

TruCluster Available Server

Installation/Owner's Guide

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Preface

Overview

This guide provides the information necessary to install the TruCluster Available Server system. Information concerning individual devices used in this system is contained in other documents as referred to in this guide.

REMINDER

For ease of reference in the remainder of this guide, the TruCluster Available Server system will be referred to as the TCAS system.

Intended Audience

The instructions in this guide are for Digital Customer Services or other Digital qualified service personnel installing a TCAS system.

Structure of This Document

This document is organized as follows:

Chapter 1, Introduction — Provides a general description and specifications for the TCAS system.

Chapter 2, Site Preparation — Provides information concerning site preparation.

Chapter 3, Unpacking the Shipment — Describes how to unpack and check the shipment.

Chapter 4, Installing the TCAS System — Describes how to install the TCAS system.

Appendix A, Additional Installation Information — Provides information for removing and replacing the rear door, removing and replacing the front door latch bracket, removing and replacing the front filler panels, adjusting the stabilizer bar, and using the interlock system.

Related Documents

Refer to the following documents for more information:

<i>Site Environmental Preparation Guide</i>	EK-CSEPG-MA
<i>H9A10 (600 mm) Cabinet Installation/Owner's Guide</i>	EK-H9A10-IN
<i>AlphaServer 1000 Rackmount Installation Information</i>	EK-RMALP-IN
<i>AlphaServer 1000 Rackmount Owner's Guide</i>	EK-RMALP-OG
<i>AlphaServer 2100 RM Series Installation/Owner's Guide</i>	EK-KN450-RM
<i>H9A15 Cabinet Installation/Owner's Guide</i>	EK-H9A15-IN
<i>TruCluster Hardware Configuration</i>	AA-QL8LA-TE
<i>AlphaServer 2100A RM Series Installation/Owner's Guide</i>	EK-2100A-RM
<i>AlphaServer 8200 RM System Installation/Owner's Guide</i>	EK-R8200-IN
<i>AlphaServer 8400 RM System Installation/Owner's Guide</i>	EK-R8400-IN
<i>PCI-RM Memory Channel User's Guide</i>	EK-PCIRM-UG
<i>BA350 Modular Storage Shelf User's Guide</i>	EK-BA350-UG
<i>StorageWorks 16-Bit Shelf Solutions BA356-SB User's Guide</i>	EK-BA356-UG
<i>HS Family of Array Controllers User's Guide</i>	EK-HSFAM-UG

Notes, Cautions, and Warnings

Where notes, cautions, and warnings are used in this document, specific types of information are highlighted as follows:

Note — Calls attention to any item of information that may be of special importance to the reader.

Caution — Contains essential information to avoid damage to the equipment.

Warning — Contains essential information for the safety of the user.

1

Introduction

1.1 Overview

This chapter provides a general description and specifications of the TruCluster Available Server system.

1.2 TCAS Systems

The TCAS systems are groups of high-performance systems that provide improved data availability and application up time. They are Alpha based systems interconnected with Ethernet and shared storage (optional memory interconnects may be used in specific models). The factory-installed software provides flexible storage and network allocation and management.

Each TCAS system can be configured in one or more cabinets with a choice of cabinet heights, depending on the configuration.

The TCAS system contains one or more AlphaServer series systems with space available for the installation of optional BA350 or BA356 storage shelves.

Introduction

1.2.1 AlphaServer RM Series Cluster

The AlphaServer RM series cluster are high-performance systems running the Digital UNIX operating system, and are packaged to be flexible and compact.

In an AlphaServer RM cluster, all systems contain the following:

- One or more CPU modules, depending on the system platform
- One or more memory modules, depending on the system platform
- One or more network devices
- One standard I/O card, and either PCI slots or a PCI chassis
- Internal or external local storage and load media (CD), not shared
- One or more shared SCSI rails using KZPSA-BB controllers connected to either an HSZ40 RAID array or disk shelf (BA356) via a DWZZx converter, depending on the amount of shared storage and RAID levels
- Either a graphics or terminal console, depending on the system platform

Note

An optional graphics switch may be used for graphics-capable systems.

