

SGI® InfiniteStorage NEXIS 1000
Quick Start Guide

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Contents

NAS Gateway Hardware Overview	2
NAS Data Manager Rear Components	2
RAID Controller/Drive Enclosure Example	3
Drive Expansion Enclosure Example	4
Powering On an SGI InfiniteStorage NEXIS 1000 System	4
Software Configuration	6
SGI InfiniteStorage NEXIS 1000 Gateway Hardware Setup	8
Rack Mounting Instructions	9
Mounting the NAS Gateway Enclosure	9
Resetting the Rail Pin Adapters to Use Round Mounting Holes	9
Preparing the Rack and Gateway	10
Mounting the Slide Rails	11
Installing the Gateway on the Slide Rails	11
Contacting SGI	14

SGI InfiniteStorage NEXIS 1000 Quick Start

This document contains basic setup information for an SGI InfiniteStorage NEXIS 1000 gateway system. If you received your NAS system already racked and cabled you probably will use only the information in the first three sub-sections of this guide. Professional assistance with the setup of your new NAS solution is available through SGI Managed Services. If you ordered such service, please contact the SGI Customer Support Center to schedule the on-site visit. If you are performing your own setup of the SGI InfiniteStorage Appliance Manager software, see “Software Configuration” on page 6. End-users or administrators who are rack-mounting systems on site should review the information in “SGI InfiniteStorage NEXIS 1000 Gateway Hardware Setup” on page 8. Reference the documentation (see examples) that comes with the SGI RAID storage you choose for use with your NAS gateway. Keep this document for future reference.

For more information on software and RAID storage hardware used with the SGI InfiniteStorage NEXIS 1000 gateway, see:

- *SGI InfiniteStorage Appliance Manager User's Guide* (P/N 007-4699-005 or later)
- *SGI Altix XE240 System User's Guide* (P/N 007-4873-00x)
- *SGI InfiniteStorage 220 Initial Setup Guide* (P/N 007-4938-00x)
- *SGI InfiniteStorage S330 RAID User's Guide* (P/N 007-4798-00x)
- *SGI InfiniteStorage 350 Quick Start Guide* (P/N 007-4932-00x)
- *SGI InfiniteStorage 4000 RAID User's Guide* (P/N 007-4834-00x)
- *SGI InfiniteStorage 4500 RAID User's Guide* (P/N 007-4843-00x)
- *SGI InfiniteStorage TP9300 and TP9300S RAID User's Guide* (P/N 007-4644-00x)
- *SGI InfiniteStorage TP9500 and TP9700 RAID User's Guide* (P/N 007-4747-00x)

These documents can be accessed and downloaded from the SGI publications library at:

<http://docs.sgi.com>

Various formats are available. This library contains the most recent and most comprehensive set of online books, release notes, man pages, and other information related to SGI products.

This document contains the following major topics:

- “NAS Gateway Hardware Overview” on page 2
- “Powering On an SGI InfiniteStorage NEXIS 1000 System” on page 4
- “Software Configuration” on page 6
- “SGI InfiniteStorage NEXIS 1000 Gateway Hardware Setup” on page 8
- “Contacting SGI” on page 14

NAS Gateway Hardware Overview

Depending on your NAS configuration, the system may come with Serial ATA (SATA) or Serial Attached SCSI (SAS) drives. The SGI InfiniteStorage NEXIS 1000 NAS gateway is a 2U compute and I/O enclosure that cables directly to the RAID controller or controllers in the primary drive enclosure.

NAS Data Manager Rear Components

Figure 1-1 shows the ports and indicators on the rear of a NAS gateway (Altix XE240). Table 1-1 calls out the component specifics on the back of the unit.

