



FortiAnalyzer-4000B®

Rack and Hardware Install Guide

Version 4.0 MR2

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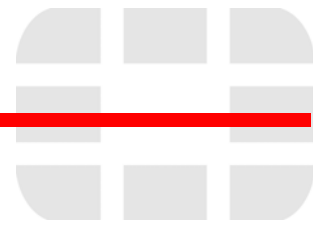
Dynamic Threat Prevention System (DTPS), APSecure, FortiASIC, FortiBIOS, FortiBridge, FortiClient, FortiGate®, FortiGate Unified Threat Management System, FortiGuard®, FortiGuard-Antispam, FortiGuard-Antivirus, FortiGuard-Intrusion, FortiGuard-Web, FortiLog, FortiAnalyzer, FortiManager, Fortinet®, FortiOS, FortiPartner, FortiProtect, FortiReporter, FortiResponse, FortiShield, FortiVoIP, and FortiWiFi are trademarks of Fortinet, Inc. in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.

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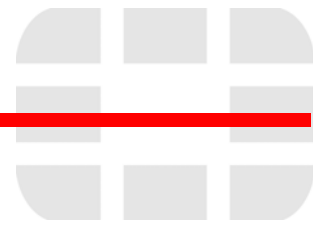


Caution: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions



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Introduction

Welcome and thank you for selecting Fortinet products for your network protection.

Fortinet® ASIC-accelerated multi-threat security systems improve network security, reduce network misuse and abuse, and help you use communications resources more efficiently without compromising the performance of your network. Fortinet systems are ICSA-certified for Antivirus, Firewall, IPSec, SSL-TLS, IPS, Intrusion detection, and AntiSpyware services.

Fortinet systems are dedicated, easily managed security devices that deliver a full suite of capabilities including:

- Application-level services such as virus protection, intrusion protection, spam filtering, web content filtering, IM, P2P, and VoIP filtering
- Network-level services such as firewall, intrusion detection, IPSec and SSL VPN, and traffic shaping
- Management services such as user authentication, logging, reporting with FortiAnalyzer, administration profiles, secure web and CLI administrative access, and SNMP.

The Fortinet security system uses Fortinet's Dynamic Threat Prevention System (DTPS™) technology, which leverages breakthroughs in chip design, networking, security and content analysis. The unique ASIC-accelerated architecture analyzes content and behavior in real-time, enabling key applications to be deployed right at the network edge where they are most effective at protecting your networks.

This chapter contains the following topics:

- [Registering your Fortinet product](#)
- [Customer service and technical support](#)
- [Fortinet documentation](#)
- [Conventions](#)

Registering your Fortinet product

Before you begin, take a moment to register your Fortinet product at the Fortinet Technical Support web site, <https://support.fortinet.com>.

Many Fortinet customer services, such as firmware updates, technical support, and FortiGuard Antivirus and other FortiGuard services, require product registration.

For more information, see the Fortinet Knowledge Center article [Registration Frequently Asked Questions](#).

Customer service and technical support

Fortinet Technical Support provides services designed to make sure that your Fortinet products install quickly, configure easily, and operate reliably in your network.

To learn about the technical support services that Fortinet provides, visit the Fortinet Technical Support web site at <https://support.fortinet.com>.

You can dramatically improve the time that it takes to resolve your technical support ticket by providing your configuration file, a network diagram, and other specific information. For a list of required information, see the Fortinet Knowledge Center article [What does Fortinet Technical Support require in order to best assist the customer?](#)

Fortinet documentation

The Fortinet Technical Documentation web site, <http://docs.fortinet.com>, provides the most up-to-date versions of Fortinet publications, as well as additional technical documentation such as technical notes.

In addition to the Fortinet Technical Documentation web site, you can find Fortinet technical documentation on the Fortinet Tools and Documentation CD, and on the Fortinet Knowledge Center.

Fortinet Tools and Documentation CD

Many Fortinet publications are available on the Fortinet Tools and Documentation CD shipped with your Fortinet product. The documents on this CD are current at shipping time. For current versions of Fortinet documentation, visit the Fortinet Technical Documentation web site, <http://docs.fortinet.com>.

Fortinet Knowledge Center

The Fortinet Knowledge Center provides additional Fortinet technical documentation, such as troubleshooting and how-to-articles, examples, FAQs, technical notes, a glossary, and more. Visit the Fortinet Knowledge Center at <http://kb.fortinet.com>.

