

# 6 Installing Modules

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## 6.1 Installing Cable Management Frames

### Context

The procedures and methods for installing cable management frames of all the CloudEngine 16800 models are the same. The following figure shows the installation of cable management frames on the CloudEngine 16808 as an example.

### Tools and Accessories

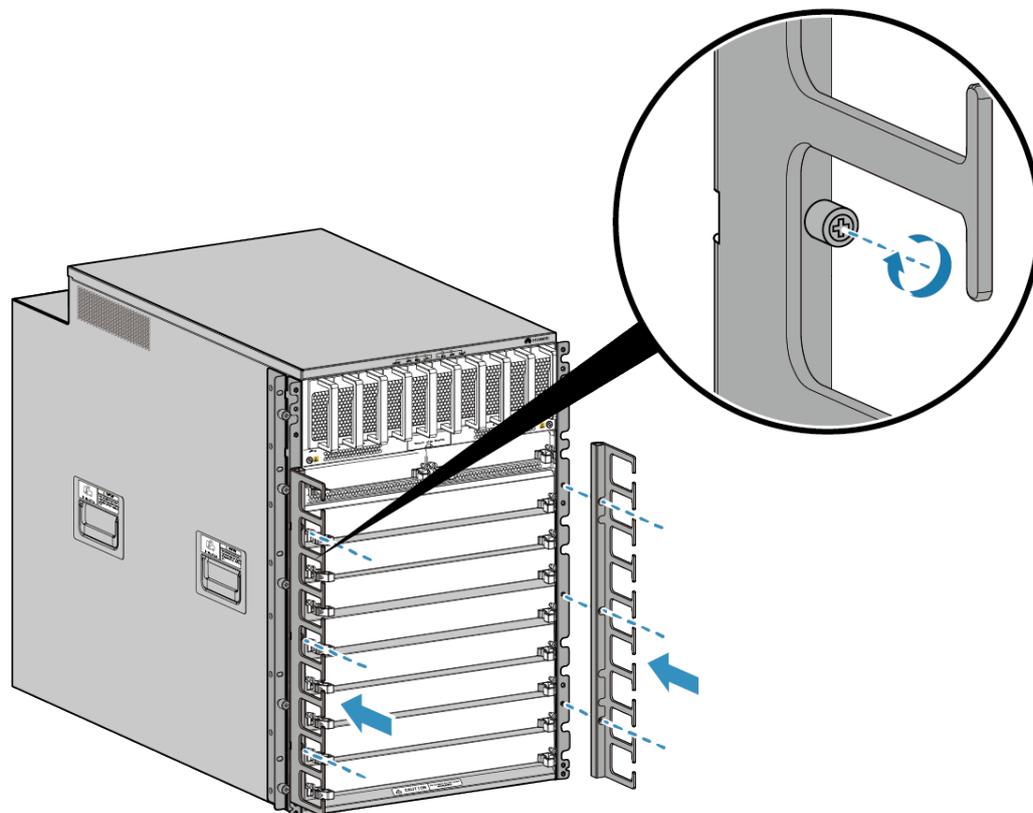
- ESD wrist strap or ESD gloves
- Phillips screwdriver

### Procedure

- Step 1** Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the cabinet or rack.
- Step 2** Install cable management frames on the device. Insert the positioning pins of a cable management frame into mounting holes on the device, slide the cable

management frame up and down to fit the positioning pins in the recess of the mounting holes, and tighten the captive screws on the cable management frame. Tighten the captive screws with a torque of 0.54 N·m.

**Figure 6-1** Installing cable management frames



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## 6.2 Installing Power Modules

### Context

The CloudEngine 16800 supports pluggable power modules. The procedures and methods for installing power modules on all the CloudEngine 16800 models are the same. The following figure shows power module installation on a CloudEngine 16808 as an example.

#### NOTICE

- Do not remove the filler panel on a power module slot if no power module needs to be installed in the slot.
- Do not install DC power modules and AC & high-voltage DC power modules on the same device.
- When installing a power module, ensure that the indicator on the power module is on the top.