- One or more backup devices

In addition, some systems will be required to have one or more memory channel PCI modules connected to each other or to a memory channel hub.

See the user's guide for specific machine and device information. Also, see the *TruCluster Hardware Configuration* for specific hardware and firmware revisions, and interconnect information.

1.2.2 Installed Software

Table 1–1 contains a list of the factory-installed software that comes with the TCAS system.

Table 1–1 Factory-Installed Software

Product Name	Description
Digital UNIX	The operating system.
Either:	
DECsafe Available Server for Digital UNIX	Reduces down time due to system hardware or software failures by providing multihost access to SCSI disks and a generic failover mechanism for network-based services and applications
or	
TruCluster	Includes memory channel driver to increase access time between systems and provide interprocessor communication.
POLYCENTER Advanced File System Utilities for Digital UNIX	A layered product consisting of several management utilities that extend the capabilities of the POLYCENTER Advanced File System.
Logical Storage Manager (LSM)	Allows data spanning across physical disks by creating file systems that span multiple disks to improve performance.

Introduction

1.3 TCAS System Specifications

This section describes the physical, environmental, and electrical specifications of the TCAS system. Table 1–2 shows the specifications for the H9A10 cabinet and Table 1–3 shows the specifications for the H9A15 cabinet.

Table 1–2 H9A10 Cabinet Specifications

Specification	Value
Physical	
Height, overall	170.0 cm (66.9 in.)
Width, overall	60.0 cm (23.6 in.)
Depth, overall	87.4 cm (34.0 in.)
Maximum vertical rackmounting space	155.0 cm (metric RETMA ¹) 59.5 in. (English RETMA ²)
Maximum vertical rackmounting space (with power distribution units installed)	153.5 cm (metric RETMA ¹) 54.25 in. (English RETMA ²)
Horizontal rack width	Standard 48.26-cm (19-in.) EIA rail spacing ³
Weight	
- Cabinet with two power distribution units	126 kg (280 lb)
- Cabinet with two power distribution units plus packing material	159.3 kg (354 lb)
- Fully configured (filled) cabinet	Up to 576 kg (1,280 lb)
- Fully configured (filled) cabinet plus packing material	Up to 609.3 kg (1,354 lb)
Casters, swivel, nonlocking:	
Diameter:	7.62 cm (3 in.)
Maximum capacity:	225 kg (500 lb)
Casters, fixed, nonlocking:	
Diameter:	7.62 cm (3 in.)
Maximum capacity:	225 kg (500 lb)
Enclosure finish	Painted Digital standard light gray

¹Refers to the cabinet version that has the rail-hole pattern compliant with the metric RETMA standard.

²Refers to the cabinet version that has the rail-hole pattern compliant with the English RETMA standard.

³Depending on the cabinet model ordered, the rail-hole pattern may be compliant with either the English RETMA or the metric RETMA standard.

(continued on next page)

Table 1–2 (Cont.) H9A10 Cabinet Specifications

Specification	Value
Environmental	
Temperature	
Operating	10°C (50°F) to 35°C (95°F)
Nonoperating	-40°C (-40°F) to 66°C (151°F)
Relative Humidity	
Operating	10% to 90%
Nonoperating	Up to 95%
Maximum wet bulb temperature	
Operating	28°C (82°F)
Nonoperating	32°C (90°F)
Electrical	
AC input voltage for H7600-AA power distribution unit	120 Vac, 80 to 135 Vac, single-phase, 3-wire
AC input voltage for H7600-AB power distribution unit	240 Vac, 180 to 264 Vac, single-phase, 3-wire
AC load	24 A maximum, 16 A typical per cord
Input line frequency range	47 to 63 Hz
Input power at full load	3,450 W maximum, 2,300 W typical per cord
Input power at no load	10 W maximum per cord
Power cord	Two (2), 120 Vac with 5-30P connectors or two (2), 240 Vac with 6-20P connectors

