



Seagate Business Storage User Manual 4-Bay Rackmount NAS



Click here to access an up-to-date online version of this document. You will also find the most recent content as well as expandable illustrations, easier navigation, and search capability.

Contents

1	Regulatory Compliance	5
	FCC Declaration of Conformance	5
	FCC Class A Information	5
	• FCC Caution	5
	• Important Note: FCC Radiation Exposure Statement	5
	Industry Canada	6
	• Important Note for mobile device use	6
	• Note Importante pour l'utilisation de dispositifs mobiles	6
	Europe – EU Declaration of Conformity	6
	Power source	8
	• Battery safety	8
2	Introduction	10
	What is in this manual	10
	Who should use this manual	10
	Box contents	10
	Minimum system requirements	11
	• Client OS:	11
	• Web browsers:	12
	• Network:	12
3	Safety Guidelines	13
	Safe handling	13
	Safety	13
	• Power supply	13
	• Battery	14
	Environment	14
	• Fans	14
	Rack system safety precautions	14
	Rack installation prerequisites	15
	Equipment handling precautions	16
	Data security	16
4	System Overview	17
	Seagate NAS OS	17
	4-bay Rackmount NAS dimensions	17
	Front panel view	18
	Rear panel view	19
	• USB and eSATA ports	20

5	System LEDs	21
	Status	21
	Disks	21
	LED behavior	22
	• General LED behavior	22
	• LED indications	22
6	Setting Up	24
	4-Bay NAS with disks	24
	• Step 1 - Rack	24
	• Step 2 - Cables	25
	• Connections	25
	• Network and power	25
	• Step 3 - Power on the NAS and log on to NAS OS	26
	4-Bay NAS empty enclosure	28
	• Prepare the NAS OS installer	28
	• Step 1 - Rack	28
	• Step 2 - Cables	29
	• Connections	30
	• Network and power	30
	• Step 3 - USB Key and Power	31
	• Step 4 - Install the drives	32
	• Step 5 - MAC address	34
	• Step 6 - Log on to the NAS	35
7	Operation	37
	Powering on the NAS	37
	Powering off the NAS	38
8	Software	40
9	Hardware Maintenance	41
	Precautions	41
	Adding/replacing a hard drive	41
	Chassis	44
	• Removing the front cover	44
	• Chassis information	45
	• Installed components	46
	• Replacing the battery	46
	• Replacing the DIMM (RAM)	47
10	Getting Help	50
	Troubleshooting topics	50

- The 4-bay Rackmount NAS will not turn on. 50
- The 4-bay Rackmount NAS turns off when I connect a USB device. 50
- The 4-bay Rackmount NAS is unresponsive. 51
- The 4-bay Rackmount NAS is overheating. 51
- I am not certain if the NAS firmware should be updated. 51

Regulatory Compliance

FCC Declaration of Conformance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Class A Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Important Note: FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The availability of some specific channels and/or operational frequency bands are country

dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Industry Canada

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Important Note for mobile device use

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Note Importante pour l'utilisation de dispositifs mobiles

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the EMC Directive 2004/108/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the EMC Directive 2004/108/EC:

- EN 60950-1:2006/AC:2011: Information technology equipment - Safety - Part 1: General requirements
- EN 55022: 2010/AC:2011: Information technology equipment - Radio disturbance characteristics
 - Limits and methods of measurement
- EN 55024: 2010: Information technology equipment - Immunity characteristics - Limits and methods of measurement



Česky [Czech]	Seagate tímto prohlašuje, že tento Rackmount NAS je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2004/5/ES.
Dansk [Danish]	Undertegnede Seagate erklærer herved, at følgende udstyr Rackmount NAS overholder de væsentlige krav og øvrige relevante krav i direktiv 2004/5/EF.
Deutsch [German]	Hiermit erklärt Seagate, dass sich das Gerät Rackmount NAS in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2004/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab Seagate seadme Rackmount NAS vastavust direktiivi 2004/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, Seagate, declares that this Rackmount NAS is in compliance with the essential requirements and other relevant provisions of Directive 2004/5/EC.
Español [Spanish]	Por medio de la presente Seagate declara que el Rackmount NAS cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2004/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Seagate ΔΗΛΩΝΕΙ ΟΤΙ Rackmount NAS ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2004/5/ΕΚ.
Français [French]	Par la présente Seagate déclare que l'appareil Rackmount NAS est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2004/5/CE.
Italiano [Italian]	Con la presente Seagate dichiara che questo Rackmount NAS è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2004/5/CE.
Latviski [Latvian]	Ar šo Seagate deklarē, ka Rackmount NAS atbilst Direktīvas 2004/104/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo Seagate deklaruoja, kad šis Rackmount NAS atitinka esminius reikalavimus ir kitas 2004/104/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart Seagate dat het toestel Rackmount NAS in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2004/104/EG.
Malti [Maltese]	Hawnhekk, Seagate, jiddikjara li dan Rackmount NAS jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 2004/104/EC.
Magyar [Hungarian]	Alulírott, Seagate nyilatkozom, hogy a Rackmount NAS megfelel a vonatkozó alapvető követelményeknek és az 2004/104/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym Seagate oświadcza, że Rackmount NAS jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2004/104/EC.
Português [Portuguese]	Seagate declara que este Rackmount NAS está conforme com os requisitos essenciais e outras disposições da Directiva 2004/104/CE.
Slovensko [Slovenian]	Seagate izjavlja, da je at Rackmount NAS v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2004/104/ES.

Slovensky [Slovak]	Seagate týmto vyhlasuje, že Rackmount NAS spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2004/104/ES.
Suomi [Finnish]	Seagate vakuuttaa täten että Rackmount NAS tyyppinen laite on direktiivin 2004/104/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar Seagate att denna Rackmount NAS står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2004/104/EG.

Power source



Caution: Use the product with the provided power supply only.



Note: To protect your data, always follow the safe removal procedures for your operating system when disconnecting your product.

Battery safety

This product contains a lithium-ion battery that must be disposed of properly. Follow the battery safety items below:

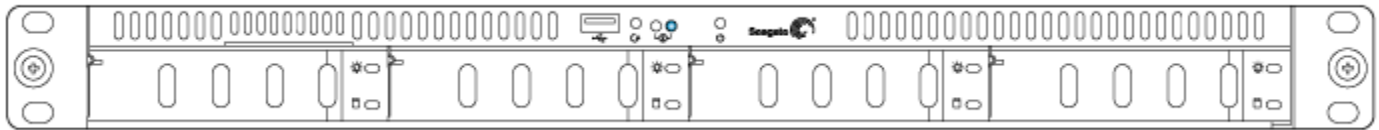
- Do not dismantle, open or shred secondary cells or batteries.
- Do not expose cells or batteries to heat or fire. Avoid storage in direct sunlight.
- Do not short-circuit a cell or a battery. Do not store cells or batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by, other metal objects.
- Do not use any charger other than that specifically provided for use with the equipment.
- Do not use any cell or battery which is not designed for use with the equipment.
- Do not mix cells of different manufacture, capacity, size or type within a device.
- Seek medical advice immediately if a cell or a battery has been swallowed.
- Do not subject cells or batteries to mechanical shock.
- In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.
- Keep cells and batteries out of the reach of children.
- Keep cells and batteries clean and dry.
- Secondary cells and batteries need to be charged before use. Always use the correct charger and refer to the manufacturer's instructions or equipment manual for proper charging instructions.
- Do not leave a battery on prolonged charge when not in use.
- After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.
- Secondary cells and batteries give their best performance when they are operated at normal room temperature (20°C±5°C).
- Retain the original product literature for future reference.
- Use only the cell or battery in the application for which it was intended.
- Dispose of properly.



Introduction

What is in this manual

Thank you for purchasing a Seagate 4-bay Rackmount NAS. Offering both high-end performance and advanced data sharing, your 4-bay Rackmount NAS is the next generation of Business Storage.



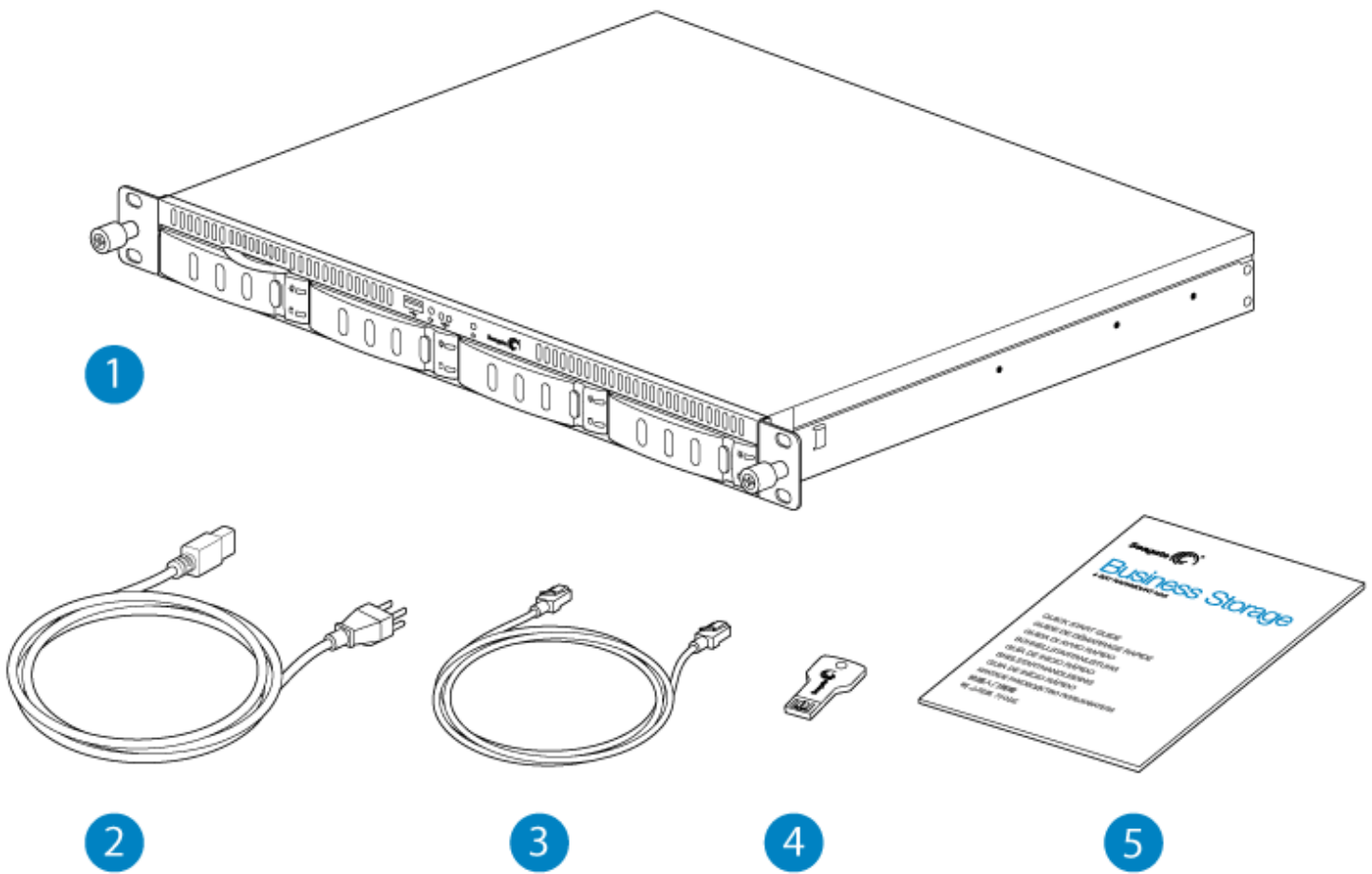
This user manual gives you step-by-step instructions on installation, hardware maintenance, and troubleshooting. If you encounter problems, check [Getting Help](#).

i **Important info:** Refer to [Warranty](#) before performing any hardware repairs or maintenance that is not described in this manual.

Who should use this manual

This user manual assumes that you have a working knowledge of networks, NAS (network-attached storage), and storage products. If you do not have these skills or, are not confident with the instructions in this guide, do not proceed with the installation or component replacement.

Box contents



1. Seagate 4-bay Rackmount NAS
2. Power supply cable
3. Ethernet cable
4. USB key (Seagate NAS OS Rescue and Install)
5. Quick Start Guide

i **Important info:** Save your packaging. In the event that the product should need to be repaired or serviced, it must be returned in its original packaging.

Minimum system requirements

Client OS:

- Windows 8 (32-bit/64-bit)
- Windows 7 (32-bit/64-bit)
- Windows Server 2012
- Windows Server 2008 R2

- Windows Server 2008
- Mac OS 10.6 and later
- Linux 2.6 and later

Web browsers:

- Internet Explorer™ 7.0 or higher
- Firefox™ 3.0 or higher
- Safari™ 3.0 or higher
- Chrome 2.0 or higher

Network:

- Computer with an Ethernet network adapter
- Ethernet switch or router 10/100/1000 (Mb/s)

i **Important info:** Consider the following when configuring your NAS: connect your NAS to a network with a DHCP server for automatic remote server setup; the NAS's performance can be affected by such external forces as network activity, hardware, distance, and setup; for optimal performance, make certain that you are using Gigabit Ethernet routers and peripherals, and that the computers on the network support Gigabit Ethernet.

Safety Guidelines

i **Important info:** Do-it-yourself repairs not covered in this manual will invalidate the warranty.

Safe handling

The 4-bay Rackmount NAS must run with all of its parts and units in place. In order to comply with applicable safety, emission, and thermal requirements, the cover should not be removed and all drives must be installed according to the instructions (see [Setting Up](#)).

Permanently unplug the unit if you think that it has become damaged in any way.

With the sole exception of “hot-swapping” compatible hard drives from protected volumes (see [Hardware Maintenance](#)), you must shut down and disconnect power from the NAS before maintenance or physical troubleshooting is performed on the device. Only qualified technical service personnel should be allowed to maintain the NAS.

Shut down and unplug the unit before moving it.

! **Caution:** If this equipment is used in a manner not specified by Seagate, the protection provided by the equipment may be impaired.

Safety

Power supply

The 4-bay Rackmount NAS must only be operated from a power supply input voltage range of 100 to 240 VAC, 50 to 60 Hz.

Make sure that the socket outlets are located near the equipment and are easily accessible.

The power supply on this unit is not serviceable or field replaceable. If Seagate technical support has determined that the power supply is faulty or has failed and the unit is under warranty, return the NAS to Seagate per the instructions provided by the Seagate technician.

Battery

Use caution when replacing the battery:

- There is a strong risk of explosion if the battery is replaced by an incorrect type.
- Dispose of used batteries according to the applicable laws for your region.

Environment

A safe electrical ground connection must be provided to the power cord. Check the grounding of the enclosure before applying power.

Provide a suitable power source with electrical overload protection to meet the requirements laid down in the technical specification.

Never expose your device to rain, or use it near water, or in damp or wet conditions. Never place objects containing liquids on the enclosure, as they may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire, or personal injury.

Always unplug the device from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting, or fire.

Hot surfaces (heat sinks) are exposed when the enclosure's top cover is removed. Disconnect power and allow the enclosure to cool before working inside the system.

When pulled out from the rack, the enclosure must not be used as a shelf to support any other object.

! **Caution:** Do not remove covers from the power supply inside the NAS: there is a danger of electric shock inside.

Fans

! **WARNING:** Removing the enclosure cover when the NAS is powered on will reveal moving parts, specifically the rotating fan blades. **You must remain vigilant when opening the enclosure cover. Above all, show extreme caution with the fans and other moving parts within the 4-bay Rackmount NAS.**

Rack system safety precautions

The rack cabinet must be capable of supporting the total weight of the installed enclosures and the design

should incorporate stabilizing features suitable to prevent the cabinet from tipping or being pushed over during installation or in normal use.

When loading a rack cabinet with the units, fill from the bottom up and empty it from the top down.

Do not add any load onto the 4-bay Rackmount NAS when it is mounted on rack rails and installed in the rack. Doing so can bend the rails and prevent the slide from proper operation (if applicable).

! **Caution:** To avoid danger of the cabinet toppling over, under no circumstances should more than one enclosure be drawn out of the rack cabinet at any one time.

The rack cabinet design should take into consideration the maximum operating ambient temperature for the unit, which is 35°C.

The rack cabinet should have a safe electrical distribution system. It must provide overcurrent protection for the unit and must not be overloaded by the total number of units installed in the rack. When addressing these concerns, consider the electrical power consumption rating shown on the product.

The electrical distribution system must provide a reliable ground for each unit and for the cabinet.

The power supply unit has a ground leakage current of 3.5mA. The design of the electrical distribution system must take into consideration the total ground leakage current from all the power supplies in all the units.

When configured, the cabinet must meet the safety requirements of IEC 60950-1 2nd edition.

Rack installation prerequisites

The Seagate 4-bay Rackmount NAS enclosure is designed for installation into an industry standard 19-inch rack cabinet subject to the following requirements:

- There must be a minimum depth of 430mm (16.9 inches) from rack posts to maximum extremity of enclosure (excluding rear cabling).
- The rack must be able to support enclosures weighing up to 12Kg (26.5 lb.).
- There must be a minimum gap of 25mm (1 inch) between the rack cover and front of the enclosure.
- There must be a minimum gap of 50mm (2 inches) between the rear of the enclosure and the rear of the rack in order to maintain the correct air flow around the enclosure.
- Use in a fully enclosed rack installation is not recommended.
- The rack design should take into consideration the maximum operating ambient temperature for the unit, which is 35°C.
- The system must be operated with low pressure rear exhaust installation. The back pressure created by rack doors and obstacles must not exceed 5 pascals (0.5mm water gauge).

The top cover of the enclosure provides access to the the motherboard. Do not remove the top cover of the enclosure unless you are performing maintenance recommended by Seagate technical support. The unit must be turned off and allowed to cool down before removing the cover. Potential hazards include the battery and hot surfaces.

When placing the cover back on the NAS, make certain that the four screws are securely fastened into place (this is to prevent users/operators from accessing service areas).

Equipment handling precautions

Observe all conventional ESD precautions when handling the NAS's internal components. Avoid contact with backplane components, module components, etc.

Drives are fragile and must be handled with care during removal/replacement.

