FIPS Security Seal

Procedures for Brocade MLXe Series, Brocade NetIron CES 2000 Series, and Brocade NetIron CER 2000 Series

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Document History

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FIPS Security Seal Procedures for Brocade MLXe Series, Brocade NetIron CES 2000 Series, and Brocade NetIron CER 2000 Series	53-1002118-01	New document	April 20, 2011

In this document

This document explains how to apply FIPS-compliant tamper-evident security seals to the devices listed in TABLE 1.

TABLE 1   Devices supporting FIPS-compliant tamper-evident security seals

Device series	Supported devices
Brocade MLXe Series	• MLXe-4 • MLXe-8 • MLXe-16 • MLXe-32
Brocade NetIron CES 2000 Series	• Brocade NetIron CES 2024C • Brocade NetIron CES 2024F • Brocade NetIron CES 2048C • Brocade NetIron CES 2048CX • Brocade NetIron CES 2048F • Brocade NetIron CES 2048FX
Brocade NetIron CER 2000 Series	• Brocade NetIron CER 2024C • Brocade NetIron CER 2024F • Brocade NetIron CER 2028C • Brocade NetIron CER 2048CX • Brocade NetIron CER 2048F • Brocade NetIron CER 2048FX

This document includes the following sections:

- FIPS security seals

- Preparing to apply FIPS security seals

- Applying seals to Brocade devices

FIPS security seals

Each seal in the Tamper Evident Seal kit measures 1.27 cm (.5 in.) by 3.18 cm (1.25 in.) and has a unique serial number printed on it. Seals must be correctly placed on each hardware device to satisfy the requirements for FIPS 140-2 Level 2 compliance.

The seals should be stored in a room temperature environment, between 20 and 25°C (68 to 77°F). Avoid applying seals in environments where the temperature is 10°C (50°F) or less.

The seals have a shelf life of one year. After that period, new seals should be purchased.

NOTE

It is recommended that you follow your company's policy for recording the seal serial numbers used and for proper disposal of expired seals.

Once installed, if the seals are tampered with, you are able to see the following tamper evidence:

- Appearance of a checkerboard destruct pattern

- Graphics printed within the seal can be partially visible on both the removed seal and the residue remaining on the surface

- Residue seen under ultraviolet light

The adhesive on the back of each seal requires at least 30 minutes to cure; tamper evidence might not be visible until the adhesive cures

Preparing to apply FIPS security seals

The time to apply security seals varies by the number of seals required for a particular model. The application of seals to a Brocade MLXe device can take 10 minutes or longer. In addition to seal application time, the adhesive requires an additional 30 minutes to cure.

Before beginning this task, ensure that you have the proper Tamper Evident Seals Kit and alcohol pads to clean the surfaces on which the seals will be affixed. Clean surfaces with alcohol and ensure that the surfaces are dry before applying security seals.

Applying seals to Brocade devices

Seal placement varies by switch model. This section includes the following FIPS seal application procedures:

- Applying seals to a Brocade MLXe-4 device

- Applying seals to a Brocade MLXe-8 device

- Applying seals to a Brocade MLXe-16 device

- Applying seals to a Brocade MLXe-32 device

- Applying seals to Brocade NetIron CES 2000 Series and Brocade NetIron CER 2000 Series devices

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NOTE
The figures in this document show transparent representations of the seals to show the specific openings or fasteners that the seals are designed to cover. The actual seals are opaque.

To apply security seals, ensure that the following requirements are met:

- Carefully remove the seals from the backing and place them on the device. Do not use bare fingers to handle the labels. Using tweezers, peel away the backing slowly and carefully to avoid contaminating or disturbing the adhesive.

- When applying a seal to the device, use firm pressure across the surface of the entire seal to ensure maximum adhesion.

- Wait at least 30 minutes for the adhesive to fully cure. Evidence of tampering might not be apparent until the adhesive cures.

NOTE
You should store any extra seals in a secure, temperature-controlled area.

Applying seals to a Brocade MLXe-4 device

Use the figures in this section as a guide for security seal placement on a Brocade MLXe-4 device. Each Brocade MLXe-4 device requires the placement of 14 seals:

- **Front**: Affix one seal from the top of the Management Module (MM) to the front panel of the chassis. Affix nine more seals—one from each module to the front panel of the chassis. See FIGURE 1 for correct seal orientation and positioning.

- **Rear**: Affix four seals from the top panel of the chassis covering a portion of the fan unit lip. You must bend these seals to place them correctly. See FIGURE 2 for correct seal orientation and positioning.