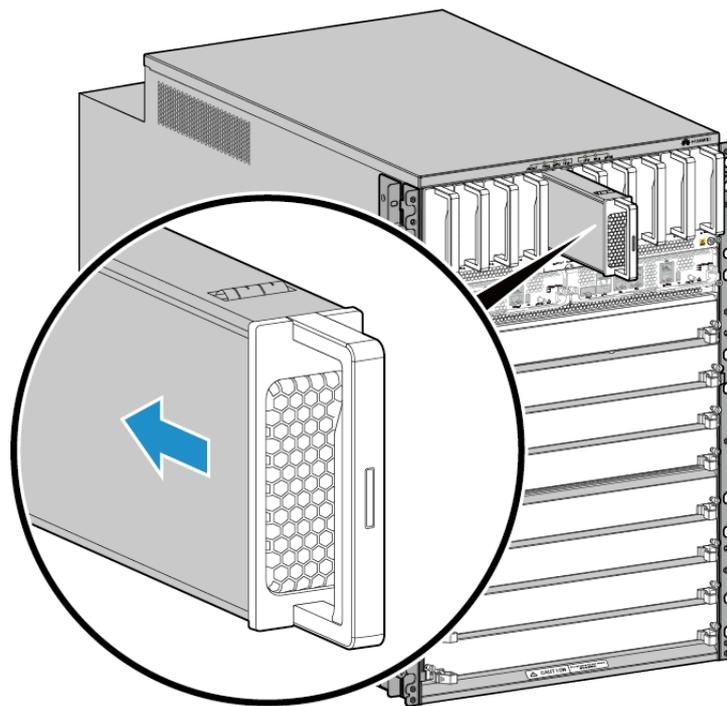
## Tools

ESD wrist strap or ESD gloves

## Procedure

- Step 1** Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the device or cabinet/rack.
- Step 2** Install a power module on the device, with the silkscreen of the power module being presented in the upper left corner.
1. Remove the filler panel from the slot where the power module will be installed. Keep the filler panel in an appropriate place for later use.
  2. Grasp the power module handle with one hand and use the other hand to support the bottom of the power module. Slowly push the power module into the slot along the guide rails, until you hear a click and the power module cannot move forward.

**Figure 6-2** Installing a power module on the device



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## 6.3 Installing Filler Panels in a Cabinet or Rack

### Context

If the top of the chassis is vacant, you need to install filler panels in the cabinet or rack for front and rear airflow isolation. If a cabinet accommodates multiple chassis, filler panels must be installed in the space between the chassis.

## Tools

- ESD wrist strap or ESD gloves
- Phillips screwdriver

## Procedure

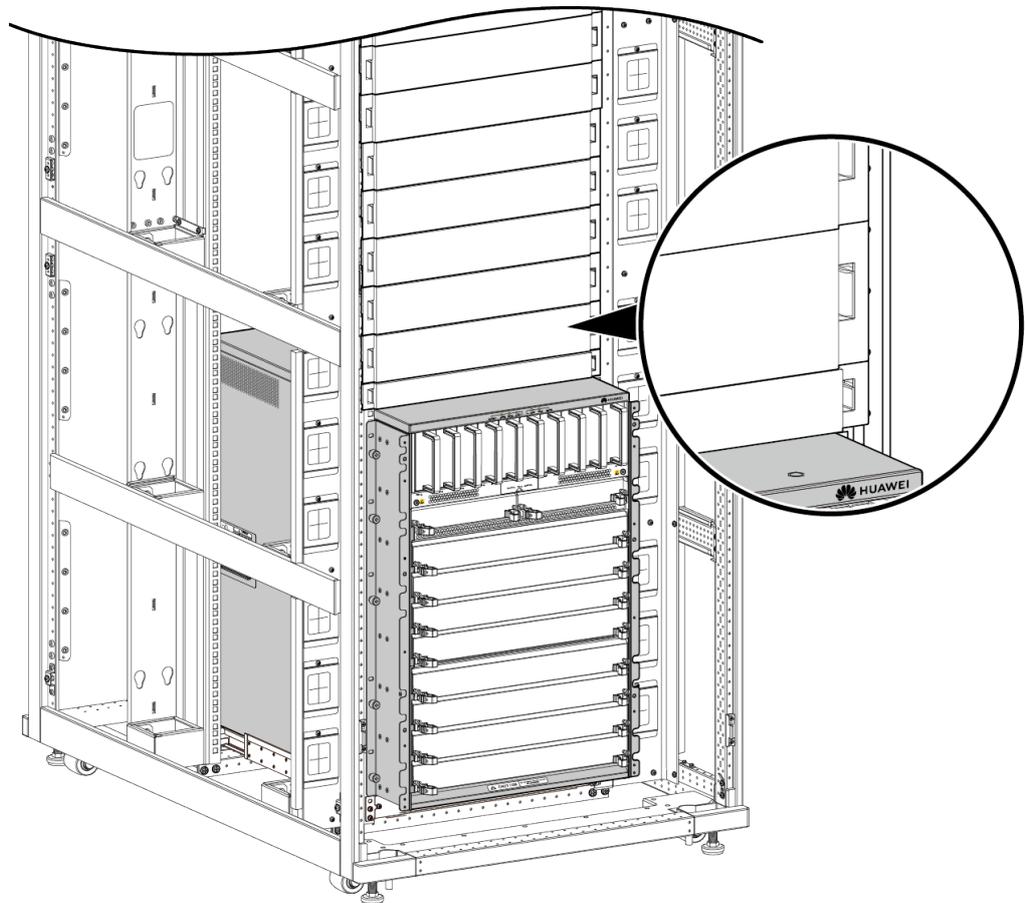
- Step 1** Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the device or cabinet/rack.
- Step 2** Install a 1U filler panel directly above the chassis. Place the bottom of the 1U filler panel against the top of the chassis. Then install 2U filler panels above the 1U filler panel. The following figure uses the CloudEngine 16808 as an example.

### NOTE

For the CloudEngine 16804 and CloudEngine 16808, 1U and 2U filler panels are required. Part numbers of 1U and 2U filler panels are 21141166 and 21141167, respectively. Filler panels must be installed in vacant slots of a cabinet to isolate airflows; otherwise, heat dissipation of devices will be less effective. Huawei cabinets must be equipped with filler panels. If another vendor's cabinet with no filler panels is used, filler panels must also be prepared. Filler panels of Huawei cabinets are recommended.

