

# **RGOS 11.X High-end Data Center Switches (N18000-X) Installation**

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- Hardware Installation

# Hardware Installation



**Tip: Read the *Hardware Installation Manual* if you install the switch for the first time.**

## Safety Notes

- Do not install the switch in a wet place and keep it away from liquid.
- Do not wear loose clothes during installation to avoid hooking components and causing damage. Therefore, fasten clothes ribbons, scarves, and sleeves.
- Place tools and components away from passageways to prevent collision.
- Check for potential risks in the working area, for example, ungrounded power supplies, unreliable grounding of power supplies, or wet floor.

## Ambient Requirements

- Temperature: 0°C to 45°C
- Relative humidity: 10% to 90%
- Cleanness:  $\leq 1.4 \times 10^5$  (particle diameter  $\geq 5 \mu\text{m}$ )
- Ventilation: at least **20 cm** clearance around the chassis for efficient heat dissipation
- Anti-interference: far away from high-power (radar or radio transmitting station), high-frequency, or large-current devices

# Hardware Installation

Preparations

Installing the Chassis  
to a Specified  
Position

Grounding

Installing Power  
Modules or Cards

Checking

## Confirming the Cabinet Specifications

- The cabinet depth (distance between the front and rear doors) must be large than **1200 mm**.
- There must be a distance of more than 180 mm between the front mounting rails and front door of the cabinet, and the thickness of the front door must be smaller than 25 mm, so that more than 155 mm space is available. See Figure 1.
- The load capacity of the cabinet must be large than 400 kg.
- If the N18000-X switch uses RG-PA2700I power modules, check whether the cabinet is an IEC cabinet, in which the PDU provides power outlets as shown in Figure 2. In this case, use C19-C20 power cables as shown in Figure 3.