FIGURE 1   Front view of a Brocade MLXe-4 device with security seals

1 to 10 = FIPS security seals

FIGURE 2   Rear and side view of a Brocade MLXe-4 device with security seals
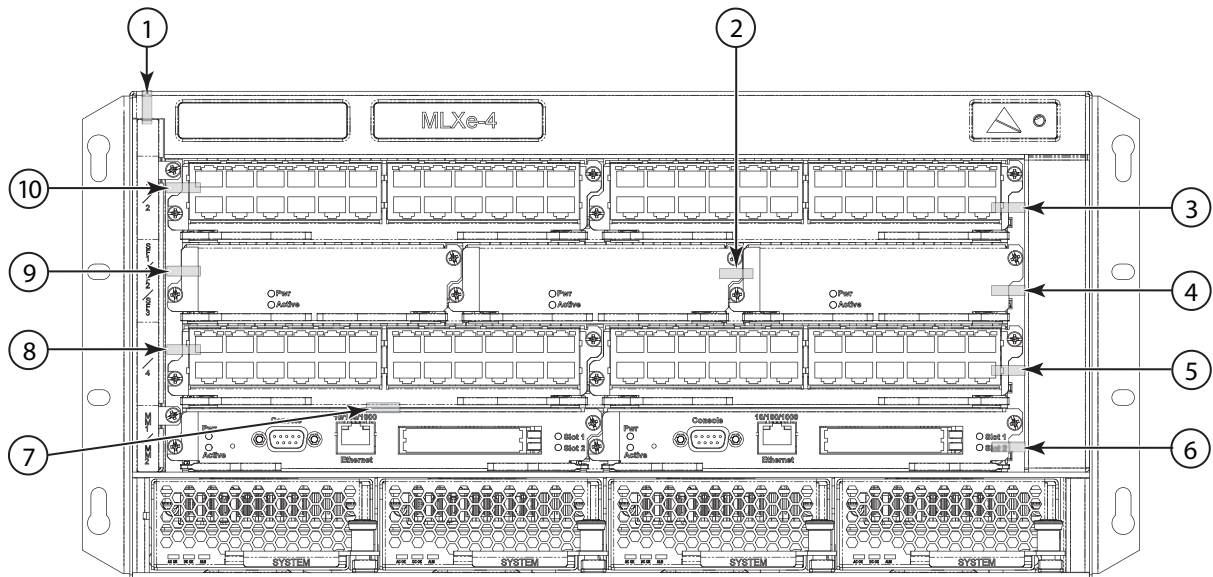

1 to 4 = FIPS security seals

Applying seals to a Brocade MLXe-8 device

Use the figures in this section as a guide for security seal placement on a Brocade MLXe-8 device. Each Brocade MLXe-8 device requires the placement of 17 seals:
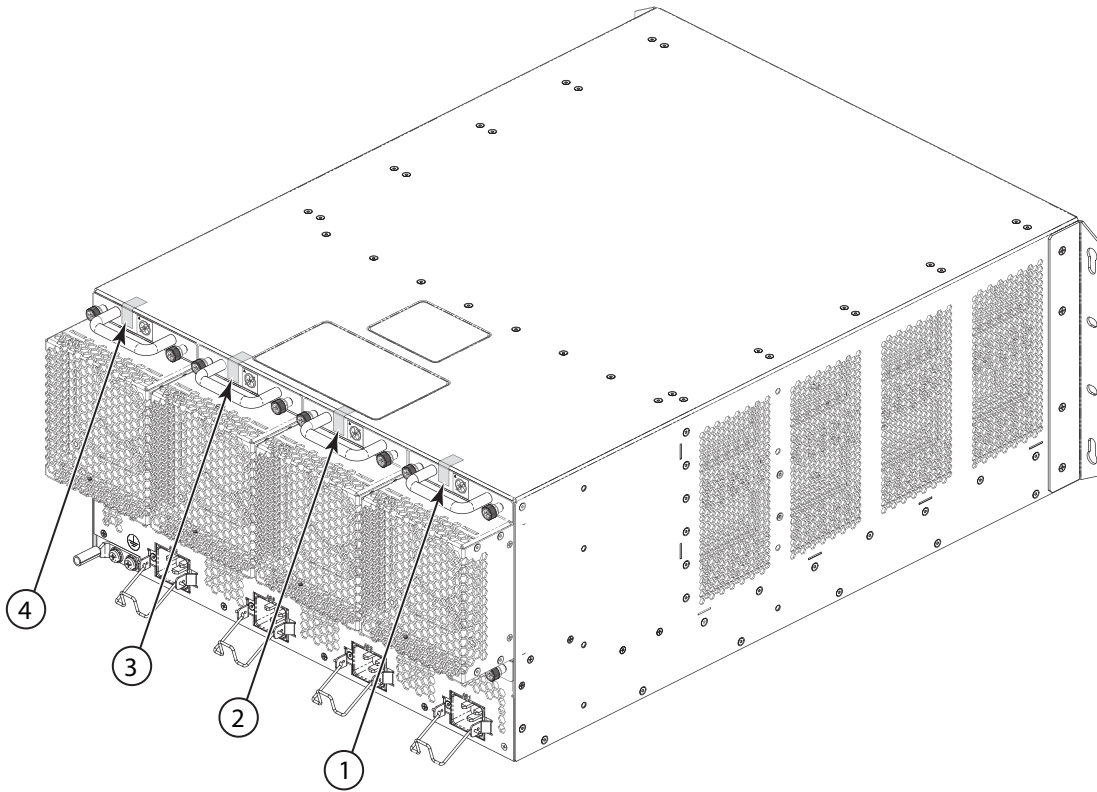
- **Front**: Affix 15 seals—one seal from each module to the front panel of the chassis. The seal for the Management Module (MM) is vertically oriented and is positioned so that half is affixed to the top panel of the chassis and half of the seal is affixed to the control module. You must bend this seal to position it correctly. See FIGURE 3 for correct seal orientation and positioning.