Table 1-1 NAS gateway rear panel components

Callout	Description	Callout	Description
A	Low-profile PCI option slots	I	USB connector
B	Full-height PCI option slots	J	USB connector
C	Upper power supply module	K	Video port
D	Top power connection	L	DB-9 serial connector
E	Bottom power connection	M	NIC 2
F	Lower power supply module	N	NIC 1
G	Optional server management NIC	O	RJ45 serial connector
H	Optional I/O module	P	PS2 keyboard/mouse connectors

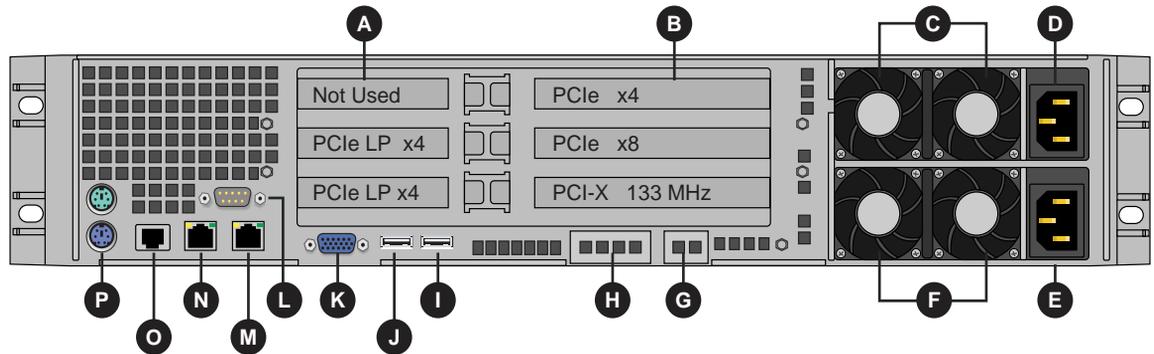


Figure 1-1 NAS Gateway Rear Panel Components

RAID Controller/Drive Enclosure Example

Your SGI InfiniteStorage NAS gateway supports a variety of SGI mass storage options as attached NAS units. The following example (Figure 1-2) shows an SGI InfiniteStorage 220 RAID controller/disk enclosure. For similar information on other SGI storage/controller units, see the documentation that comes with the SGI storage option you select.

Note that controller A (left side of enclosure) contains drive channel 1, while controller B (right side of enclosure) contains drive channel 2. Figure 1-2 shows the controller's input/output ports.

1. Connector not used in this configuration
2. Fibre channel data manager host ports
3. Expansion ports

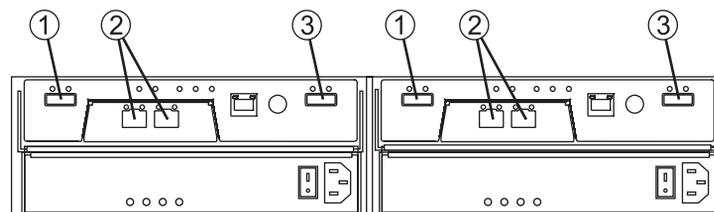


Figure 1-2 RAID Drive Enclosure Rear Panel Example (SAS Dual-Controller Shown)

Drive Expansion Enclosure Example

The drive expansion enclosure connects to the RAID expansion enclosure(s). The example in Figure 1-3 is an SGI InfiniteStorage 220 that uses serial-attached SCSI (SAS) cables (rather than fibre channel). Each RAID controller has one drive expansion connector (located on the far right of the controller). You can connect multiple optional drive expansion enclosures to your RAID controller/drive enclosure, see the documentation that comes with your SGI mass storage choice. InfiniteStorage 220 drive expansion modules (see example in Figure 1-3) use the following SAS connectors:

1. SAS in connector
2. SAS out connector

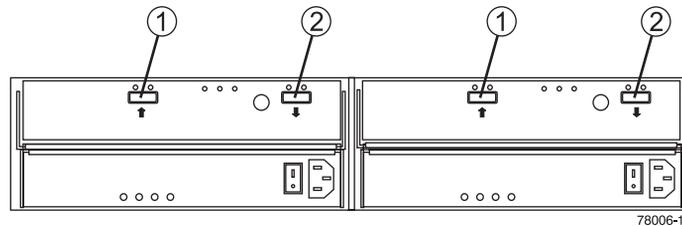


Figure 1-3 Drive Expansion Enclosure Rear Panel Example

Powering On an SGI InfiniteStorage NEXIS 1000 System

Plug your NAS system into a suitable power outlet(s), as in the example shown in Figure 1-4 (for racked chassis). Reference the applicable document (see the list on page 1) for the RAID storage you are using with your NAS gateway.