Comments on Fortinet technical documentation

Please send information about any errors or omissions in this or any Fortinet technical document to techdoc@fortinet.com.

Conventions

Fortinet technical documentation uses the conventions described below.

IP addresses

To avoid publication of public IP addresses that belong to Fortinet or any other organization, the IP addresses used in Fortinet technical documentation are fictional and follow the documentation guidelines specific to Fortinet. The addresses used are from the private IP address ranges defined in RFC 1918: Address Allocation for Private Internets, available at <http://ietf.org/rfc/rfc1918.txt?number-1918>.

CLI constraints

CLI constraints, such as `<address_ipv4>`, indicate which data types or string patterns are acceptable input for a given parameter or variable value. CLI constraint conventions are described in the CLI Reference document for each product.

Notes, Tips and Cautions

Fortinet technical documentation uses the following guidance and styles for notes, tips and cautions.



Tip: Highlights useful additional information, often tailored to your workplace activity.



Note: Also presents useful information, but usually focused on an alternative, optional method, such as a shortcut, to perform a step.



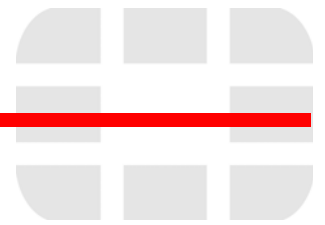
Caution: Warns you about commands or procedures that could have unexpected or undesirable results including loss of data or damage to equipment.

Typographical conventions

Fortinet documentation uses the following typographical conventions:

Table 1: Typographical conventions in Fortinet technical documentation

Convention	Example
Button, menu, text box, field, or check box label	From <i>Minimum log level</i> , select <i>Notification</i> .
CLI input	<pre>config system dns set primary <address_ipv4> end</pre>
CLI output	<pre>FGT-602803030703 # get system settings comments : (null) opmode : nat</pre>
Emphasis	HTTP connections are <i>not</i> secure and can be intercepted by a third party.
File content	<pre><HTML><HEAD><TITLE>Firewall Authentication</TITLE></HEAD> <BODY><H4>You must authenticate to use this service.</H4></pre>
Hyperlink	Visit the Fortinet Technical Support web site, https://support.fortinet.com .
Keyboard entry	Type a name for the remote VPN peer or client, such as <code>Central_Office_1</code> .
Navigation	Go to <code>VPN > IPSEC > Auto Key (IKE)</code> .
Publication	For details, see the FortiGate Administration Guide .



Rack and Hard Drive Installation Instructions

The FortiAnalyzer-4000B comes with a sliding rail kit. Use the instructions below to install the rails.



Caution: Only trained service technicians are authorized to remove the system cover and access any of the components inside the system. Before you begin, review the safety instructions that came with the system.