Introduction

Table 1–3 H9A15 Cabinet Specifications

Specification	Value
Physical	
Height, overall	199.9 cm (78.7 in.)
Width, overall	60.0 cm (23.6 in.)
Depth, overall	84.89 cm (33.42 in.) (Standard depth with front trim kit) 91.24 cm (35.92 in.) (Standard depth with front door kit) 103.6 cm (40.8 in.) (Extended depth with front trim kit) 109.95 cm (43.3 in.) (Extended depth with front door kit)
Maximum vertical rackmounting space	182.3 cm (71.75 in.)
Maximum vertical rackmounting space (with power distribution units installed)	173.4 cm (68.25 in.)
Horizontal rack width	Standard 48.26-cm (19-in.)
Weight	
- Standard depth cabinet with front trim kit and two power distribution units	124.74 kg (275 lb)
- Standard depth cabinet with front trim kit and two power distribution units plus packing material	150.14 kg (331 lb)
- Fully configured (filled) standard depth cabinet with front trim kit	Up to 578.34 kg (1,275 lb)
- Fully configured (filled) standard depth cabinet with front trim kit plus packing material	Up to 603.74 kg (1,331 lb)
- Standard depth cabinet with front door kit and two power distribution units	141.98 kg (313 lb)
- Standard depth cabinet with front door kit and two power distribution units plus packing material	167.38 kg (369 lb)
- Fully configured (filled) standard depth cabinet with front door kit	Up to 595.58 kg (1,313 lb)
- Fully configured (filled) standard depth cabinet with front door kit plus packing material	Up to 620.98 kg (1,369 lb)

(continued on next page)

Table 1–3 (Cont.) H9A15 Cabinet Specifications

Specification	Value
- Extended depth cabinet with front trim kit and two power distribution units	137 kg (302 lb)
- Extended depth cabinet with front trim kit and two power distribution units plus packing material	162.39 kg (358 lb)
- Fully configured (filled) extended depth cabinet with front trim kit	Up to 590.59 kg (1,302 lb)
- Fully configured (filled) extended depth cabinet with front trim kit plus packing material	Up to 616 kg (1,358 lb)
- Extended depth cabinet with front door kit and two power distribution units	154.22 kg (340 lb)
- Extended depth cabinet with front door kit and two power distribution units plus packing material	179.63 kg (396 lb)
- Fully configured (filled) extended depth cabinet with front door kit	Up to 607.82 kg (1,340 lb)
- Fully configured (filled) extended depth cabinet with front door kit plus packing material	Up to 633.23 kg (1,396 lb)
Casters, swivel, nonlocking:	
Diameter:	7.62 cm (3 in.)
Maximum capacity:	225 kg (500 lb)
Casters, fixed, nonlocking:	
Diameter:	7.62 cm (3 in.)
Maximum capacity:	225 kg (500 lb)
Enclosure finish	Painted
Electrical	
AC input voltage for H7600-AA PDU	100 to 120 Vac, single-phase, 3-wire
AC input voltage for H7600-AB/BB PDU	220 to 240 Vac, single-phase, 3-wire
AC input voltage for H7600-CB PDU	200 to 240 Vac, single-phase, 3-wire
AC load	24 A per H7600-AA PDU 16 A per H7600-AB/BB/CB PDU
Input line frequency range	47 to 63 Hz
Input power at full load	2.88 kVA per H7600-AA PDU 3.84 kVA per H7600-AB/BB/CB PDU

(continued on next page)

Introduction

Table 1–3 (Cont.) H9A15 Cabinet Specifications

Specification	Value
Power cords (attached)	H7600-AA - Two (2), 120 Vac with L5-30P connectors H7600-AB - Two (2), 240 Vac with L6-20P connectors H7600-BB - Two (2), 240 Vac with IEC 309 connectors
Detached power cords (H7600-CB)	See Table 1–4.

For a list of the power cords available for the H7600-CB PDU, refer to Table 1–4.

Table 1–4 H7600-CB PDU Power Cord Part Numbers

Country	Part Number
U.S., Canada, Japan	BN18X-4E
Australia, New Zealand	BN18D-4E
Central Europe ¹	BN25T-4E
UK, Ireland	BN18B-4E
Switzerland	BN27G-2E
Denmark	BN27K-2E
Italy	BN18E-4E
India, South Africa	BN22V-4E
Israel	BN27N-2E

¹Central Europe includes Austria, Algeria, Belgium, Finland, France, Germany, Netherlands, Norway, Portugal, Spain, and Sweden.