Refer to the *SGI InfiniteStorage 220 Initial Setup Guide* for a more detailed power-up description if you are using SGI InfiniteStorage 220 RAID units with your gateway system (as shown in the example).

Turn on the power to all connected drive enclosures before you turn on the RAID controller enclosure, turn on the data manager last. This action ensures that the controllers recognize each attached drive enclosure.

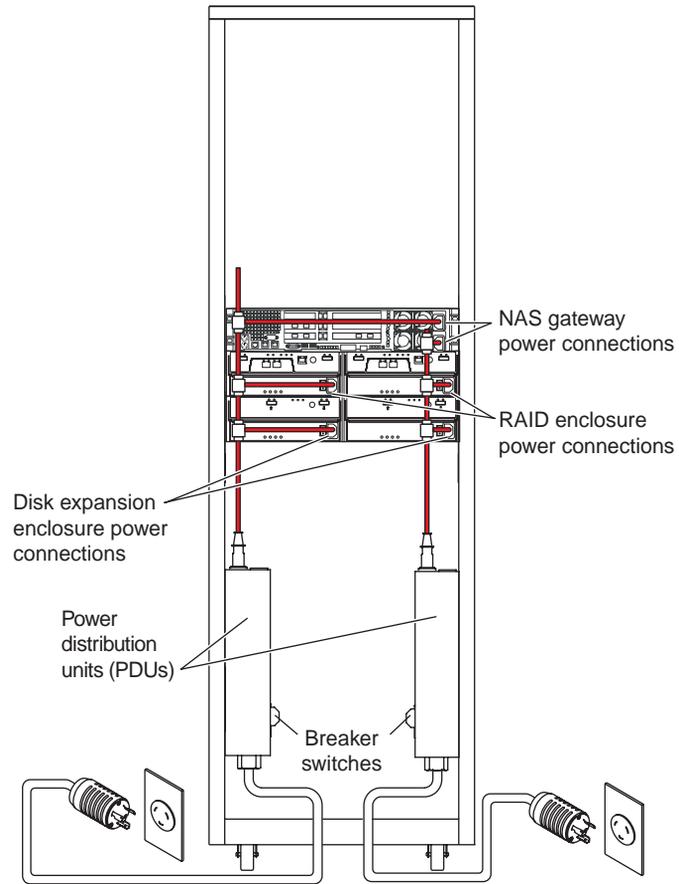


Figure 1-4 Connection Example of a Racked System to Power

Software Configuration

If your NAS system's hardware is configured and powered on, use the SGI InfiniteStorage Appliance Manager Setup Wizard to set up the initial software configuration of your SGI Data Manager appliance. Web browser Internet Explorer 6.0 or Mozilla Firefox 1.0 or later are required.

It should only be run after the hardware setup instructions have been completed and verified and the machine has been powered up. To run the wizard, connect a cross-over ethernet cable from a laptop or PC to the primary ethernet port on the 2U NAS Data Manager appliance. The cable plugs into the left-hand NIC port (NIC1) when looking at the rear of the unit, see Figure 1-5.