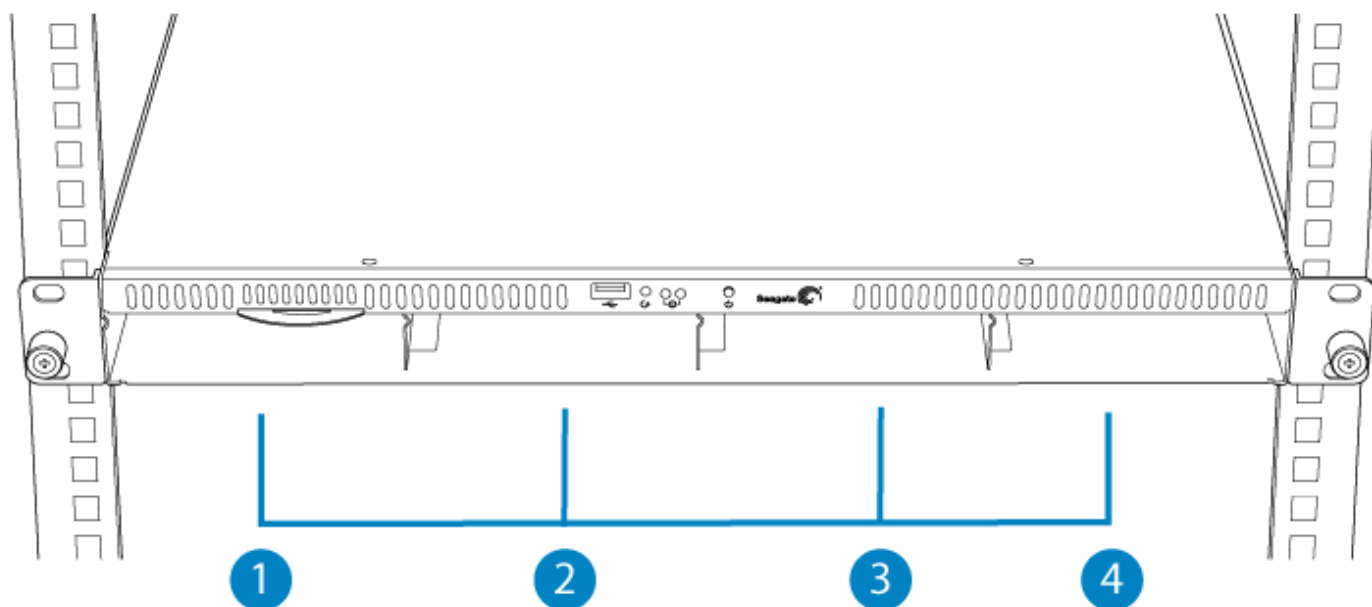
Data security

Any loss, corruption, or destruction of data while using a Seagate drive or a Seagate drive system is the sole responsibility of the user, and under no circumstances will Seagate be held liable for the recovery or restoration of this data. To help prevent the loss of your data, Seagate highly recommends that you keep TWO copies of your data: one copy on your NAS; and, a second copy on one of the following:

- Direct-attached storage (DAS)
- A second NAS
- Some form of removable storage or archival media

i **Important Info:** 1GB = 1,000,000,000 bytes. 1TB = 1,000,000,000,000 bytes. Once formatted, the actual available storage capacity varies depending upon the operating environment (typically 10-15% less).

System Overview



Enclosures shipped with hard drives feature Seagate's NAS HDD. For more information, go to [NAS HDD](#).

New or replacement hard drives must meet the following requirements:

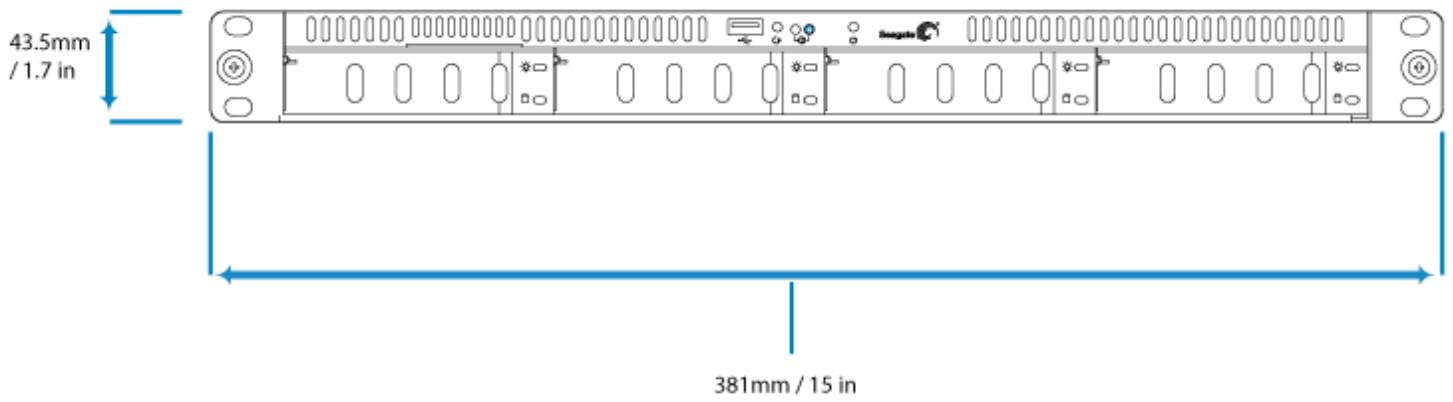
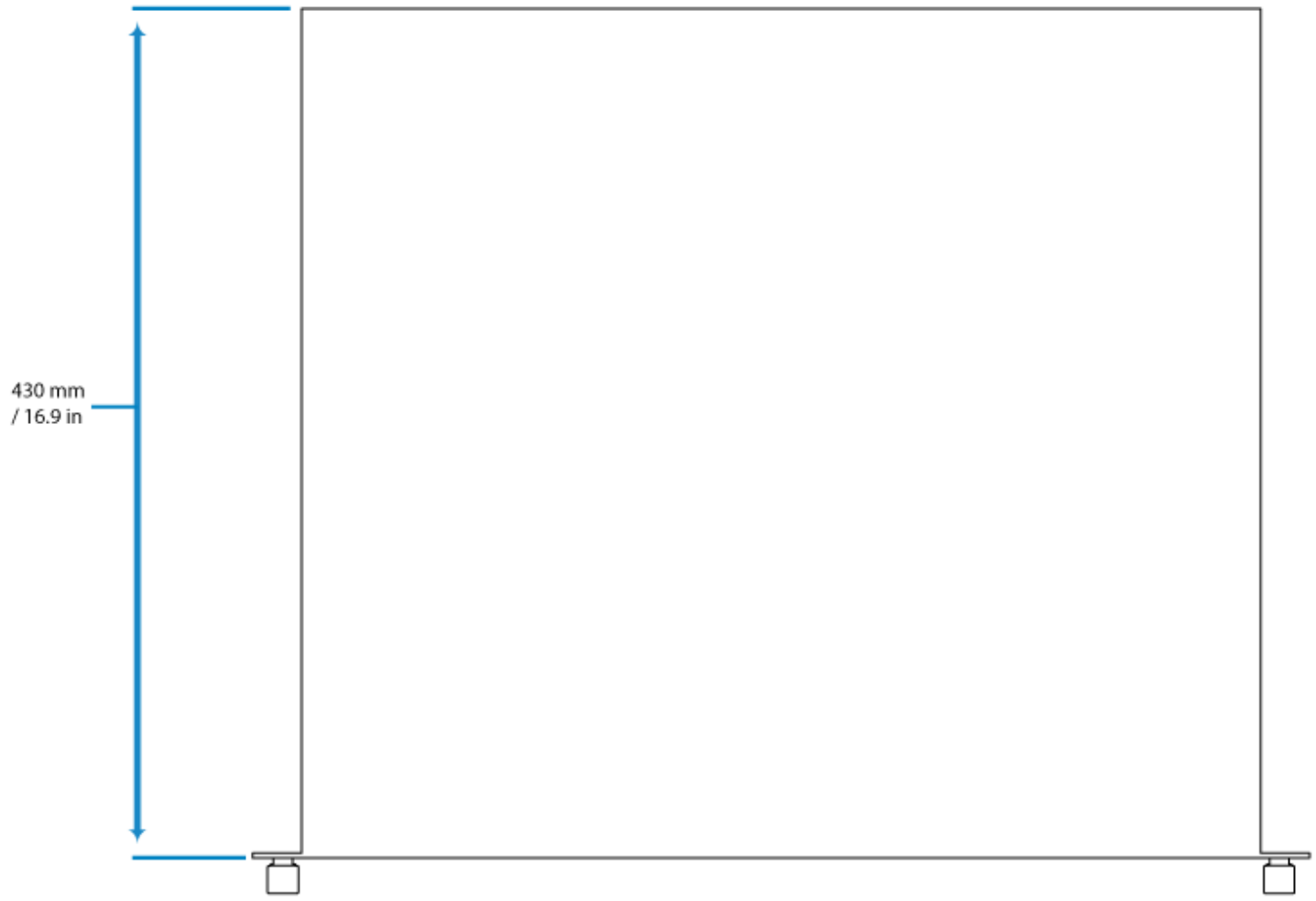
- SATA I or higher
- 3.0Gb/s or higher
- Spin up to 7200 RPM

In case of disk failure or, the need to expand storage capacity, each individual hard drive is hot-swappable and field replaceable. When adding hard drives to the enclosure, consider using Seagate NAS HDD.

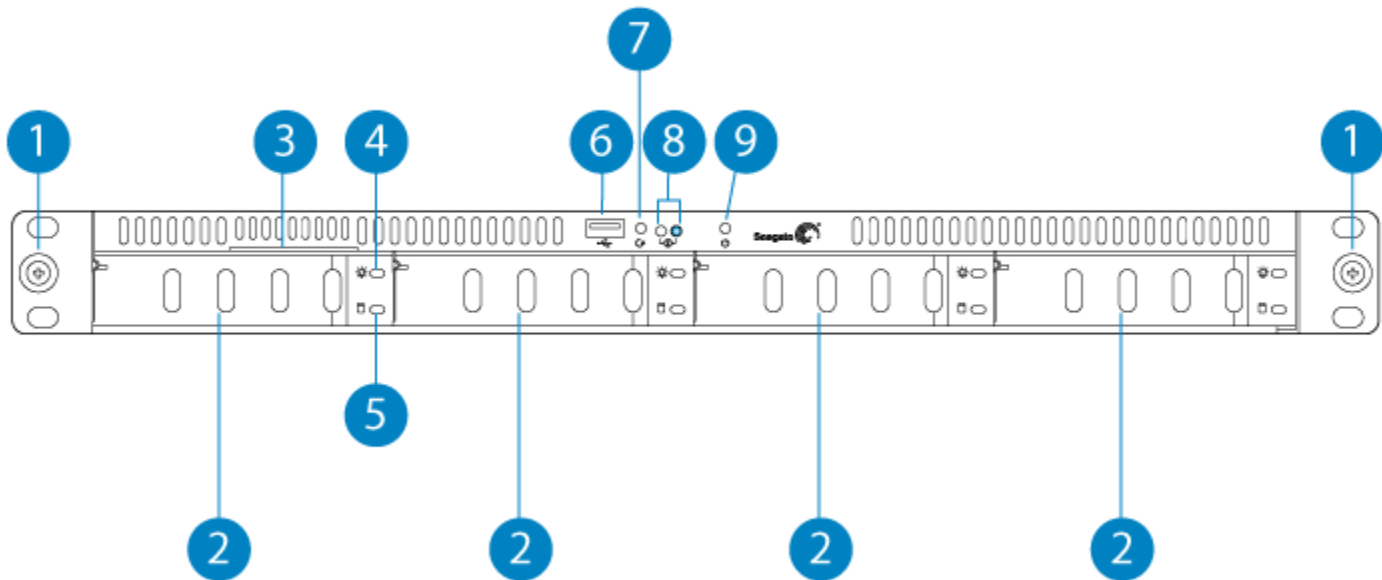
Seagate NAS OS

The 4-bay Rackmount NAS is managed by Seagate NAS OS. Written to all drives within the enclosure, NAS OS helps you to create volumes with RAID protection. Direct attached storage (DAS) can be connected to the enclosure's external ports for NAS backup. However, it is not possible to expand volumes using DAS.

4-bay Rackmount NAS dimensions



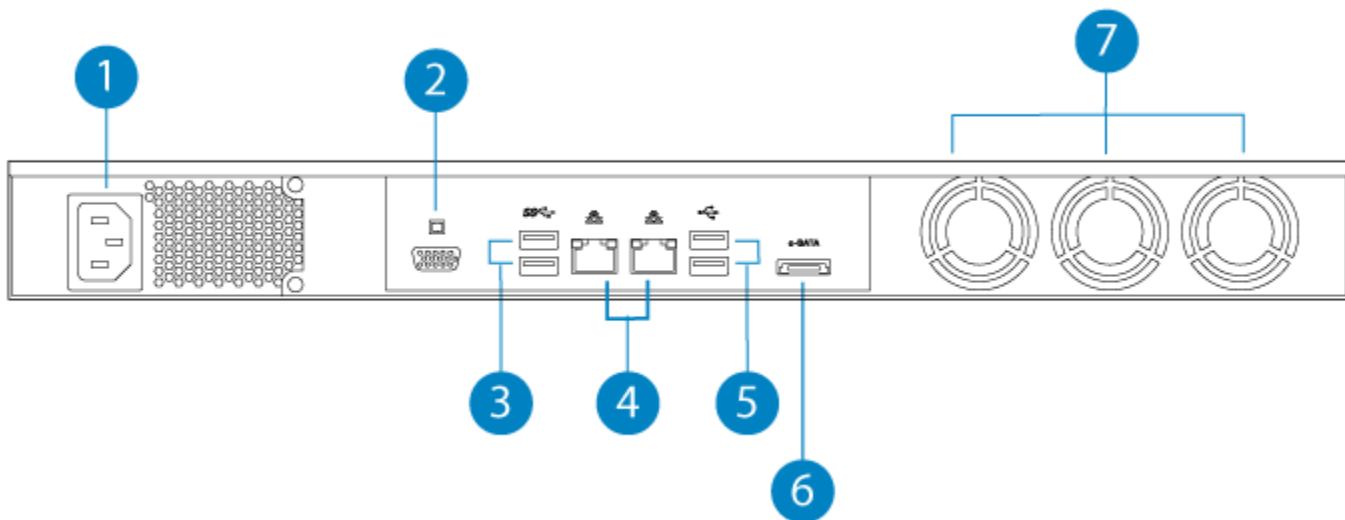
Front panel view



1. **Rackmount Bracket:** Attaches the Seagate 4-bay Rackmount NAS to a standard 19-inch computer equipment rack. See [Setting Up](#).
2. **Disk trays (x4):** Install up to four disks.
3. **MAC Address Label:** Slide the label toward you to view the MAC addresses for the Ethernet ports.
4. **Disk Power LED:** The LED turns solid blue when the NAS receives power.
5. **Disk Activity LED:** The LED blinks to indicate activity for the drive.
6. **Hi-Speed USB 2.0 Port:** Connect compatible USB devices to the port.
7. **Reset Button:** Used to tell the NAS to boot from a NAS OS Rescue USB key (included with your device).
8. **Status LEDs:** Indicates that the device is powered on and provides status signals (see [System LEDs](#)).
9. **Power Button:** Used to turn the system on and off (see [Operation](#)).

For details on LED behavior, see [System LEDs](#).

Rear panel view



1. **Power Input:** Plug in the AC adapter supplied with the drive. See [Setting Up](#).
2. **VGA Video Port:** Connect a VGA display for maintenance.
3. **SuperSpeed USB 3.0 Ports (x2):** Connect direct-attached storage (DAS) or USB devices such as a mouse and keyboard.
4. **Gigabit Ethernet Ports (x2):** Connect Ethernet cables from the device to your network. See [Setting Up](#).
5. **Hi-Speed USB 2.0 Ports (x2):** Connect direct-attached storage (DAS) or USB devices such as a mouse and keyboard.
6. **eSATA Port:** Connect direct-attached storage (DAS).
7. **Ventilation:** Keeps your NAS's power supply unit cool during operation. Be sure not to block the fan exhaust when using the product.

USB and eSATA ports

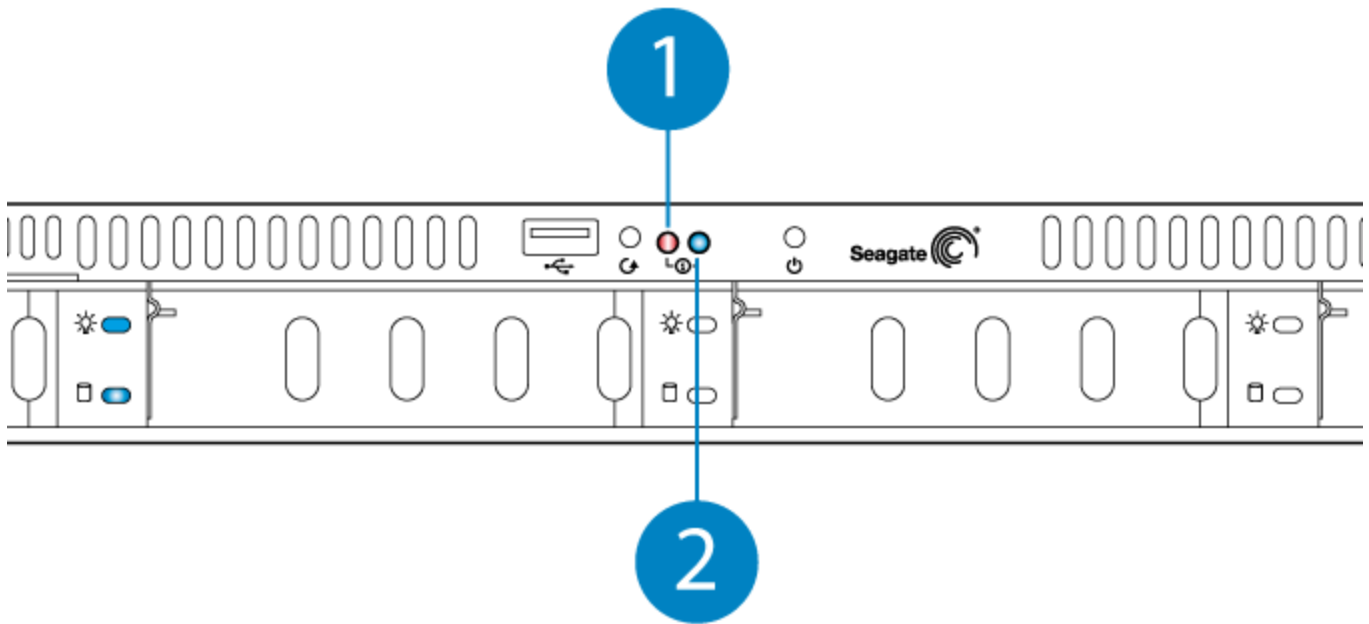
The 8-bay Rackmount NAS has three USB 2.0 ports, which lets you connect DAS or other USB devices:

- Storage devices connected to a USB port should be formatted using one of the following file systems: FAT32, NTFS, HFS+, EXT2, EXT3, EXT4, and XFS. Other storage formats will not be recognized by the NAS. No capacity limitations apply.
- You can connect any USB keyboard, USB mouse, or USB accessories.

