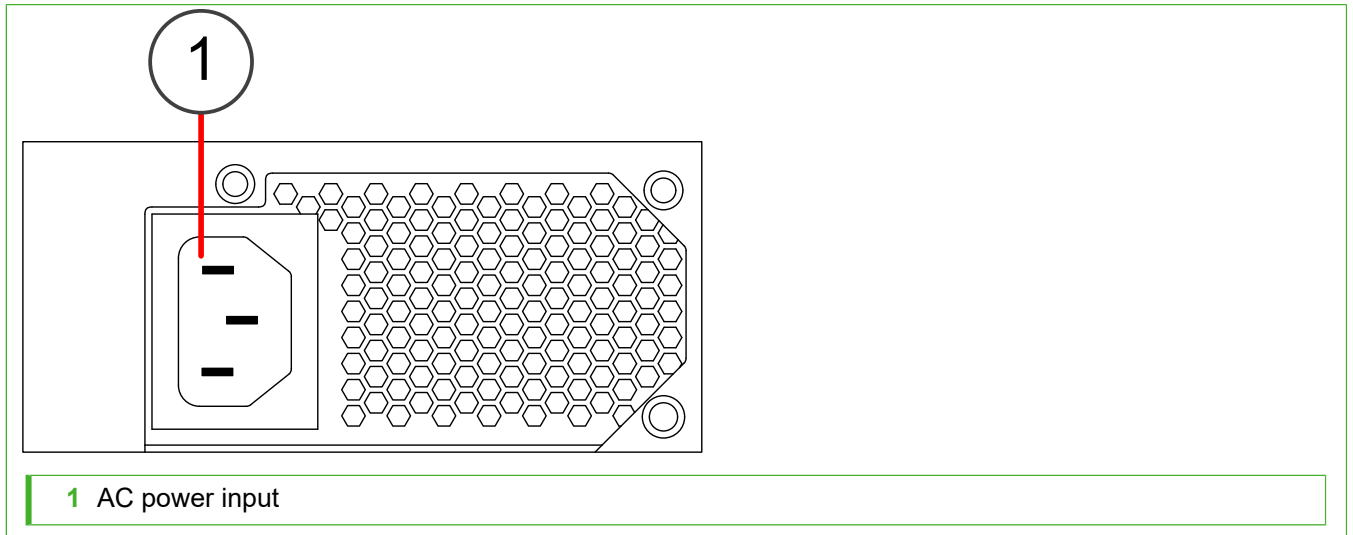
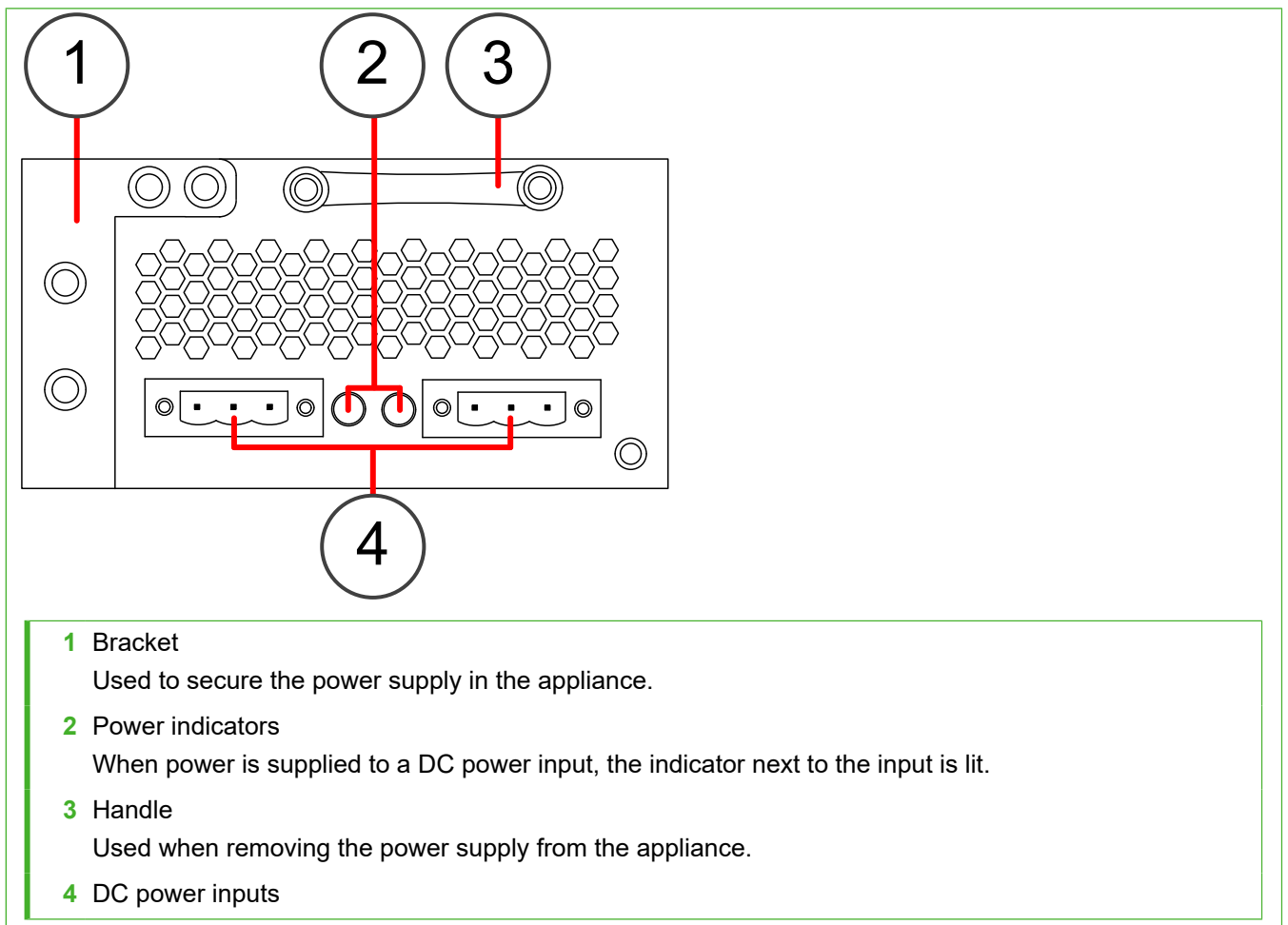| Component	Slot number	Port numbers
Fixed Ethernet ports	0	eth0_0, eth0_1, eth0_2, eth0_3, eth0_4, eth0_5, eth0_6, eth0_7, eth0_8, and eth0_9.
Interface module ports	1	The port numbers start from 0 and increase from left to right. *Example:* The port farthest to the left in slot 1 is eth1_0.

Back panel

The back panel has fans and power supplies.
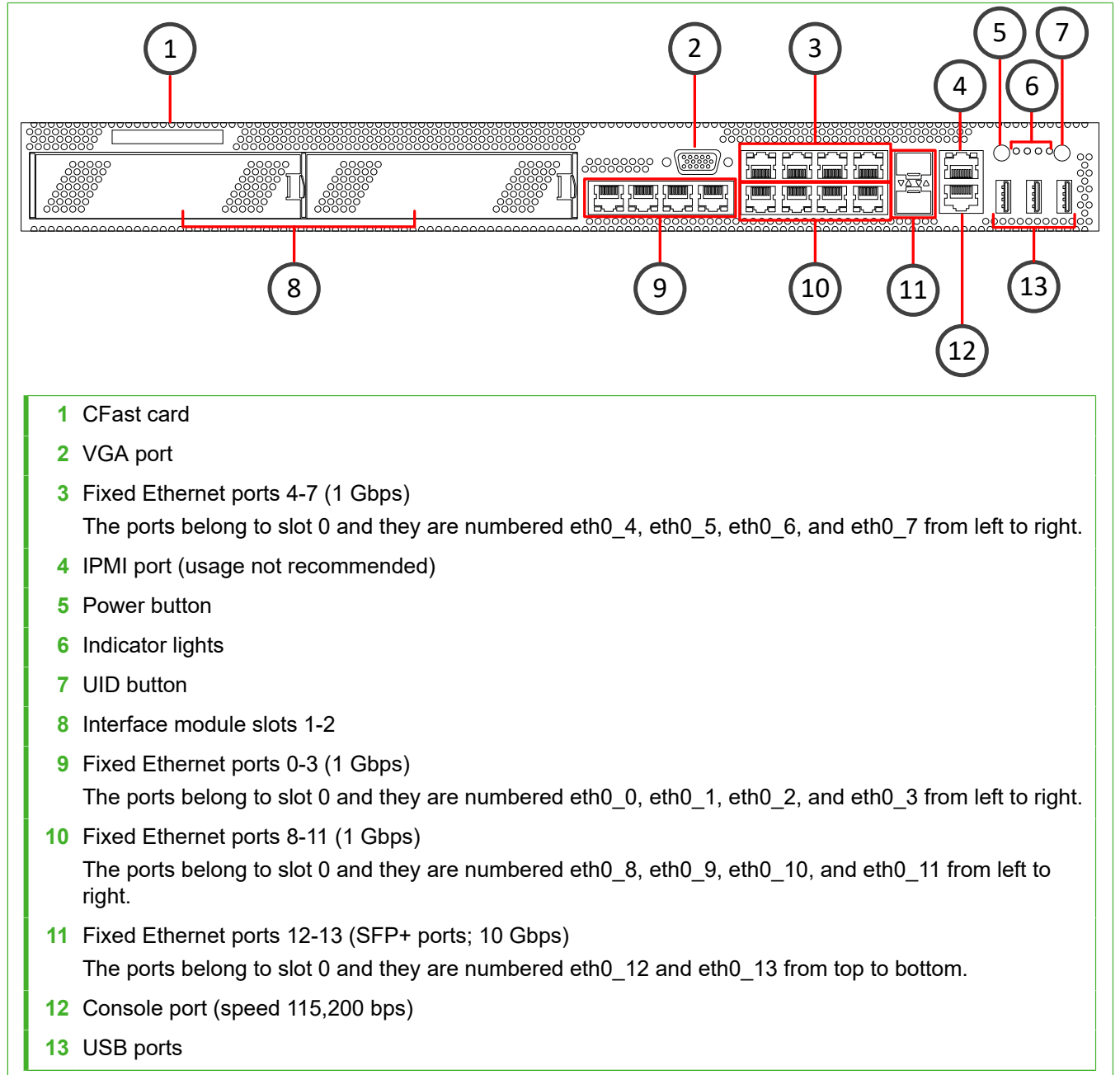

1 Location of AC or DC power supply

2 Fan release screws

3 Unit identification (UID) button

Used to locate the appliance in a rack. When you press the button, the UID light on the front and back panel turns on until you press the button again.

4 UID indicator

5 Fans 1–2 (from left to right)

6 Grounding nut

7 Fans 3–4 (from left to right)

AC power supply

1	AC power input

Dual-input DC power supply

1	Bracket
	Used to secure the power supply in the appliance.
2	Power indicators
	When power is supplied to a DC power input, the indicator next to the input is lit.
3	Handle
	Used when removing the power supply from the appliance.
4	DC power inputs

Series 2100 features

The figures and tables show the Series 2100 (2101 and 2105) appliance components.