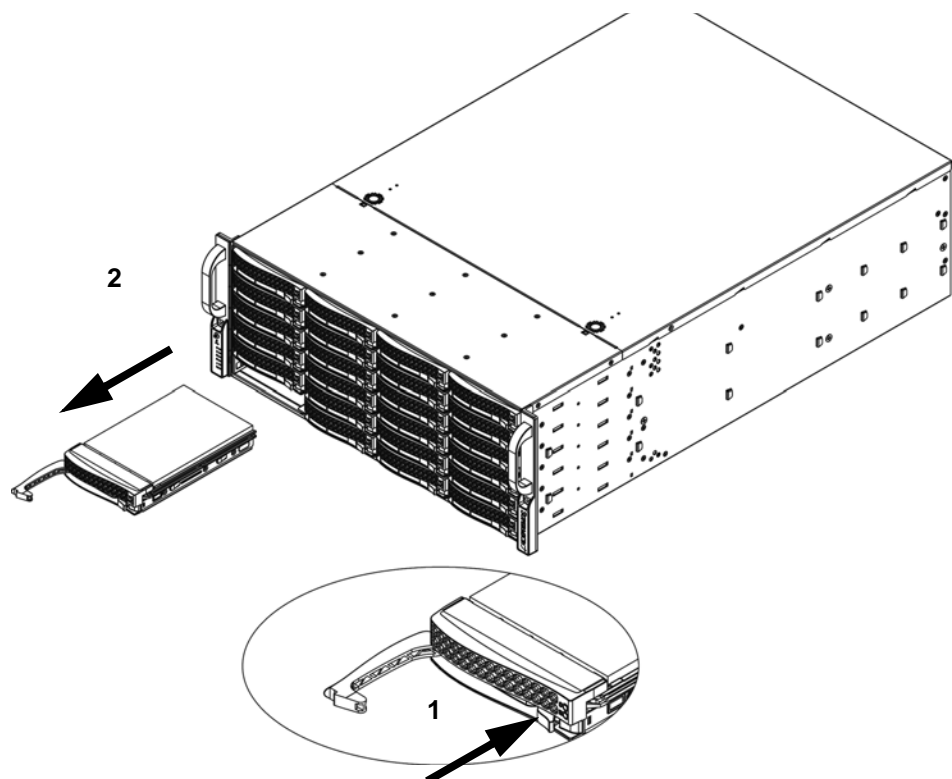
Installing Hard Drives

Removing Hard Drive Trays from the Chassis

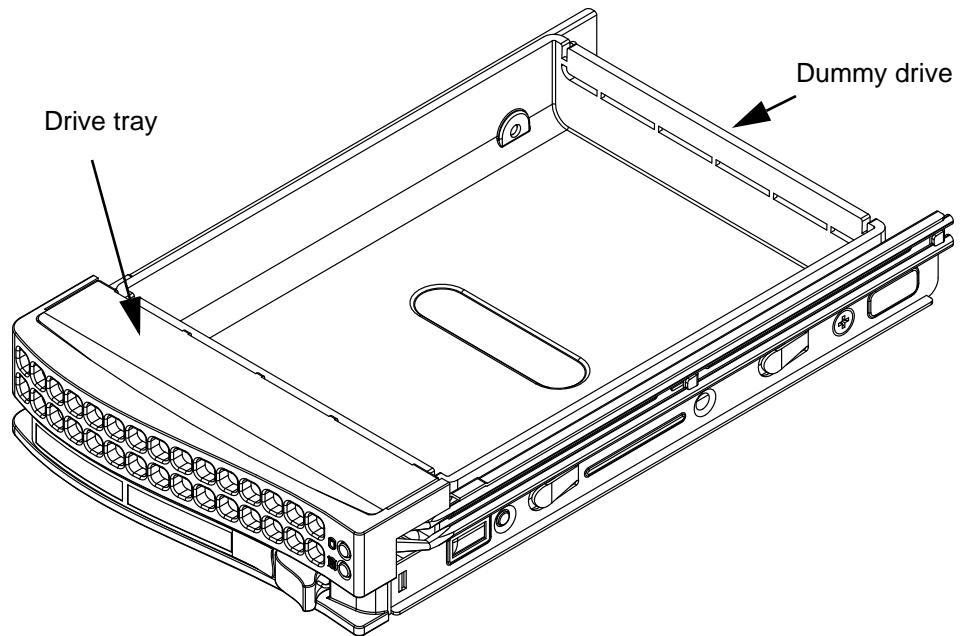
To remove a hard drive tray from the chassis

- 1 Press the release button on the drive tray. This extends the drive bay handle.
- 2 Use the handle to pull the drive out of the chassis.

Figure 1: Removing the hard drive.



The drives are mounted in drive trays to simplify their installation and removal from the chassis. These trays also help promote proper airflow for the drive bays.