System LEDs

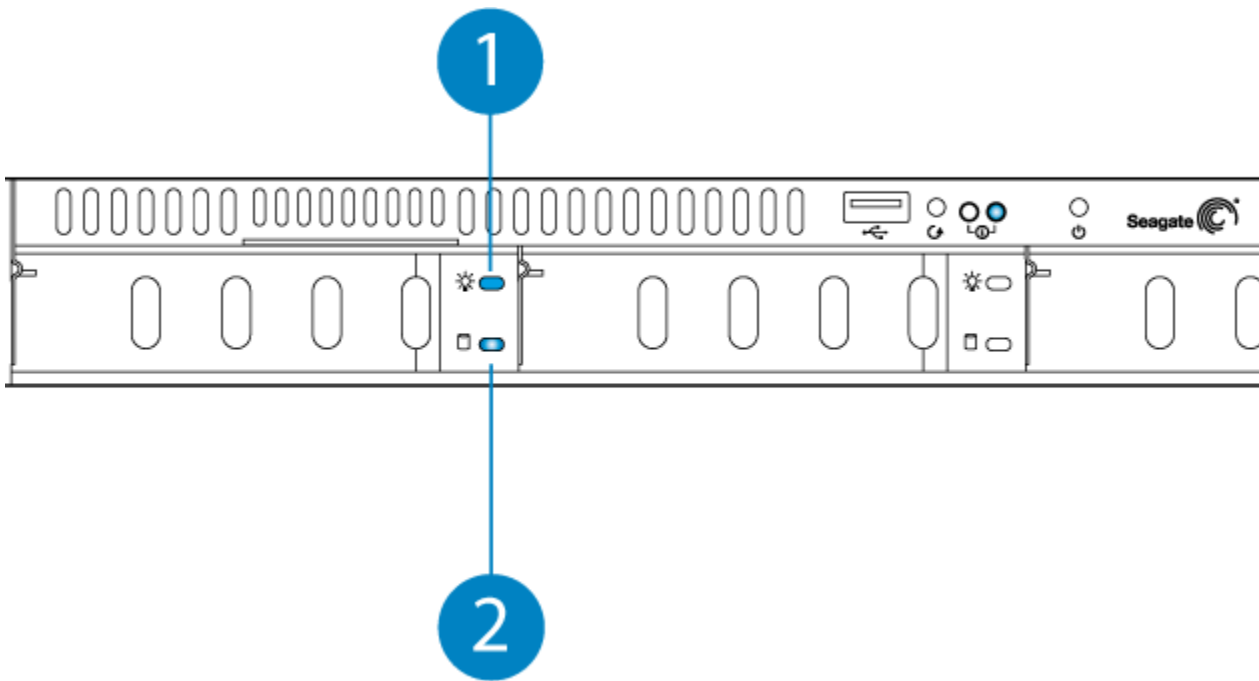
The 4-bay Rackmount NAS features two sets of LEDs that provide information on the system status. Review the illustrations below for the LED locations on the chassis.

Status



1. Status 1 (red only)
2. Status 2 (blue only)

Disks



1. Power
2. Activity



Note on the disk power LED: The disk tray power LED will turn solid blue when the device is powered on.

LED behavior

General LED behavior

The list of colors below will help you identify the general status of your NAS.

Color	State
Solid blue	Ready
Blinking blue	Startup; shutdown; activity
Blinking red and blue	RAID synchronization; software update
Blinking red	Warning
Solid red	Error

LED indications

The status and drive LEDs work together to provide up-to-date details on your NAS's health.

Status LED 1	Status LED 2	Disk Activity	LED State
Off	Blinking blue	Blinking blue	The device is booting and will turn solid blue; the device is shutting down.
Off	Solid blue	Blinking blue	Disk Activity
Blinking Red	Off	Blinking blue	RAID is degraded (data remains intact but the array is no longer protected should another disk fail); preparing to synchronize the RAID.
Alternating red	Alternating blue	Blinking blue	RAID synchronization; NAS OS update in progress.
Off	Off	Off	The device is off; fans are not spinning; the power supply has been cut but power is provided by a UPS; the power supply is not providing power and, if applicable, the UPS has run out of reserve power.
Solid red	Off	Solid red	File system check failed.
Solid red	Off	Blinking blue	Temperature alert (critical level). The product will shut off due to the high temperature.
Solid red	Off	Solid red	RAID has failed and all data has been lost.

Setting Up

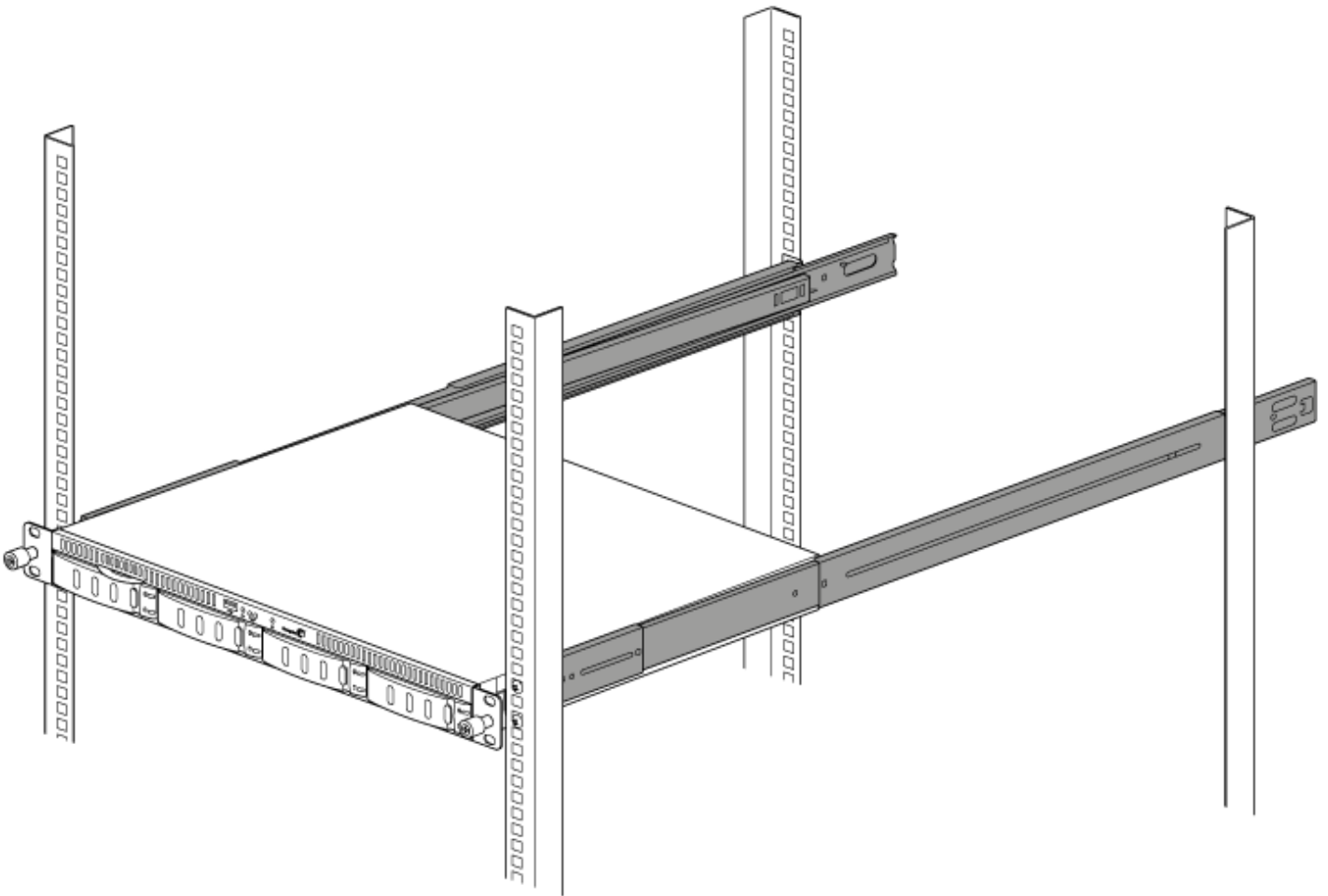
The Seagate 4-bay Rackmount NAS is available with disks or without disks. Rackmount NAS with disks are pre-configured for use out of the box.

- NAS with disks: go to [4-bay NAS with disks](#)
- Empty NAS enclosure: go to [4-bay NAS empty enclosure](#).

The instructions below may be found in the Quick Start Guide included with the NAS.

4-Bay NAS with disks

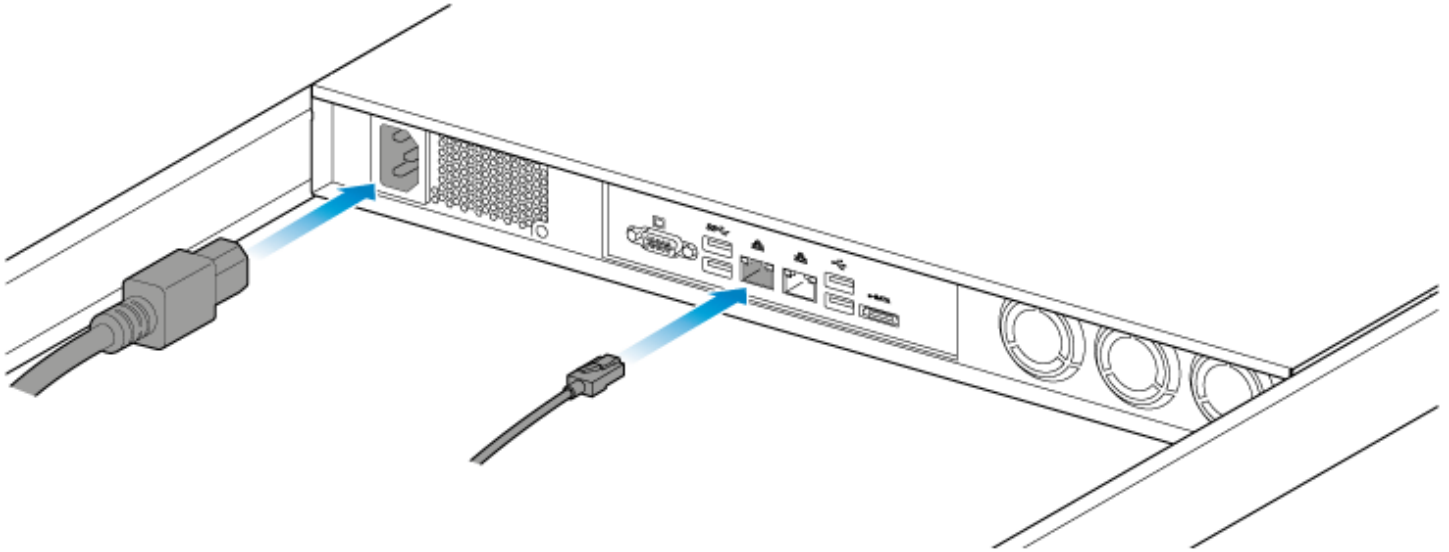
Step 1 - Rack



Install your rack rails or rack kit per the instructions of the manufacturer. Make certain that your rack rails and rack support the weight of the 4-bay Rackmount NAS (12Kg/26.5 lb.).

i **Important info:** Seagate is not responsible for damage to the NAS or other equipment due to the use of improper or faulty third-party racks and/or rack rail systems or rackmount kits/shelves.

Step 2 - Cables



Connections

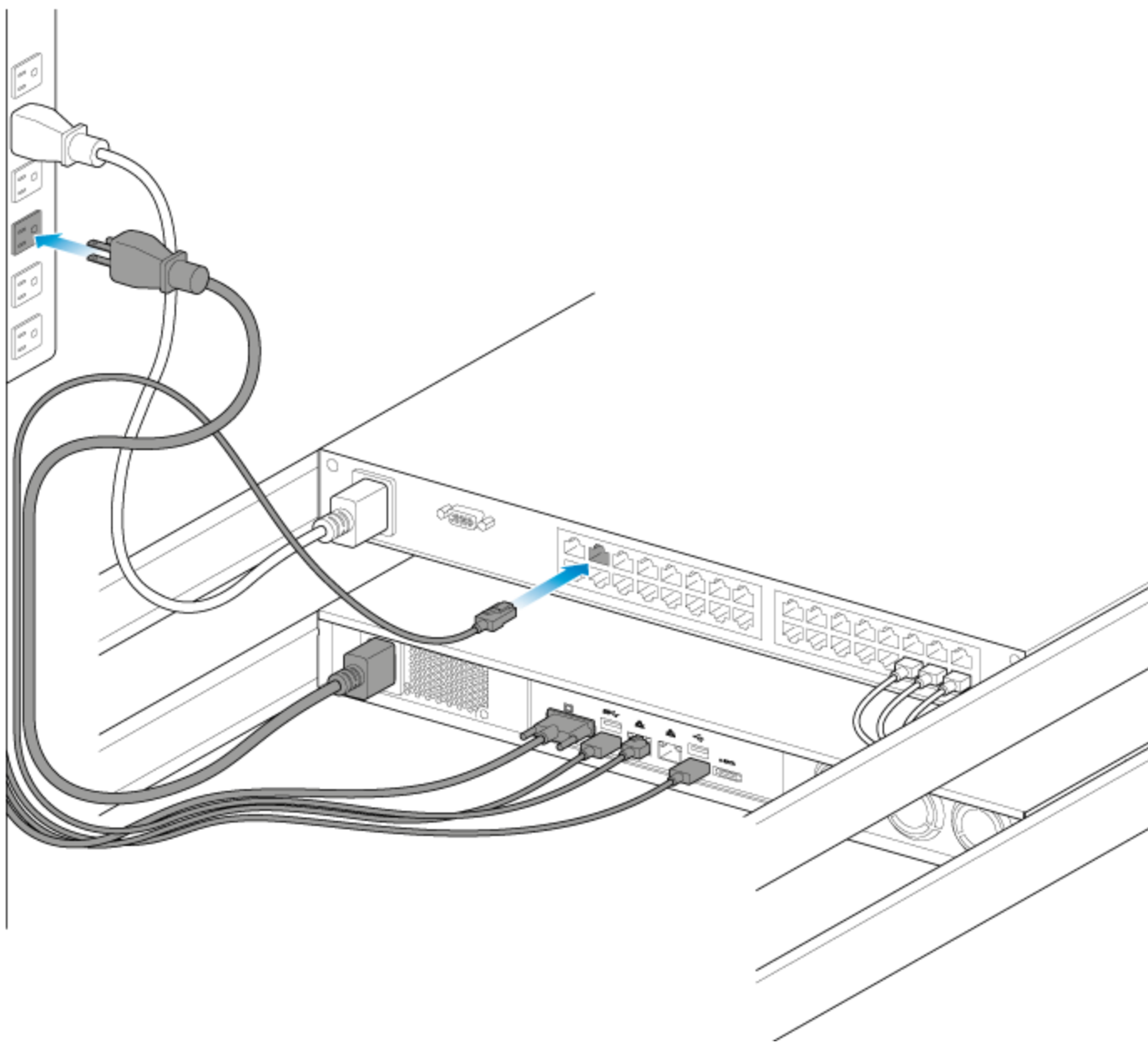
- Ethernet
- Power cable

You can also connect:

- A second Ethernet cable for redundancy or performance.
- A mouse, a keyboard and a VGA monitor for maintenance.

! **Cable management:** Careful management of cables is recommended for optimal operation. It prevents potential hazards and allows for easier maintenance.

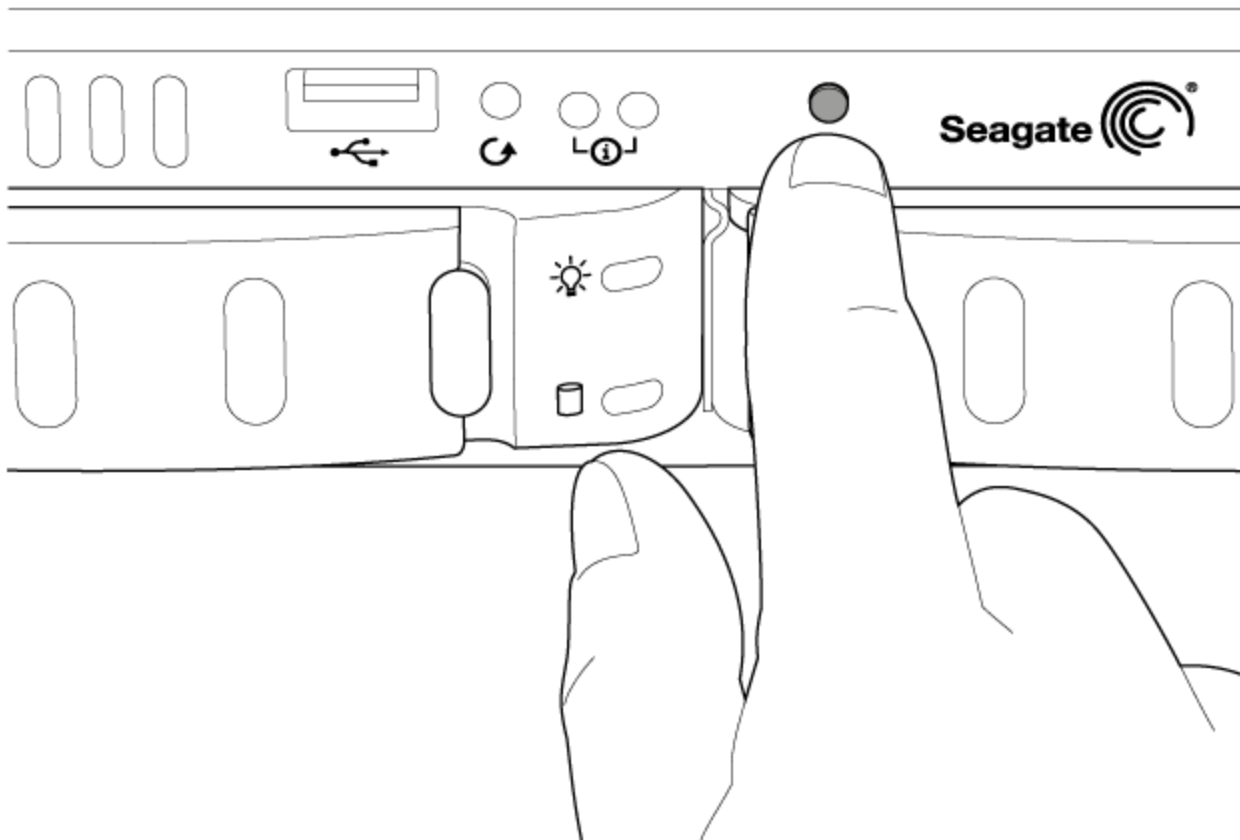
Network and power



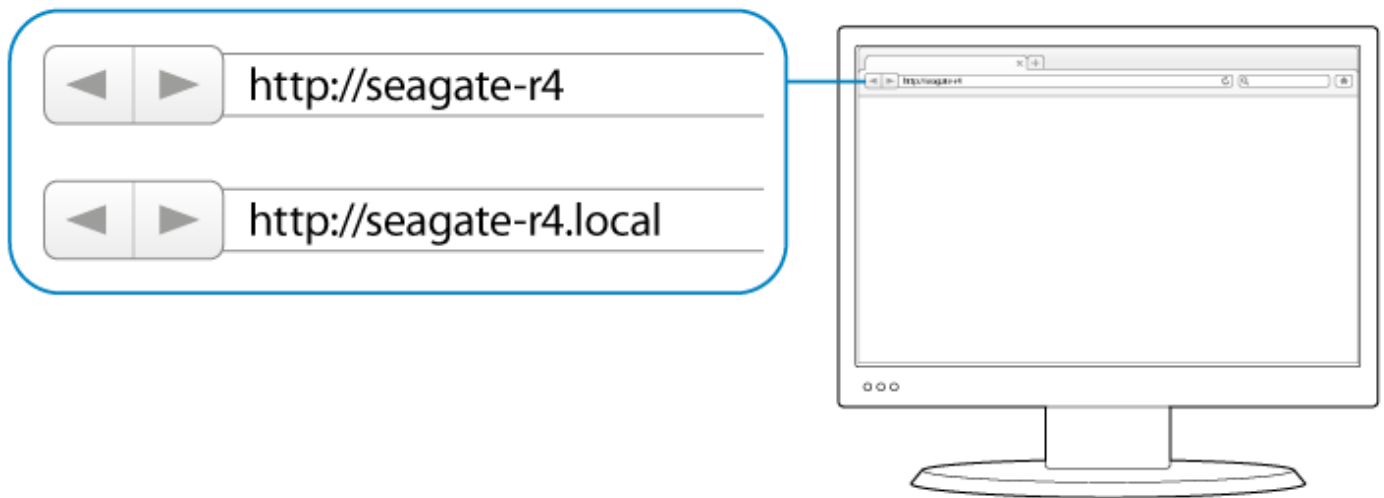
1. Connect the Ethernet cables to your router.
2. Connect the power cable to an outlet.