Front panel
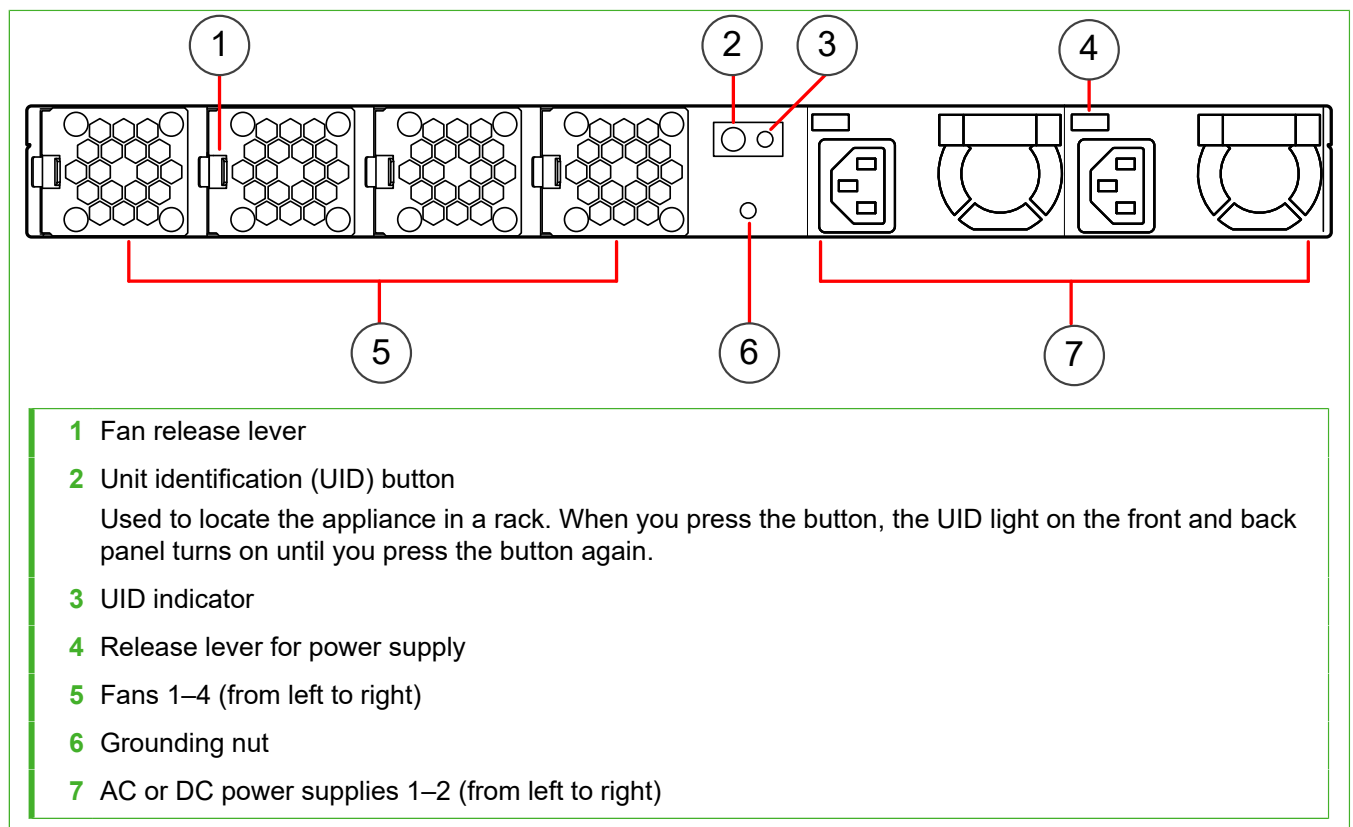
The front panel has ports and indicator lights.

1	CFast card
2	VGA port
3	Fixed Ethernet ports 4-7 (1 Gbps)
	The ports belong to slot 0 and they are numbered eth0_4, eth0_5, eth0_6, and eth0_7 from left to right.
4	IPMI port (usage not recommended)
5	Power button
6	Indicator lights
7	UID button
8	Interface module slots 1-2
9	Fixed Ethernet ports 0-3 (1 Gbps)
	The ports belong to slot 0 and they are numbered eth0_0, eth0_1, eth0_2, and eth0_3 from left to right.
10	Fixed Ethernet ports 8-11 (1 Gbps)
	The ports belong to slot 0 and they are numbered eth0_8, eth0_9, eth0_10, and eth0_11 from left to right.
11	Fixed Ethernet ports 12-13 (SFP+ ports; 10 Gbps)
	The ports belong to slot 0 and they are numbered eth0_12 and eth0_13 from top to bottom.
12	Console port (speed 115,200 bps)
13	USB ports

Ethernet port names

Ethernet port names for the ports on the front panel are based on the slot and port numbers.

The first number in the name represents the slot on the appliance. The second number represents the port on the slot. *Example:* eth2_0 is located on port 0 of slot 2.

Component	Slot number	Port numbers
Fixed Ethernet ports	0	eth0_0, eth0_1, eth0_2, eth0_3, eth0_4, eth0_5, eth0_6, eth0_7, eth0_8, eth0_9, eth0_10, eth0_11, eth0_12, and eth0_13.
Interface module ports	1–2	The port numbers start from 0 and increase from left to right. *Example:* The port farthest to the left in slot 1 is eth1_0.

Back panel

The back panel has fans and power supplies.

1 Fan release lever

2 Unit identification (UID) button

Used to locate the appliance in a rack. When you press the button, the UID light on the front and back panel turns on until you press the button again.

3 UID indicator

4 Release lever for power supply

5 Fans 1–4 (from left to right)

6 Grounding nut

7 AC or DC power supplies 1–2 (from left to right)

Fixed port indicators

Fixed port indicators show the status and speed of the network ports.

Ethernet port indicators

Ethernet port indicators show the status and speed of the network ports.
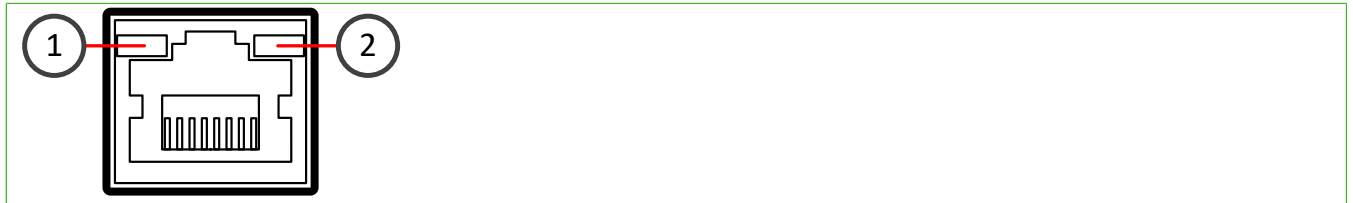
Number	Indicator	Status	Description
1	Activity/link indicator	Green	Link OK. Flashes on activity.
2	Link speed indicator	Unlit	10 Mbps link.
		Amber	100 Mbps link.
		Green	1 Gbps link.

SFP+ port indicators
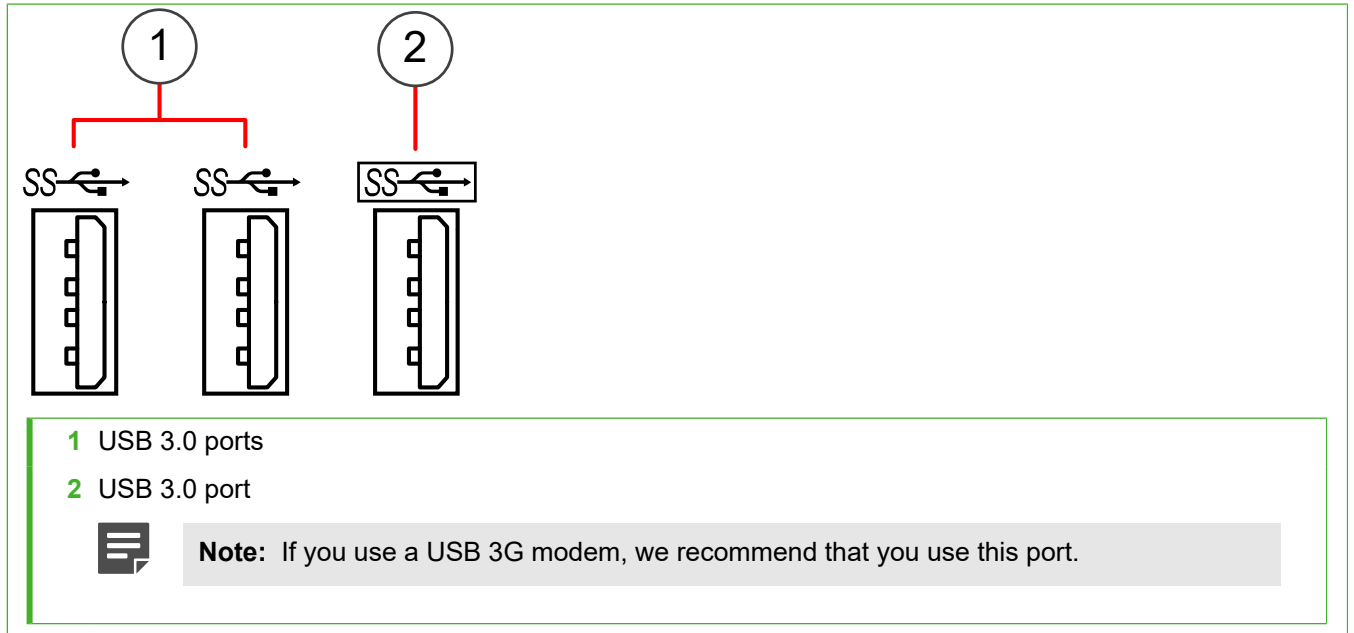
SFP+ port indicators show the status and speed of the network ports.

1 Link speed indicator for the upper port

2 Link status indicator for the upper port

3 Link speed indicator for the lower port

4 Link status indicator for the lower port

Indicator	Status	Description
Link speed	Green	10 Gbps link
Link status	Blue	Link OK

USB ports on the front panel

1 USB 3.0 ports

2 USB 3.0 port

> **Note:** If you use a USB 3G modem, we recommend that you use this port.