FIGURE 3   Front view of a Brocade MLXe-8 device with security seals
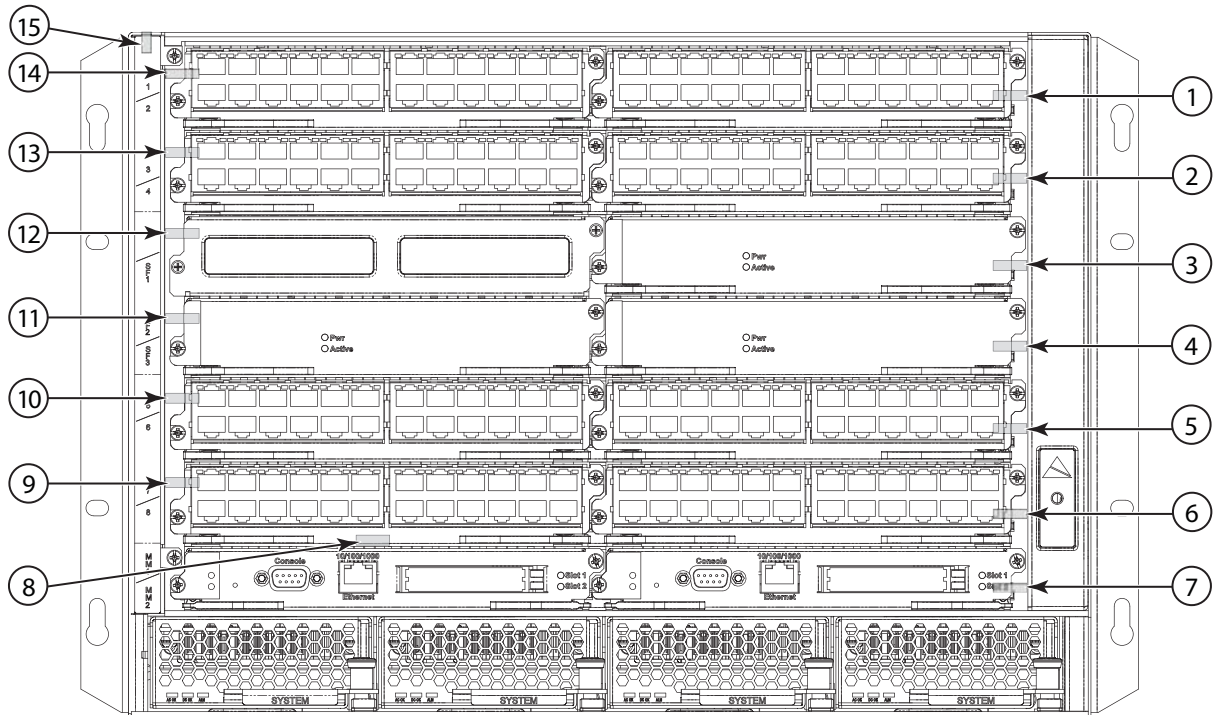
1 to 15 = FIPS security seals

- **Rear**: Affix two vertically-oriented seals from the top panel of the chassis covering a portion of the fan unit lip. One seal will be to the left of the upper leftmost securing post; and the other seal will be to the right of the rightmost securing post. You must bend these seals to position them correctly. See FIGURE 4 for correct seal orientation and positioning.