Step 3 - Power on the NAS and log on to NAS OS

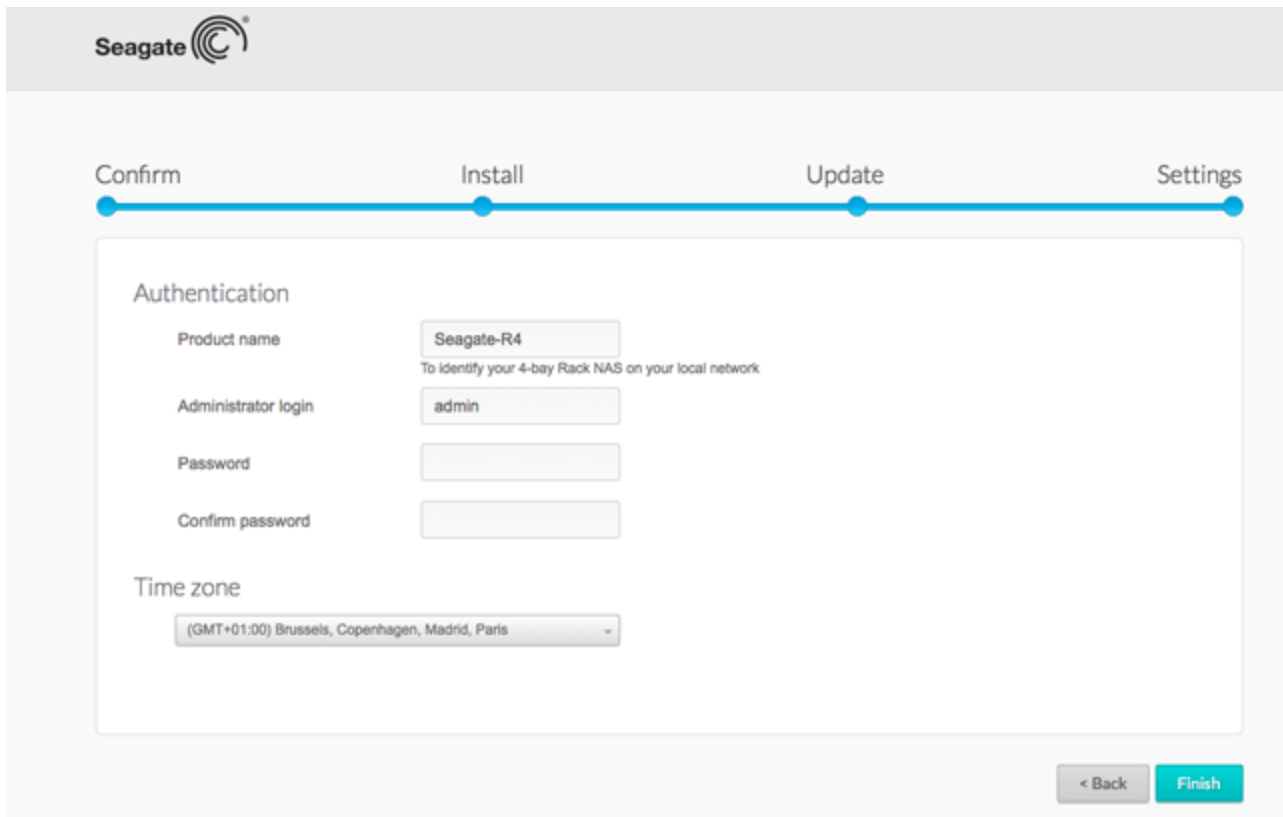
1. Push the power button on the front of the device.



2. Once the status activity LED turns solid blue, launch a web browser from a computer on the network.
3. Enter <http://seagate-r4> or, <http://seagate-r4.local> for Mac or any workstation using Bonjour®.



4. Follow the on-screen instructions to complete the installation.



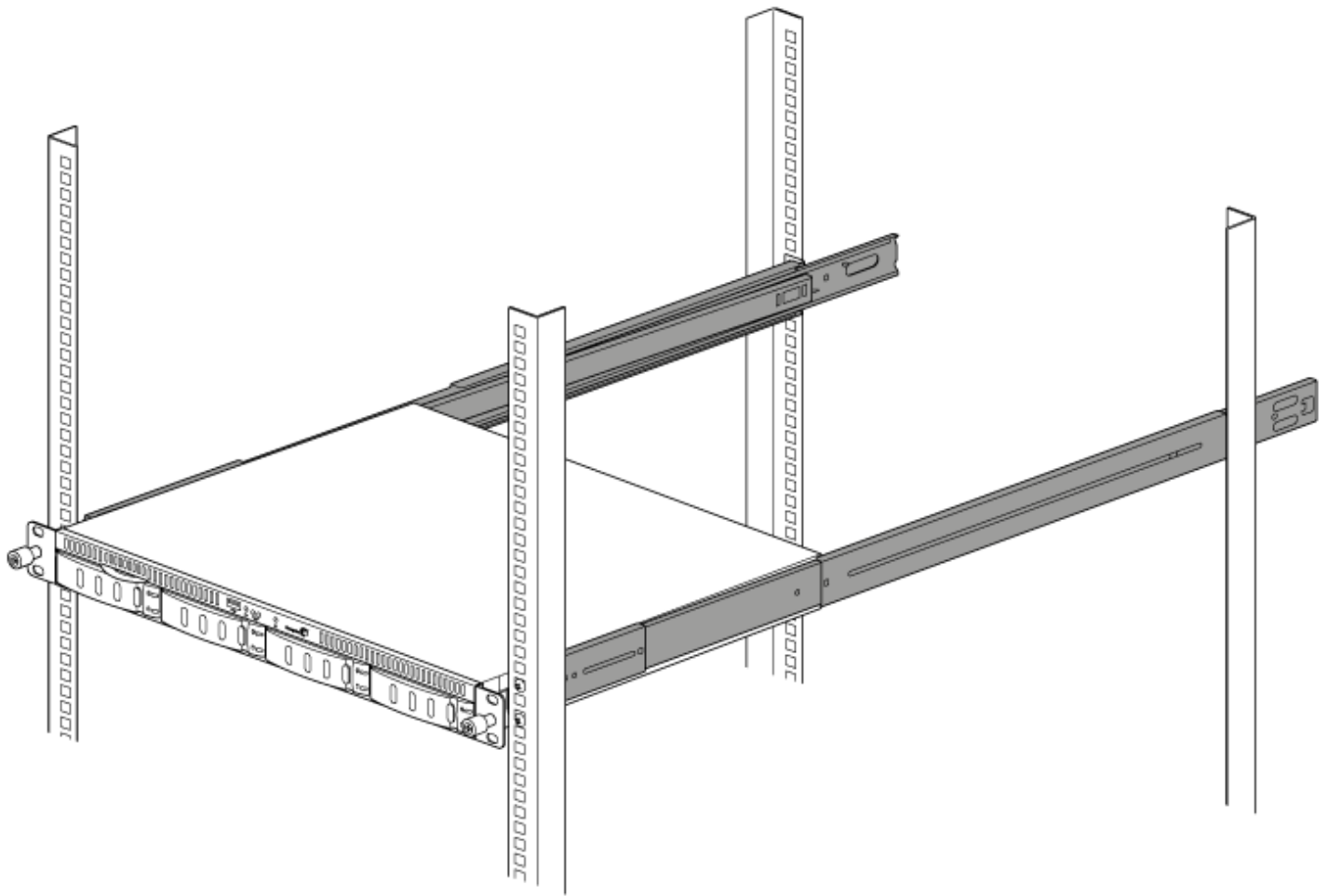
4-Bay NAS empty enclosure

Prepare the NAS OS installer

The included USB key is shipped with software installers to set up your NAS. Seagate periodically adds new features to software and recommends updating the key before proceeding:

1. Go to <http://www.seagate.com/naskey> to download the installer.
2. Launch the installer and follow the on-screen instructions.

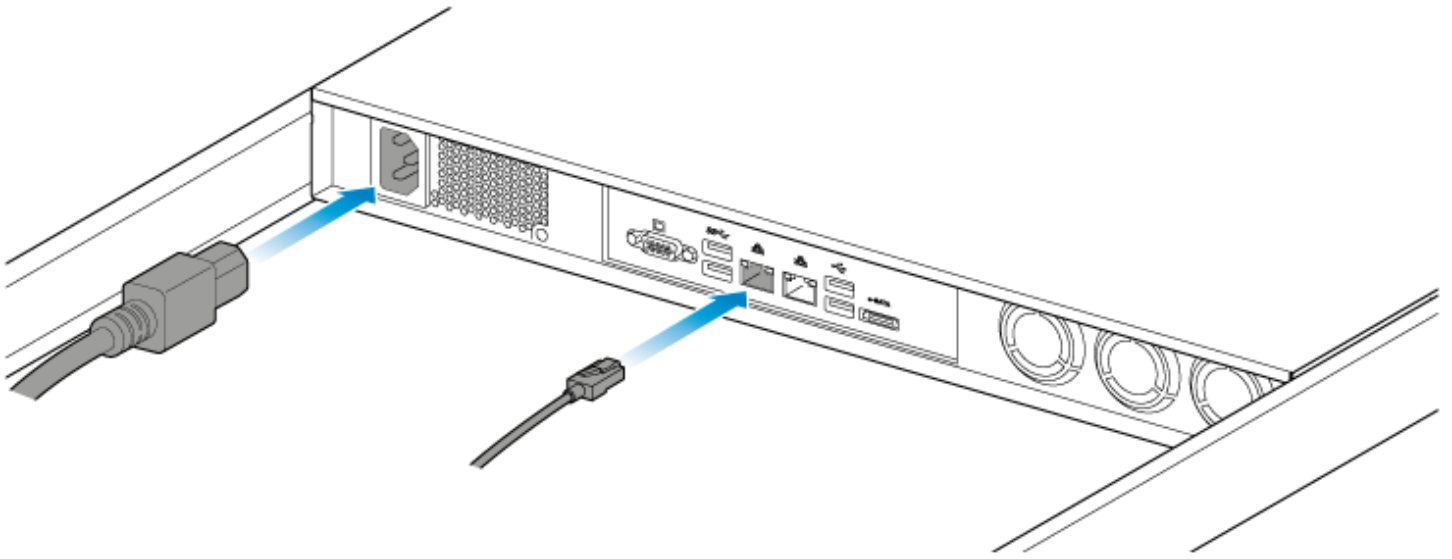
Step 1 - Rack



Install your rack rails or rack kit per the instructions of the manufacturer. Make certain that your rack rails and rack support the weight of the 4-bay Rackmount NAS (12Kg/26.5 lb.).

i **Important info:** Seagate is not responsible for damage to the NAS or other equipment due to the use of improper or faulty third-party racks and/or rack rail systems or rackmount kits/shelves.

Step 2 - Cables



Connections

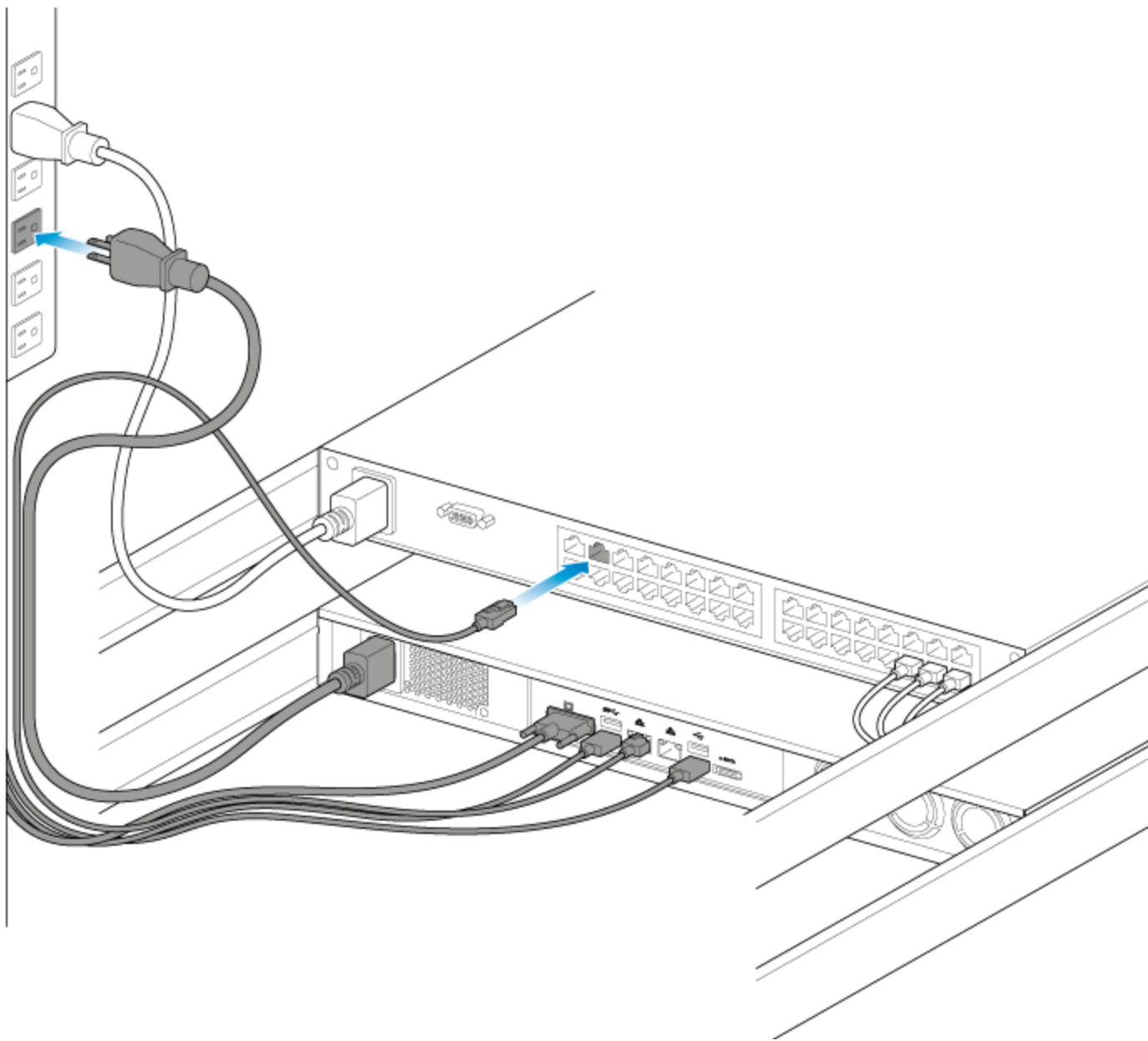
- Ethernet
- Power cable

You can also connect:

- A second Ethernet cable for redundancy or performance.
- A mouse, a keyboard and a VGA monitor for maintenance.

! **Cable management:** Careful management of cables is recommended for optimal operation. It prevents potential hazards and allows for easier maintenance.