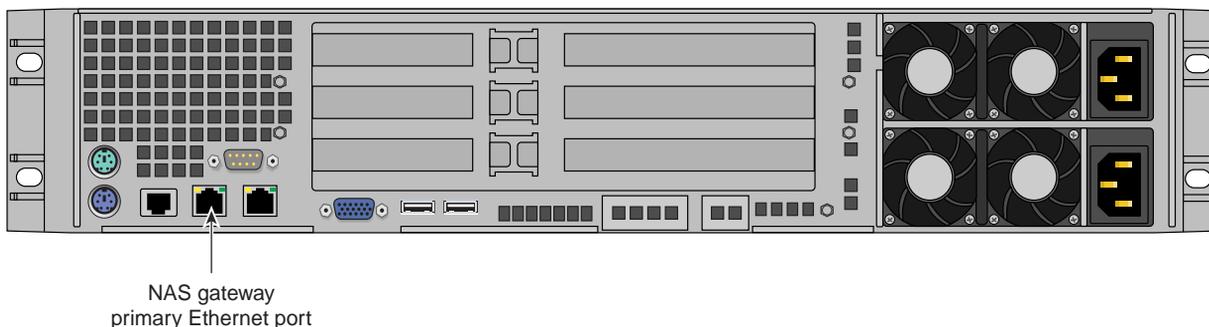


Figure 1-5 Primary Ethernet Connection to NAS Gateway

Then launch a web browser to the following URL:

<https://192.168.9.9:1178>

Note: You may need to temporarily reset the IP address of the laptop or PC to 192.168.9.1 for this to work correctly.

The setup wizard is intended to be easy to use and leads you through the initial system configuration steps. Figure 1-6 shows an example start screen. For more details, see the *SGI InfiniteStorage Appliance Manager User's Guide*, (P/N 007-4699-005 or later). Note that only revision five or later will have the applicable information for this NAS product. Once the software setup phase has completed, you must restart the SGI NAS system. Afterwards, you should remove the cross-over cable and plug the system into the local area network. Note that once the system has been restarted, you can monitor its performance, or change the software configuration by going to <https://your.server:1178/>.