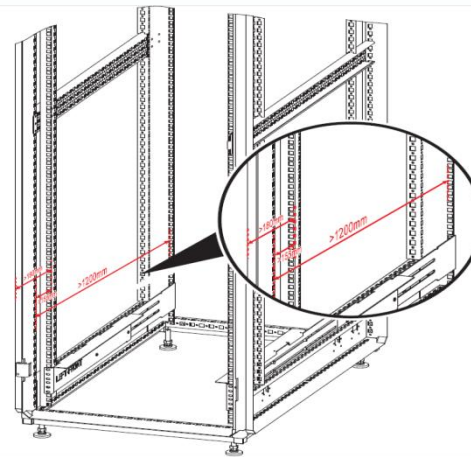


Figure 1



Figure 2



Figure 3

# Hardware Installation

Preparations

Installing the Chassis  
to a Specified  
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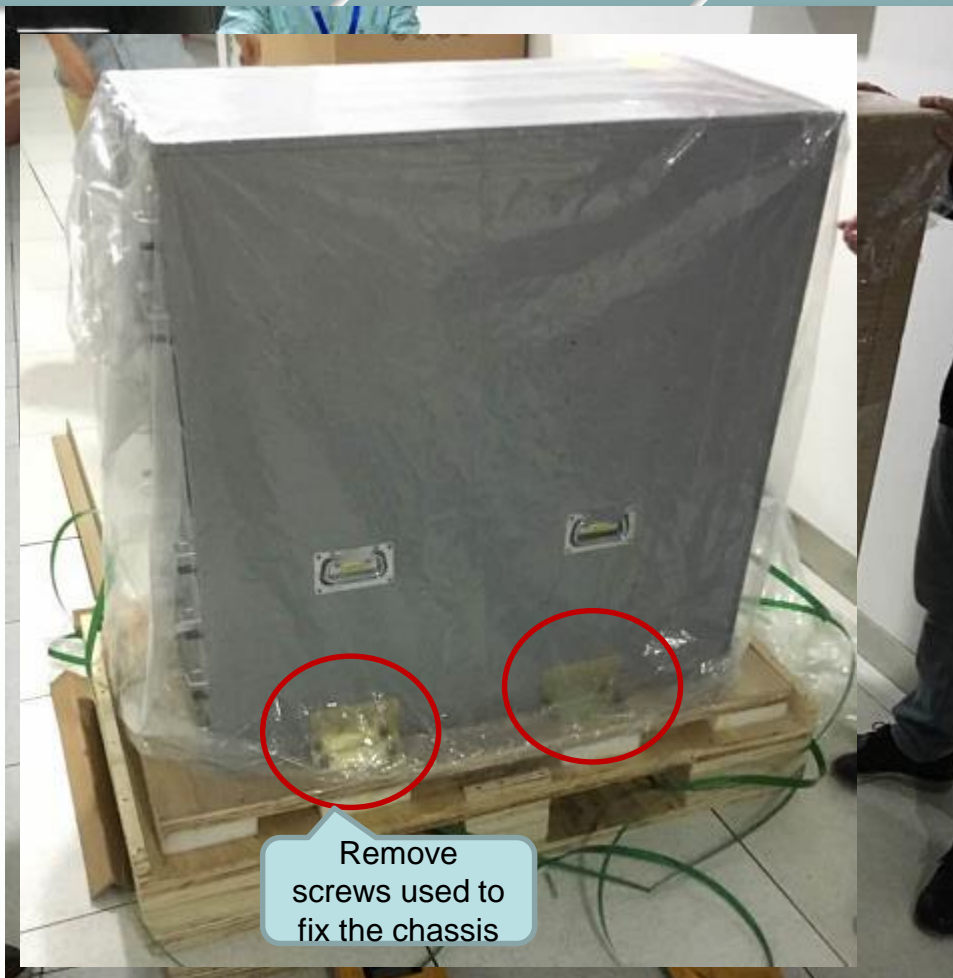
Checking

## Unpacking:

An N18000-X series switch is packed in carton, so it can be unpacked more quickly than an N18000 series switch.

You will find a wrench and a screwdriver in the carton.

Use them to remove the four L-shaped plates that fix the chassis on the pallet.





# Hardware Installation

Preparations

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Grounding

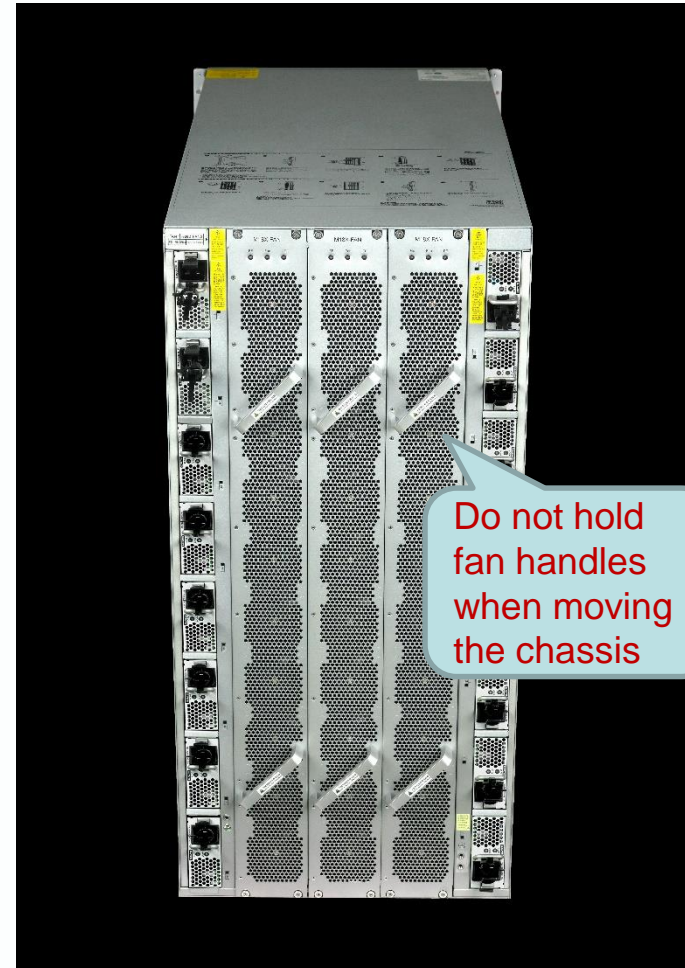
Installing Power  
Modules or Cards

Checking

## Moving the Chassis: Operation by Four Persons Recommended

### Precautions:

1. Do not hold the panels, power module handles, or chassis handles when moving the chassis. These parts are not designed to bear the weight of the whole chassis. Holding them to move the chassis may cause damage to the parts or even personal injury.
2. Before moving the chassis, remove the Supervisor Engine modules, line cards, and power modules to reduce weight of the chassis.