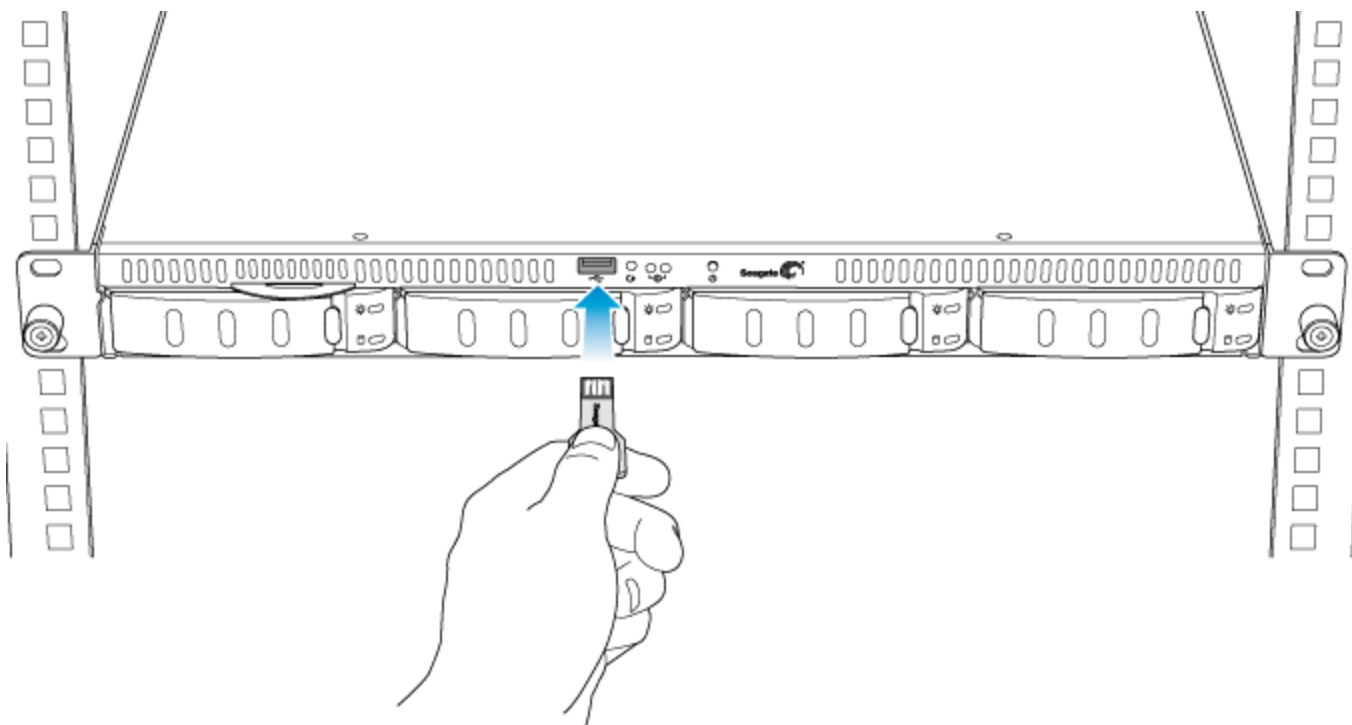
Network and power



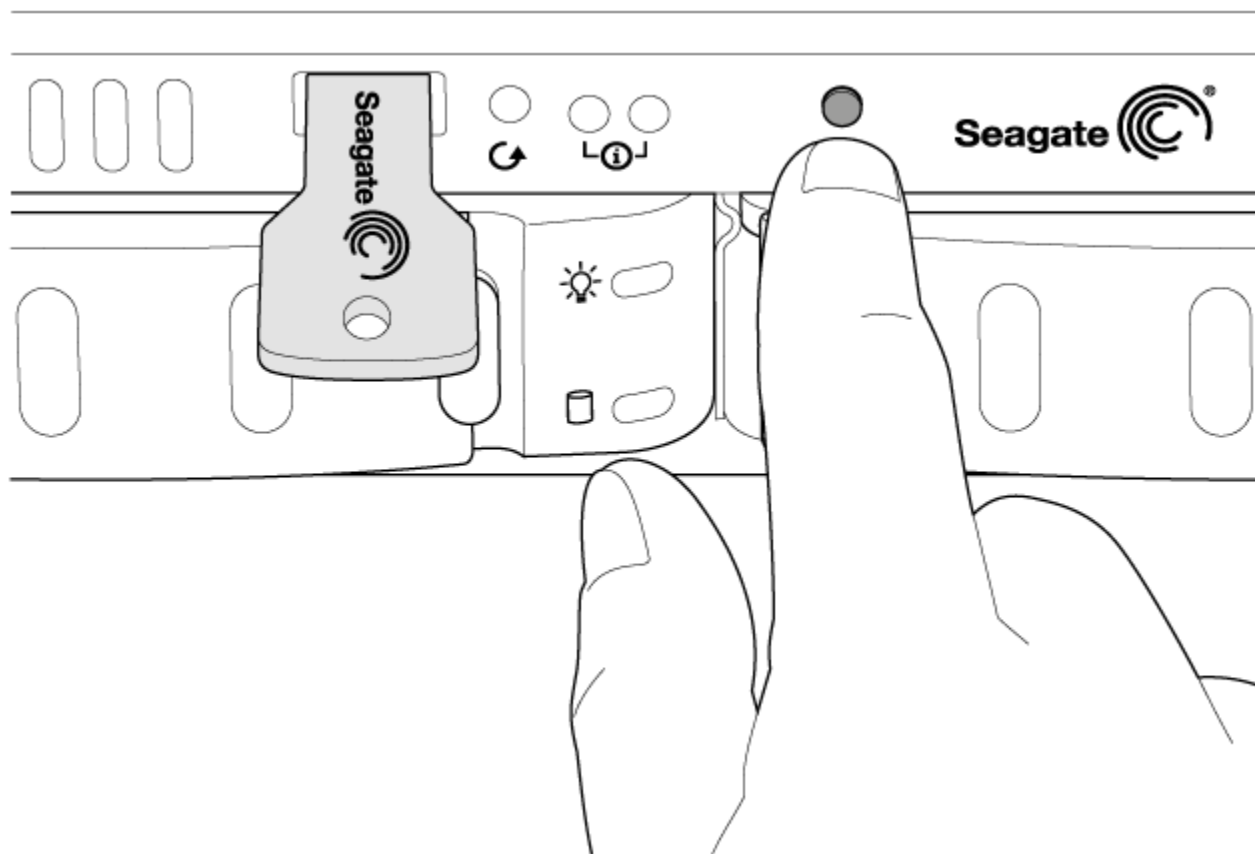
1. Connect the Ethernet cables to your router.
2. Connect the power cable to an outlet.

Step 3 - USB Key and Power

1. Connect the Seagate USB Key to the front USB port.



2. Power on the NAS.



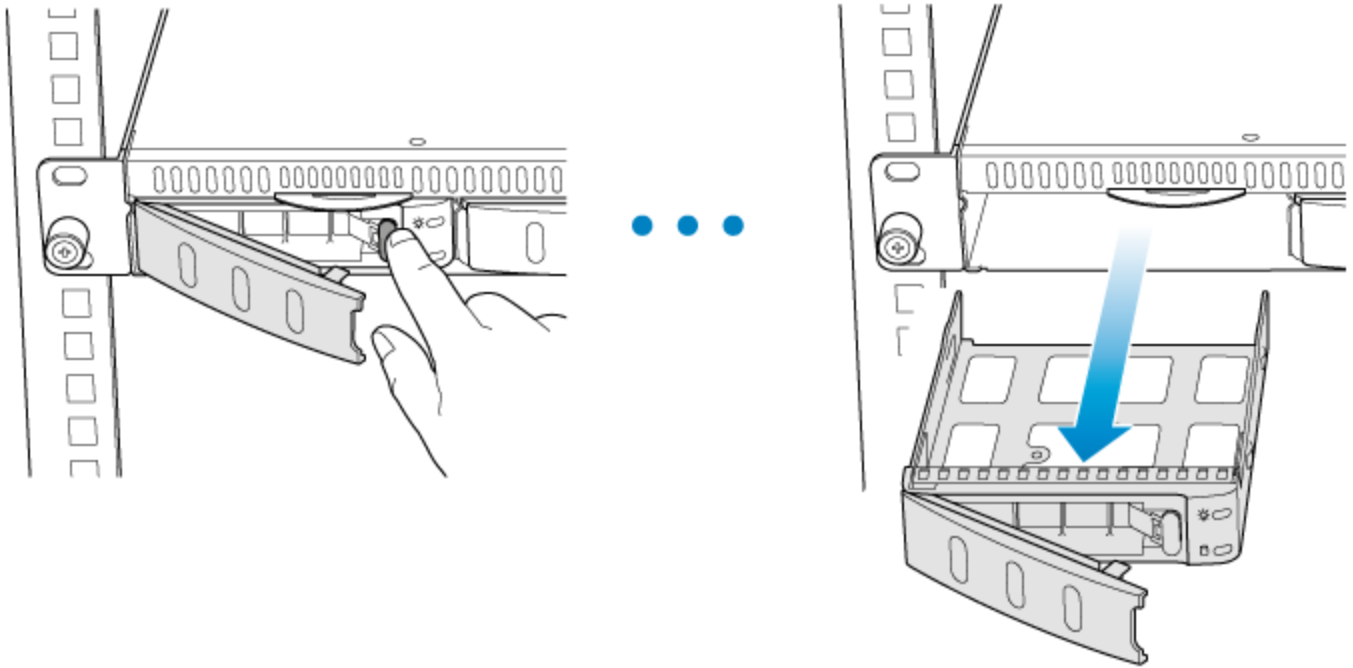
Step 4 - Install the drives

Before installing the drives, consider the following:

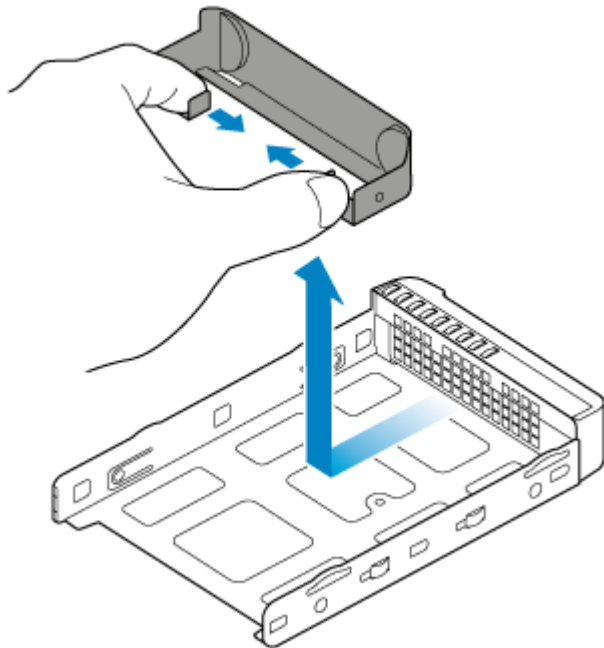
- Insert disks from left to right.
- Empty trays must stay in the bays for proper airflow.

- Make certain that you are properly grounded before touching the disks.

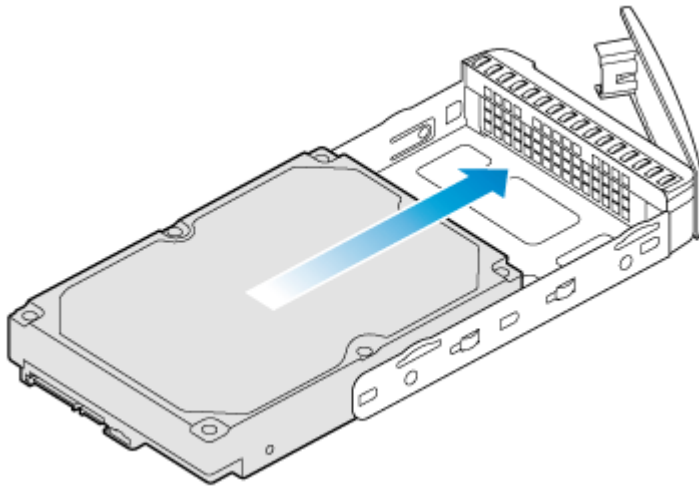
1. Unlock and remove the empty disk tray from the 4-bay Rackmount NAS.



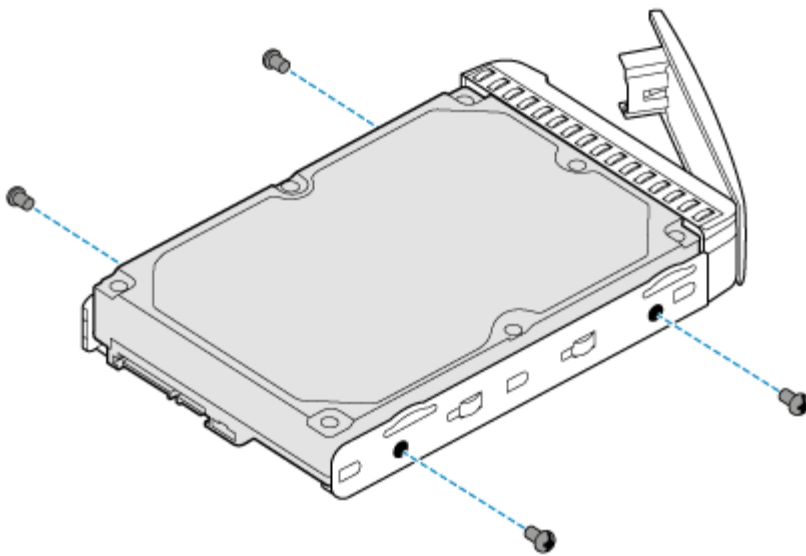
2. Release the placeholder from the disk tray by squeezing the brackets inward and lifting up.



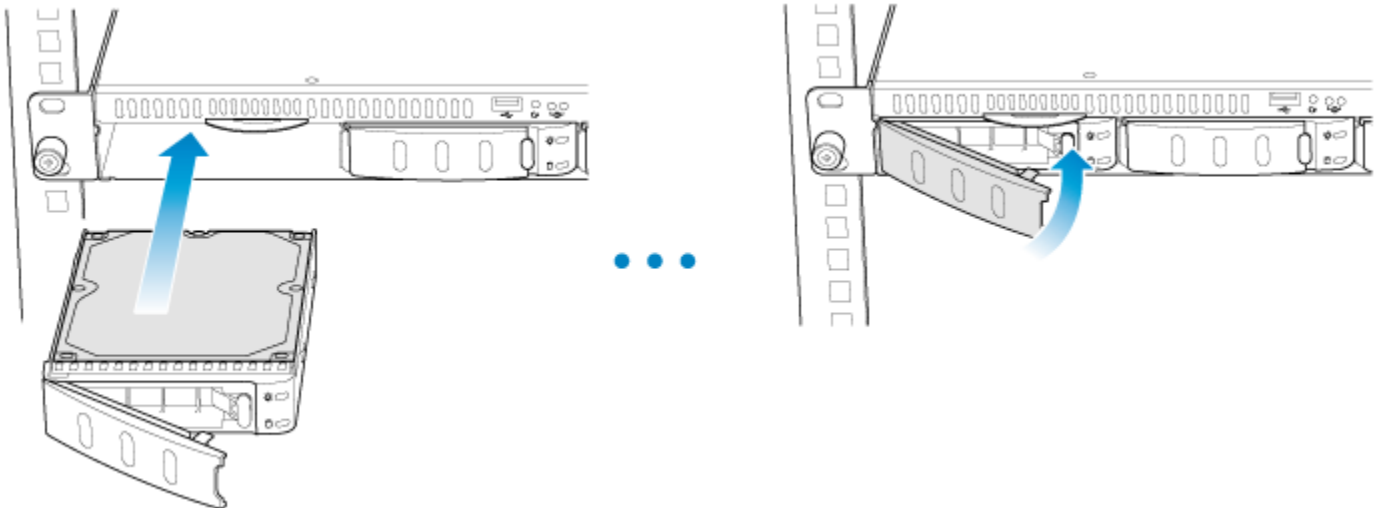
3. Insert the drive into the tray. Confirm that the SATA connection is at the rear of the tray.



4. Screw the drive to the tray, two screws on each side.



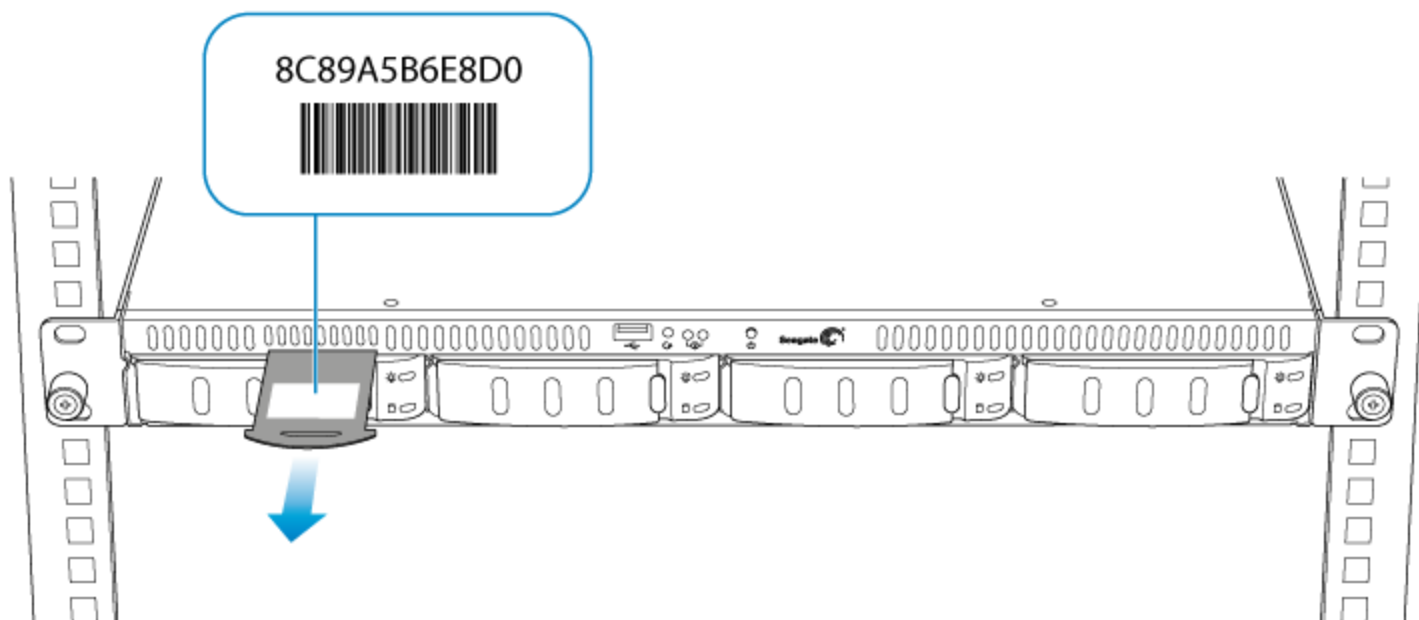
5. Insert the disk into the empty bay as far as it will go before closing the tray handle.



6. Repeat the steps for each disk.

Step 5 - MAC address

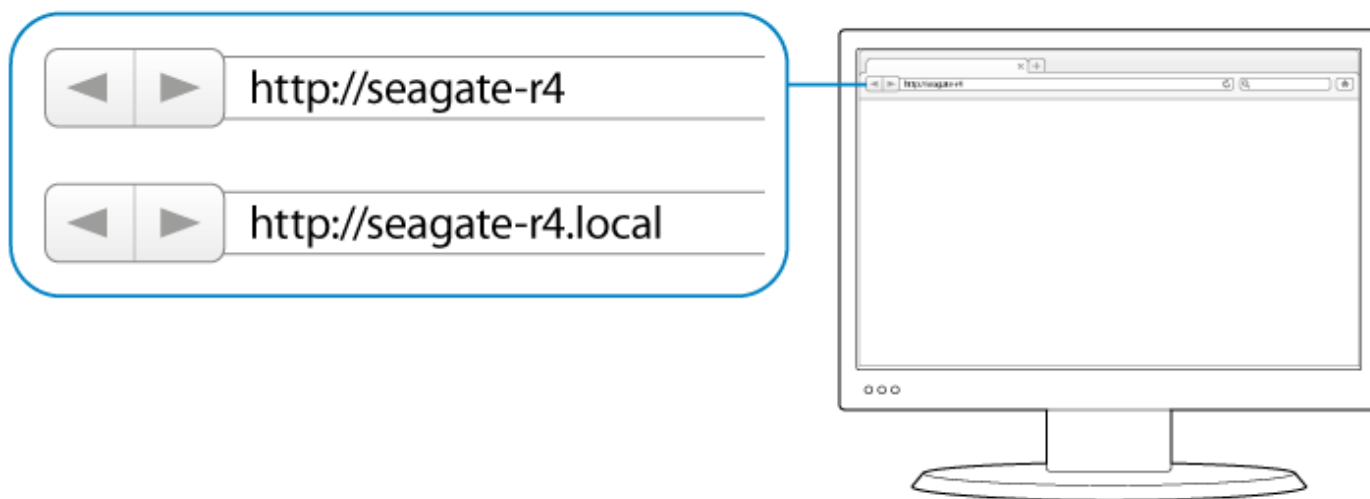
1. You will be prompted to enter the NAS's MAC address in the next step. Slide out the label on the front of the NAS and note one of the MAC addresses.