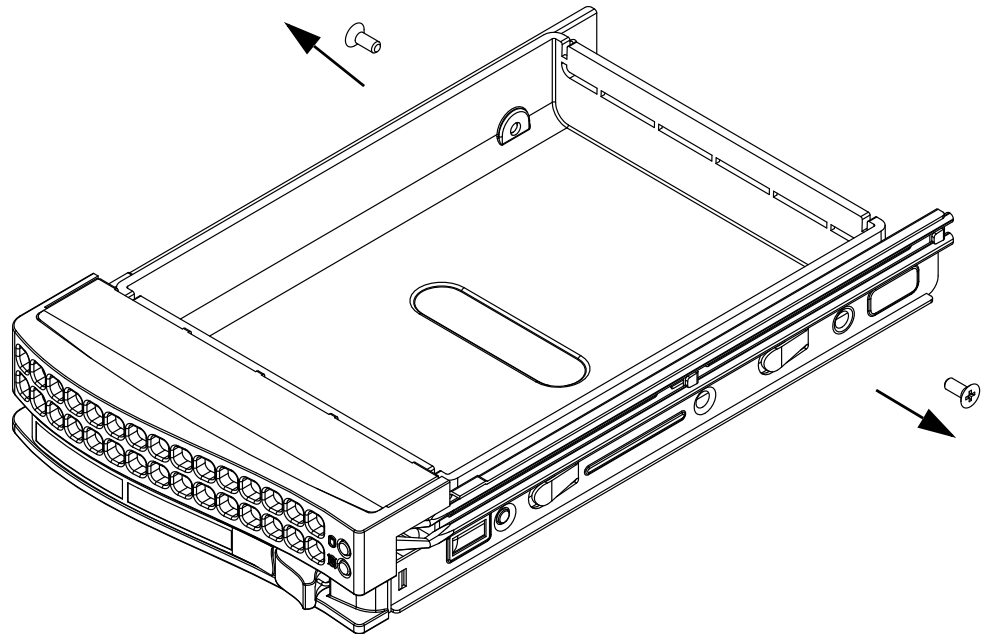
Figure 2: Chassis drive tray.

Note: Except for short periods of time (swapping hard drives), do not operate the server with the hard drives empty.

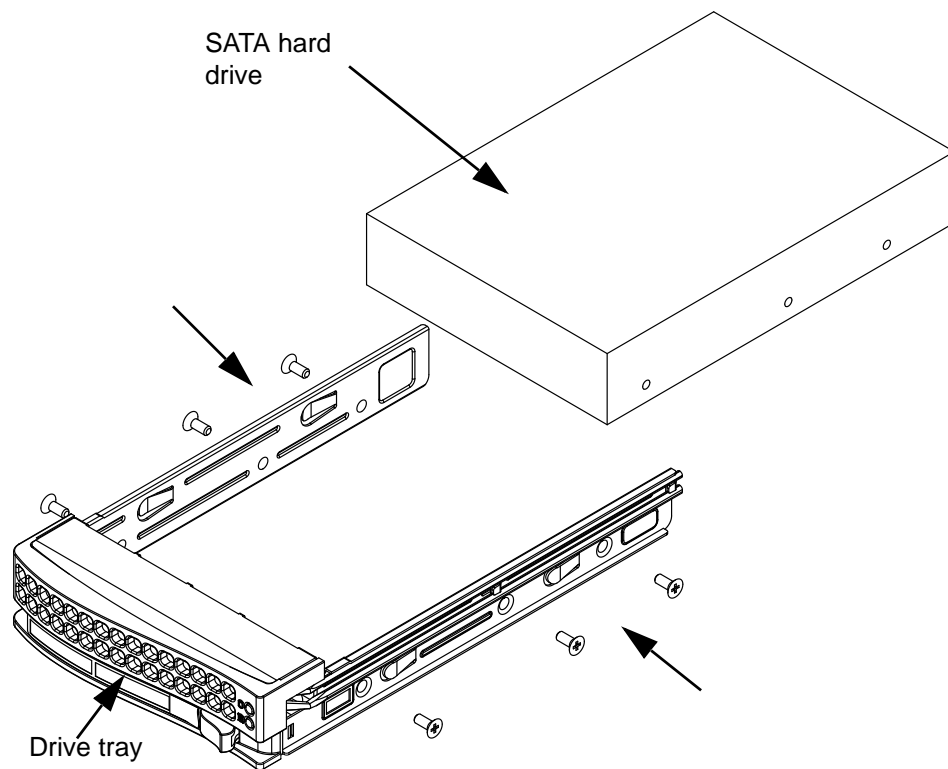
Installing a Hard Drive to the Hard Drive Tray

To install a hard drive into the hard drive tray

- 1 Remove the two screws securing the dummy drive to the drive tray and remove the dummy drive. Place the hard drive tray on a flat surface such as a desk, table or work bench.

Figure 3: Removing dummy drive from tray.