For the CloudEngine 16816, only 1U filler panels are required.

**Figure 6-3** Installing filler panels in a cabinet or rack



----End

## 6.4 Installing SFUs

### Context

SFU slots of the CloudEngine 16800 chassis are behind fan slots. Slots SFU1, SFU2, and SFU9 cannot be used. If the **set sfu reduced-mode** command is run to configure the SFU reduction mode, only slots SFU3, SFU5, SFU6, and SFU8 can be used. The procedures and methods for installing SFUs on all the CloudEngine 16800 models are the same. The following figure shows SFU installation on a CloudEngine 16816 as an example.

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#### NOTICE

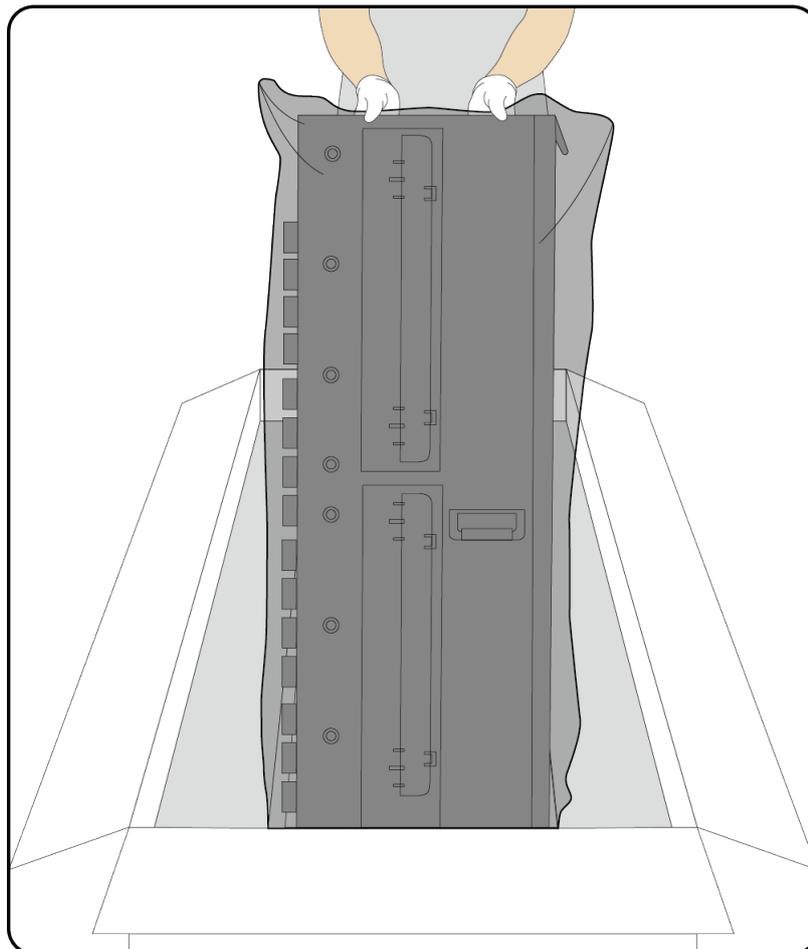
- Cover all the vacant slots with filler panels to ensure good electromagnetic shielding and heat dissipation.
  - Before removing the filler panel from the fan slots, ensure that all M3 screws on the filler panel have been removed. If some M3 screws are not removed when the filler panel is removed, the screws will be bent.
  - Before installing SFUs on a device, make sure that the device and SFUs are all free from damp.
  - When installing an SFU, gently push the SFU along the guide rails, and be careful not to crash the card connector. Distorted card connector will cause pins on the backplane connector to bend.
  - If the connector of an SFU has collided with the slot or other objects, ask Huawei professionals whether the SFU can still be installed. Installing an SFU with distorted connector may cause damage to the device.
  - Before installing an SFU, remove the filler panel from the fan slots.
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### Tools