Indicator lights

Indicator lights show the status of the appliance.
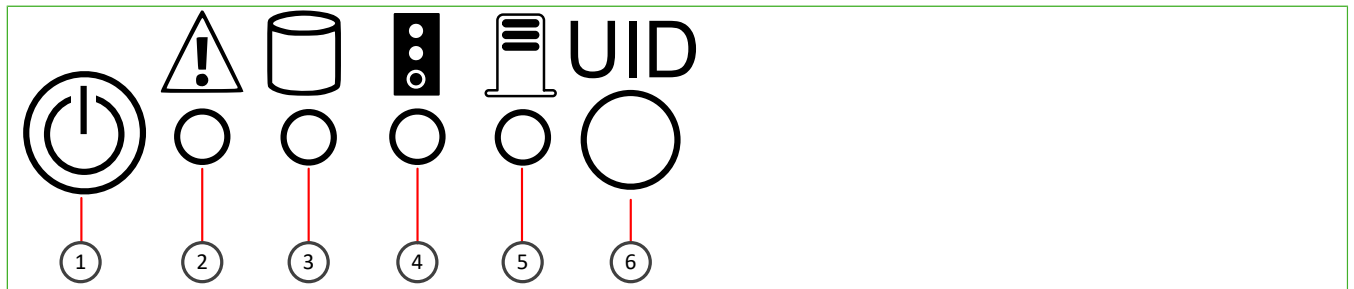
Number	Indicator	Status	Description
1	Power	Green	The appliance is in a running state.
		Red	The appliance is in a standby state.
2	Warning	Red	• Steady — Overheating or general system failure • Flashing — Fan failure
3	Disk activity	Green	Indicates CFast card activity when flashing.
4	Software status	Amber	Initial contact is established but the engine is offline. Flashes until initial contact is established.
		Green	The engine is online.

Number	Indicator	Status	Description
5	Management connectivity	Green	Connection between the NGFW appliance and the Management Server has been established.
6	UID	Blue	The unit identification (UID) indicator has been switched on. Used to locate the appliance in a rack. When you press the UID button, the UID indicator on the front and back panel turns on until you press the button again.

Supported interface modules

Forcepoint NGFW appliances support copper, fiber, and small form-factor pluggable (SFP) modules.

> **Note:** Do not remove any stickers from modules — they contain important information.

For a list of all available interface modules and compatibility information, see Knowledge Base article 10245.

Table 1: Copper modules

Module	Identifier	Appliance models
2 port 10 gigabit Ethernet RJ45 module	MO102	1101, 1105, 2101, 2105
4 port gigabit Ethernet bypass RJ45 module	MOG4B	1101, 1105, 2101, 2105
8 port gigabit Ethernet RJ45 module	MOG8	1101, 1105, 2101, 2105

Table 2: Fiber modules

| Module	Identifier	Appliance models
2 port 10 gigabit Ethernet short reach bypass module	MO10S2B	1101, 1105, 2101, 2105
2 port 10 gigabit Ethernet long reach bypass module	MO10L2B	1101, 1105, 2101, 2105
4 port gigabit Ethernet SX fiber bypass module	MOGS4B	2101, 2105

Table 3: SFP modules

Module	Identifier	Appliance models
2 port 10 gigabit Ethernet SFP+ module	MO10F2	1101, 1105, 2101, 2105
2 port 40 gigabit Ethernet QSFP module	MO40F2	2101, 2105
4 port gigabit Ethernet SFP module	MOGF4	1101, 1105, 2101, 2105
4 port 10 gigabit Ethernet SFP+ module revision 2	MOE10F4	1101, 1105, 2101, 2105

Copper interface modules

Forcepoint NGFW appliances support these copper interface modules.

MO102 module

The MO102 module is a two-port 10 gigabit copper interface module.
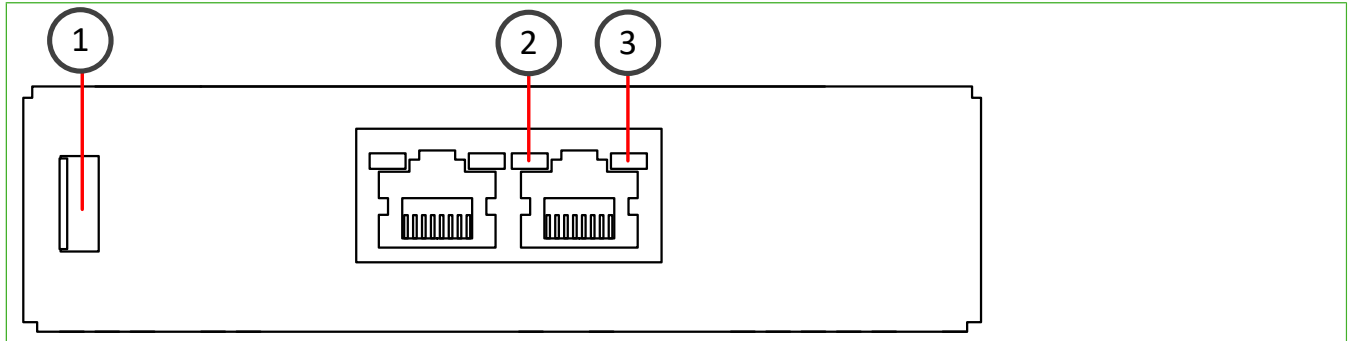
Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK, flashes on activity.
3	Link speed indicator	Yellow	1 Gbps link.
		Green	10 Gbps link.

MOG4B module

The MOG4B module is a quad-port gigabit bypass copper module.
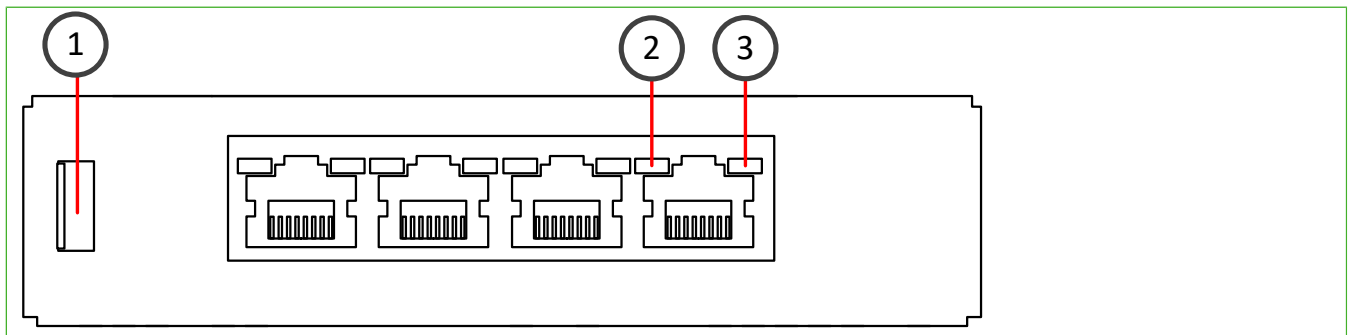
Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK.
3	Link speed/bypass/disconnect indicator	Yellow	1 Gbps link, flashes in disconnect mode.
		Green	100 Mbps link, flashes in bypass mode.

Number	Component	Color	Description
		Unlit	10 Mbps link.

MOG8 module

The MOG8 module is an eight-port gigabit copper interface module.
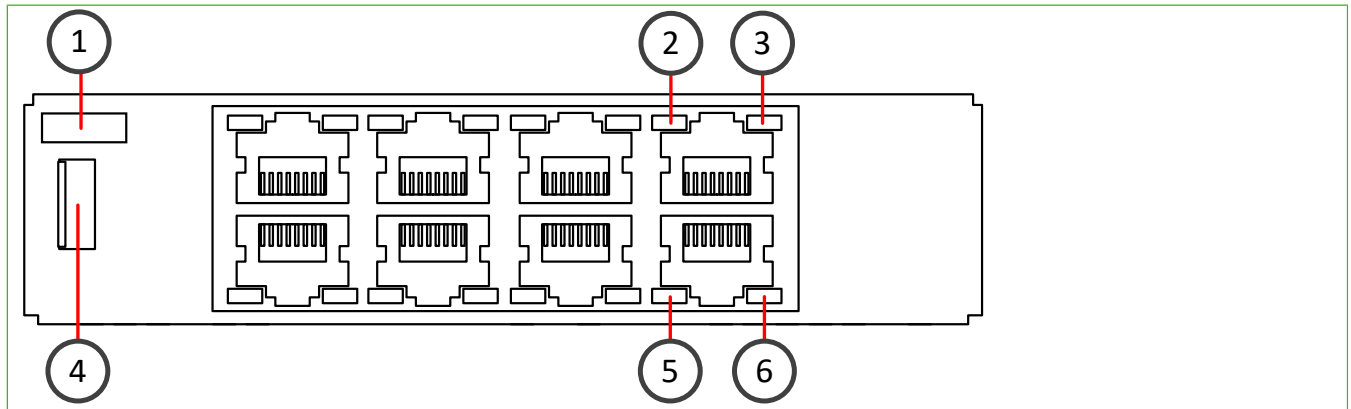
Number	Component	Color	Description
1	Port numbers 0–7	N/A	N/A
2, 5	Activity/link indicator	Green	Link OK, flashes on activity.
3, 6	Link speed indicator	Yellow	1 Gbps link.
		Green	100 Mbps link.
		Unlit	10 Mbps link.
4	Release lever	N/A	N/A

Fiber interface modules

Forcepoint NGFW appliances support these fiber interface modules.

MO10S2B module

The MO10S2B module is a two-port 10 gigabit bypass fiber module.
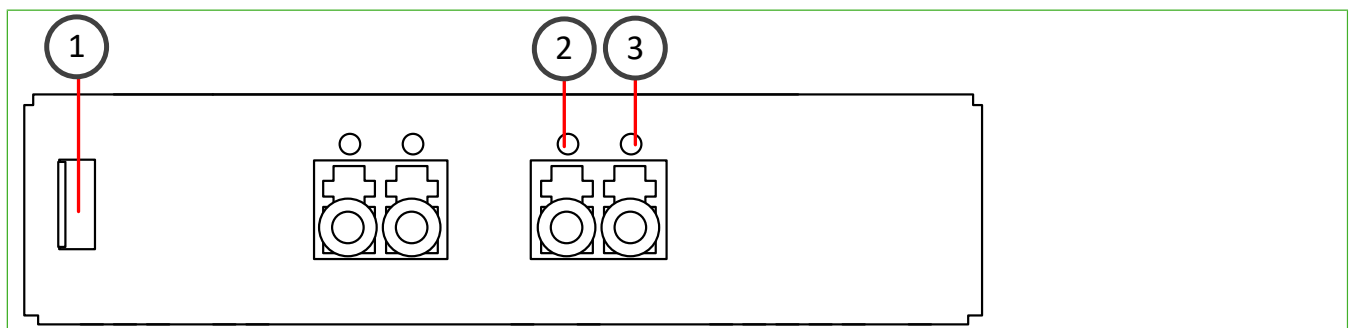
Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK.
3	Link speed/bypass/disconnect indicator	Blue	10 Gbps link.
		Green	Flashes in bypass mode.