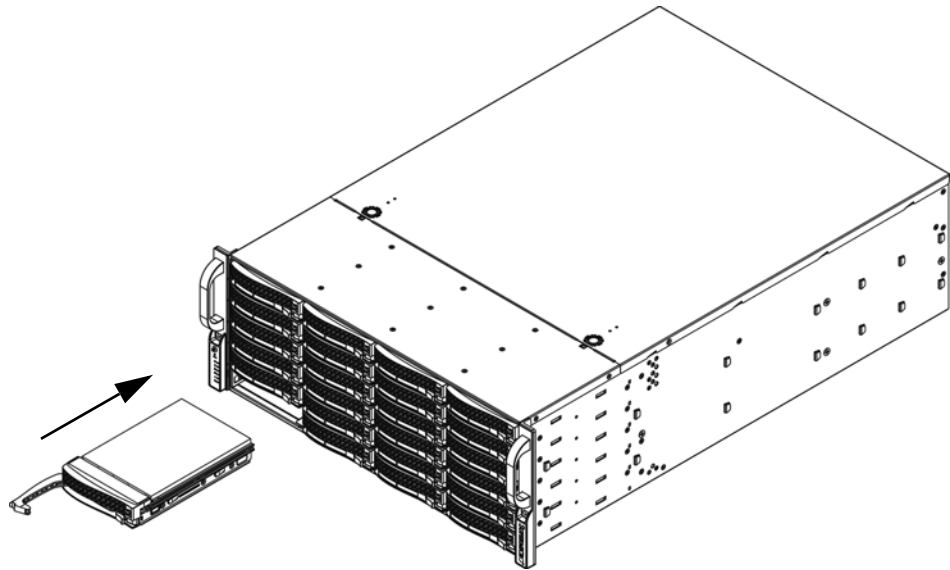
- 2 Slide the hard drive into the tray with the printed circuit board side facing down.

Figure 4: Installing the hard drive into the tray.

- 3 Carefully align the mounting holes in both the drive tray and the hard drive.
- 4 Secure the hard drive to the tray using six screws.

- 5 Replace the drive tray into the chassis. Make sure to close the drive tray handle to lock the drive tray into place.

Figure 5: Installing the hard drive in the chassis.



Rack Installation

Overview

This chapter provides a quick setup checklist to get your chassis up and running. Following these steps in the order given should enable you to have the system operational within a minimum amount of time.

Unpacking the System

You should inspect the box the chassis was shipped in and note if it was damaged in any way. If the chassis itself shows damage you should file a damage claim with the carrier who delivered it.

Decide on a suitable location for the rack unit that will hold your chassis. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. You will also need it placed near a grounded power outlet. Be sure to read the Rack and Server Precautions in the next section.

Preparing for Setup

The box your chassis was shipped in should include two sets of rail assemblies, two rail mounting brackets and the mounting screws you will need to install the system into the rack. Read this section in its entirety before you begin the installation procedure outlined in the sections that follow.

Choosing a Setup Location

Leave enough clearance in front of the rack to enable you to open the front door completely (~25 inches).

Leave approximately 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing.

Warnings and Precautions!

This product is for installation only in a Restricted Access Location (dedicated equipment rooms, service closets and the like).

Rack Precautions

Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.

In single rack installation, stabilizers should be attached to the rack.

In multiple rack installations, the racks should be coupled together.

Always make sure the rack is stable before extending a component from the rack.

You should extend only one component at a time - extending two or more simultaneously may cause the rack to become unstable.

General Server Precautions

Review the electrical and general safety precautions that came with the components you are adding to your chassis.

Determine the placement of each component in the rack *before* you install the rails.

Install the heaviest server components on the bottom of the rack first, and then work up.

Use a regulating uninterruptible power supply (UPS) to protect the server from power surges, voltage spikes and to keep your system operating in case of a power failure.

Allow the hot plug hard drives and power supply modules to cool before touching them.

Always keep the rack's front door and all panels and components on the servers closed when not servicing to maintain proper cooling.

Rack Mounting Considerations

Ambient Operating Temperature

If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room.

Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (T_{mra}).

Reduced Airflow

Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

Mechanical Loading

Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

Circuit Overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable Ground

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (i.e. the use of power strips, etc.).

Rack Mounting Instructions

Rack Rails Assembly

This section provides information on installing the SC846 chassis into a rack unit with the rails provided. There are a variety of rack units on the market, which may mean that the assembly procedure will differ slightly. You should also refer to the installation instructions that came with the rack unit you are using.



Note: This rail will fit a rack between 27" and 34.45" deep.



Caution: The left and right rails differ from each other. Do not exchange their inner rails.