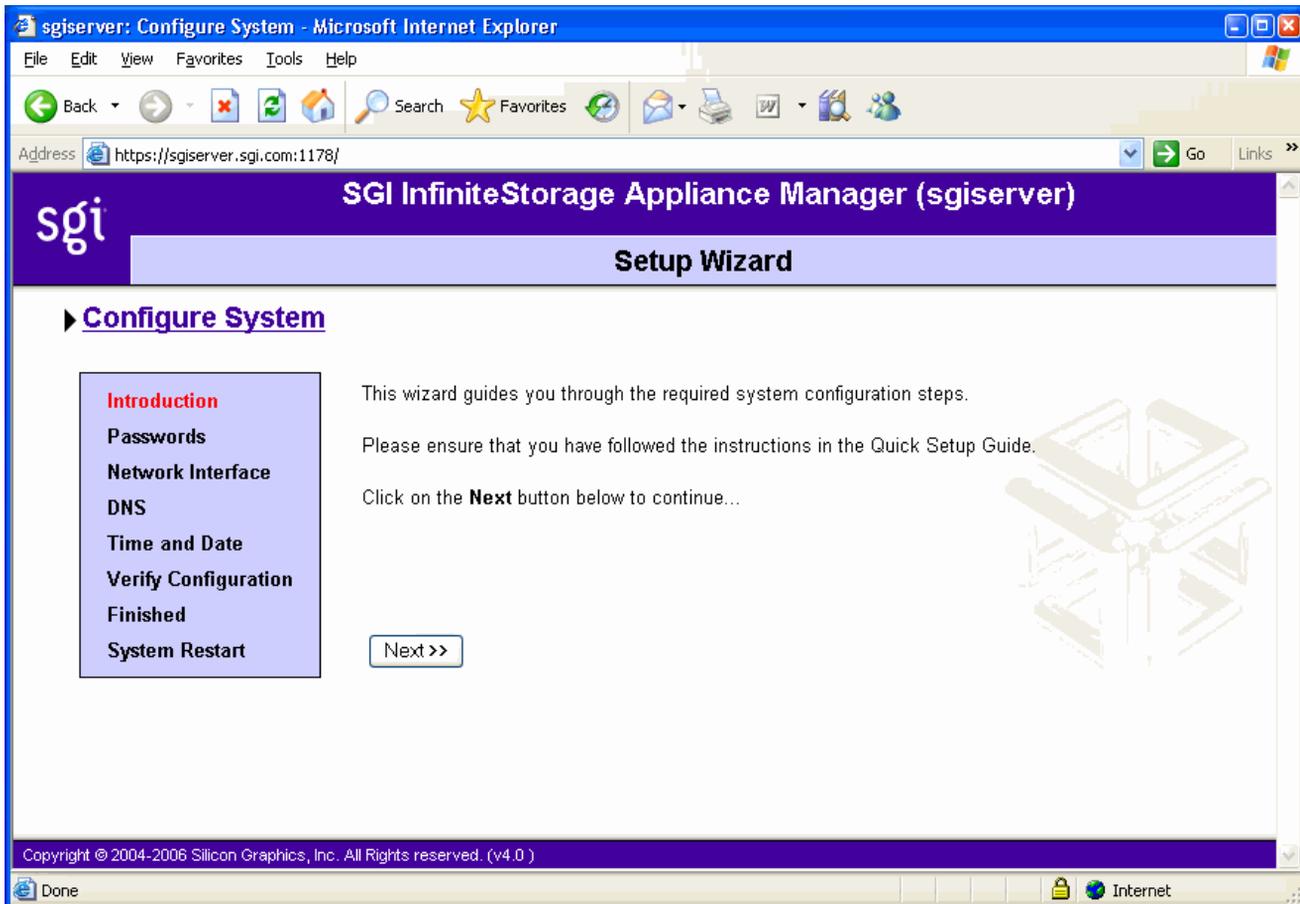


Figure 1-6 SGI InfiniteStorage Appliance Manager Start Screen Example

SGI InfiniteStorage NEXIS 1000 Gateway Hardware Setup

Depending on the options ordered, your SGI NAS gateway is a 2U compute/gateway, equipped with 2, 4, or 6 Fibre Channel ports capable of controlling a RAID controller/drive enclosure (housing one or two RAID controllers), and optional drive expansion enclosures.

Raid controller and drive expansion products supported with the NAS gateway include many current and recently sold SGI RAID storage products, such as:

- SGI InfiniteStorage 220
- SGI InfiniteStorage 330
- SGI InfiniteStorage 4000
- SGI InfiniteStorage 4500
- SGI InfiniteStorage TP9300
- SGI InfiniteStorage TP9500
- SGI InfiniteStorage TP9700

Systems that come pre-mounted in a rack from SGI in most cases only require booting and configuration of the NAS management software (see “Software Configuration” on page 6).

You may need to refer to the rack installation manual accompanying your system for guidelines on unpacking, moving, and placing a rack.

Some configurations can be ordered with no rack and would need to be mounted at the operation site.

“Rack Mounting Instructions” on page 9 provides generic information on mounting the 2U NAS gateway in a rack.

Important: Enclosures within a rack should always be placed in locations that keep the RAID controller enclosure and any expansion drive enclosures distributed below the gateway. In all cases it is safest to keep the majority of the weight in the bottom half of the rack.

Rack Mounting Instructions

If you have purchased a NAS gateway that has not been pre-mounted in a rack prior to delivery, use the generic instructions in this section. Note that while this information is applicable to many industry-standard racks, the mounting rails cannot be guaranteed to fit all makes. Check with your SGI sales or service representative if you need to order additional rails. Always install the enclosures in the lowest part of the rack possible (allowing for available space). Remember the:

- NAS gateway is installed in the upper position
- RAID controller enclosure installs directly below the 2U NAS gateway
- Disk expansion enclosure(s) are installed below the RAID controller enclosure

Mounting the NAS Gateway Enclosure

Support rails used with the NAS gateway enclosure in an industry-standard rack are not the same as those used in SGI NAS racks. The mounting rails are designed for use with most industry-standard racks, but may not fit all models. Multi-pin adapters at either end of each rail allow for mounting in racks with square or round mounting holes. Note that the rack rails ship with the adapters set for mounting in square rail holes, go on to the section “Preparing the Rack and Gateway” on page 10 if your rack has this type of rail.