MO10L2B module

The MO10L2B module is a two-port 10 gigabit bypass fiber module.
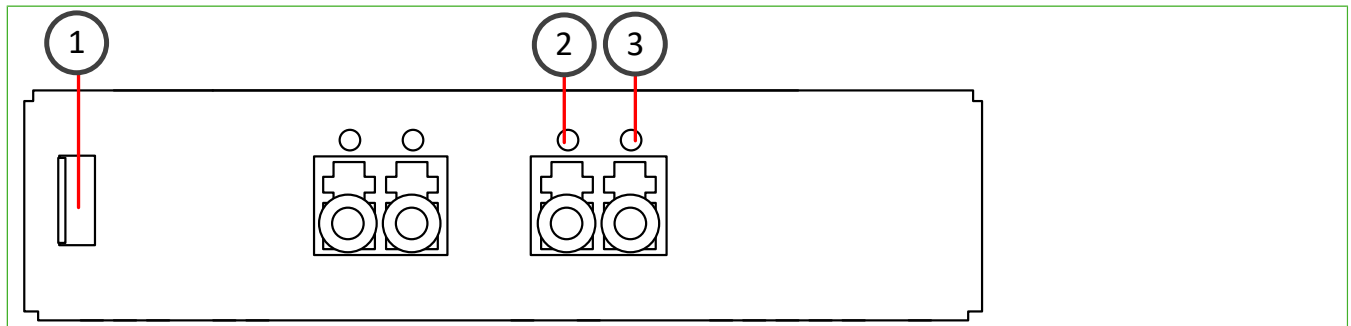
Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK.
3	Link speed/bypass/disconnect indicator	Blue	10 Gbps link.
		Green	Flashes in bypass mode.

MOGS4B module

The MOGS4B module is a quad-port gigabit bypass fiber module.
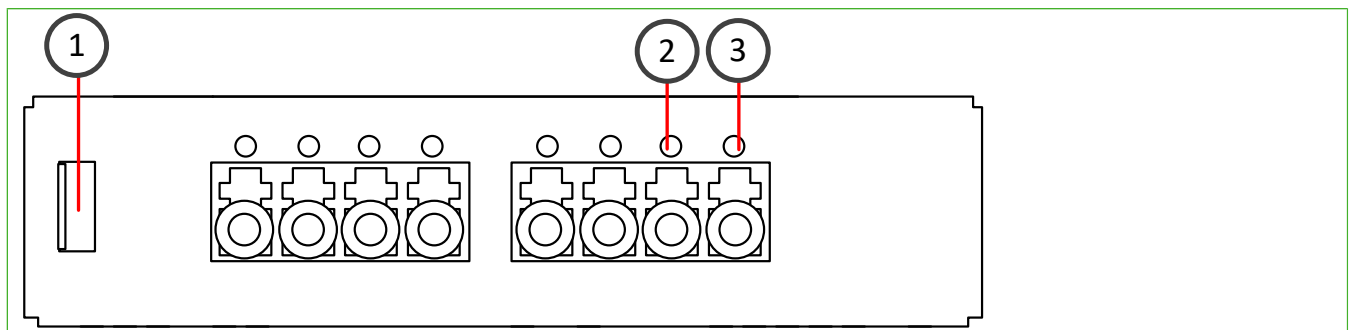
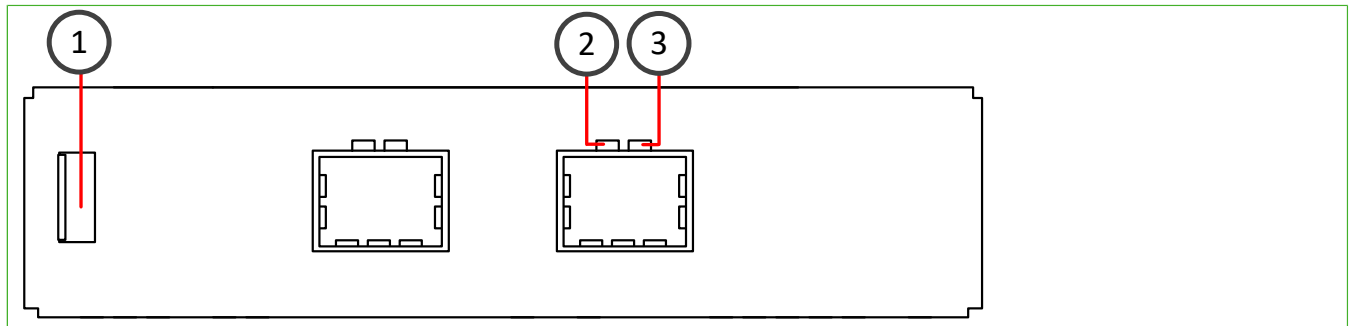| Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK.
3	Link speed/bypass/disconnect indicator	Green	1 Gbps link, flashes in bypass mode.

Number	Component	Color	Description
		Yellow	Flashes in disconnect mode.

SFP interface modules

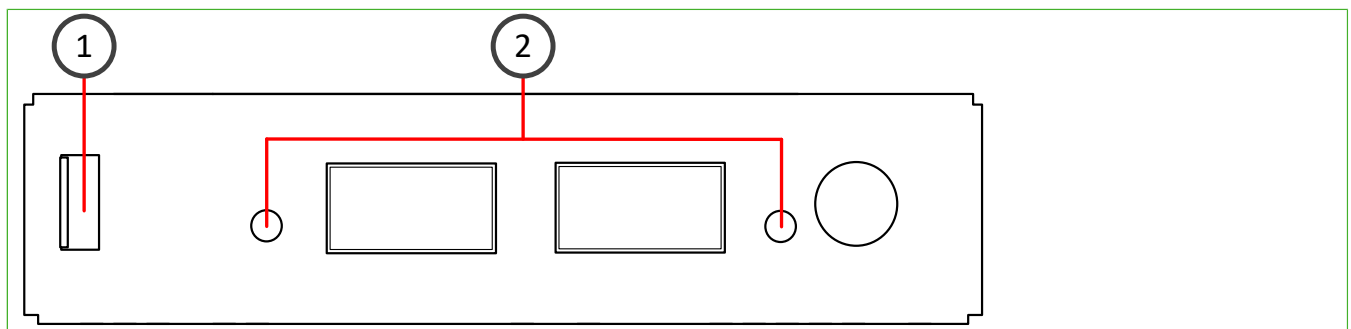Forcepoint NGFW appliances support these SFP interface modules.

MO10F2 module

The MO10F2 module is a two-port 10 gigabit SFP+ interface module.

Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK.
3	Link speed indicator	Blue	10 Gbps link.

MO40F2 module

The MO40F2 module is a two-port 40 gigabit QSFP+ interface module.

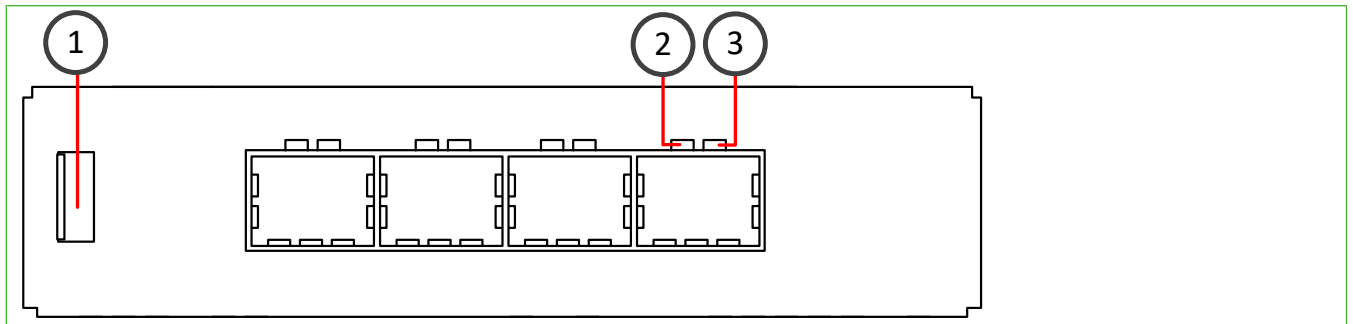| Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link/link speed indicator	Green	40 Gbps link (other speeds not supported), flashes on activity.

MOGF4 module

The MOGF4 module is a quad-port gigabit SFP interface module.
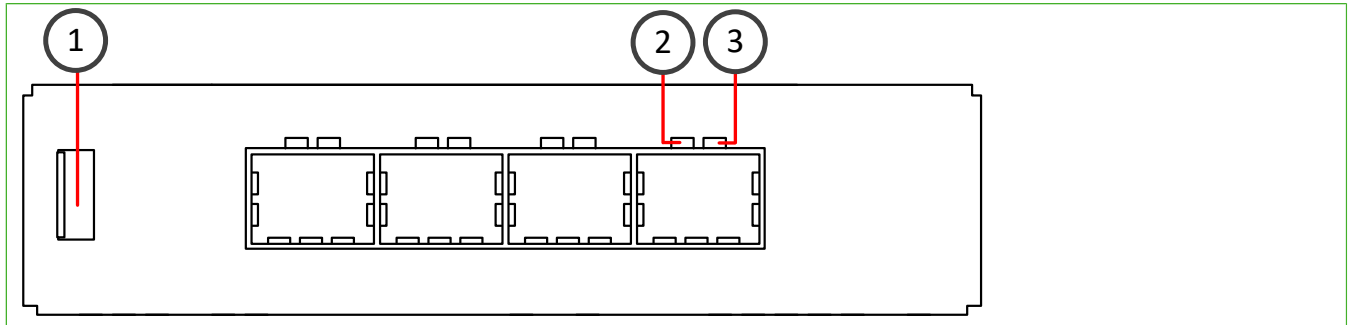
Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK.
3	Link speed indicator	Yellow	1 Gbps link.

MOE10F4 module

The MOE10F4 module is a quad-port 10 gigabit SFP+ interface module.

Number	Component	Color	Description
1	Release lever	N/A	N/A
2	Activity/link indicator	Green	Link OK.
3	Link speed indicator	Blue	10 Gbps link.

Precautions

The precautions provide safety guidance when working with Forcepoint appliances and electrical equipment.

Safety precautions

Read the safety information and follow the procedures whenever you are working with electronic equipment.

> ⚠️ **CAUTION:** Forcepoint appliances cannot be serviced by end users. Never open the appliance covers for any reason. Doing so can lead to serious injury and void the hardware warranty.

General safety

Follow these rules to ensure general safety.

- Keep the area around the appliance clean and free of clutter.
- Use a regulating uninterruptible power supply (UPS) to keep your system operating if there is a power failure and to protect the appliance from power surges and voltage spikes.
- If you need to switch off or unplug the appliance, always wait at least five seconds before turning on or plugging in the appliance again.

Operating precautions

Do not open the power supply casing. Only the manufacturer's qualified technician is allowed to service power supplies.

For additional safety information, see the *Forcepoint Product Safety and Regulatory Compliance Guide*.

Electrical safety precautions

Follow basic electrical safety precautions to protect yourself from harm and the appliance from damage.

- Know the locations of the power on/off button and the emergency turn-off switch, disconnection switch, or electrical outlet for the room. If an electrical accident occurs, you can quickly turn off power to the system.
- When working with high-voltage components, do not work alone.
- Turn off the system and disconnect the power before removing or installing system components.
- When working with electrical equipment that is turned on, use only one hand. This is to avoid making a complete circuit, which causes an electric shock. Use extreme caution when using metal tools, which can easily damage any electrical components or circuit boards the tools come into contact with.
- Do not use mats designed to decrease electrostatic discharge as protection from electric shock. Instead, use rubber mats that have been designed as electrical insulators.
- If the power supply cable includes a grounding plug, the plug must be plugged into a grounded electrical outlet.