Step 6 - Log on to the NAS

Confirm that the status LED is solid blue before following the steps below.

1. Launch a web browser from a computer on the network.
2. Enter <http://seagate-r4> or <http://seagate-r4.local> for Mac or any workstation using Bonjour®.



3. Follow the on-screen instructions to complete the installation.

Welcome

To get started, enter your Seagate product's MAC address, located on the slide-out MAC address label on the front of the NAS.

Get started

MAC address

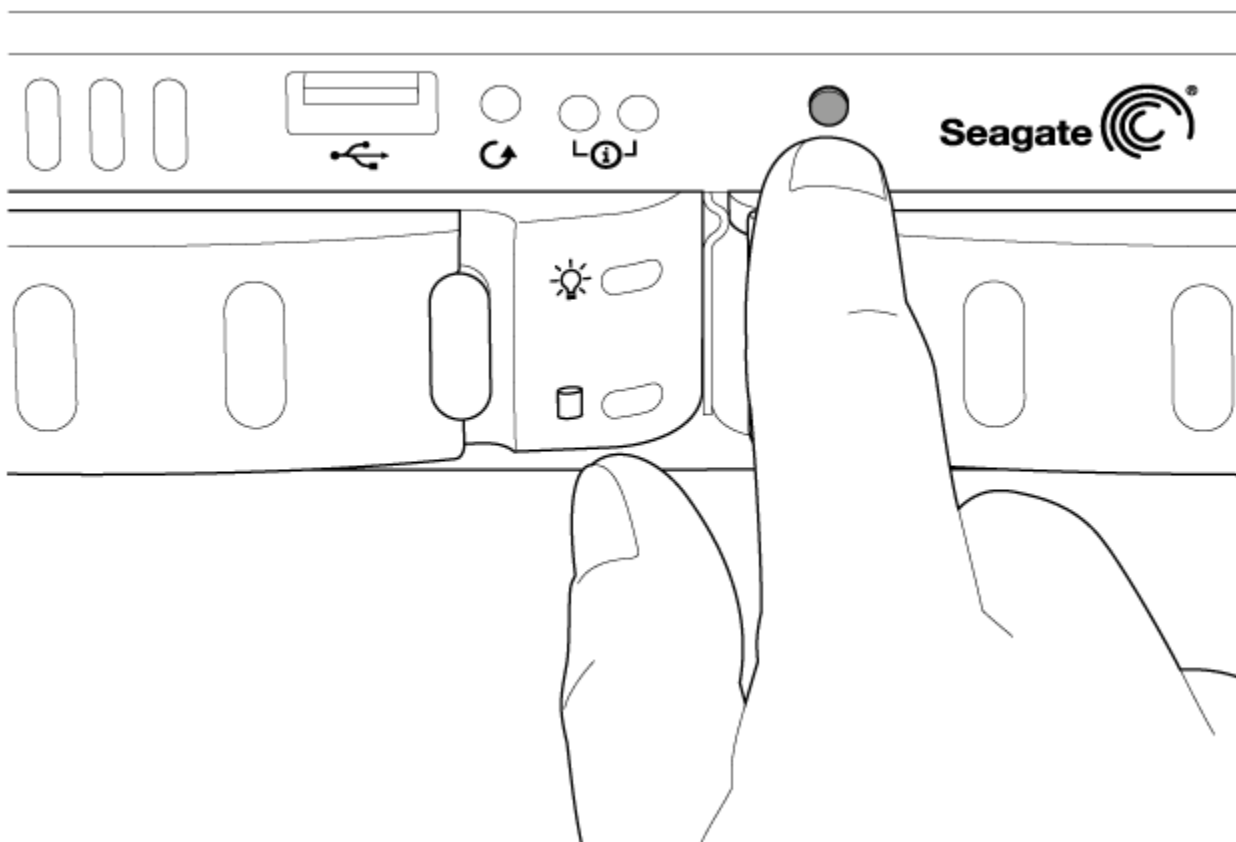
Connect

Operation

Powering on the NAS

! **Caution:** Do not operate the product until the ambient temperature is within the specified operating range. If the drives have been recently installed make sure they have had time to acclimatize before operating them.

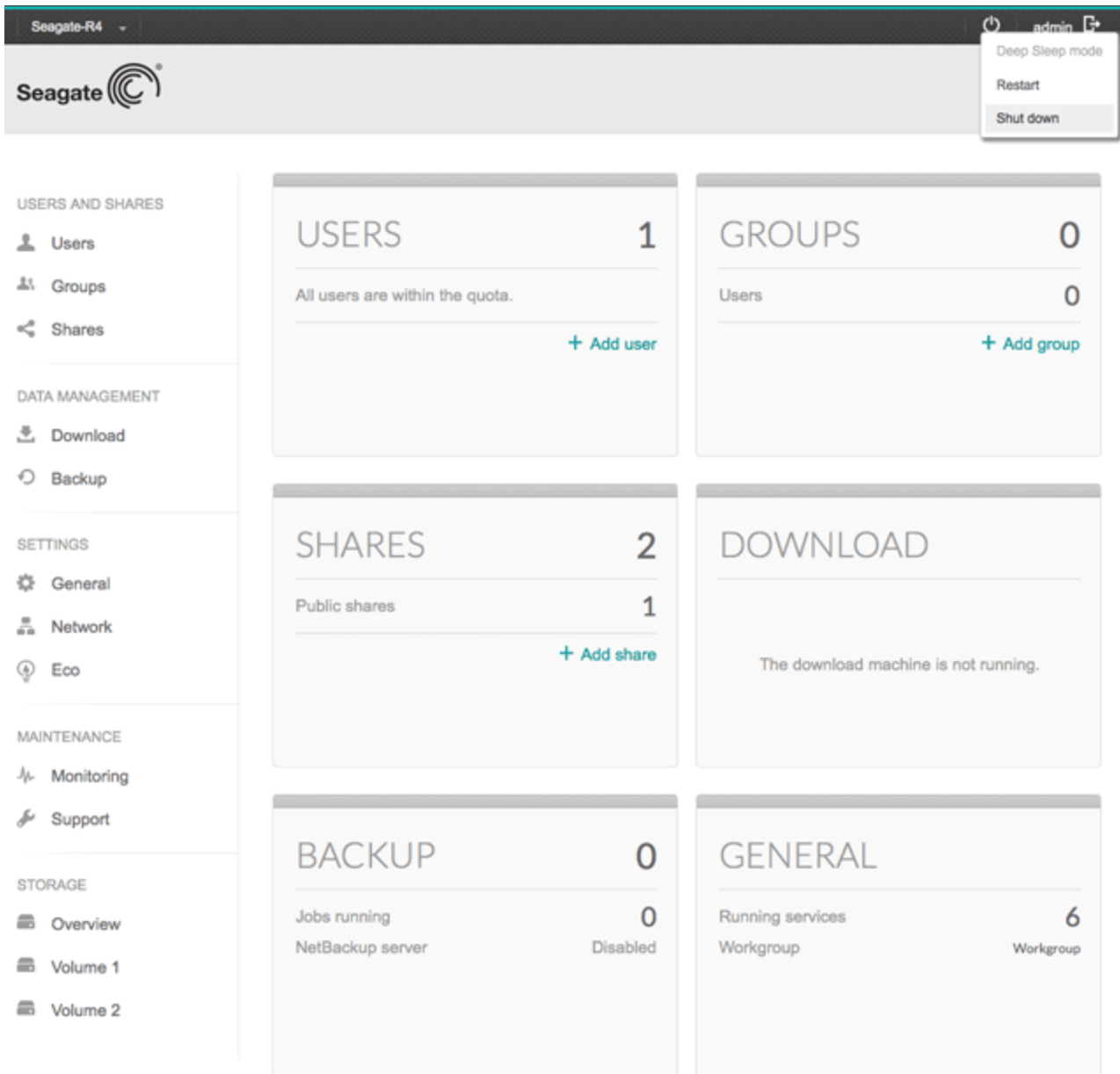
1. Before powering on the product, make sure that all the modules are firmly seated in their bays. Note that all drive slots must be filled by drives or empty disk trays in order for the product to receive sufficient cooling.
2. Confirm that the NAS power supply is connected to a compatible power outlet.
3. Press the product's on/off button.



The status and drive activity LEDs will turn blue when the product's power button is pressed and the disks should spin.

Powering off the NAS

1. Make certain the NAS is not being accessed by users on the network.
2. Use NAS OS to turn the NAS off.



The LEDs will turn off once the system has shut down.



Note: When the product is operating, a short push of the on/off button will turn the 4-bay NAS off or, place the 4-bay NAS into deep sleep mode if the option has been configured in NAS OS. A long push of more than four seconds will cut the power from the NAS, forcing it to shut down immediately. A long push is not recommended as it may result in data loss.

Software

The Seagate 4-bay Rackmount NAS is managed by Seagate NAS OS, a web-based administration tool. Use NAS OS to:

- Allocate the NAS's drives into volumes
- Configure RAID
- Set up the NAS's network connections
- Link the Ethernet ports for performance or protections
- Create shares for data distribution
- Create users and groups for access rights to data
- Create iSCSI targets
- Set up remote access
- Check the health of the NAS

See the [Seagate NAS OS User Manual](#) for instructions on how to manage all the features available to the Seagate 4-bay Rackmount NAS.

Hardware Maintenance

The 4-bay Rackmount NAS has a single chassis with its own cover. Review the details below for hardware module locations and, where applicable, replacement. Refer to the product's warranty (<http://www.seagate.com/support/warranty-and-replacements/limited-consumer-warranty/>) before performing any hardware repairs or maintenance that is not described in this manual.

Precautions

- Prior to performing most hardware maintenance, power off the product and disconnect the power from the power supply. Use the NAS OS to shut down the NAS before unplugging the power cables. If you cannot access NAS OS, push the power button or, in extreme circumstances, turn off the power source.
- During operation, all provided hardware (including the drives in their frames) should remain in place for optimal air flow.
- Observe all conventional ESD precautions when handling 4-bay Rackmount NAS parts. Avoid contact with backplane components and module connectors, etc.
- The top cover should be removed only when the unit has been turned off and allowed to cool down. Potential hazards of opening the cover while the product is operating includes, but is not limited to, rotating fans and hot surfaces.

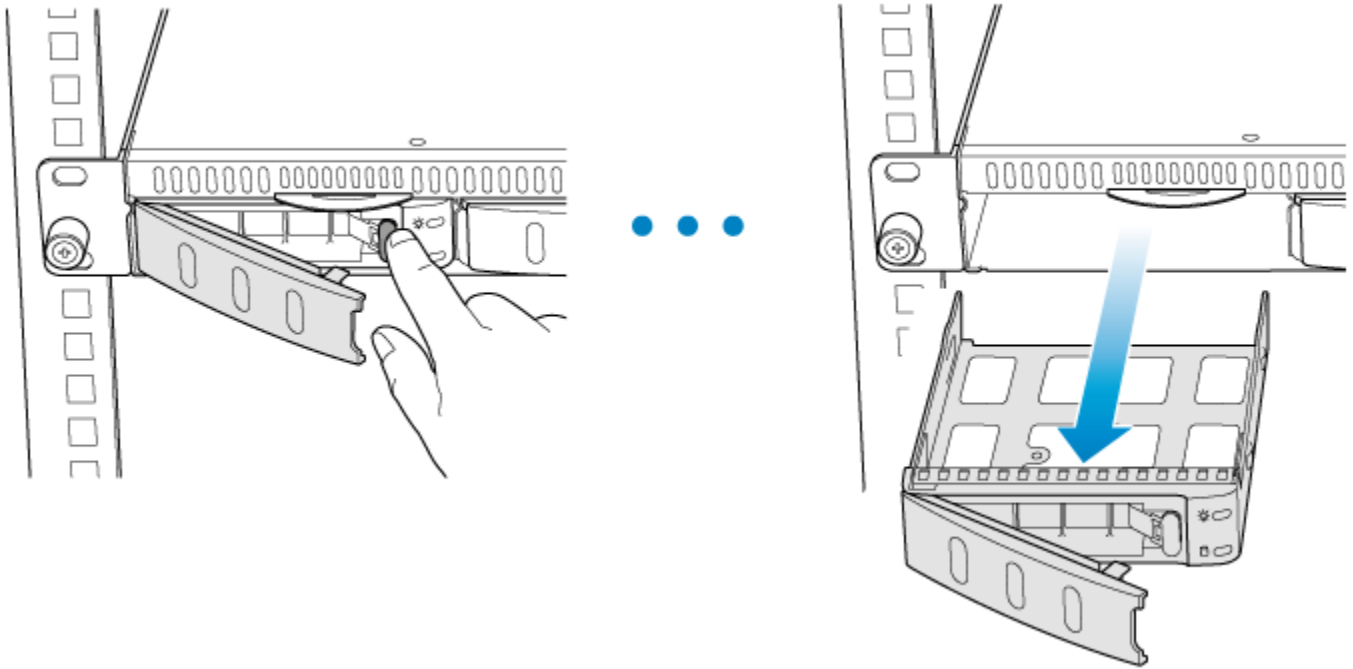
Adding/replacing a hard drive

You can replace a failed disk or expand storage space with a higher-capacity hard drive. Drives in protected RAID volumes are hot-swappable (e.g. SimplyRAID, RAID 1, RAID 5, and RAID 6). However, it is not possible to hot-swap more than one drive at a time. If you are replacing more than one drive in a volume, wait for synchronization to successfully complete before moving to the next disk.

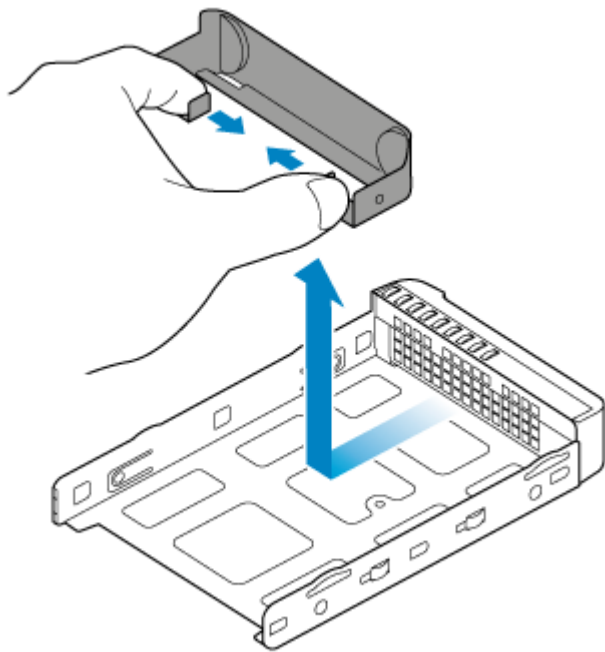
i Important Info: Replace an existing or faulty drive with a drive of equal or greater capacity. When handling drives, make sure that they are placed (and stored) on a cushioned surface.

Note: Seagate hard drives are optimized for use with your 4-bay Rackmount NAS. See [Seagate NAS HDD](#) for further information.

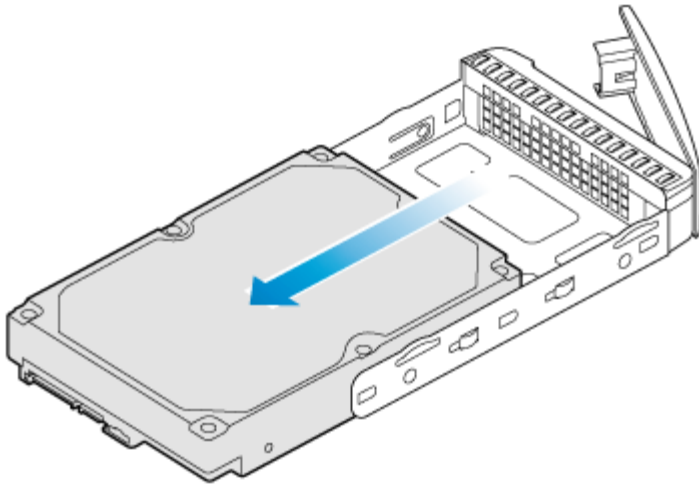
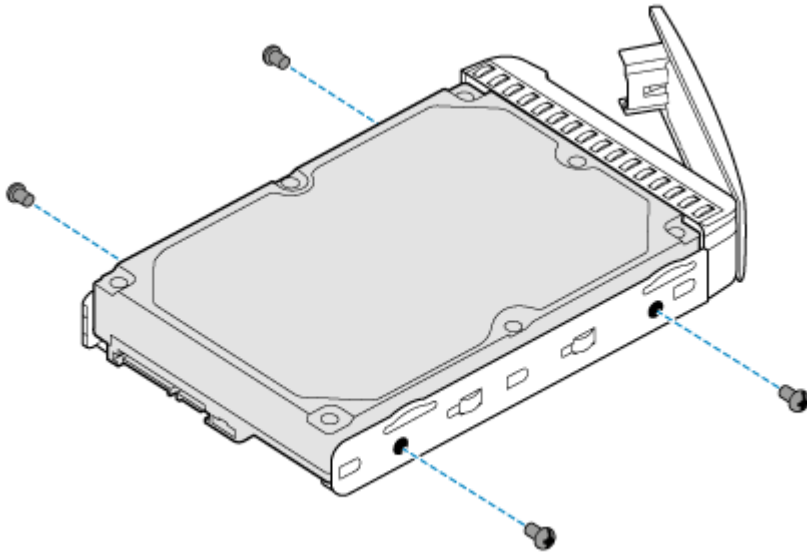
1. Push the disk's lock button to open the latch and remove the disk tray.