Resetting the Rail Pin Adapters to Use Round Mounting Holes

Use the following instructions if you need to reset the rails for use with round mounting holes:

1. Remove the multi-pin adapter by first rotating the swivel lock into the “up” position.
2. Squeeze the adapter’s pins together and extract it from the end of the rail, see Figure 1-7 on page 10.
3. Reinsert the adapter with the round pins facing out and rotate the swivel lock back down.

Important: When resetting the rail pin adapters do not reverse the top and bottom of the adapter, otherwise the “swivel lock” will not have enough room to rotate back into place. This is because the bottom part of the rail pin adapter is larger (not the same thickness).

4. Repeat for all additional rail ends that need to be used with round mounting holes.

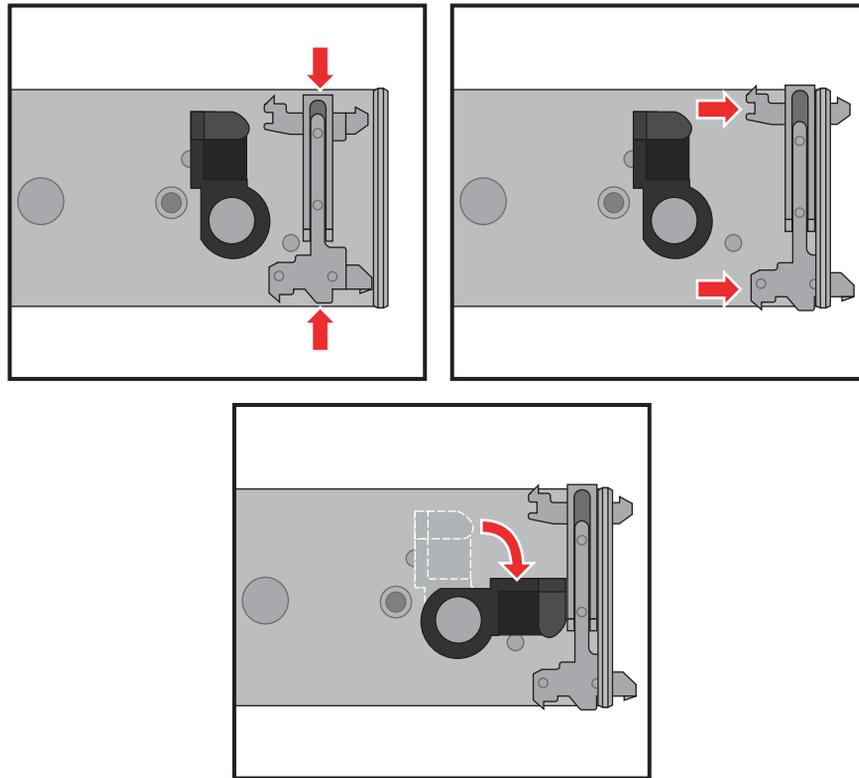


Figure 1-7 Reversing the Rail Pin Adapter

Preparing the Rack and Gateway

The following procedures and figures explain how to install the gateway support rails:

1. Make sure that the rack is in the final (operating) location and that it meets the following clearance requirements:
 - 76-cm (30 in) clearance in front of the cabinet
 - 61-cm (24 in) clearance behind the cabinet
2. Lower the stabilization feet on the rack so it does not move. Use any anti-tip extensions or other stabilization hardware available with the rack.
3. Remove the 2U gateway enclosure and all contents from the shipping carton.

Mounting the Slide Rails

Position and secure the support rails in the rack using the information in the following steps and Figure 1-9 on page 13.

1. Determine the vertical position within the rack where the rails will be mounted taking into consideration the gateway uses 2U of vertical space on the rack rail. The top-most mounting hole for each 1U of space is often marked by a small hole or other mark on the rail.

Important: If the rails are not mounted in holes that are vertically aligned from front to back, the rail may be damaged and the mounting will not be secure.