# Hardware Installation

Preparations

Installing the Chassis to a Specified Position

Grounding

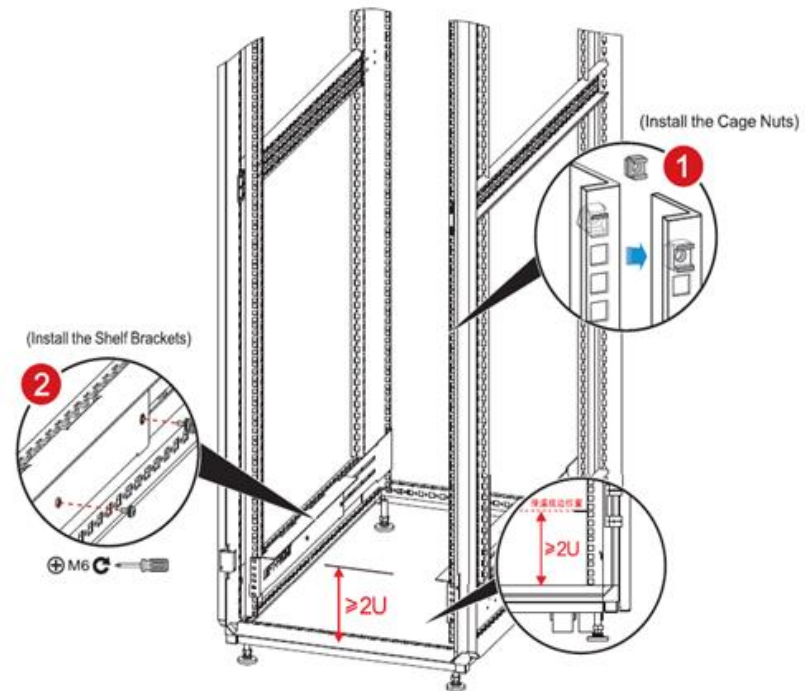
Installing Power Modules or Cards

Checking

## Installing Shelf Brackets

An N18000-X chassis is delivered with a pair of expandable shelf brackets. Reserve 2 U height above the cabinet bottom for shelf bracket installation. The two shelf brackets are marked RIGHT and LEFT to identify their installation positions.

See the figure on the right for installation positions of the shelf brackets.



# Hardware Installation

Preparations

Installing the  
Chassis to a  
Specified Position

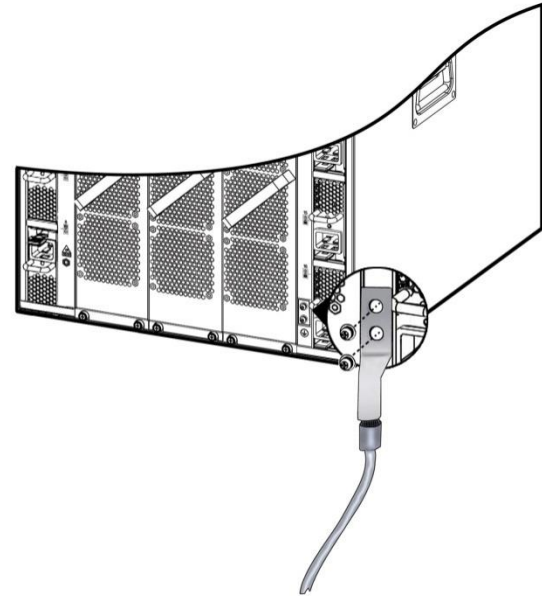
Grounding

Installing Power  
Modules or Cards

Checking

## There Is a Ground Bar in the Installation Environment (Recommended)

- ① Remove the ground screw from the rear panel of the chassis.
- ② Put the OT terminal of the ground cable delivered with the switch on the ground screw of the chassis.
- ③ Install the ground screw with the OT terminal to the ground hole, fasten it with a screwdriver, and connect the other end of the ground cable to the ground bar of the equipment room. (Adjust the length of the ground cable based on the distance with the ground bar.)