Power supply safety precautions

Depending on the type of power supply that your Forcepoint NGFW appliance uses, different safety precautions and installation guidelines apply.

> **Note:** If the appliance has two power supplies, we recommend that you use both power supplies for redundancy.

AC power supplies

The appliance power inlet is the disconnect device on the appliance.

DC power supplies

- The appliance must be used in a restricted access location and users must be well trained to operate it.
- The outlet for the appliance must be installed near the appliance and be easily accessible.
- The appliance must be protected against electric shock.
- We recommend using a power switch between the appliance and the main power source.
- We recommend using, at maximum, a 10A slow fuse for models 1101 and 1105.
- We recommend using, at maximum, a 20A slow fuse for models 2101 and 2105.
- Use minimum 0.82 mm^2 (18 AWG) single copper wire, or minimum 1.25 mm^2 (16AWG) multi-core copper at 90° C models 1101 and 1105.
- Use minimum 1.25 mm^2 (16 AWG) single copper wire, or minimum 1.5 mm^2 (14 AWG) multi-core copper at 90° C for models 2101 and 2105.
- The mains supply plug on the power supply cable is the disconnect device on the appliance. To disconnect the appliance, you must first disconnect the mains, then disconnect the ground.

Restricted substances

The following table shows the restricted substances and their chemical symbols.

設備名稱：網路安全平台，型號（型式）						
Equipment name Type designation (Type)						
單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
電路板 PCB	—	○	○	○	○	○
機箱 Chassis	○	○	○	○	○	○
線材 Wiring cable	○	○	○	○	○	○
紙箱 Carton	○	○	○	○	○	○
電源供應器 Power supply unit	—	○	○	○	○	○

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。

Note 1："Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2："○" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3.〝—〞係指該項限用物質為排除項目。

Note 3：The "–" indicates that the restricted substance corresponds to the exemption.

Install the appliance

Prepare and install the appliance in your network. There are some tasks to perform first.

- Install a Security Management Center (SMC) on a separate server.
- Configure the NGFW Engine element (Firewall, IPS, or Layer 2 Firewall) in the Management Client, and save the initial configuration. For additional information on SMC installation and initial configuration, see the *Forcepoint Next Generation Firewall Installation Guide*.
- Inspect the appliance, the delivery box, and all components included in the shipment.

> **Note:** Do not use damaged appliances or components.

Rack-mount the appliance

The rack-mounting procedure varies depending on the type of rack unit. If needed, see the documentation for your rack unit.

> ⚠️ **Important:** Read the safety precautions before you rack-mount the appliance. Do not install the appliance upside down.

Preparing for rack-mounting

The rack-mounting kit includes the mounting screws and the rail assemblies or rack-mounting brackets to install the system into the rack.

Determine the placement of each component in the rack.

- Install the heaviest components on the bottom of the rack first. Install components from the bottom to the top.
- The appliance must be connected to a grounded power outlet.
- Use a UPS to protect the appliance from power surges and voltage spikes, and to keep your system operating if there is a power failure.
- To maintain proper cooling, always keep the front door of the rack and all panels and components on the appliances closed when not servicing.

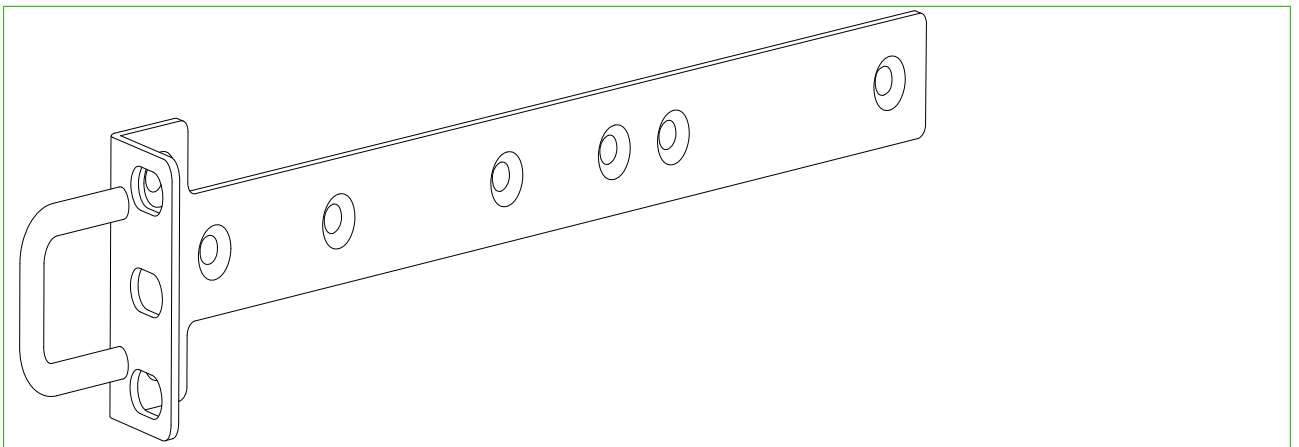# Install a 1101 or 1105 appliance in a two-post rack or a four-post rack with a front attachment

Use the rack-mounting brackets to secure the appliance in the rack with a front attachment.

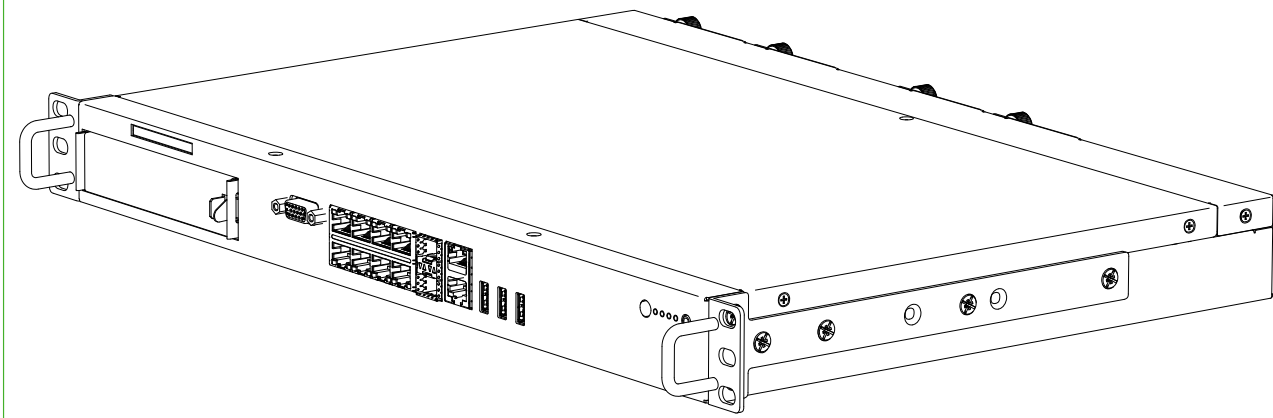> 📝 **Note:** In a four-post rack, the appliance is attached only to the front posts.

Steps

1) Locate the rack-mounting brackets for front attachment.

2) Attach a bracket to each side of the appliance with screws through the grooves in the bracket. Position the brackets to fit around the posts.

Figure 1: Front attachment

3) Attach each bracket to the rack with three screws through the holes in the front of the bracket: one screw through the top hole, the second through the middle hole, and the third through the bottom hole.
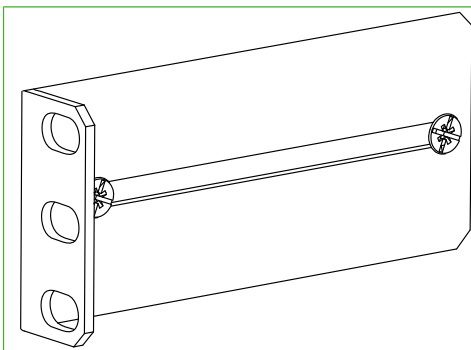
> ⚠️ **CAUTION:** Use all three screws to attach each rack-mounting bracket to the rack. Using fewer screws might not provide sufficient support and can damage the appliance.

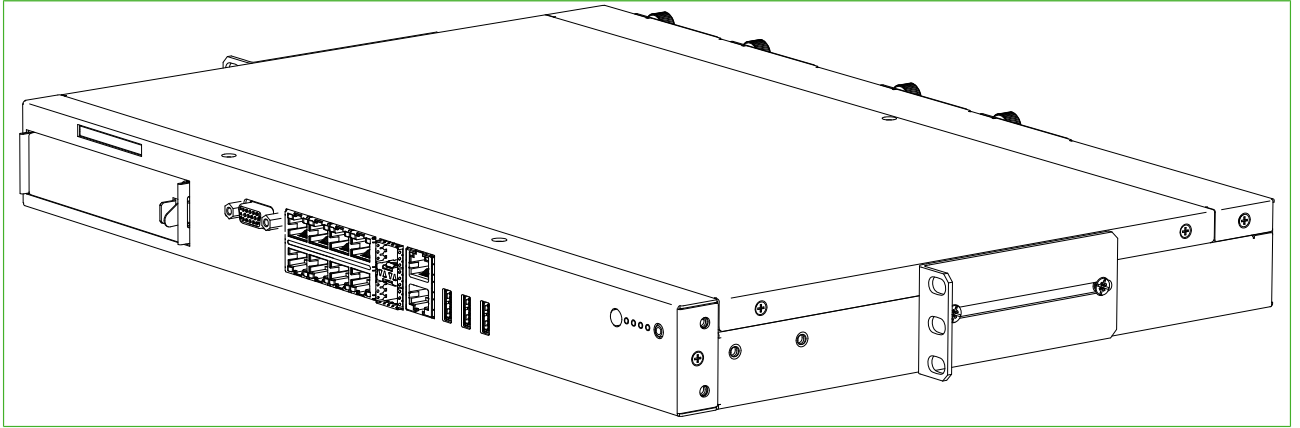# Install a 1101 or 1105 appliance in a two-post rack with a center attachment

Use the rack-mounting brackets to secure the appliance in the rack with a center attachment.

Steps

1) Locate the rack-mounting brackets for the two-post rack installation with a center attachment.

2) Attach a center attachment bracket to both sides of the appliance using two screws for each bracket.

3) Attach each bracket to the rack with three screws through the holes in the front of the bracket: one screw through the top hole, the second through the middle hole, and the third through the bottom hole.
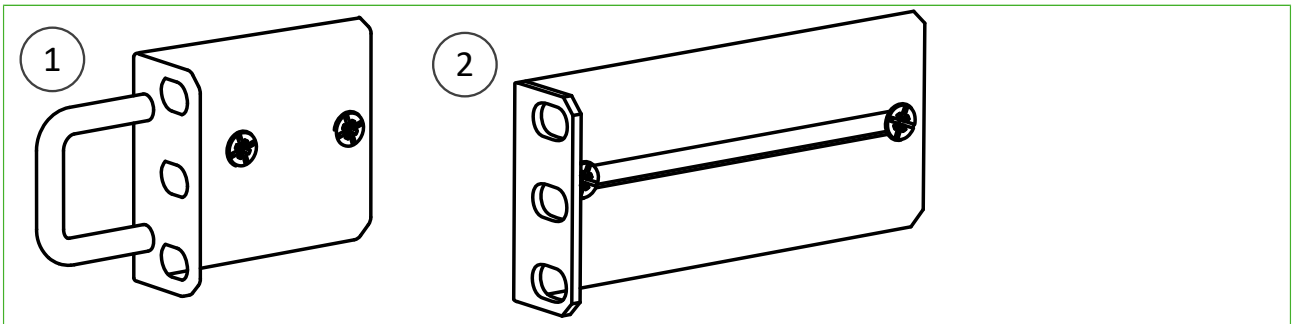
> ⚠️ **CAUTION:** Use all three screws to attach each rack-mounting bracket to the rack. Using fewer screws might not provide sufficient support and can damage the appliance.