2. Noting the proper hole positions, squeeze the multi-pin adapter mounting pins together at one end of the slide rail and insert them into the holes in the rack's mounting rail.

Tip: When installing the rail mount into the rack, it is much easier to first insert the lower pin of the rail pin adapter in the selected hole. Then squeeze the adapter pin by pushing it down from the top to insert it in the upper selected rack rail hole.

3. Ensure that the slide rail is level and repeat the procedure at the opposite end.
4. Fully extend the rail assembly until the extension lock is revealed.
5. Press the slide extension release levers and move the slide rail in and out to check for proper functionality; if any binding is noted recheck the mounting positions of the rail.
6. Repeat these steps for the slide rail on the opposite side of the rack while ensuring that it is aligned exactly with the existing slide rail.

Installing the Gateway on the Slide Rails

Use the following instructions to mount the gateway on the slide rails and install it in the rack:

1. Extend both slide rails into the fully extended (locked) position.
2. The rail system is now ready to receive the gateway chassis.

Important: Lifting and placing the gateway chassis onto the rails is a two-person job. If needed, use an appropriate lifting device.

3. Using two people, align and insert the gateway's mounting studs into the component mounting channels on the two slide rails, see Figure 1-8 for an example.

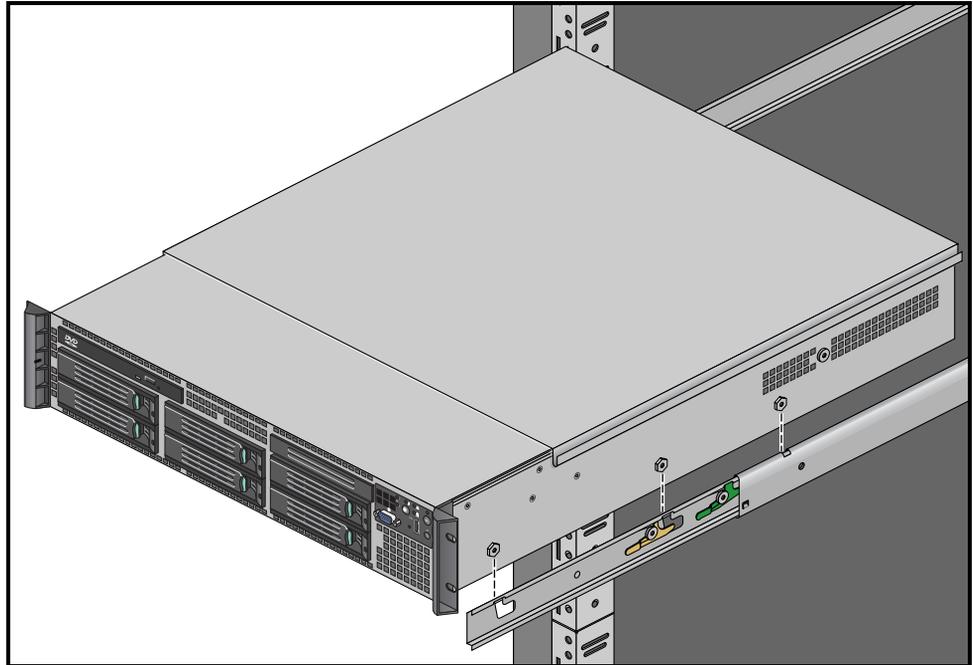


Figure 1-8 NAS Gateway Slide Rail Mounting Stud Positions

4. Place the gateway's mounting studs in the mounting channels of both rails until they are fully seated.

Note: The release levers on each slide rail should pivot out of the way and then snap back into place when the mounting studs are fully seated.

5. Confirm that all the gateway's mounting studs are correctly in place on the slide rails (see Figure 1-9 on page 13 for an example), before sliding the unit into the rack.
6. Press in both the left and right slide extension release levers and slowly push the gateway inward until the unit is fully locked in place and the chassis handles are against the front posts.