## There Is No Ground Bar in the Installation Environment

If the switch adopts AC power supply, the PE cable of the AC power supply needs to be grounded. Check whether the PE cable of the AC power supply is properly grounded in the power distribution room or on the AC transformer side.



# Hardware Installation

Preparations

Installing the Chassis to a Specified Position

Grounding

Installing Power Modules or Cards

Checking

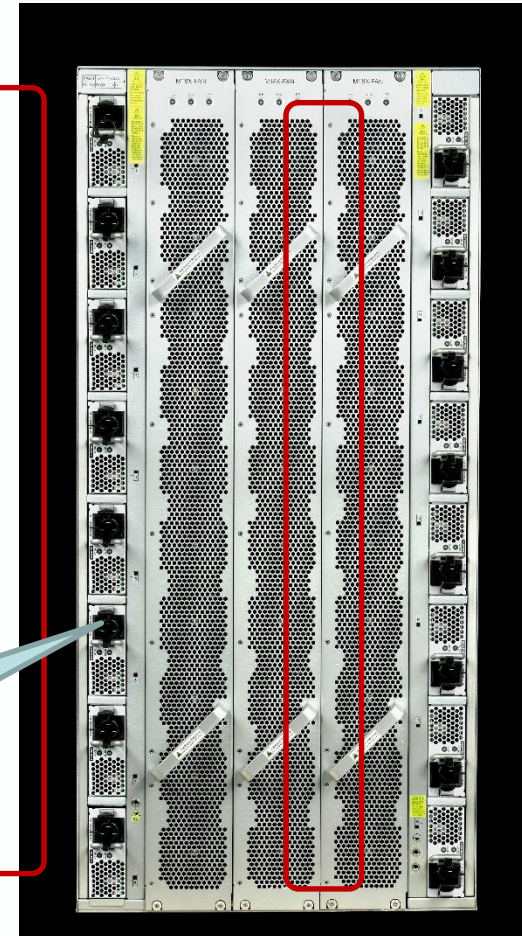
## Installing Power Modules

All the chassis models have power module slots at two sides of the chassis.

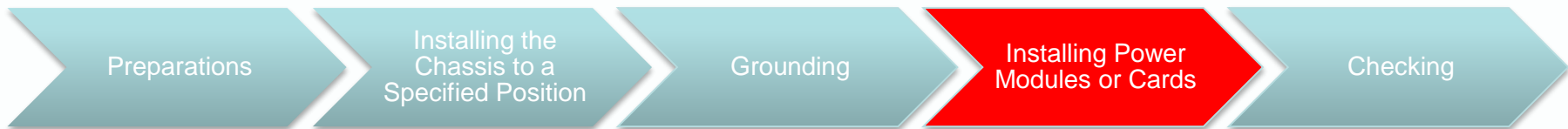
Precautions:

1. Ensure that there are no objects, such as a PDU, near the rear mounting rails within depth of the chassis in the cabinet to hinder installation or removal of power modules.
2. Each power module has a locking latch. After connecting a power cable to a power module, close the locking latch to secure the power cable.