Caution: Keep the ball bearing shuttle locked at the front of the middle rail during installation.

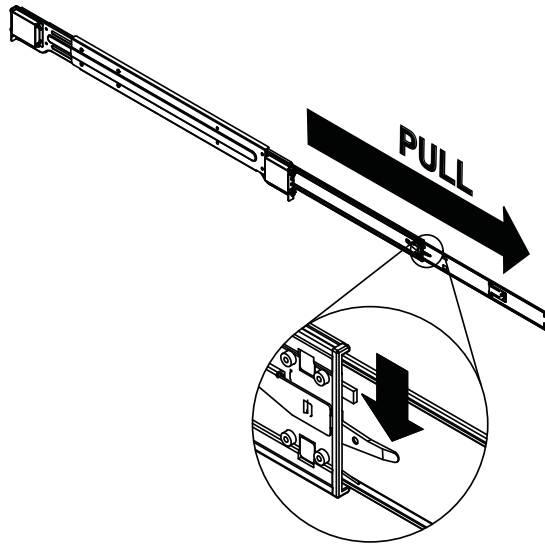


Caution: A minimum of two people are required for safe installation of the chassis.

To install the unit on the rack

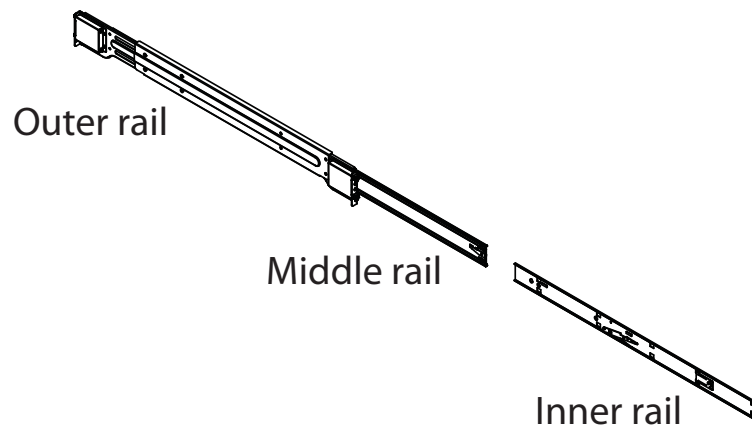
- 1 Pull the inner rail out of the outer rail until it is fully extended.

Figure 6: Pulling the inner rail out of the outer rail until it is fully extended and pressing the locking tab down.



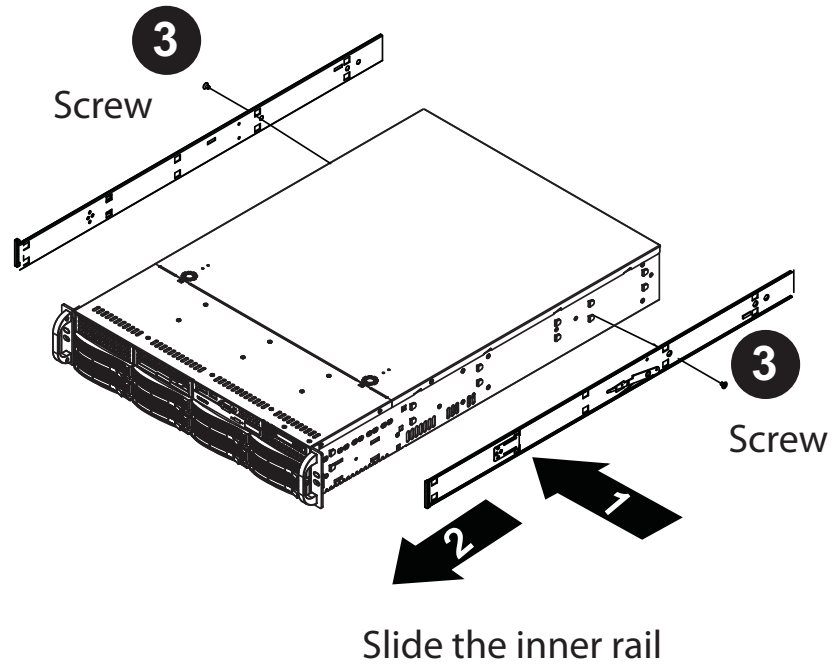
- 2 Press the locking tab down to release the inner rail. See the locking tab in [Figure 6](#).