2

Site Preparation

2.1 Overview

Site preparation and planning are necessary before installing the TCAS system. Before installing a system, ensure that the installation site conforms to the physical, electrical, and environmental specifications provided in Chapter 1.

Warning

When installing a TCAS system in a computer room with raised floors, DO NOT use vented tiles under any of the system casters. The tiles crease and may eventually collapse. This could cause personal injury or equipment damage.

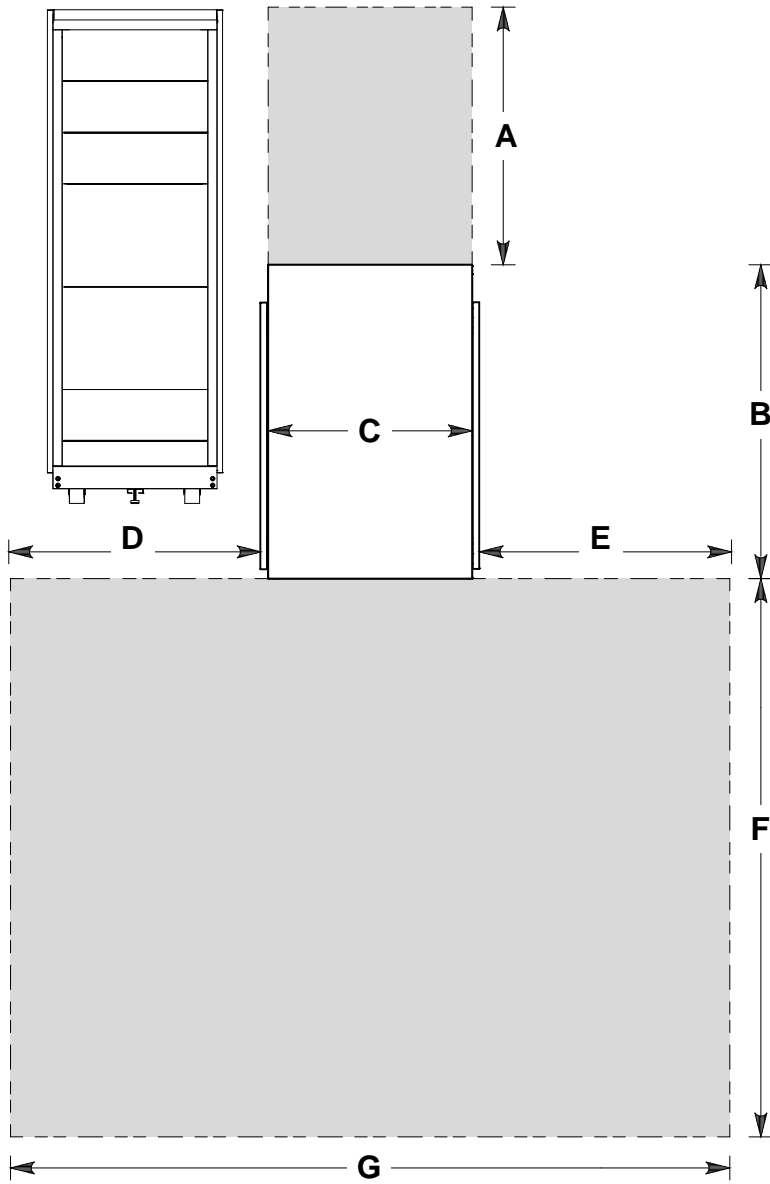
Locate the system in an area that provides sufficient clearance for ventilation and servicing. Figure 2–1 shows the clearance required around the TCAS system. Ensure that no obstructions (walls, cabinets, boxes, and so forth) are allowed to interfere with the free flow of exhaust air from the system.

For additional information concerning site planning and computer room environments, refer to the *Site Environmental Preparation Guide* (not supplied with the system).