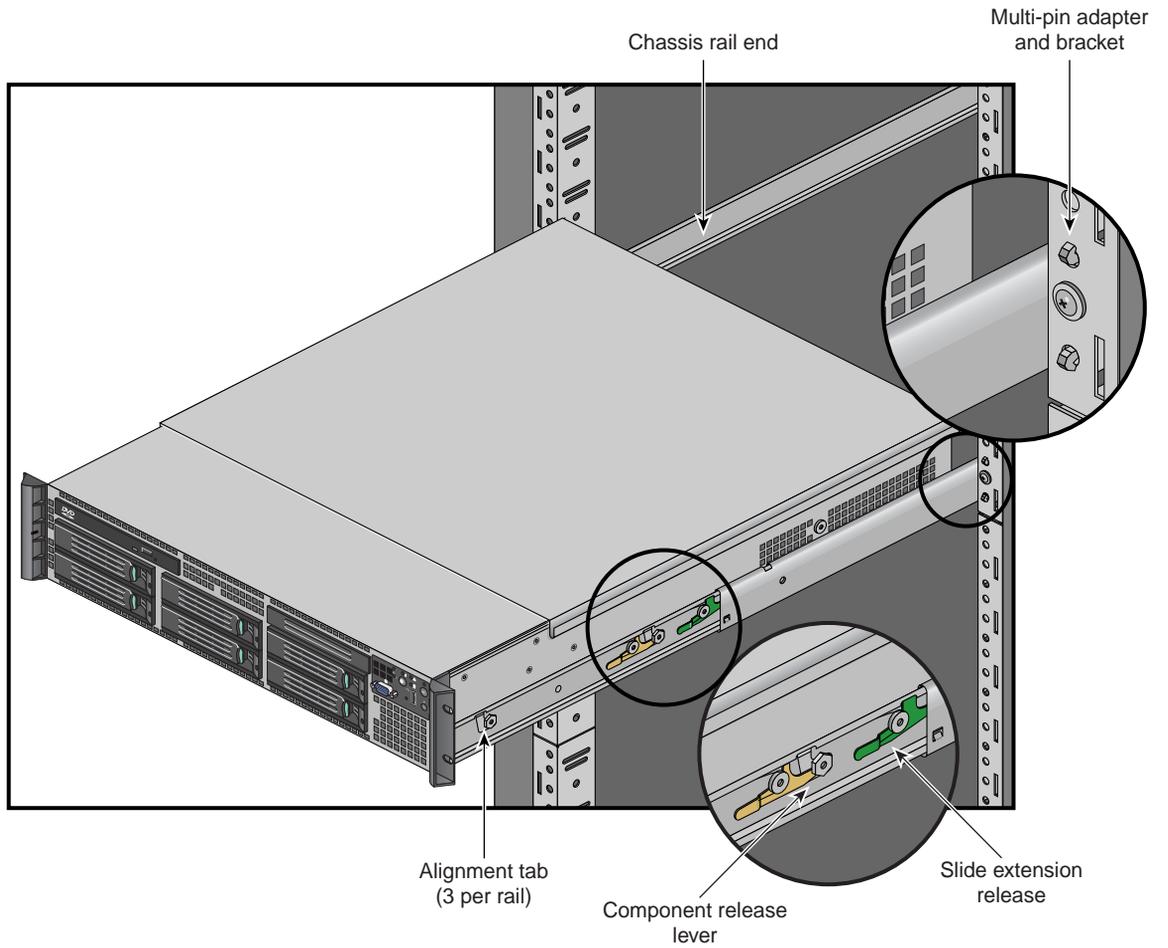


Figure 1-9 NAS Gateway Slide Rails

Contacting SGI

To contact the SGI Customer Service Center, call 1-800-800-4SGI, or visit <http://www.sgi.com/support/customerservice.html>.

From outside the United States contact your local SGI sales office.

For more information on SGI's available storage products, see: <http://www.sgi.com/storage>

To reach SGI for other purposes, use the following contact information:

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