Figure 7: Releasing the inner rail.



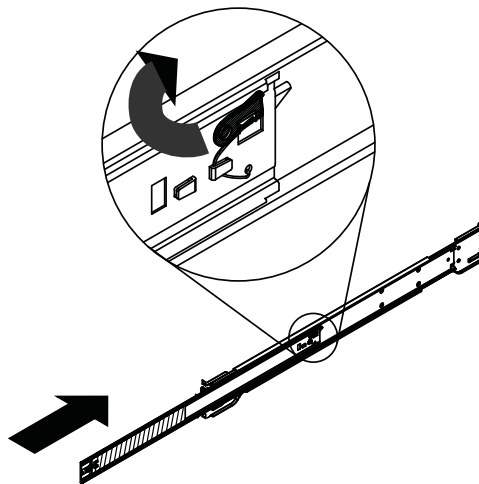
- 3 Place the inner rail firmly against the side of the chassis. Make sure that the hooks are straight and aligned with the holes in the inner rail. See [Figure 8 \(1\)](#).
- 4 Slide the inner rail forward until it clicks into the locked position. See [Figure 8 \(2\)](#)
- 5 Secure the inner screw (optional). See [Figure 8 \(3\)](#)

Figure 8: Attaching the rails to the chassis.



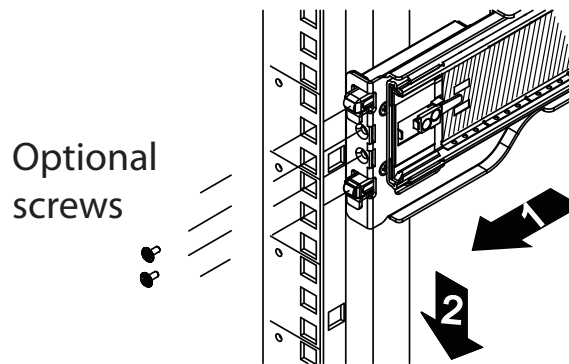
- 6 Press the locking tab and push the middle rail back into the outer rail.

Figure 9: Press the locking tab and push the middle rail back into the outer rail.



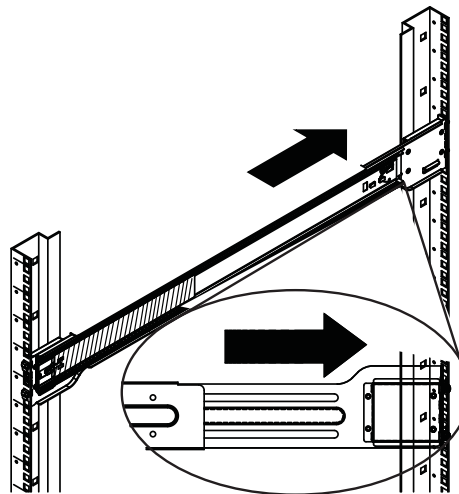
- 7 Hang the hooks of the rails on the rack holes and if necessary, secure with screws.

Figure 10: Inserting the hooks on the rails.