FIGURE 4　　Rear and side view of a Brocade MLXe-8 device with security seals
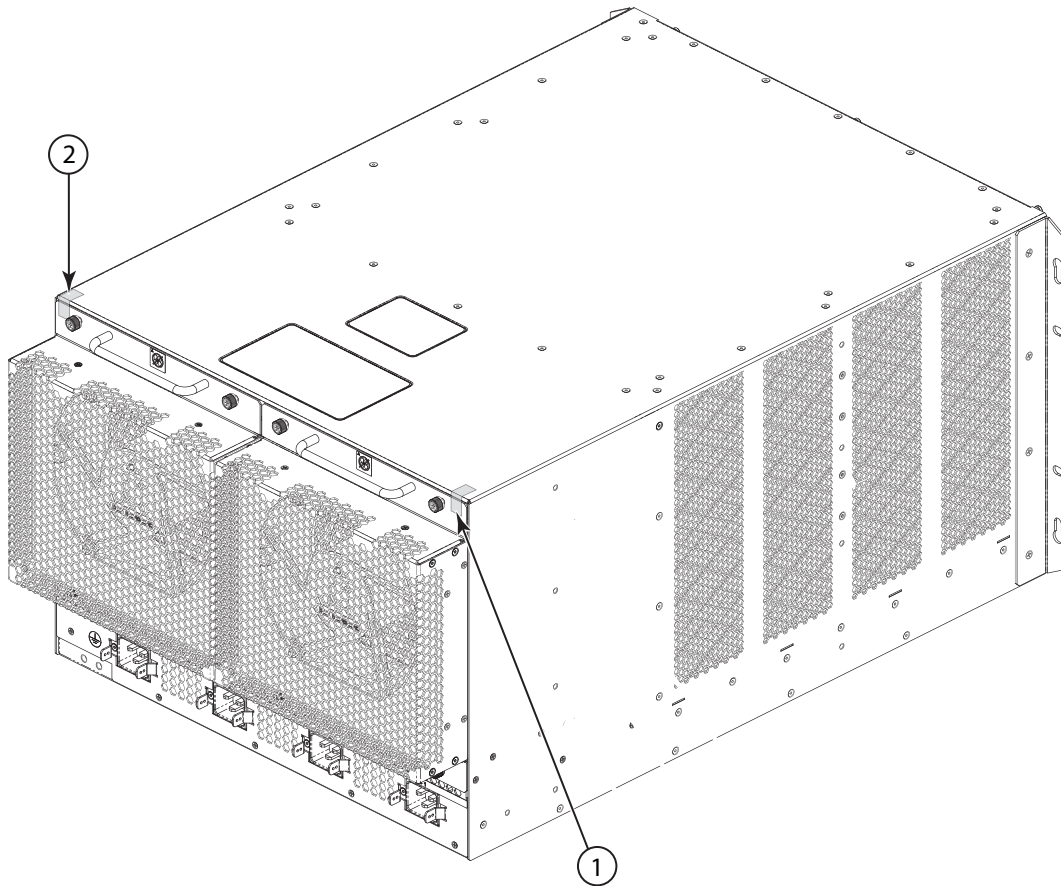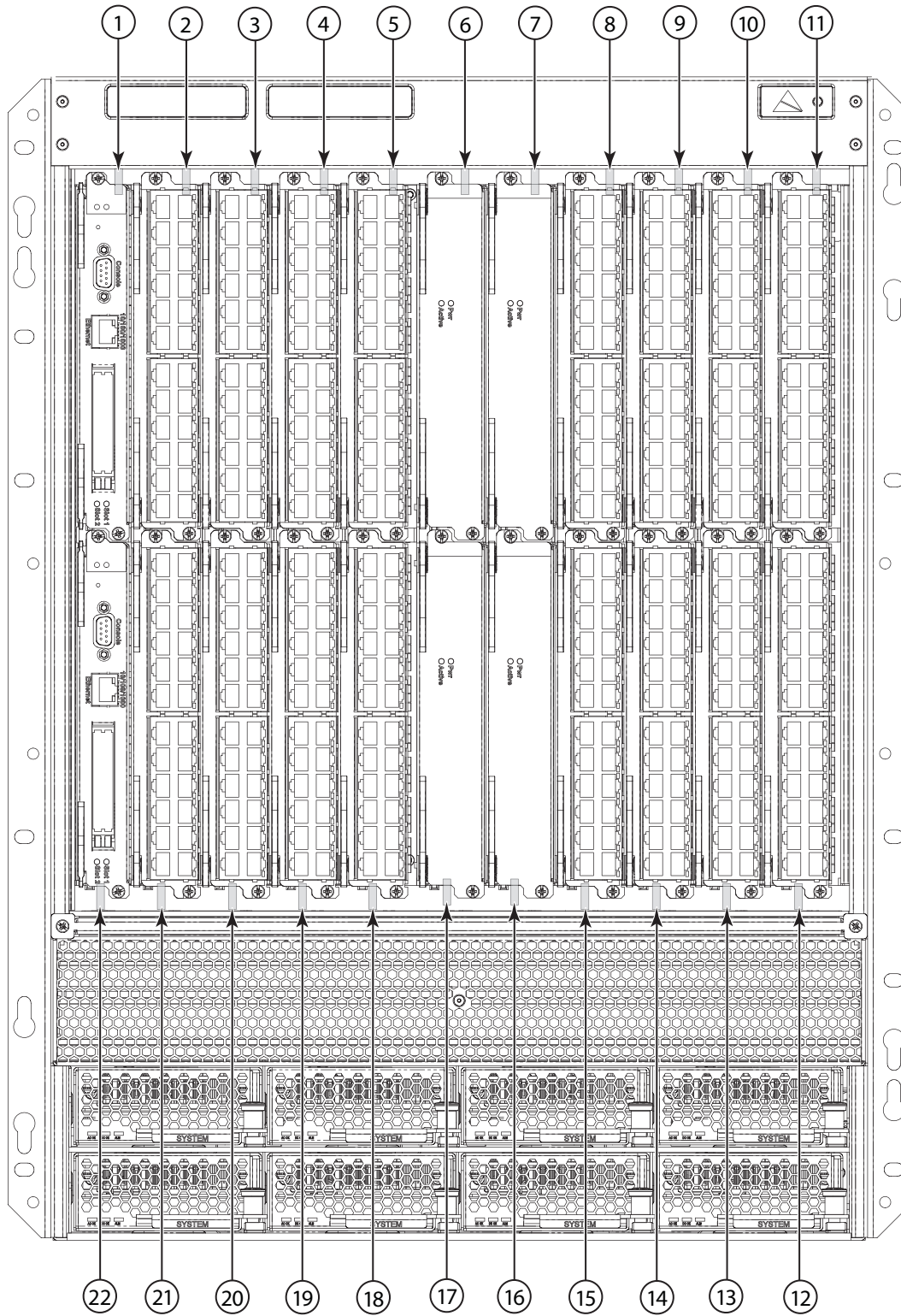

1 to 2 = FIPS security seals

Applying seals to a Brocade MLXe-16 device

Use the figures in this section as a guide for security seal placement on a Brocade MLXe-16 device. Each Brocade MLXe-16 device requires the placement of 24 seals:

- **Front:** A total of 22 seals must be placed on the front panel of each Brocade MLXe-16 device. See FIGURE 5 for correct seal orientation and positioning.

  - Affix 11 vertically-oriented seals along the top row of modules; each seal must be affixed to the front panel of the chassis and to the upper right side of each module.