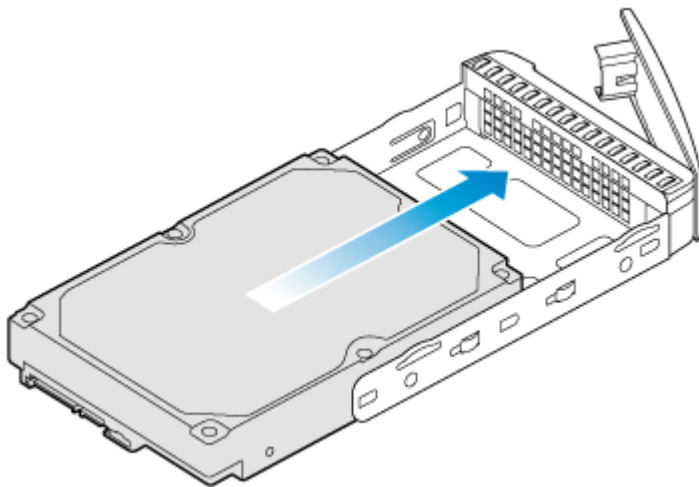
2. If the disk tray is empty, remove the placeholder.



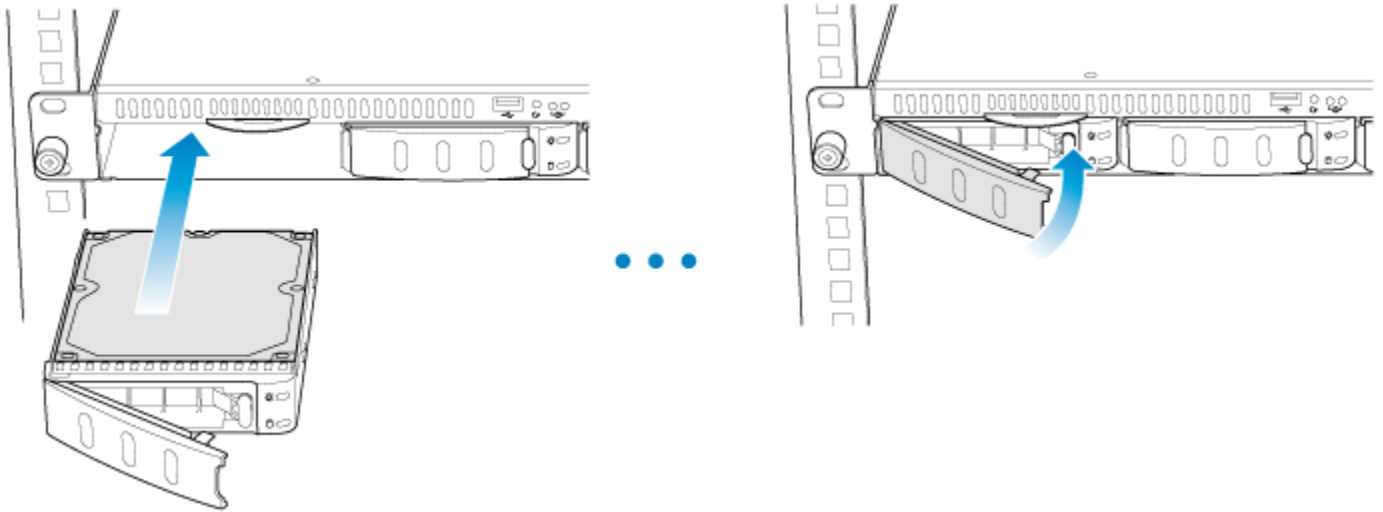
3. If the tray has a disk, unfasten the four screws and remove it from the tray.



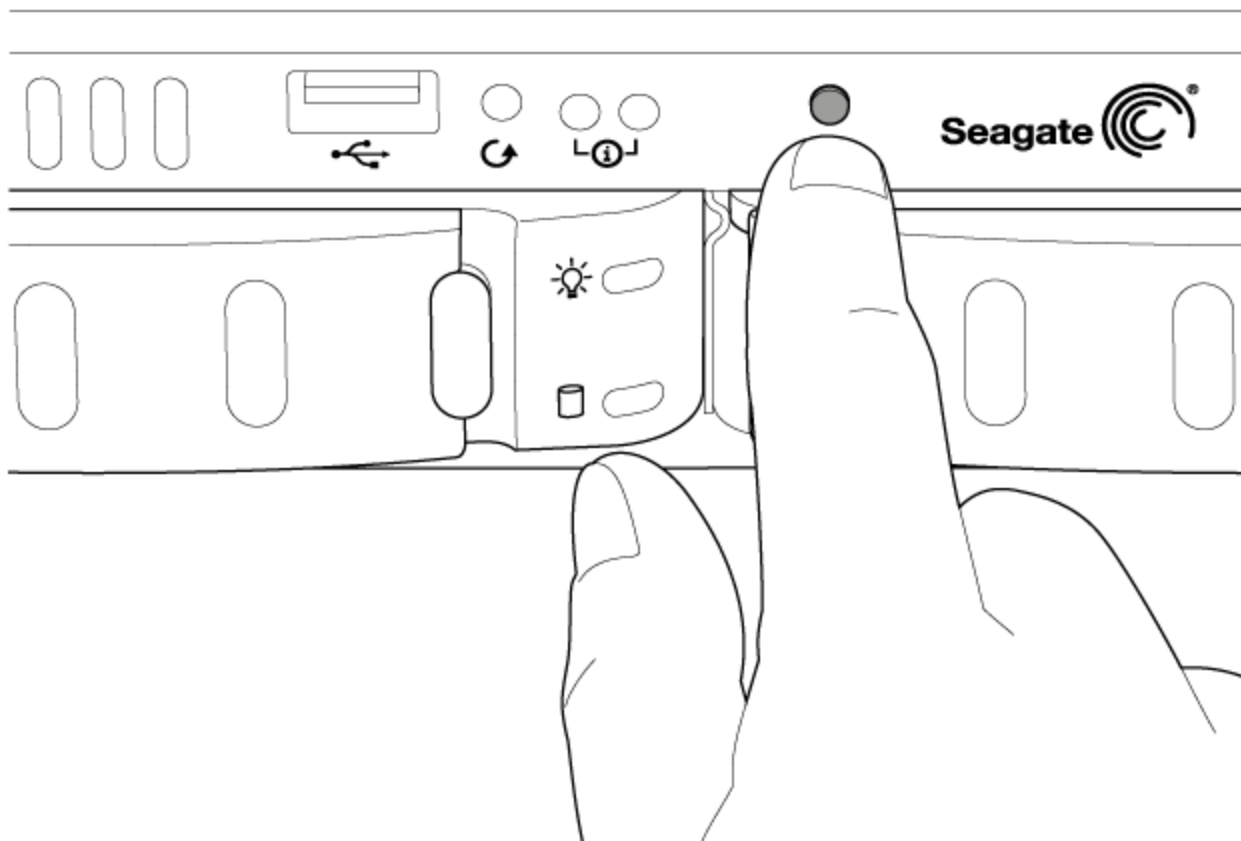
4. Insert the new drive into the tray. Confirm that the SATA connection is at the rear of the tray.



5. Fasten the drive to the tray using the four screws.
6. Insert the disk into the empty NAS bay. Push the tray into the bay as far as it will go before closing the handle.



7. If necessary, power on the NAS.

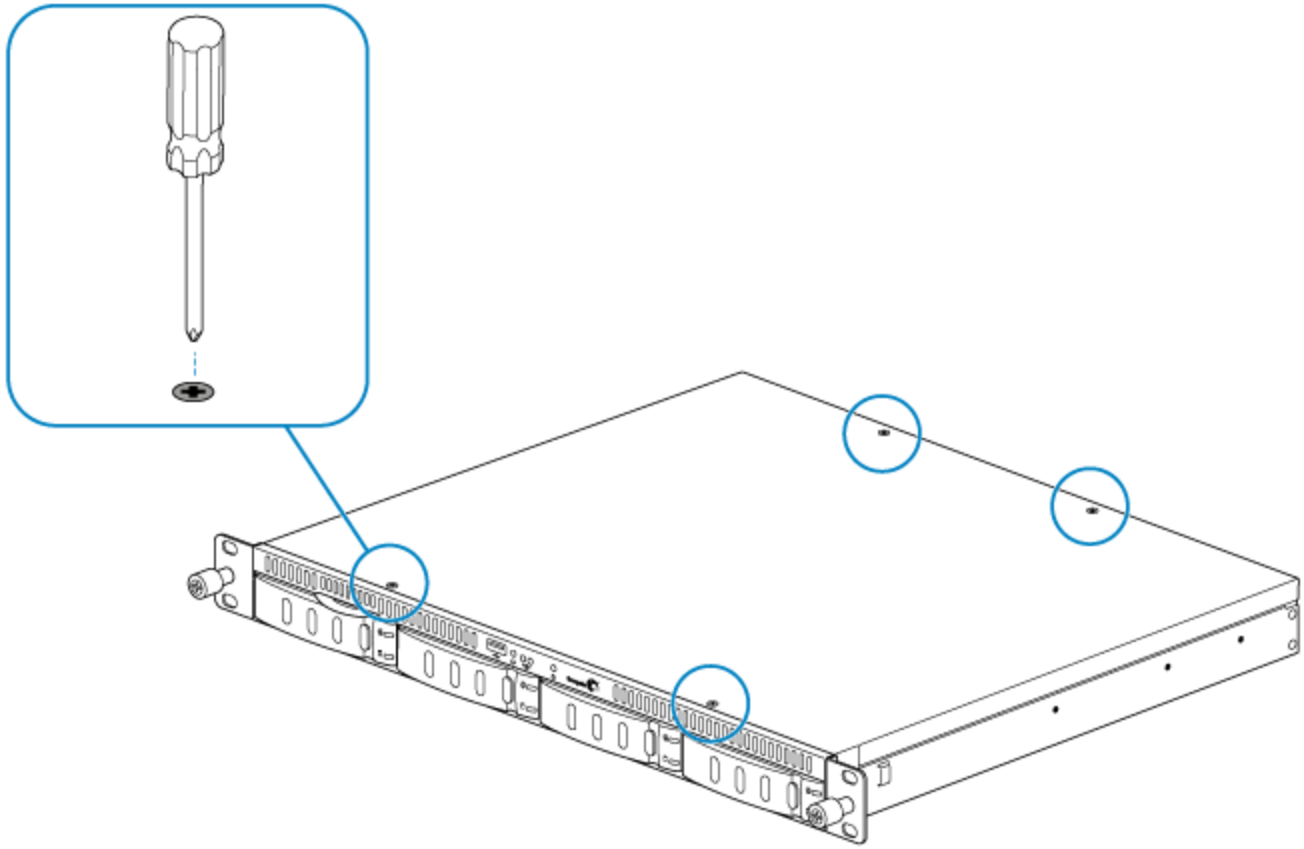


8. Manage the new storage using NAS OS.

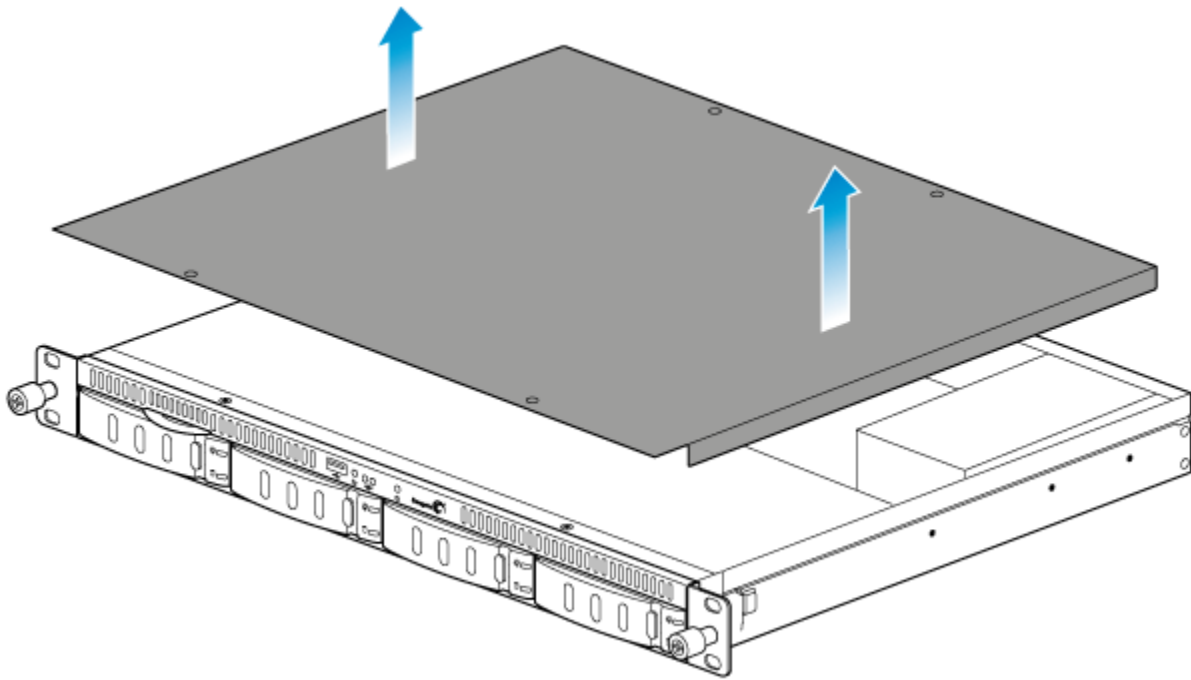
Chassis

Removing the front cover

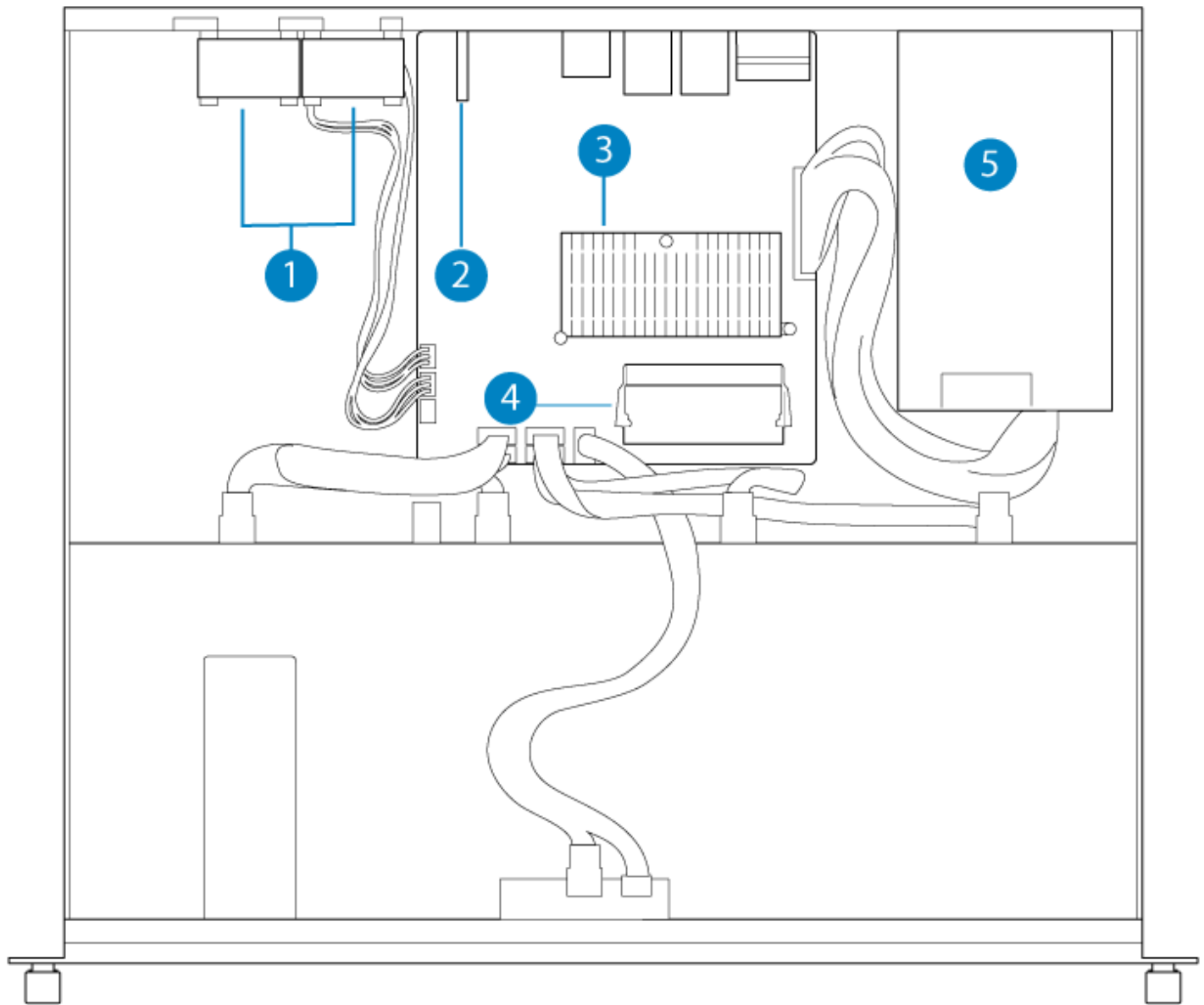
1. Power down the NAS using NAS OS and unplug the power supply. Wait for the components to completely cool before moving to Step 2.
2. Unfasten the four screws holding the top cover into place.



3. Lift the cover and remove it from the NAS.



Chassis information



1. Fans (x2)
2. Battery
3. Central Processing Unit (CPU)
4. Memory (RAM)
5. Power supply

Installed components

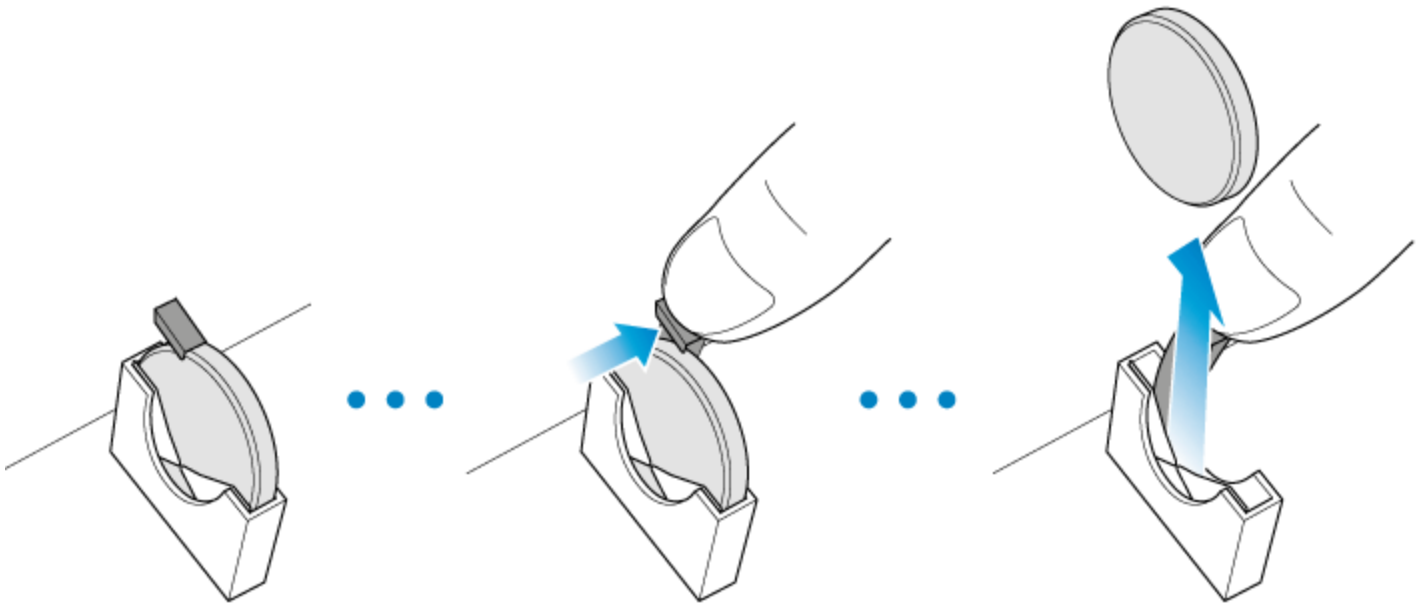
The chassis is shipped with the following:

- Battery: 3V Lithium Battery (CR2032)
- CPU: Dual-core 2.13GHz Intel® 64-bit Atom®
- RAM: 2GB DDR3 SO-DIMM 1333MHz
- Power supply: 100 to 240 VAC, 50 to 60 Hz

Replacing the battery

IMPORTANT: Use caution when replacing the battery:

- There is a strong risk of explosion if the battery is replaced by an incorrect type.
- Dispose of used batteries according to the applicable laws for your region.