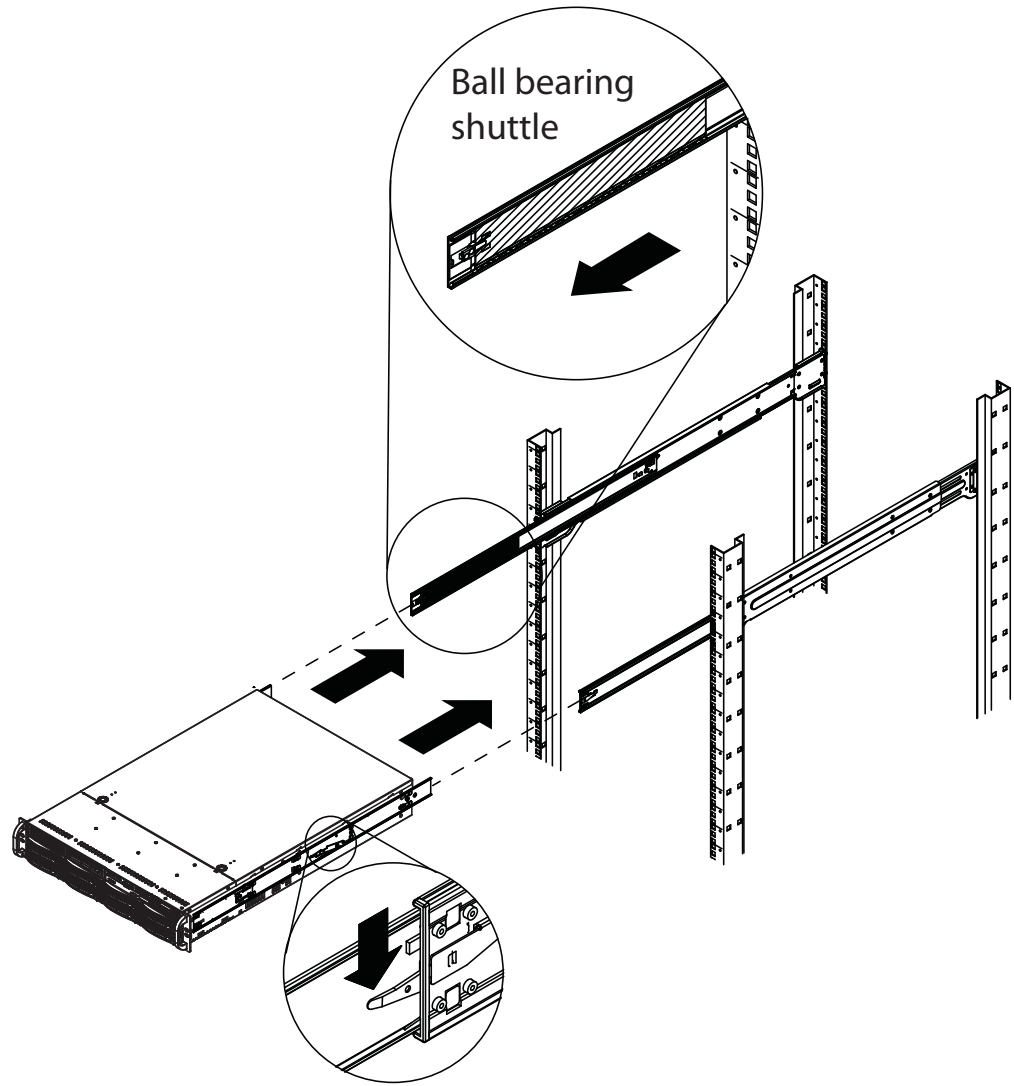


- 8** Repeat Step 7 to mount the four ends, extending the rails as necessary.

Figure 11: Installing the rails to the server rack.

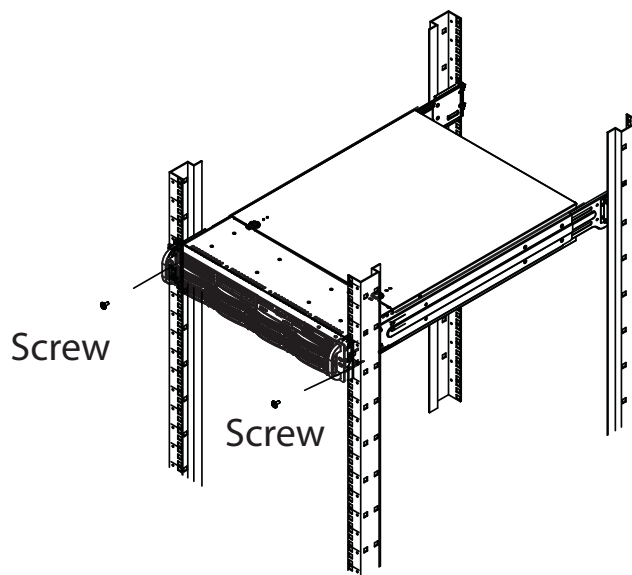


- 9** Pull the middle rail out of the front of the outer rail and make sure that the ball bearing shuttle is locked at the front of the middle rail.
- 10** Align the inner rails with the middle rails and then push evenly on both sides of the chassis until it clicks into the fully extended position.

Figure 12: Installing the chassis on the rack.

- 11** Depress the locking tabs on both sides of the chassis simultaneously and push the chassis all the way into the rear of the rack.
- 12** If additional security is required, secure the chassis handles to the front of the rack with two screws (optional).

Figure 13: Optional screws to secure chassis to rack.



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