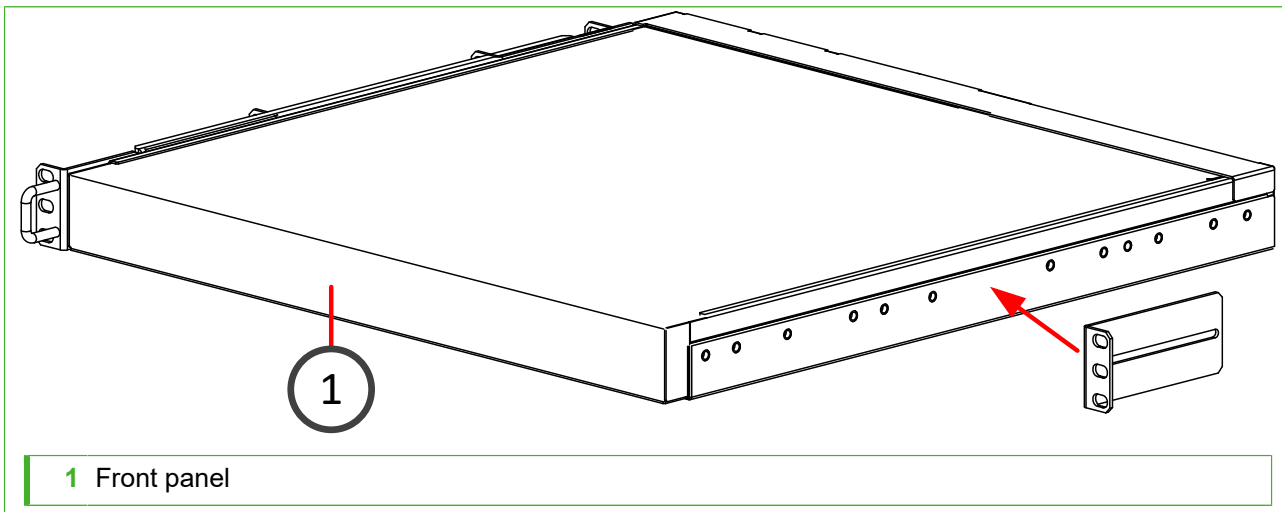# Install a 2101 or 2105 appliance in a two-post rack

Use the rack-mounting brackets to secure the appliance in the rack.

Steps

1) Locate the two rack-mounting brackets for the two-post rack installation.

2) Attach a bracket to each side of the appliance with screws through the grooves in the bracket. Position the brackets to fit around the posts.

1	Front panel

3) Attach each bracket to the rack with three screws through the holes in the front of the bracket: one screw through the top hole, the second through the middle hole, and the third through the bottom hole.
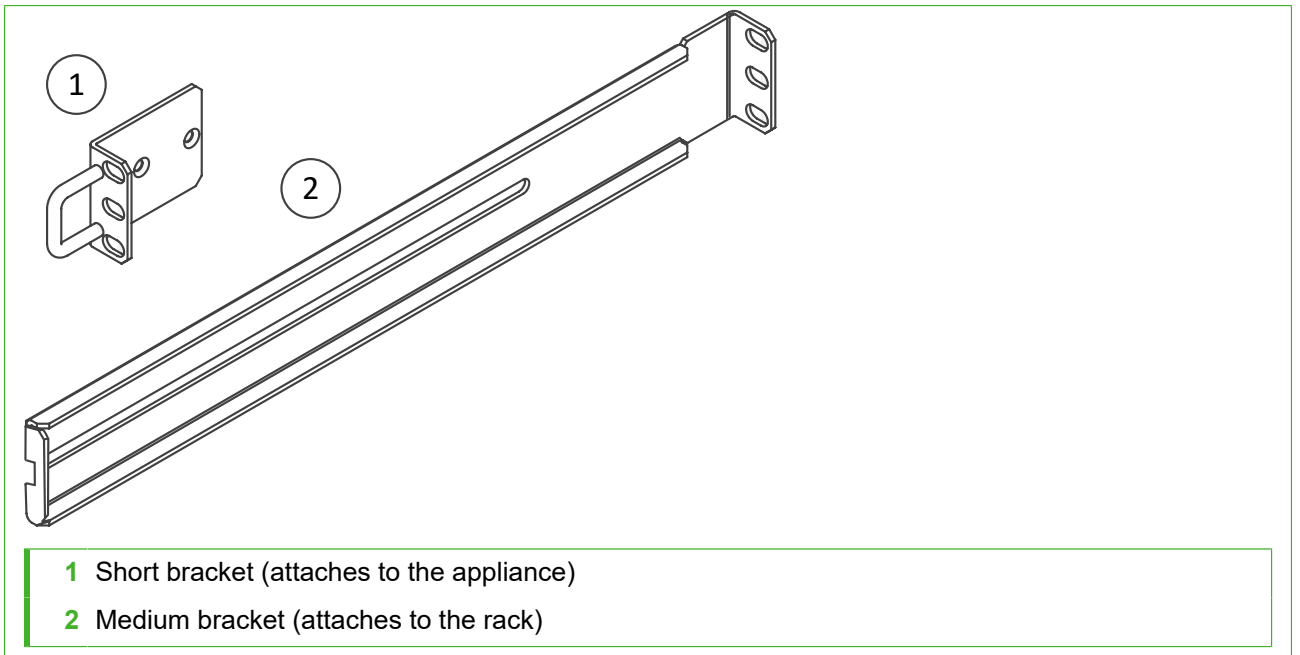
> ⚠️ **CAUTION:** Use all three screws to attach each rack-mounting bracket to the rack. Using fewer screws might not provide sufficient support and can damage the appliance.

# Install a 2101 or 2105 appliance with medium-length brackets in a four-post rack

Use the medium-length brackets (with a depth of approximately 20–30 in. or 50–76 cm) to secure the appliance in a four-post rack.

Steps

1) Locate the two pairs of brackets in the delivery package: two short brackets that attach to the appliance and two medium brackets that attach to the rack.

1	Short bracket (attaches to the appliance)
2	Medium bracket (attaches to the rack)

2) Attach a short bracket to both sides of the appliance using two screws for each bracket.

1	Front panel
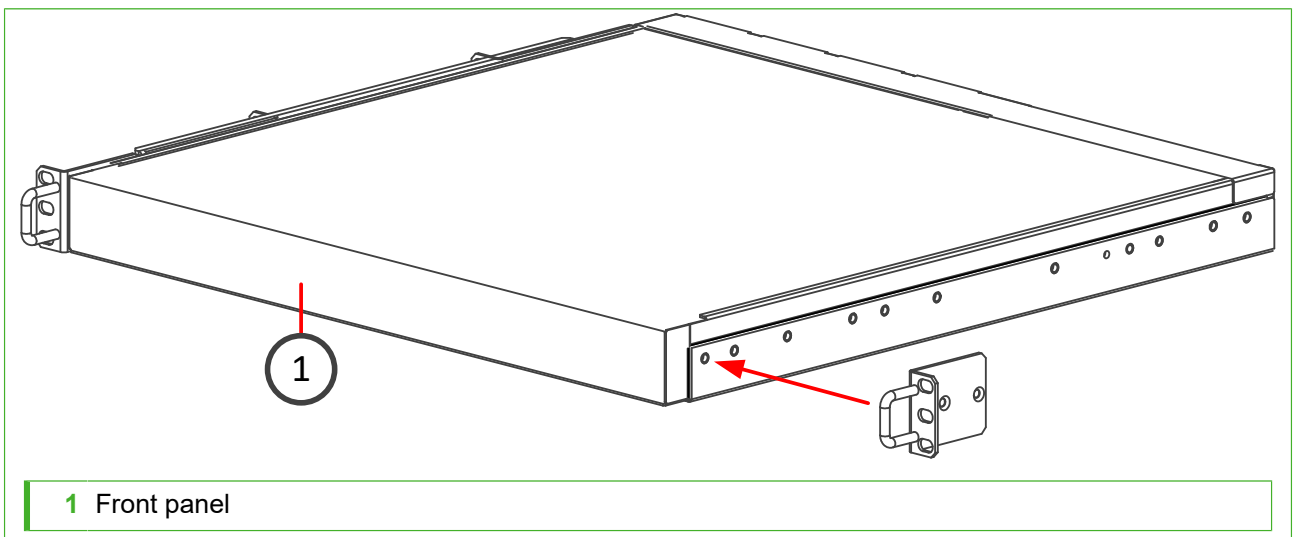
3) Attach the two medium brackets to the back of the rack with three screws through the holes at the back of each bracket: one screw through the top hole, another through the middle hole, and the third through the bottom hole.

> ⚠️ **CAUTION:** Use all three screws to attach each rack-mounting bracket to the rack. Using fewer screws might not provide sufficient support and can damage the appliance.

4) Attach three screws with a wider head to a suitable position on the side of the appliance. Do the same for the other side of the appliance.

> 📝 **Note:** These screws support the appliance when it is inserted into the rack.

5) Line up the screws that you have attached to the appliance with the groove in the brackets attached to the rack.

6) Slide the appliance into the brackets in the rack.

7) Attach the appliance to the rack with three screws through the holes in the front of the short brackets: one screw through the top hole, the second through the middle hole, and the third through the bottom hole.

> ⚠️ **CAUTION:** Use all three screws to attach each rack-mounting bracket to the rack. Using fewer screws might not provide sufficient support and can damage the appliance.

Install an interface module

If needed, install any interface modules.

> **Before you begin**
>
> - Read the safety precautions.
> - Make sure any interface modules you install are the correct type for your appliance.

> ⚠️ **CAUTION:** To avoid damaging the modules or the appliance, do not install or remove any interface modules if the appliance is turned on.

You must install an interface module or a placeholder module in each slot before making the appliance operational. If the appliance was delivered with a plate that covered the interface slot, you can cover the interface slot with the plate.

> 📝 **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Locate the slot to install the module in.

2) If the interface slot is covered with a plate, unfasten the thumbscrew that attaches the plate to the interface module slot and remove the plate.

Store the plate and the thumbscrew for later use in case you want to use the appliance without an interface module.

3) Push the module into the slot.

The module is seated correctly when the front panel of the module is even with the front panel of the appliance.

> **Tip:** If the module has a sticker, make sure that the sticker faces up.

> **Important:** Do not insert the module in the wrong orientation. Inserting the modules incorrectly might damage the appliance and the modules and voids the warranty.