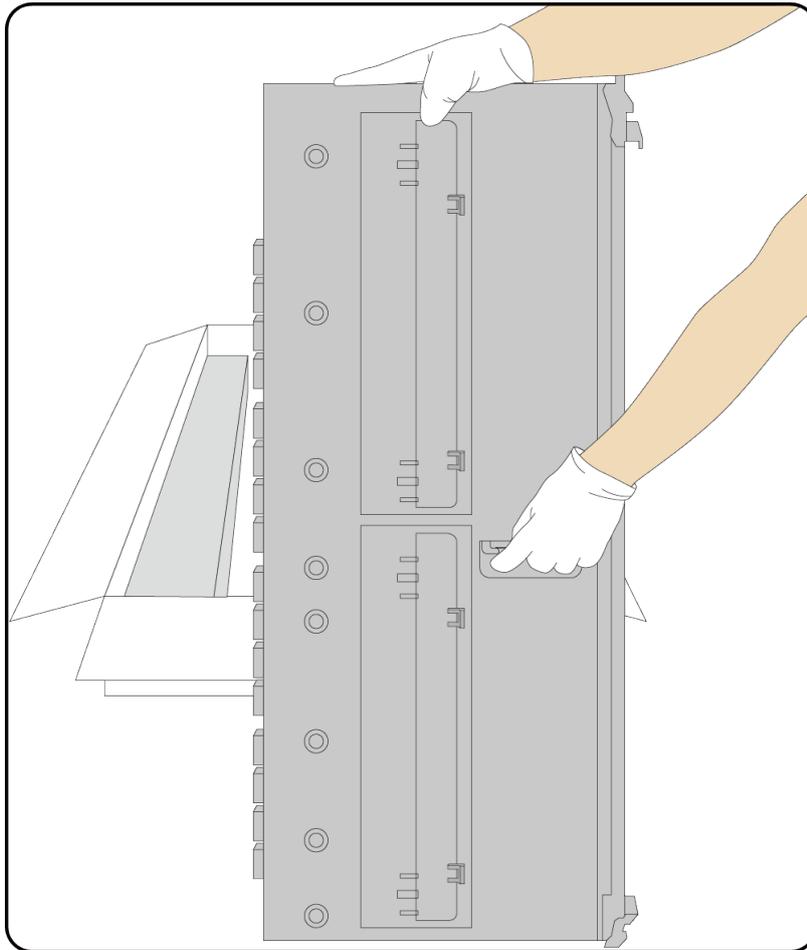
- ESD wrist strap or ESD gloves
- Phillips screwdriver

### Procedure

- Step 1** Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the device or cabinet/rack.
- Step 2** Remove the filler panel from the fan slots at the rear of the chassis and from the slot where an SFU is to be installed.
- Step 3** Hold the top of the SFU with both hands and stand the SFU upright. Take the SFU out from the ESD bag.



**Step 4** Open the handle on the left side of the SFU. Grasp the handle with one hand and the top of the SFU with the other hand to stabilize the SFU.



 NOTE

- For the CloudEngine 16804 and CloudEngine 16808, use one hand to support the bottom of the SFU, use the other hand to grasp the panel of the SFU, and place the SFU in the slot.

**Step 5** Place the SFU in the slot and gently push the SFU along the guide rails. See callout 1 in [Figure 6-4](#).

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 WARNING

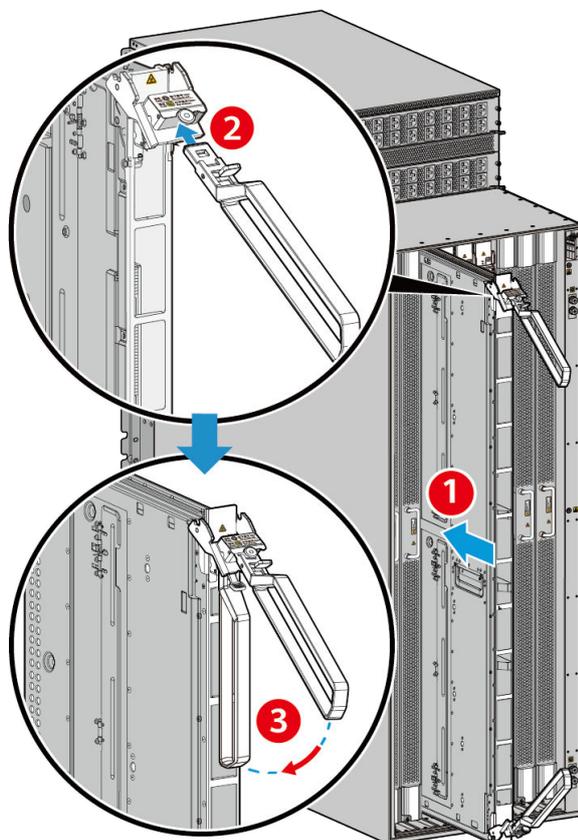
Do not carry an SFU horizontally by one person because it is heavy and long. Two persons are required when moving an SFU for a long distance. To prevent personal injury or damage to the SFU, follow the preceding steps.

**Step 6** Take out the wrenches for SFUs, and install the wrenches on the SFU. A wrench is successfully installed until you hear a click. Grasp the wrenches with both hands, and gently push the SFU until the hooks of the wrenches are attached to the interior sides of the slot. Close the wrenches until the SFU is securely installed in the chassis. See callouts 2 and 3 in [Figure 6-4](#).