  - Affix 11 vertically-oriented seals along the bottom row of modules; each seal must be affixed to the bottom left side of each module and to the front panel of the chassis.

- **Rear:** Affix two vertically-oriented seals from the top panel of the chassis covering a portion of the fan unit lip. One seal will be to the left of the upper leftmost securing post; and the other seal will be to the right of the rightmost securing post. You must bend these seals to position them correctly. See FIGURE 6 for correct seal orientation and positioning.
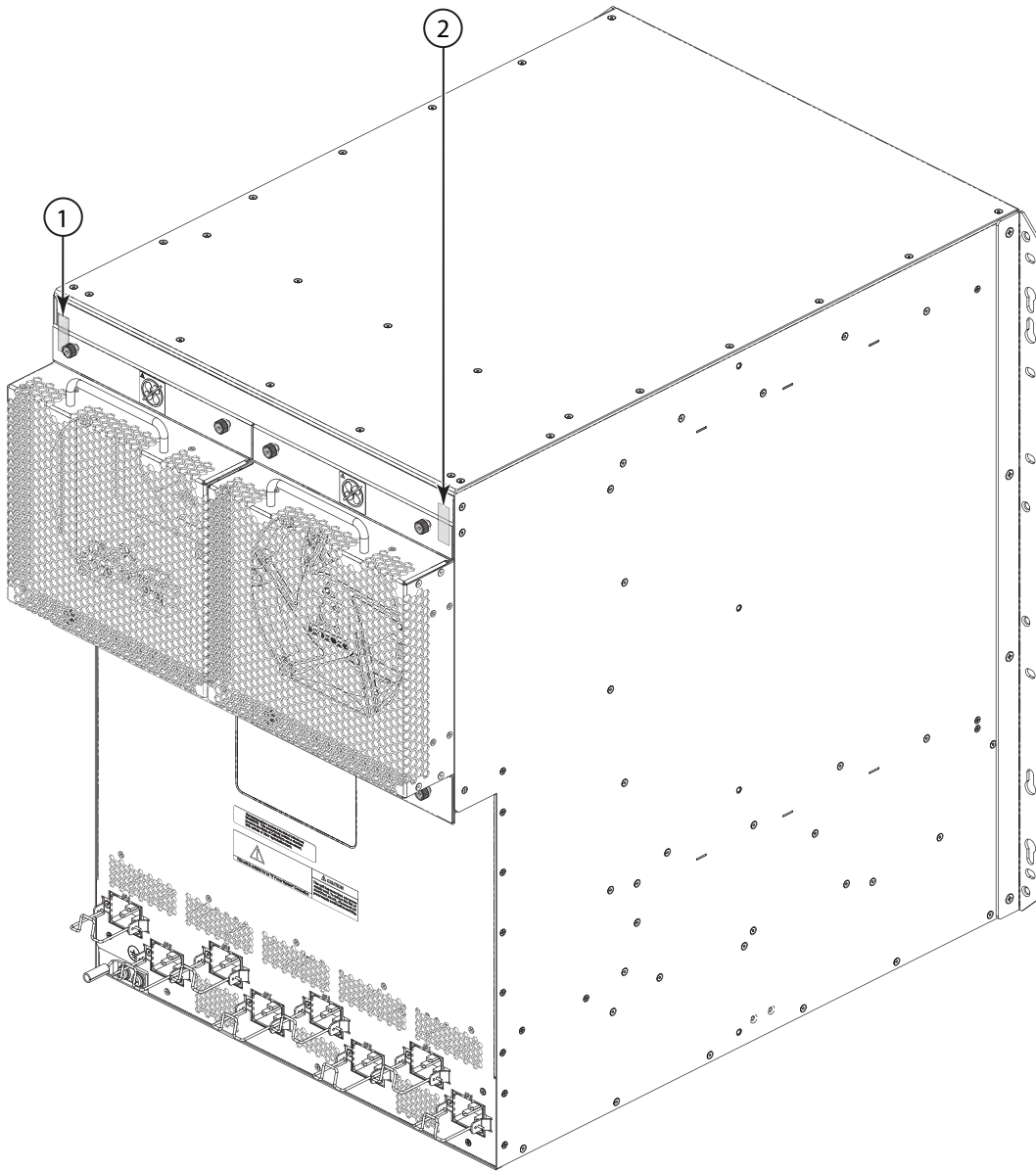
FIGURE 5 Front view of a Brocade MLXe-16 device with security seals