Connect the cables

Connect the network, management, and power supply cables.

> **CAUTION:** On appliances that have an Intelligent Platform Management Interface (IPMI) port, the IPMI port is disabled by default. We do not recommend that you enable the IPMI port and connect a cable to it. This might help an unauthorized user to find a way to access and manage the appliance remotely and compromise the security of the system.

Copper cable types

Use at least CAT5e-rated cables for gigabit networks.

Always use standard cabling methods. Use crossover cables to connect the appliance to hosts and straight cables to connect the appliance to switches or hubs. For more information, see the *Forcepoint Next Generation Firewall Installation Guide*.

Speed and duplex settings

Network interfaces at both ends of each cable must have identical speed and duplex settings.

These settings include the automatic negotiation setting. If one end of the cable uses autonegotiation, the other end must also use autonegotiation. Gigabit standards require interfaces to use autonegotiation. Fixed settings are not allowed at gigabit speeds.

The settings for inline interfaces must be identical for all four interfaces. The pair on the appliance and the interfaces on the two devices connecting to the appliance must have the same speed and duplex settings configured.

Ethernet port mapping

For appliances that have removable interface modules, Ethernet port names are based on the slot and port numbers.

The first number in the name represents the slot on the appliance, and the second number represents the port on the slot. *Example:* eth2_0 is located on port 0 of slot 2.
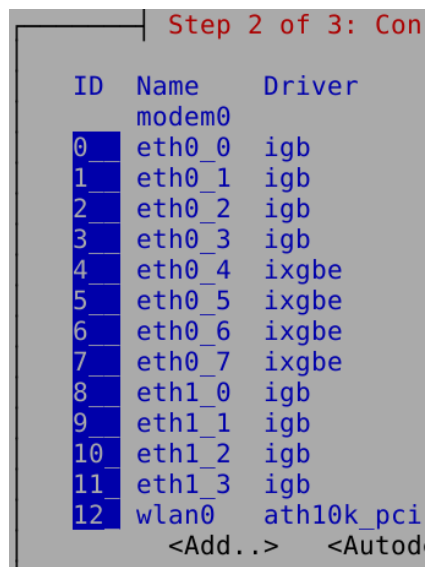
- Slot 0 contains the fixed Ethernet ports.
- Slots 1 and higher contain the ports on the interface modules. The port numbers start at 0 and increase from left to right.

During the initial configuration of the appliance, you map the Ethernet ports to the interface IDs that you defined in the Management Client.

The NGFW Initial Configuration Wizard shows the mapping between the interface IDs and port names. In the command line version of the NGFW Initial Configuration Wizard, Interface IDs appear in the **Id** column and port names appear in the **Name** column.

This mapping can change if you replace an interface module. If the new module has more Ethernet ports, the interface IDs for the new ports start from the next free interface ID number. *Example:* You have thirteen interfaces numbered 0–12, which includes a four-port module installed in slot 1.
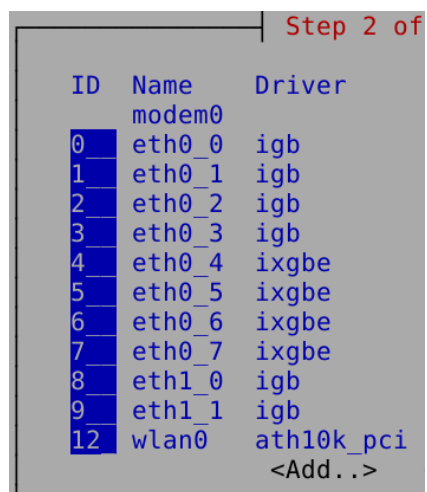
Figure 2: Original interface ID mapping

```
                  Step 2 of 3: Con
    ID   Name      Driver
         modem0
    0    eth0_0   igb
    1    eth0_1   igb
    2    eth0_2   igb
    3    eth0_3   igb
    4    eth0_4   ixgbe
    5    eth0_5   ixgbe
    6    eth0_6   ixgbe
    7    eth0_7   ixgbe
    8    eth1_0   igb
    9    eth1_1   igb
    10   eth1_2   igb
    11   eth1_3   igb
    12   wlan0    ath10k_pci
            <Add..>     <Autod
```

If you replace the four-port module installed in slot 1 with a two-port module, eth1_2 with ID 10 and eth1_3 with ID 11 are removed.

Figure 3: Changed interface ID mapping

```
                  Step 2 of
    ID   Name      Driver
         modem0
    0    eth0_0   igb
    1    eth0_1   igb
    2    eth0_2   igb
    3    eth0_3   igb
    4    eth0_4   ixgbe
    5    eth0_5   ixgbe
    6    eth0_6   ixgbe
    7    eth0_7   ixgbe
    8    eth1_0   igb
    9    eth1_1   igb
    12   wlan0    ath10k_pci
               <Add..>
```

Connect network and management cables

Connect the appliance to your networks. The management connection allows you to view the system console.

> **Note:** Ethernet ports are mapped to interface IDs during the initial configuration. The ports and port numbers of the physical appliance must match the interface definitions and interface IDs configured for the engine in the Management Client.

Steps

1) Determine which Ethernet ports to use and connect the ports to your networks.

2) Select one of these options for the management connection depending on the appliance model and features:
   - Connect a null-modem cable to the console port of the appliance and to another computer for a terminal connection.
   - Connect a monitor to the VGA port and a keyboard to a USB port.

   > **Note:** The serial console is not enabled by default on some appliances and cannot be used for the initial configuration. To use the serial console after the initial configuration on these appliances, use the command `sg-bootconfig` on the engine command line. For more information, see *Command line tools* in the *Forcepoint Next Generation Firewall Product Guide* for more information.

Connect network cables to SFP ports

If you installed an SFP interface module on the appliance or the appliance has an integrated SFP port, insert the copper or fiber-optic SFP transceiver into the port, then connect the cables.

Steps

1) Insert the SFP transceiver in the port slot until you feel the connector on the transceiver snap into place.

   > **Note:** Make sure that the latch on the SFP transceiver is up when you insert the SFP transceiver in the port slot.

2) If the SFP transceiver has a rubber plug, remove the plug.

3) Connect the copper or fiber-optic cable to the SFP transceiver.

   > **Note:** Each SFP port must match the wavelength specifications at the other end of the cable. The cable must not exceed the stipulated cable length for reliable communications.

Connect the AC power supply

If your appliance has an AC power supply, connect the power cable.

> **Note:** We recommend using a UPS to ensure continuous operation and minimize the risk of damage to the appliance in case of sudden loss of power.

Steps

1) Plug the cable to the AC power connector on the back of the appliance.

2) Plug the cable to a grounded, high-quality power strip that offers protection from electrical noise and power surges.

> **Note:** Standby power is supplied to the system even when the appliance is turned off.

Connect the DC power supply

Some appliances have a DC power supply that must be wired for power.

Two types of connectors are required for a DC power supply:

- Male connector of the type IC 2,5/ 3-STGF-5,08 (fixed)
- Female connector of the type MSTB 2,5/ 3-STF-5,08 (removable)
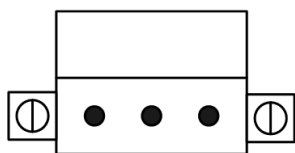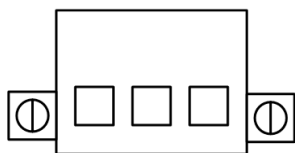

Figure 4: Male connector

Figure 5: Female connector

> **Note:** We recommend using a UPS to ensure continuous operation and minimize the risk of damage to the appliance in case of sudden loss of power.

Steps

1) Assemble a female connector.

    a) Locate a copper cable with three wires:

- 48 V negative terminal (–)
- Ground connection
- 48 V positive terminal (+)

   **b)** Strip 8 mm of insulation from each of the three wires in the cable.

> ⚠ **CAUTION:** Do not strip more than 8 mm from each wire to avoid leaving uninsulated wire exposed from the female connector.

c) If necessary, turn the screws on top of the female connector to expose the square holes for inserting the three wires in the connector.

d) Insert the exposed part of each of the three wires into the female connector. The illustration shows the wiring.

You can configure the DC input feed in three different ways, depending on your environment:

- Negative grounded (+48VDC)
- Positive grounded (–48VDC)
- Floating (default)

1	48 V negative terminal (–)
2	Ground connection
3	48 V positive terminal (+)
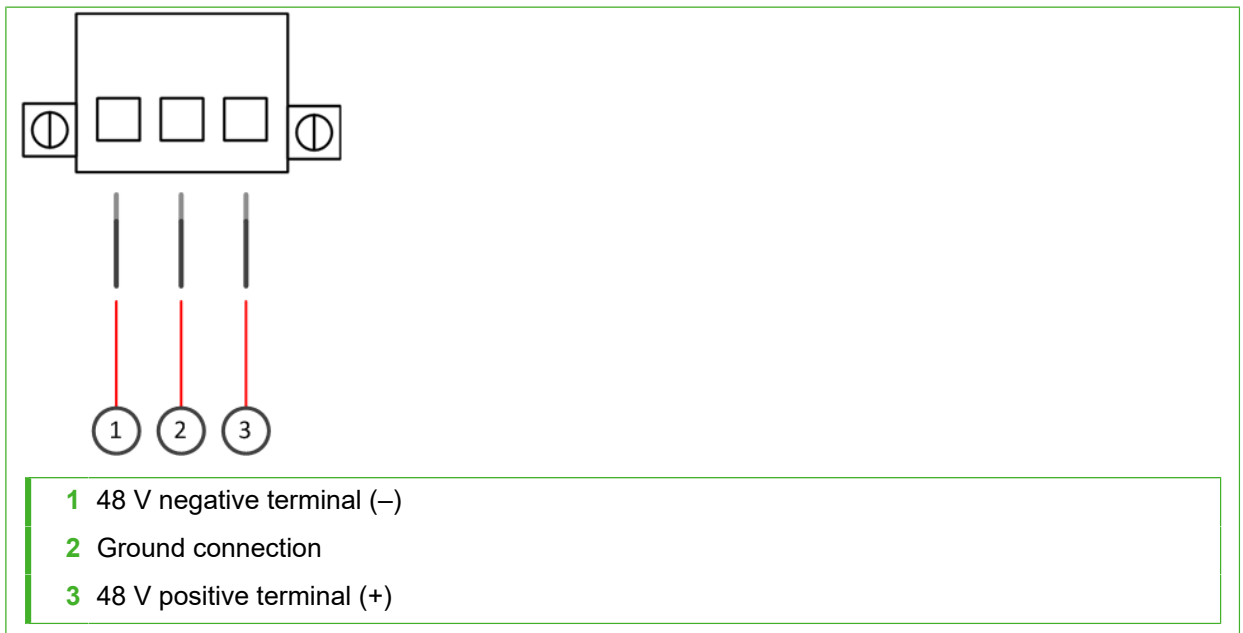
e) Tighten the screws on top of the female connector to lock the wires into place.

f) If the appliance has a dual-input adapter, assemble the second female connector.

2) Connect the mating connectors.

a) Insert a female connector into the pre-installed male connector as shown in the illustration.