Consider all specifications and conditions listed in Chapter 1 during preinstallation planning.

Site Preparation

Figure 2-1 TCAS System Clearance Requirements



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Site Preparation

The following is the key to Figure 2-1:

- | | |
|--|---|
| <p>A = Rear cabinet clearance
 B = Cabinet depth
 C = Cabinet width
 D = Left-side clearance</p> | <p>E = Right-side clearance
 F = Front clearance
 G = Cabinet width plus clearance</p> |
|--|---|

Table 2-1 shows the system dimensions for up to six cabinets installed at a site.

Table 2-1 System Dimensions for Multiple Cabinets

Number of Cabinets	A	B	C	D	E	F	G
1	24"	Overall cabinet depth	24"	24"	24"	24" + SD ¹	72"
2	24"	Overall cabinet depth	48"	24"	24"	24" + SD	96"
3	24"	Overall cabinet depth	72"	24"	24"	24" + SD	120"
4	24"	Overall cabinet depth	96"	24"	24"	24" + SD	144"
5	24"	Overall cabinet depth	120"	24"	24"	24" + SD	168"
6	24"	Overall cabinet depth	144"	24"	24"	24" + SD	192"

¹SD = System depth (see Table 1-3 for system depths).

Site Preparation

The tools required to install the system cabinet are:

- Utility knife
- Phillips screwdriver
- 5/8-inch box wrench or adjustable wrench

Warning

High Leakage Current — An insulated earthing conductor that is identical in size, insulation material, and thickness to the earthed and unearthed branch-circuit supply conductors (except that it is green with or without one or more yellow stripes) is to be installed as part of the branch circuit that supplies the unit or system. The earthing conductor described is to be connected to earth at the service equipment or, if supplied by a separately derived system, at the supply transformer or motor-generator set.

The attachment-plug receptacles in the vicinity of the system are all to be of an earthing type, and the earthing conductors serving these receptacles are to be connected to earth at the service equipment.

Warning

Use sufficient personnel when unloading cabinets from the pallets or moving cabinets to a new location. Each cabinet can weigh up to 633.23 kg (1,396 lb) fully configured.

For site preparation details concerning the system devices installed in the cabinet, refer to the documentation for those systems.

3

Unpacking the Shipment

3.1 Overview

This chapter describes how to unpack a TCAS system. The TCAS system is shipped with one cabinet on a wooden pallet. Unpacking involves:

- Removing the packaging material
- Checking the shipment
- Removing the system cabinets from the pallets

Unpacking the Shipment

3.2 Removing the Packaging Material

To remove the packaging material, refer to Figure 3-1 and proceed as follows:

Note

Save all packaging materials in case any items need to be returned.

1. Position the pallet with the cabinet in an area that provides sufficient workspace for unpacking. Ensure that there is sufficient clearance in front of the pallet (marked with a large F) to roll the cabinet down the ramps.
2. Cut and remove the plastic bands ❶ that secure the corner posts ❷ and the carton ❸ to the cabinet. The carton contains the two ramps.
3. Remove the corner posts ❷ and the carton ❸ from the pallet ❹.

Caution

In the next step, take care not to damage the cabinet finish when removing the plastic bag.

4. Remove the plastic bag ❺ covering the cabinet.
5. Check the cabinet and the associated equipment for any external damage. Report any damage to Digital Customer Services or a Digital sales office, and to the responsible freight carrier.