1 to 22 = FIPS security seals

FIGURE 6   Rear and side view of a Brocade MLXe-16 device with security seals
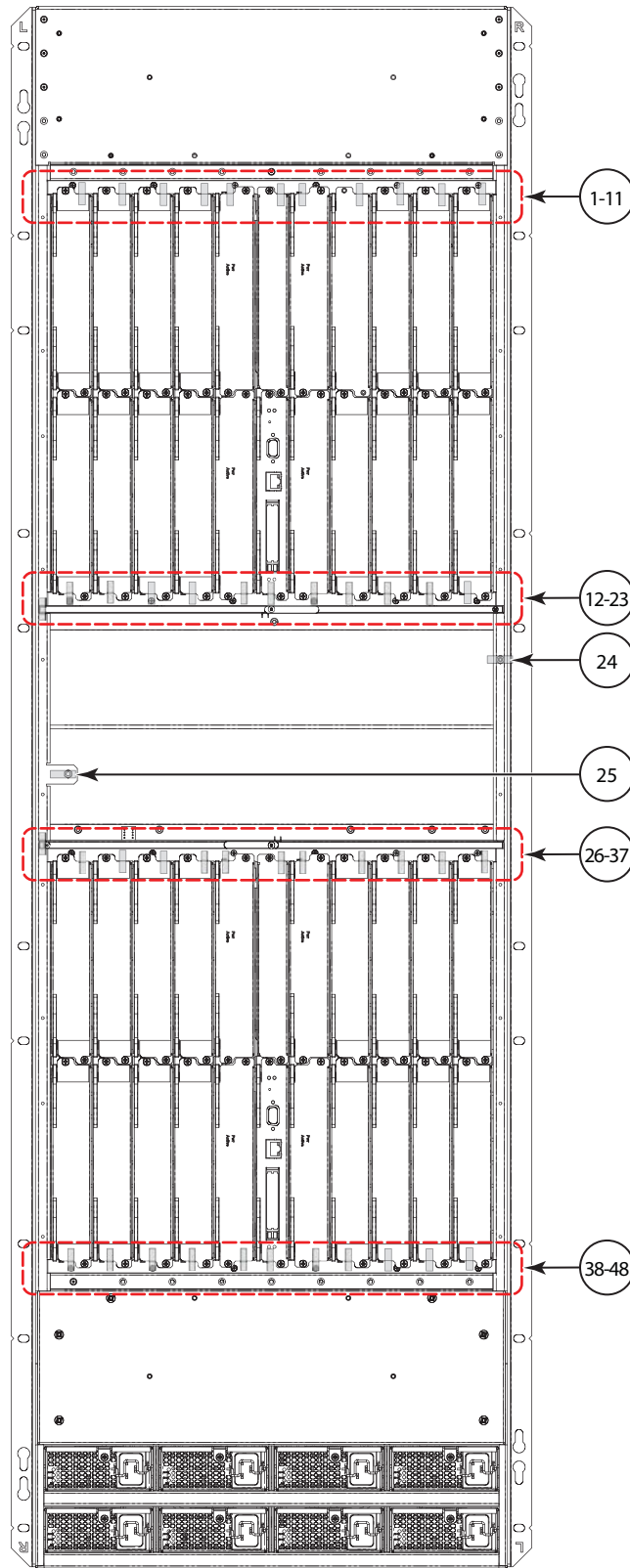

1 to 2 = FIPS security seals

Applying seals to a Brocade MLXe-32 device

Use the figures in this section as a guide for security seal placement on a Brocade MLXe-32 device. Each Brocade MLXe-32 device requires the placement of 58 seals:

- **Front**: Affix a total of 48 seals to the front of the chassis. Affix 46 seals—two rows of 11 seals and two rows of 12—one from each module to the front panel of the chassis. All seals are oriented vertically, and each seal connects one module to the front panel of the chassis. Affix two seals to the front panel of the chassis, one covering the right screw and one covering the left screw that secure the front panel to the chassis. See FIGURE 7 for correct seal orientation and positioning.

- **Rear**: Affix a total of ten seals to the rear of the device. Affix eight horizontally-oriented seals from the outer bottom corner of each power supply to the side of the chassis. You must bend these seals to place them correctly. Affix two seals covering the fans at the base of the rear side of the device. See FIGURE 8 for correct seal orientation and positioning.