**NOTICE**

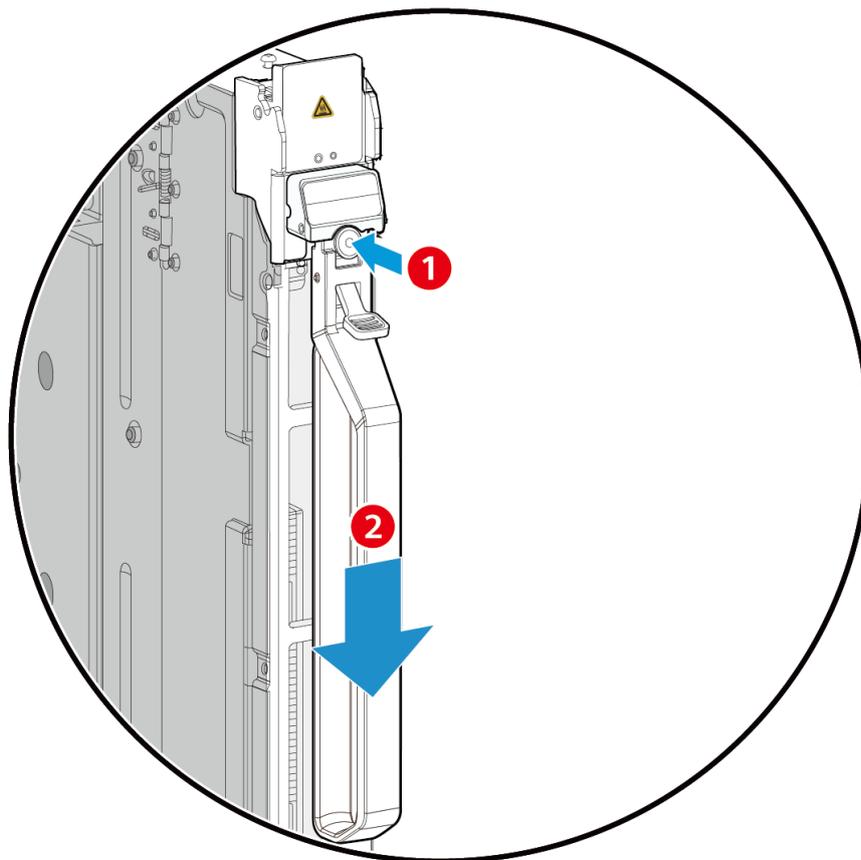
Do not use a tool other than the wrenches to install or remove an SFU.

**Figure 6-4** Installing an SFU in the chassis



**Step 7** Remove the wrenches. Press and hold down a round button on the SFU with one hand and hold one wrench with the other hand to remove it downwards. See [Figure 6-5](#). Remove the other wrench in the same way.

**Figure 6-5** Removing wrenches from an SFU



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## 6.5 Installing Fan Modules

### Context

Fan module slots of the CloudEngine 16800 are outside SFUs. Install SFUs before installing fan modules. The procedures and methods for installing fan modules on all the CloudEngine 16800 models are the same. The figure shows fan module installation on the CloudEngine 16808 as an example.

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#### NOTICE

- Do not stand a fan module upright to avoid it falling over and causing damage or injury.
  - To prevent a fan module from falling down, hold both handles while removing it.
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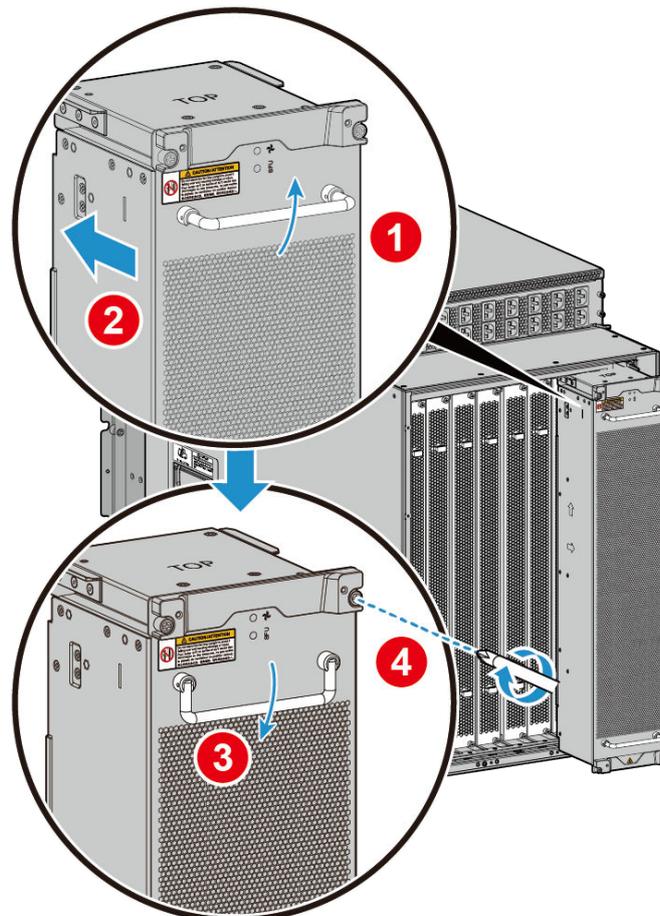
## Tools

- ESD wrist strap or ESD gloves
- Phillips screwdriver

## Procedure

- Step 1** Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the device or cabinet/rack.
- Step 2** Take a fan module out from the ESD bag, and turn the fan module handles out. See callout 1 in [Figure 6-6](#).
- Step 3** Hold the handles with both hands and gently push the fan module into the slot along the guide rails until the fan module cannot move forward. See callout 2 in [Figure 6-6](#).
- Step 4** Fold the handles. See callout 3 in [Figure 6-6](#).
- Step 5** Tighten the captive screws on the fan module. See callout 4 in [Figure 6-6](#). Tighten the captive screws with a torque of 0.54 N m.