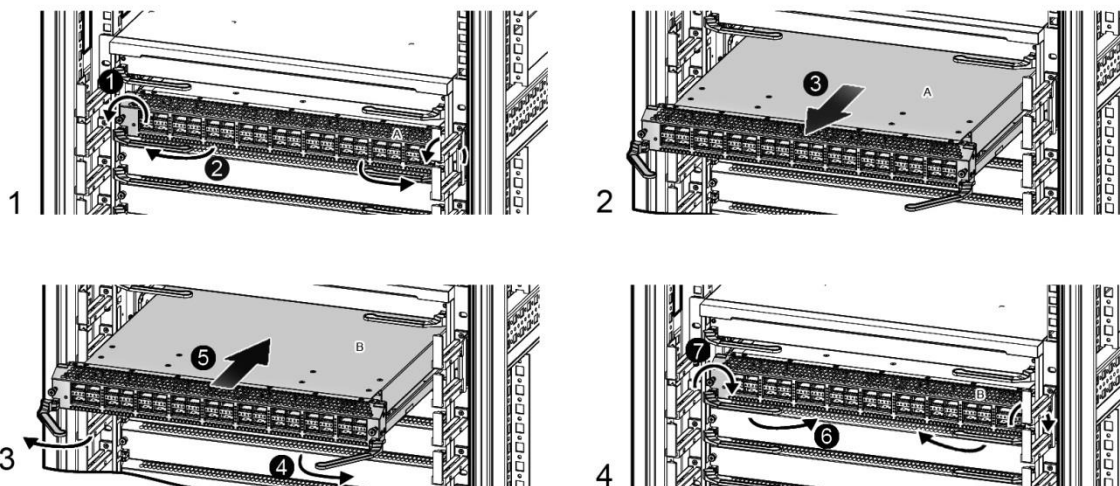
Two columns of power modules



# Hardware Installation

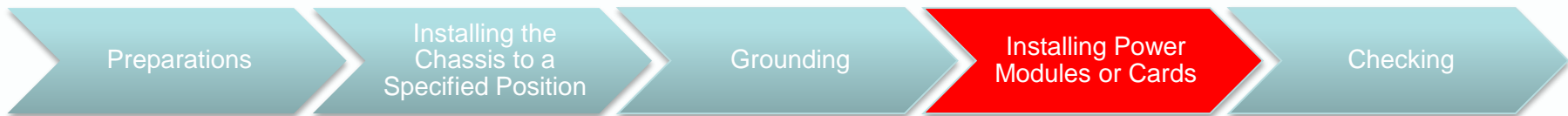


## Installing Line Cards

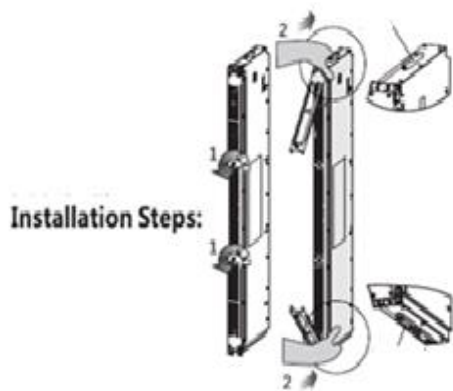


Caution: N18000-X line cards do not use self-locking ejector levers.

# Hardware Installation



## Installing FE Switch Fabric Modules



**Step 1:** Position the switch fabric module in the slot. Open both ejector levers and slide the switch fabric module into the slot.



**Step 2:** Push the module forward until it stops. Use the thumb and forefinger of each hand, grasp the two ejector levers.



**Step 3:** Tighten the captive screws on the module.

**Note:**

Keep the UP label on the module facing upwards.

Make sure that you align the edges of the module with the guides on each side of the slot.

# Hardware Installation



## Checking the Cabinet

Ensure that the external power supply system matches the power distribution panel of the cabinet.

Ensure that the front and rear doors of the cabinet can be closed with the switch in the cabinet.

Ensure that the cabinet is securely fixed and will not move or fall down.

Ensure that the switch is securely fixed in the cabinet and that all cables are bundled on the cabinet.

Ensure that sufficient space is reserved around the switch for heat dissipation, especially at the front and rear of the switch (at least 20 cm).

## Checking Cable Connections

Ensure that optical fibers and twisted pair cables match the connected interfaces.

Ensure that all cables are bundled properly.

Ensure that ground cable specifications and connection are correct.

Check whether that all the cables are routed indoors. If any cables are routed outdoors, check whether AC power supply surge protection bars and network interface surge protectors are used.

## Checking the Power Supply System

Ensure that all power cables are properly connected and meet security requirements.