FIGURE 7   Front view of a Brocade MLXe-32 device with security seals

1-11

12-23

24

25

26-37

38-48

48 FIPS security seals

FIGURE 8   Rear and side view of a Brocade MLXe-32 device with security seals
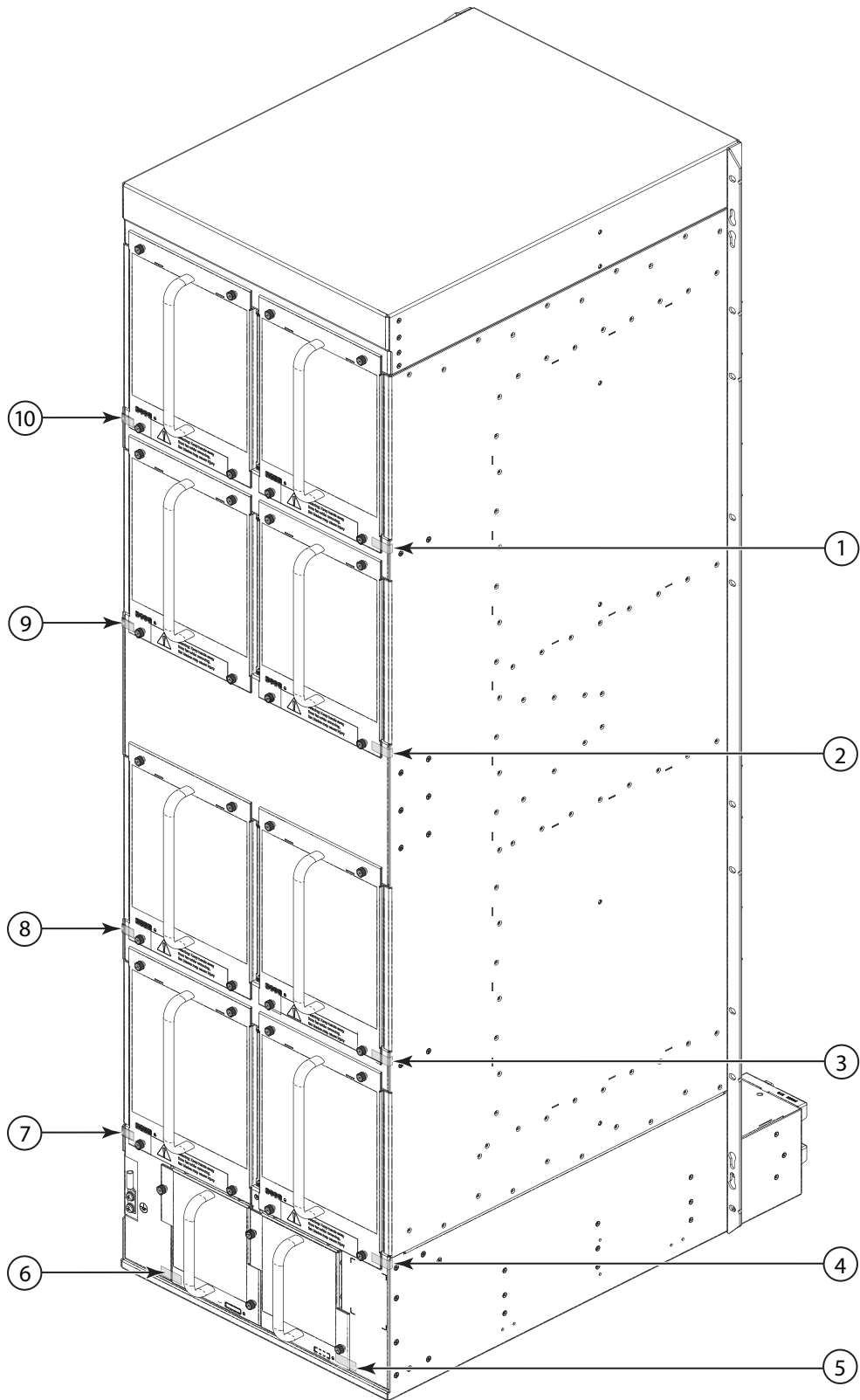
1 to 10 = FIPS security seals

Applying seals to Brocade NetIron CES 2000 Series and Brocade NetIron CER 2000 Series devices

This section explains how to apply FIPS-compliant tamper-evident security seals to Brocade NetIron CES 2000 Series and Brocade NetIron CER 2000 Series devices listed in TABLE 2.

TABLE 2   Devices supporting FIPS-compliant tamper-evident security seals

Device series	Supported devices	Total number of seals required to be placed on the device
Brocade NetIron CES 2000 Series	• Brocade NetIron CES 2024C • Brocade NetIron CES 2024F	16 total seals
	• Brocade NetIron CES 2048C • Brocade NetIron CES 2048CX • Brocade NetIron CES 2048F • Brocade NetIron CES 2048FX	15 total seals
Brocade NetIron CER 2000 Series	• Brocade NetIron CER 2024C • Brocade NetIron CER 2024F	16 total seals
	• Brocade NetIron CER 2028C • Brocade NetIron CER 2048CX • Brocade NetIron CER 2048F • Brocade NetIron CER 2048FX	15 total seals

Use the figures in this section as a guide for security seal placement on a Brocade NetIron CER or CES series device. The connectors on the faceplate of a particular model might vary, but the placement of the seals is the same. Refer to TABLE 2 for the total number of seals required to be placed on each device.

- **Top:** Affix one seal lengthwise completely covering the top rightmost screw that connects the faceplate to the device. See FIGURE 9 for correct seal orientation and positioning.

- **Right and left sides:** Affix seven seals on each side of the device. The seals placed on the sides must each be vertically oriented and cover two open holes. See FIGURE 9 for correct seal orientation and positioning on the right side. The orientation and placement of seals on the left side mirrors the orientation and placement of seals on the right side. See FIGURE 10 for correct seal orientation and positioning on the left side.

- **Front:** On Brocade NetIron CER 2024C, Brocade NetIron CER 2024F, Brocade NetIron CES 2024C, and Brocade NetIron CES 2024F devices, affix one seal from the front panel to the bottom panel. See FIGURE 9 for correct seal orientation and placement.

NOTE

Brocade NetIron CER 2048C, Brocade NetIron CER 2048CX, Brocade NetIron CER 2048F, Brocade NetIron CER 2048FX, Brocade NetIron CES 2048C, Brocade NetIron CES 2048CX, Brocade NetIron CES 2048F, and Brocade NetIron CES 2048FX devices do not require seal placement on the front panel of the device.