**Figure 6-6** Installing a fan module on a device



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## 6.6 Installing MPUs and LPUs

### Context

MPUs and LPUs of the CloudEngine 16800 are installed in different slots, but their installation methods are similar. This section uses an LPU as an example to describe the installation procedure of MPUs and LPUs. The procedures and methods for installing LPUs are the same on all the CloudEngine 16800 models. The following figure shows LPU installation on the CloudEngine 16808.

#### NOTICE

- Cover all the vacant slots with filler panels to ensure good electromagnetic shielding, heat dissipation, and dustproof performance of the device.
- Before installing a card, ensure that the device and card are not damped, and that the backplane and card connectors are not damaged or have foreign objects.
- When installing a card, ensure that ejector levers of the card are at the bottom to avoid incorrect card installation. Incorrect card installation will damage the connector at the rear of the card.
- When installing a card, gently push the card along the guide rails, and be careful not to crash the card connector. Distorted card connector will cause pins on the backplane connector to bend.
- If the connector of a card has collided with the slot or other objects, ask Huawei professionals whether the card can still be installed. Installing a card with distorted connector may cause damage to the device.
- For the CloudEngine 16816, do not install an MPU in an LPU slot or install an LPU in an MPU slot.

### Tools

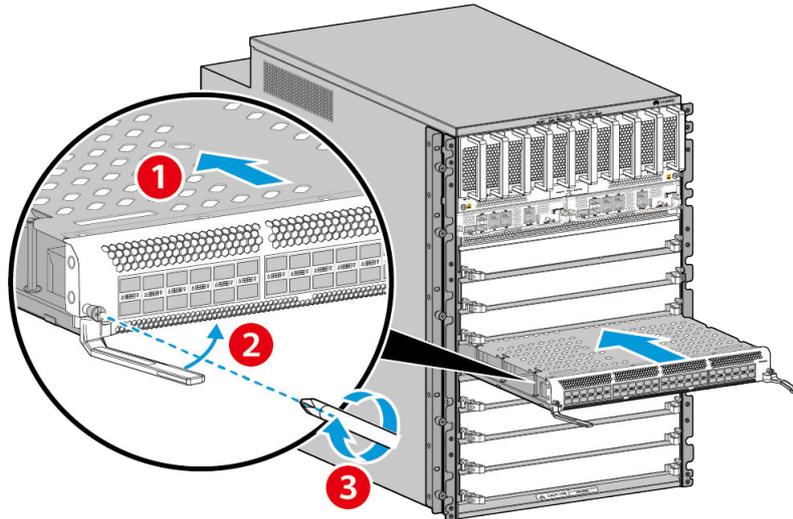
- ESD wrist strap or ESD gloves
- Phillips screwdriver

### Procedure

- Step 1** Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the device or cabinet/rack.
- Step 2** (Optional) If the slot where the LPU will be installed has a filler panel, remove the filler panel first.
- Step 3** Take an LPU out from the ESD bag and verify that the captive screws on the LPU panel are loosened. Rotate the ejector levers of the LPU 45 degrees outward. With one hand supporting the LPU bottom and the other hand grasping the LPU panel, slowly slide the LPU into the slot along the guide rails, until the LPU cannot move forward. See callout 1 in [Figure 6-7](#).

- Step 4** Rotate the ejector levers inward and push them until they cannot move forward. See callout 2 in [Figure 6-7](#).
- Step 5** Use a Phillips screwdriver to tighten the captive screws on both ends of the LPU panel. See callout 3 in [Figure 6-7](#). Tighten the captive screws with a torque of 1.18 N·m.

**Figure 6-7** Installing a card on the device



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## 6.7 Installing an Optical Module

### NOTICE

- Huawei-certified optical modules are strongly recommended because non-Huawei-certified optical modules cannot ensure transmission reliability and may affect service stability.
- Wear an ESD wrist strap or ESD gloves before installing optical modules.
- Install dust-proof caps on optical ports without optical modules.
- Do not insert an optical module reversely. If an optical module cannot be completely inserted into an optical port, do not force it into the port. Turn the optical module over and try again.