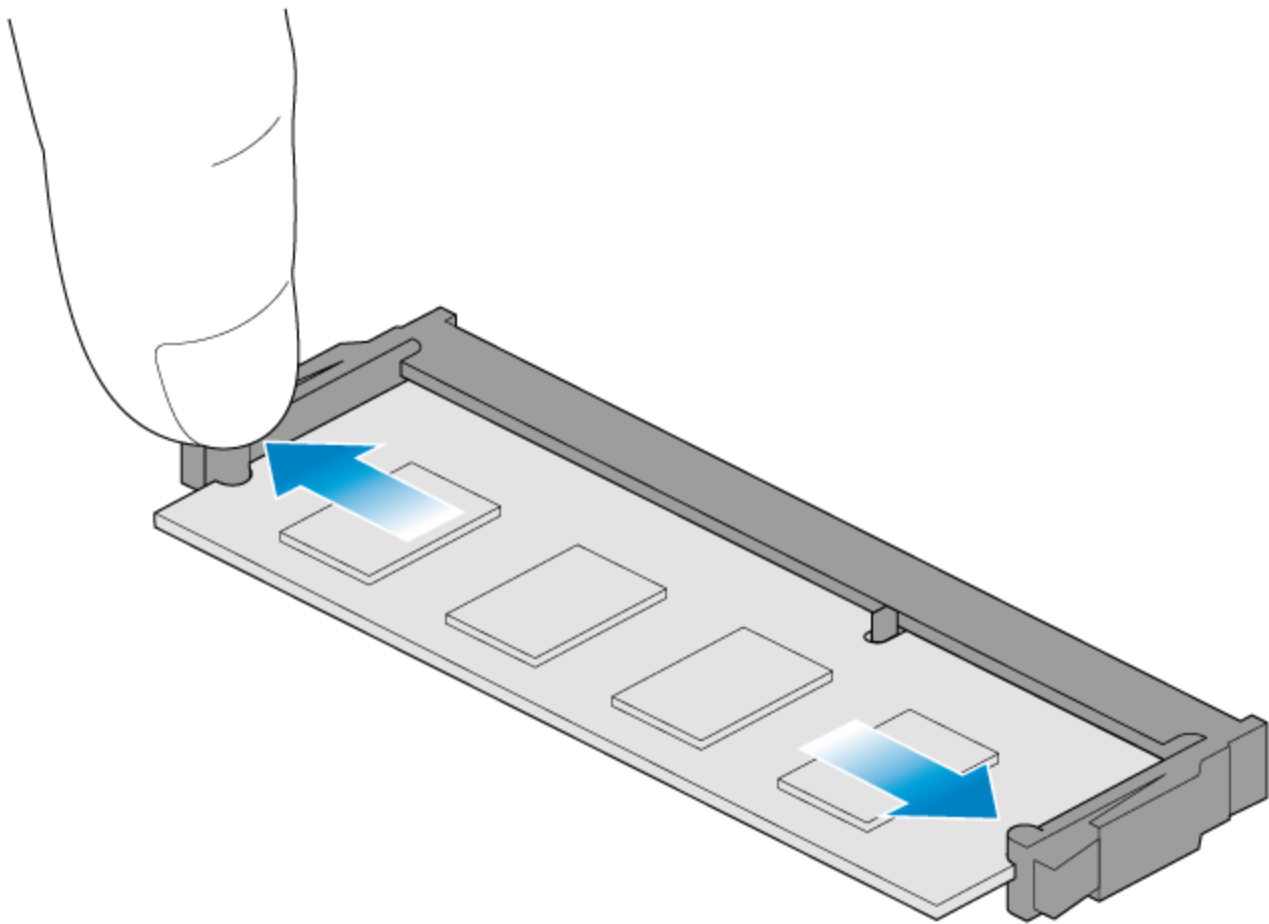
1. Power down the system, unplug the power supply, and remove the cover as described above.
2. Locate the battery.
3. Use one hand to press the battery's retaining clip away from the battery, then use the other hand to lift the battery from its socket.
4. Insert the replacement battery into the battery socket.

Replacing the DIMM (RAM)

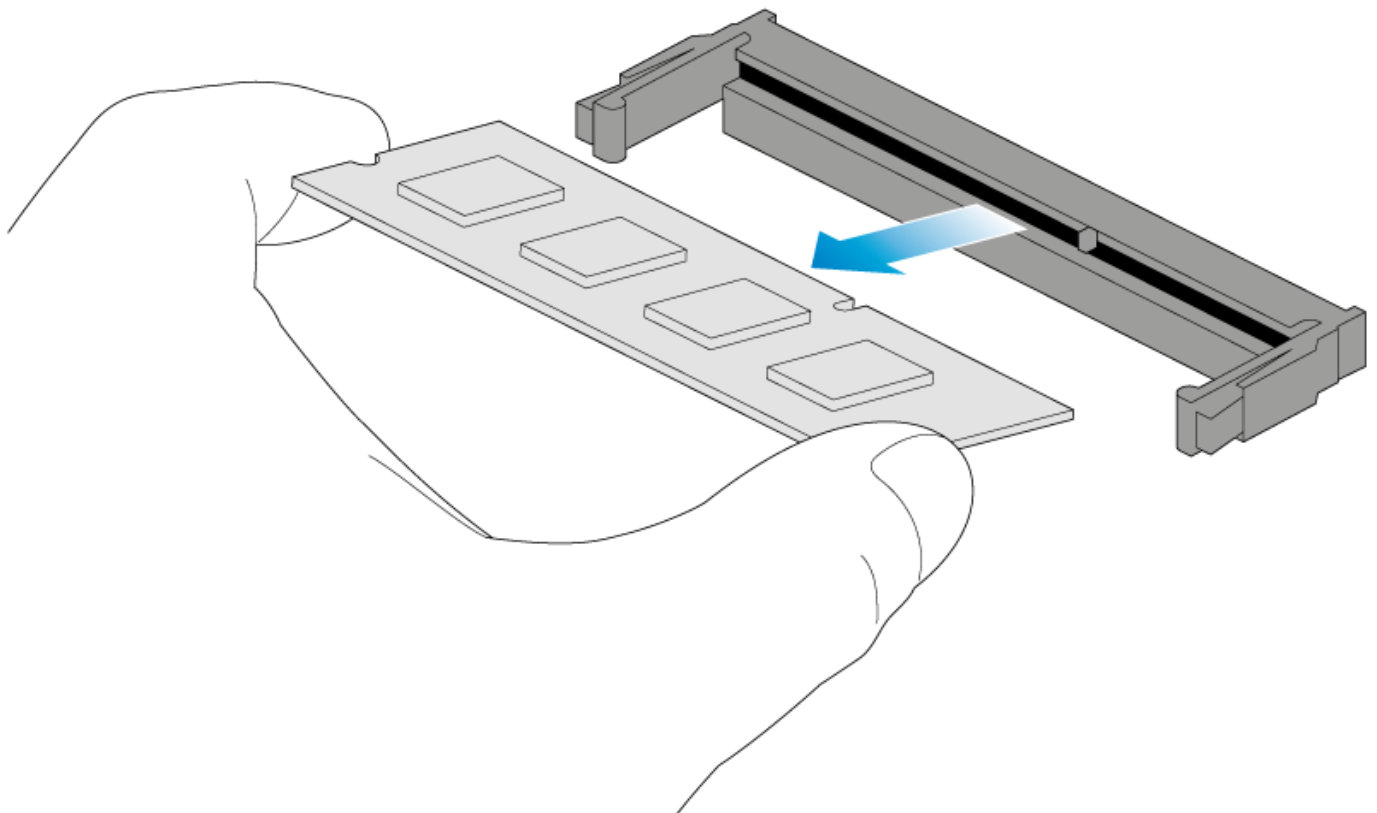
IMPORTANT: Use caution when replacing the DIMM:

- Make certain to use the correct type.
- Open the retaining clips with care.
- Avoid damaging the socket on the motherboard and the DIMM's notch.

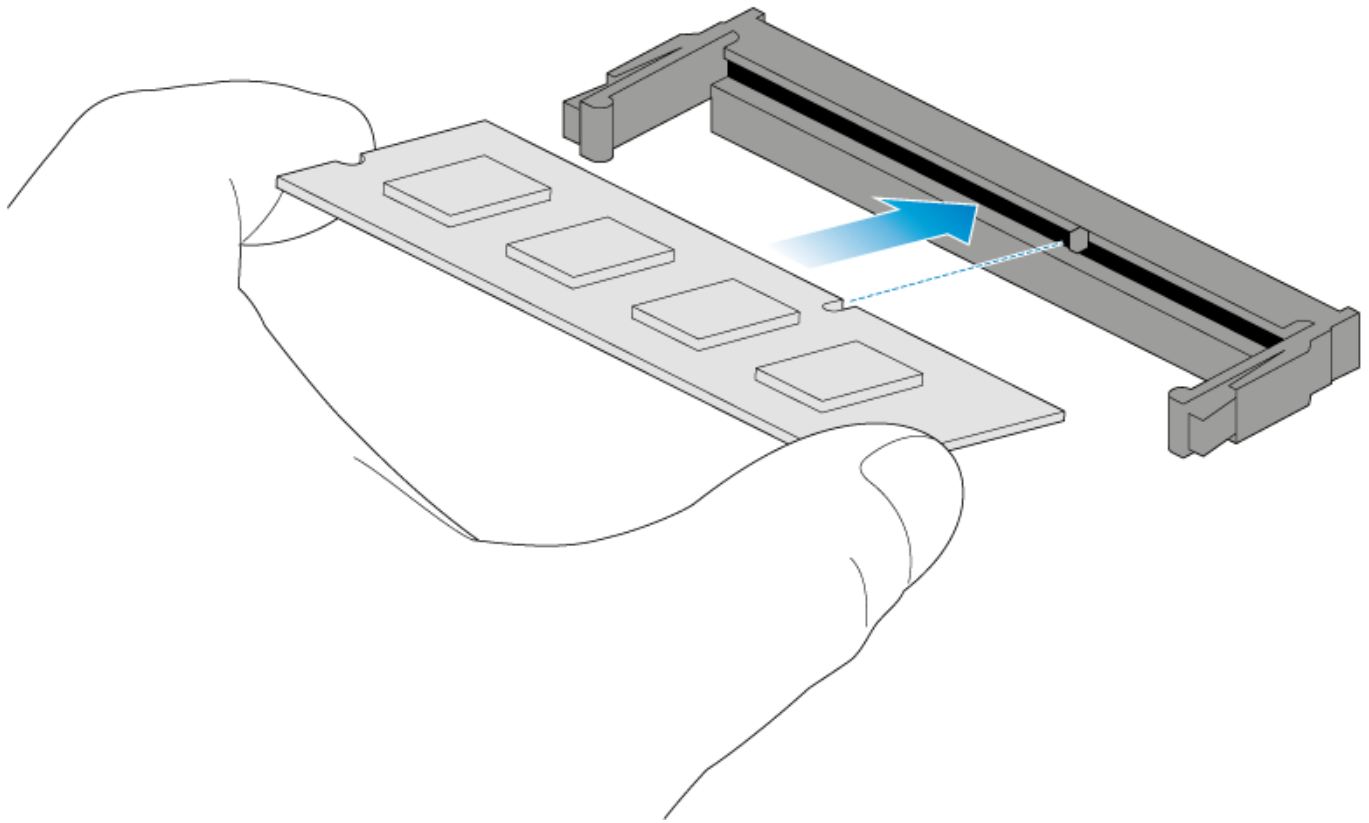
1. Power down the system, unplug the power supply, and remove the cover as described above.
2. Unhook each of the retaining clips outward to unlock the DIMM from its socket. The DIMM will pop up.



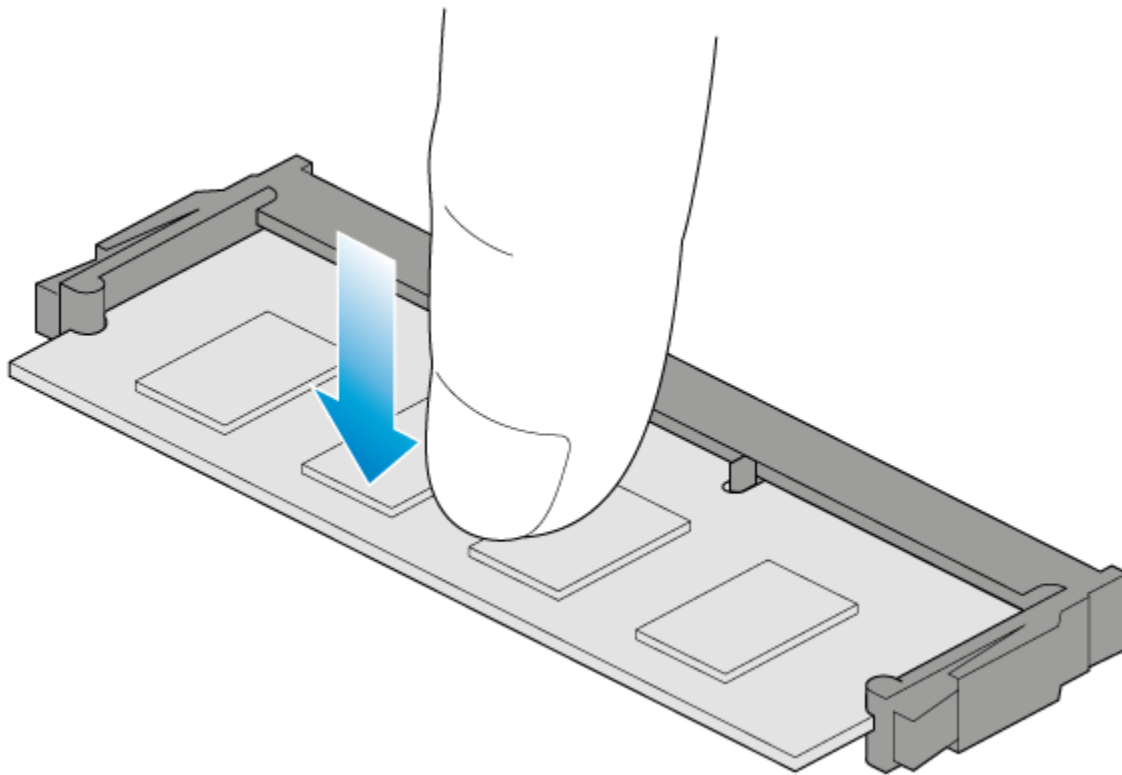
3. Hold the DIMM on its two ends and lift it from the socket.



4. At a vertical angle, align the replacement DIMM on the slot's socket. Make certain that the edge of the DIMM's notch matches the key for the socket.



5. Gently push the DIMM into the socket. The DIMM is properly inserted when you hear the retaining clips snap into place.



Getting Help

If you are having issues with your product, first consult the troubleshooting topics below. If the problem persists, refer to <http://www.seagate.com/support/warranty-and-replacements/limited-consumer-warranty/> to understand your warranty rights and responsibilities.



Note: Seagate is dedicated to providing high quality products that enrich the lives of our customers. To help Seagate offer the best customer support, we encourage you to create an account and register your product at [Seagate Product Registration](#). You can give us important feedback as well as receive updated information on your Seagate device.

Troubleshooting topics

The 4-bay Rackmount NAS will not turn on.

Q: Can you confirm that the NAS is receiving power?

A: Make sure the power cord is properly connected, then push the power button until the status LED turns on.

Q: Have you connected a USB storage device?

A: The NAS may be attempting to boot from it. Unplug the device and try to reboot the system.

Q: Does the motherboard battery need to be replaced?

A: A non-functioning motherboard battery could prevent the system from booting. To check if this is the problem, connect a monitor, mouse, and keyboard to the NAS and reboot. If the display reads “CMOS Checksum Error”, the motherboard battery may be the cause of the problem. Contact LaCie support for confirmation and help.

Q: Is there a problem with the power supply?

A: Connect a monitor, mouse, and keyboard, and turn your product on. If you don't see anything on the monitor and the LEDs remain off, the NAS's power supply unit may be damaged. Contact Seagate support if you believe that the power supply has failed.

The 4-bay Rackmount NAS turns off when I connect a USB device.

Q: Did the product turn off as soon as the USB device and the 4-bay Rackmount NAS's USB port came into

contact?

A: The USB device may have caused a short circuit. Unplug any USB devices you have connected since the failure and reboot the product.

The 4-bay Rackmount NAS is unresponsive.

Q: Have you tried to restart the system?

A: Shut down the NAS using NAS OS or, if you cannot access the NAS OS administration tool, push the front button. If nothing happens after a few minutes, then force the NAS to turn off by pressing and holding the front button for more than four seconds. Once off, restart the product by pushing and immediately releasing the front button. Note that this is not recommended under standard conditions as it may result in data loss.

The 4-bay Rackmount NAS is overheating.

Q: Is the ambient temperature too high? Is the air output blocked? Are several fans malfunctioning?

A: If the ambient temperature is below 95°F/35°C and the fan output is cleared, you may have one or several malfunctioning fans. Contact Seagate technical support for confirmation.

I am not certain if the NAS firmware should be updated.

Q: Where can I check the firmware version?

A: Navigate to the NAS OS Support page and review **Firmware**.

Q: How do I know if the firmware is the latest version?

A: The NAS OS automatically checks for updates and will prompt you when new firmware is available.