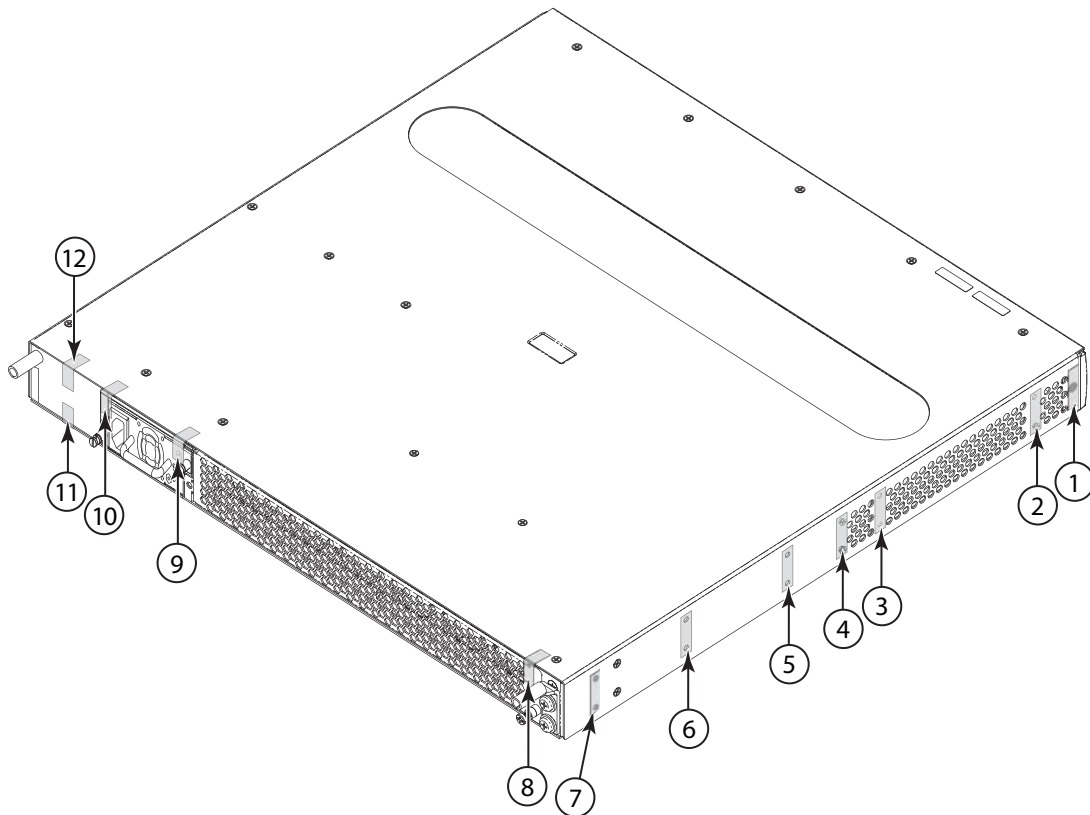FIGURE 9   Front, top, and right side view of a Brocade NetIron CER 2000 device with security seals
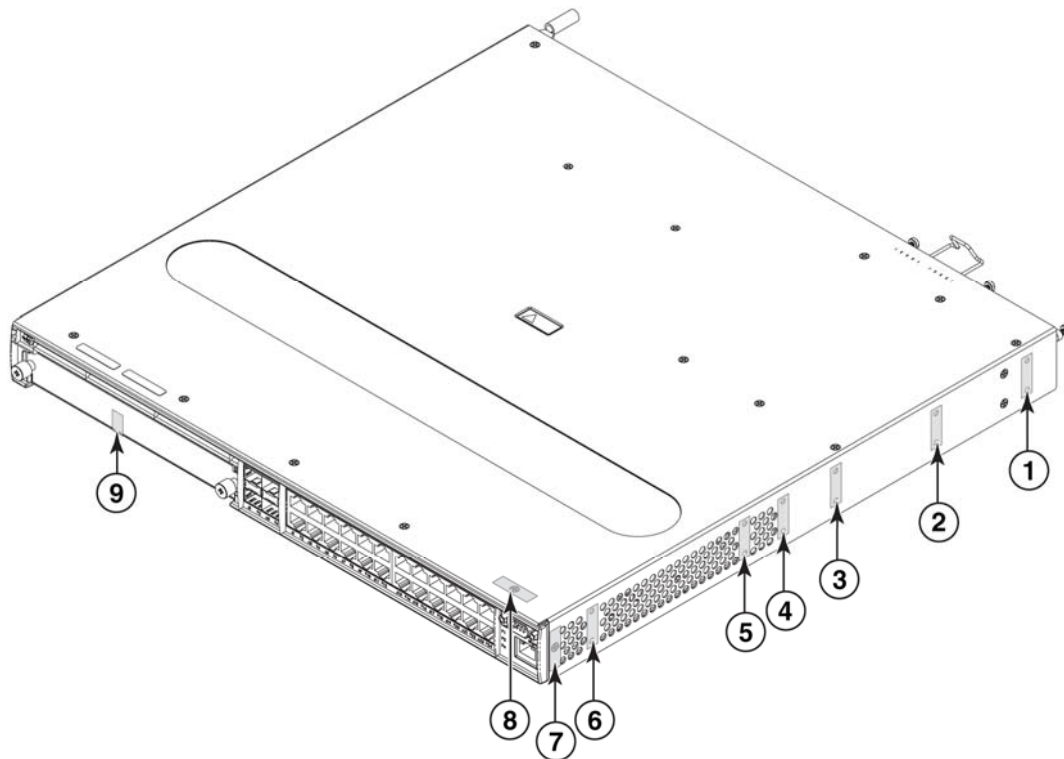
1 to 9 = FIPS security seals

- **Rear:** Affix three seals from the top panel to the rear panel. Affix one seal from the rear panel to the bottom panel. See FIGURE 10 for correct seal placement and orientation.

FIGURE 10   Rear, top, and left side view of a Brocade NetIron CER 2000 device with security seals

1 to 12 = FIPS security seals