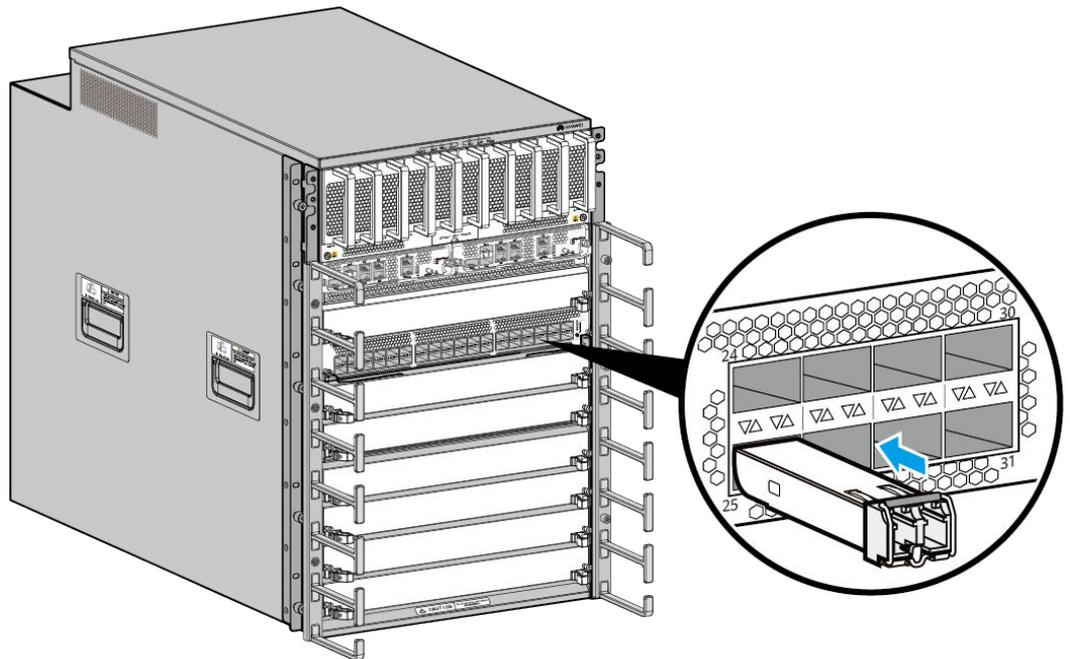
### Tools

- ESD wrist strap or ESD gloves
- Dust caps
- (Optional) Optical port dust plug

## Procedure

1. Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the device or cabinet/rack.
2. Insert the optical module into the optical port until the optical module is secured in the optical port.

**Figure 6-8** Installing an optical module



## Follow-up Procedure

If the optical module does not work normally, contact the equipment supplier for technical support.

## 6.8 (Optional) Installing a Chassis Door

### Context

Chassis doors of the CloudEngine 16800 are optional. The cable management frames matching chassis doors have rubber components. A chassis door is installed at the front side of a chassis to shield electromagnetic noise. The procedures and methods for installing chassis doors are the same for all the CloudEngine 16800 models. The following figures show chassis door installation on the CloudEngine 16808.

The chassis door can be installed after cables are connected.

 NOTE

- Components of the chassis door include dedicated cable management frames. When installing the chassis door components, you do not need to install the cable management frames that are delivered with the chassis.
- The chassis door and cabinet door cannot be installed together.