1	Pre-installed male connector
2	Female connector
3	Black or blue
4	Green-yellow
5	Red
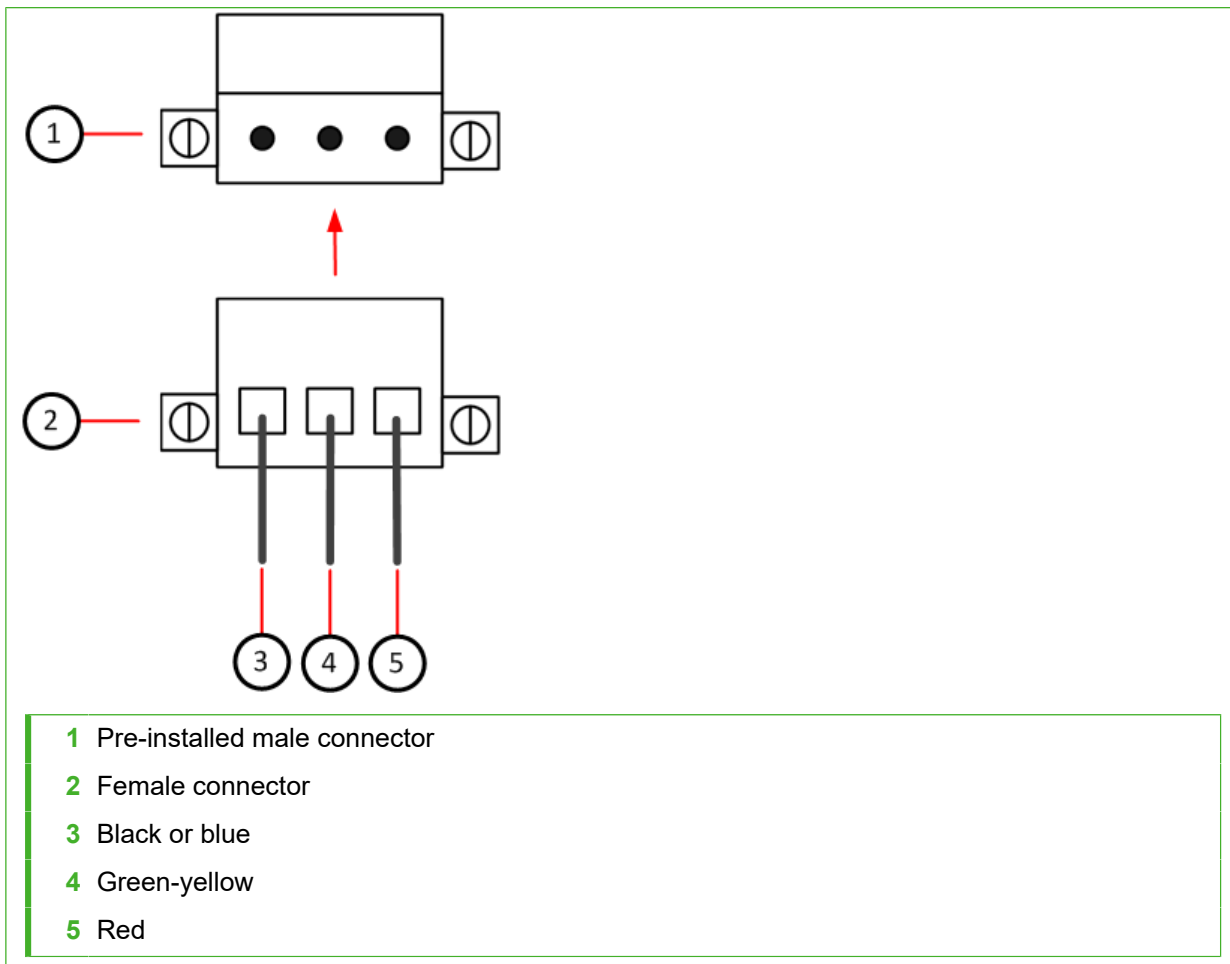
b) If the appliance has a dual-input adapter, connect the second female connector to the male connector.

c) (Optional) Connect a grounding wire to the grounding screw on the back of the appliance.

📝 **Note:** Standby power is supplied to the system even when the appliance is turned off.

Maintenance

Forcepoint NGFW appliances ship with replaceable components.

Related concepts
Safety precautions on page 16

Turn off the appliance

Most Forcepoint NGFW appliance hardware components are not hot-swappable. Turn off the appliance and disconnect power before replacing the CFast card, interface modules, or SFP transceivers.

On models 2101 and 2105, fans and power supplies are hot-swappable. On models 1101 and 1105, only fans are hot-swappable. The AC power supply is not user-replaceable on models 1101 and 1105.

> 📝 **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Connect to the engine command line. Depending on your appliance type, use one of these options.

- Connect a keyboard to a USB port and a monitor to the VGA port, then press **Enter**.
- Connect a computer running a terminal emulator program to the appliance console port, then press **Enter**.

  > 📝 **Note:** The console port is not enabled by default on some appliances.

- Connect using SSH.

  > 📝 **Note:** SSH access is not enabled by default.

2) Enter the logon credentials.
The user name is `root` and the password is the one you set for the appliance.

3) Enter the command `halt`.

4) Unplug all power cords from the system or the wall outlets.

Replace the DC power supply on a 1101 or 1105 appliance

The power supplies are replaceable on most Forcepoint NGFW appliances.

> ⚠️ **CAUTION:** Do not open the casing of a power supply module. Power supply modules can only be repaired by a qualified technician from the manufacturer.

> 📝 **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Disconnect the power cables from the power supply module.

2) Remove the four screws and the bracket that secure the power supply module to the appliance.
Store the screws and the bracket for later use.

3) Pull out the power supply module using the handle provided.

4) Push the replacement power supply module into the power bay until it clicks in place.

5) Use the bracket and the four screws to secure the power supply to the appliance.

⚠️ **CAUTION:** Make sure that you use all four screws that you removed earlier. Do not use different screws. Using different screws might damage the appliance or might not safely secure the bracket and the power supply to the appliance.

Replace an AC or DC power supply on a 2101 or 2105 appliance

The power supplies are replaceable on most Forcepoint NGFW appliances.

⚠️ **CAUTION:** Do not open the casing of a power supply module. Power supply modules can only be repaired by a qualified technician from the manufacturer.

📝 **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Disconnect the power cable from the power supply module.
If the appliance has a dual-input DC power supply, disconnect the power cables from both inputs.

2) Locate the release tab for the power supply module.

3) Push the release tab to release the power supply module from its locking position.

4) Pull out the power supply module using the handle provided.

5) Push the replacement power supply module into the power bay until it clicks in place.

Replace the appliance fans

Replace failed fans to ensure proper cooling of the appliance.

We recommend that you replace all appliance fans if one of the fans fails.

⚠️ **CAUTION:** Do not remove all fans at the same time if the appliance is running.

> **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Release the fan in one of the following ways depending on the appliance model:

    - Press the release tab on the side of the appliance fan to release the fan from its locking position.

    - Loosen the screws at the top and bottom of the fan.

2) Remove the fan from the appliance and slide the new fan into the fan housing.

3) If the fan has screws, tighten the screws until the fan is attached firmly in place.

Replace the CFast card

Replace the CFast card with another card that you received from Forcepoint.

> **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Turn off the appliance and disconnect any power cables.

2) Locate the CFast card on your appliance.

3) If there is still tape covering the CFast card, remove the tape.

4) Gently push in the CFast card to release the card from the slot.

5) Position the replacement CFast card. Turn the end with the slots toward the appliance. The wider slot must be on the left.

6) Insert the new CFast card into the slot and gently push to lock the card into place.

7) Reconfigure the appliance for the replacement CFast card. See the initial configuration information in the *Forcepoint Next Generation Firewall Installation Guide*.

Replace an interface module

Replace an interface module with the same type or a different type of module.

If the appliance was delivered with a plate that covered the interface slot, you can cover the interface slot with the plate.

> 📝 **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Turn off the appliance and disconnect any power cables.

2) Release the module.

- If the module is secured using thumbscrews, unscrew the thumbscrews and carefully pull the module out of the slot.

- Otherwise, press and hold the release lever right, then carefully pull the module out of the slot using the handle or the knob on the front panel of the module.

3) Insert the new module.

4) Connect the cables and plug the power cables to the system and to the wall outlets.

5) Turn on the appliance.

> ⚠️ **CAUTION:** To ensure proper cooling, do not turn on the appliance if you have not installed an interface module or a placeholder module in each slot. For some appliances, you can install the cover plate over the slot instead.

6) Update the interface configuration.

a) On the command line of the NGFW Engine, enter the following command to start the NGFW Initial Configuration Wizard:

```
sg-reconfigure
```

b) In the network interface configuration options, make sure that the autodetected information is correct and that all interfaces have been detected.

If autodetection fails, add network drivers manually. For detailed instructions, see the *Forcepoint Next Generation Firewall Installation Guide*.

c) If the number of ports in the new module differs from the old module, adjust the mapping of interfaces to interface IDs.

> ⚠️ **CAUTION:** Do not select the **Clear** action when modifying interface IDs in the NGFW Initial Configuration Wizard on the command line. Selecting **Clear** removes all mapping information between interface IDs and Ethernet ports, and restores the default values.

d) On the **Prepare for Management Contact** page, highlight **Finish**, then press **Enter**.

e) If the number of ports in the new module differs from the old module, modify the interface definitions in the Management Client, then refresh the policy to transfer the interface changes to the engine.

Make sure to use the same interface IDs that you mapped to the interfaces in the NGFW Initial Configuration Wizard for the interface definitions in the Management Client.

Related concepts
Ethernet port mapping on page 25

Reattach the cover plate to the interface module slot

Reattach the module cover plate if there is no module in the slot.

⚠️ **CAUTION:** Do not turn on the appliance if a slot is empty or uncovered. Using the appliance without an interface module or the cover plate can damage the appliance and voids the warranty.

📄 **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Turn off the appliance.

2) Remove the interface module from the interface module slot.

3) Locate the tab at the lower left corner of the plate.

4) Insert the tab into the hole in the lower left corner of the slot casing.

5) Slide the plate inward until it covers the slot and the thumbscrew in the plate aligns with the screw hole to the right of the slot.

6) Push and hold the thumbscrews on the plate, then tighten them to secure the plate in place.

Remove SFP transceivers

Remove or replace an SFP transceiver.

⚠️ **CAUTION:** Invisible laser radiation is emitted from the end of a fiber-optic cable and from the fiber port. Do not stare into the beam and avoid direct exposure to the beam.

📄 **Note:** We recommend fastening a grounding strap to your wrist so that it contacts your bare skin and attaching the other end of the strap to the appliance.

Steps

1) Turn off the appliance and disconnect any power cables.

2) Unplug all power cables from the system or the wall outlets.

3) Disconnect the cable from the SFP transceiver.

4) Pull down the latch on the transceiver and carefully pull the SFP transceiver out of the port slot.

5) If needed, insert a replacement SFP transceiver in the slot.

Related tasks
Connect network cables to SFP ports on page 27