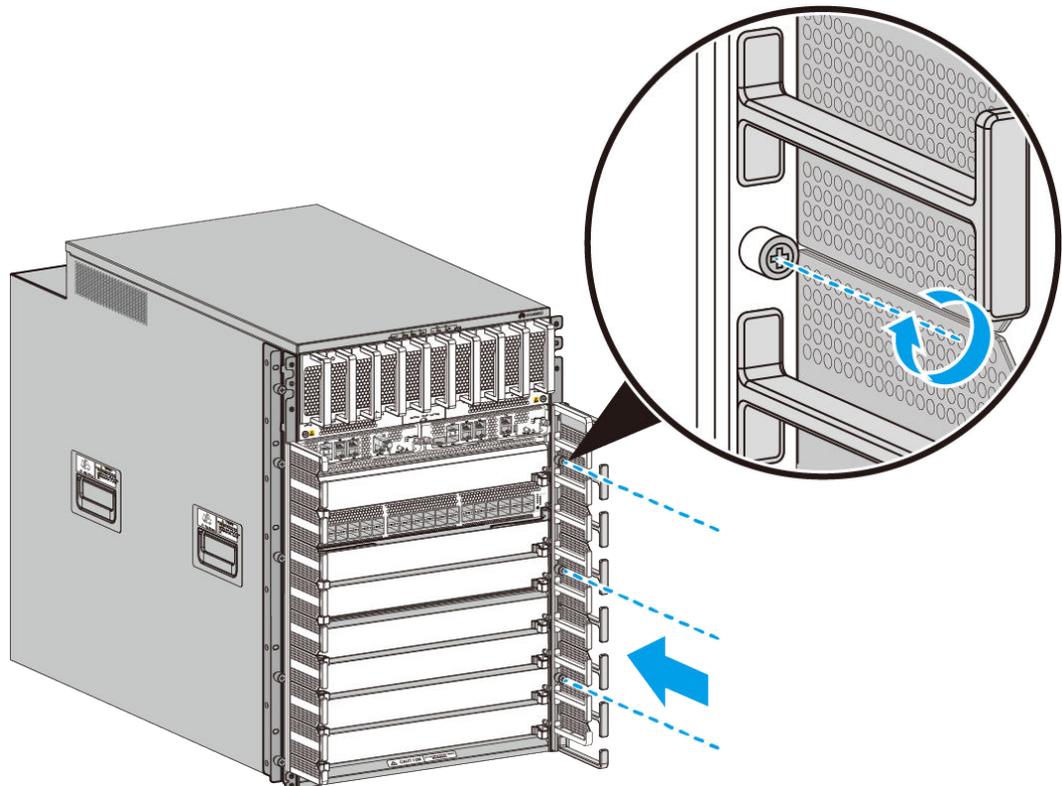
## Tools and Accessories

- ESD wrist strap or ESD gloves
- Phillips screwdriver

## Procedure

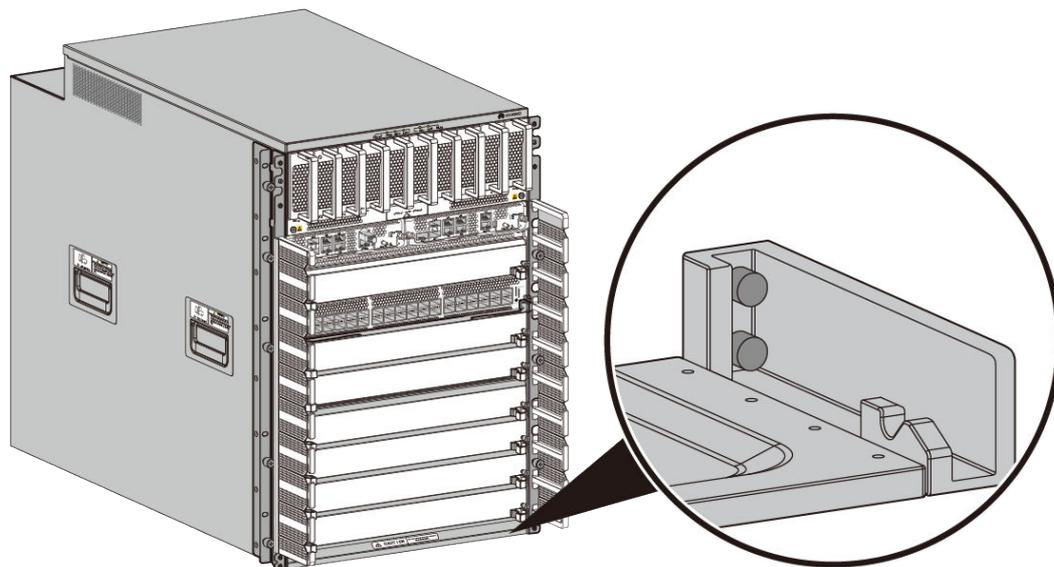
- Step 1** Wear an ESD wrist strap or ESD gloves. When wearing an ESD wrist strap, ensure that the ESD wrist strap is in close contact with your wrist, and insert the other end into the ESD jack of the device or cabinet/rack.
- Step 2** Install cable management frames on the device. Insert the positioning pins of a cable management frame into mounting holes on the device, insert the cable management frame horizontally, and tighten the captive screws on the cable management frame with a torque of 0.54 N m.

**Figure 6-9** Installing cable management frames on the device



- Step 3** Install upper and lower enclosure frames on the device. Align the upper and lower enclosure frames with mounting holes on the device, insert the upper and lower enclosure frames horizontally, and tighten the captive screws on the upper and lower enclosure frames with a torque of 0.54 N m.

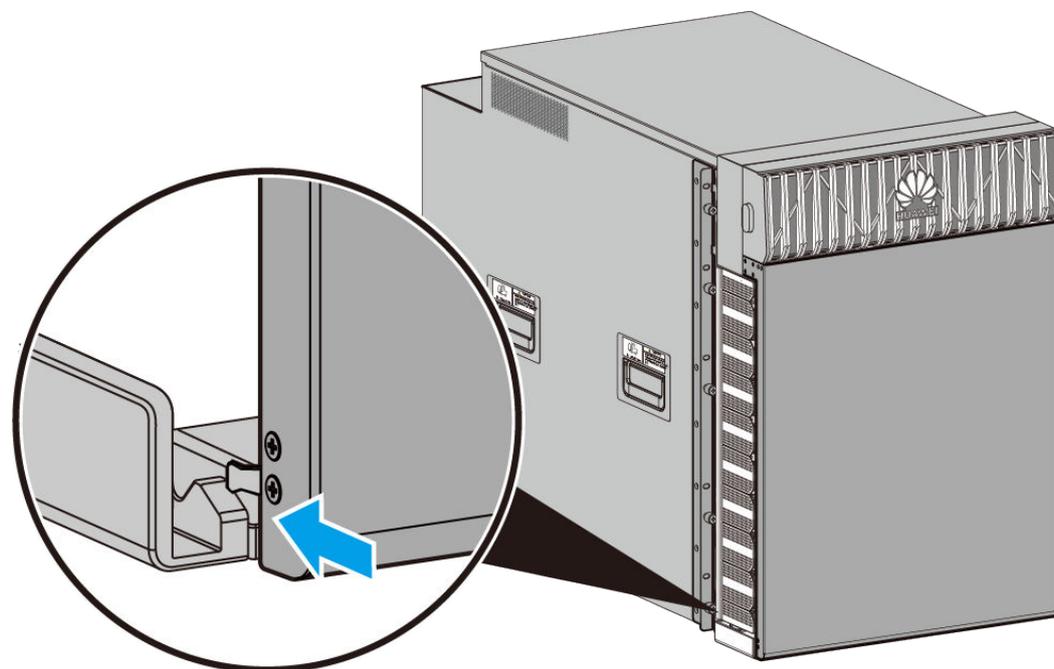
**Figure 6-10** Installing the upper and lower enclosure frames on the device



**Step 4** Install a chassis door on the device.

1. Align the buckles at the bottom of the chassis door with the lower enclosure frame and insert the buckles.
2. Push the chassis door to the upper enclosure frame until you hear a click indicating that hooks of the chassis door clasp in the upper enclosure frame.

**Figure 6-11** Installing a chassis door



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