Note

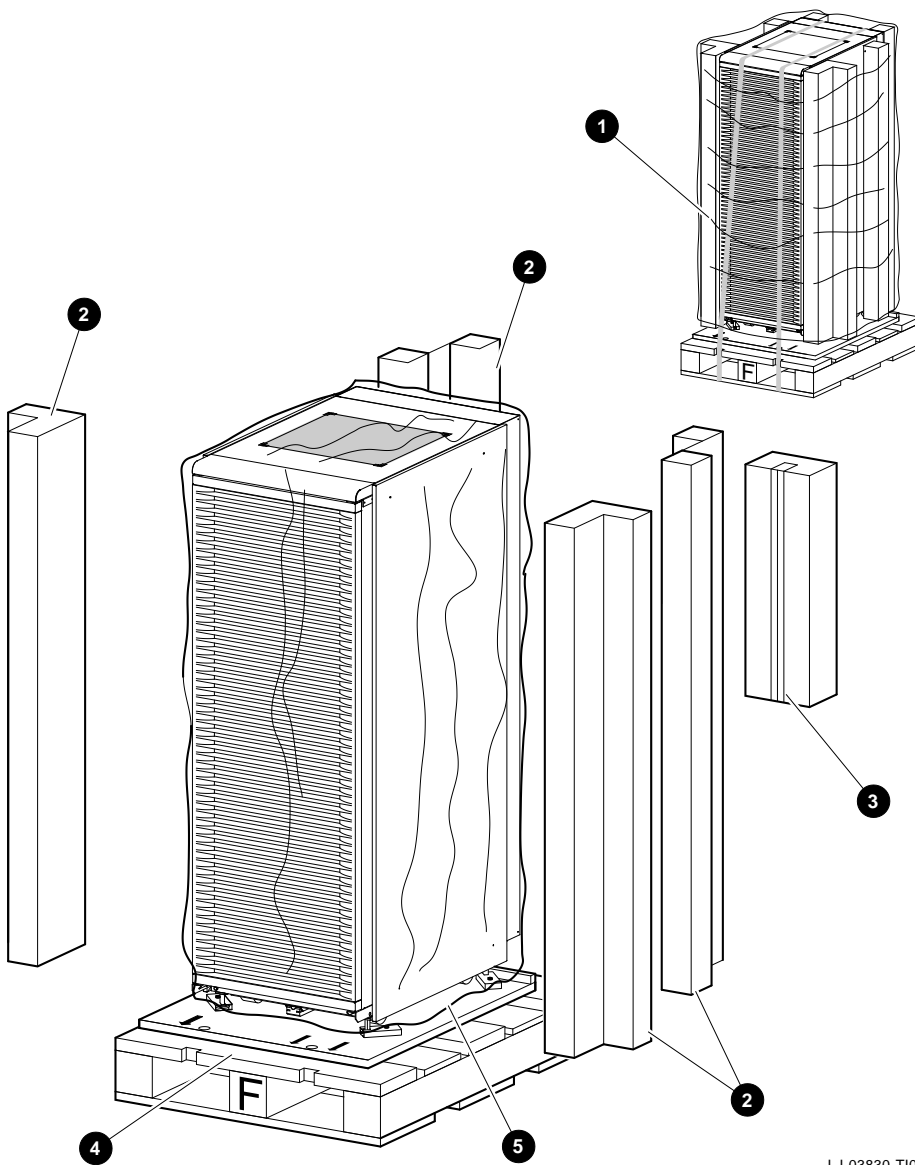
Keep all packing material and receipts in case a damage claim is filed.

3.3 Checking the Shipment

In addition to the cabinet and its contents, the shipment may include several boxes depending on the particular system ordered. Check the packing list to ensure that all items listed have been received. If any item is missing, immediately contact your Digital sales office and the responsible freight carrier.

Unpacking the Shipment

Figure 3-1 Unpacking the Cabinet



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Unpacking the Shipment

3.4 Removing the System Cabinet from the Pallet

To remove the system cabinet from the pallet, refer to Figure 3–2 and proceed as follows:

1. Remove the four shipping bolts ⑥ and brackets ⑦ that secure the four cabinet leveler feet ③ to the pallet ④.

Note

The ramps attach to the front of the pallet. Therefore, the cabinet will have to be rolled frontwards down the ramps.

2. Remove the ramps ⑨ from the shipping carton and set the ramps in the holes ⑩ provided at the front of the pallet ④. Ensure that the arrows ⑪ on the ramps match the pallet arrows ⑫ as shown in Figure 3–2.

Caution

In the next step, the leveler feet must be fully retracted to prevent contact with the ramp or the floor when the cabinet is unloaded from the pallet.

3. Adjust the four cabinet leveler feet ⑧ and the leveler foot on the stabilizer bar ⑬ to the maximum upward position.

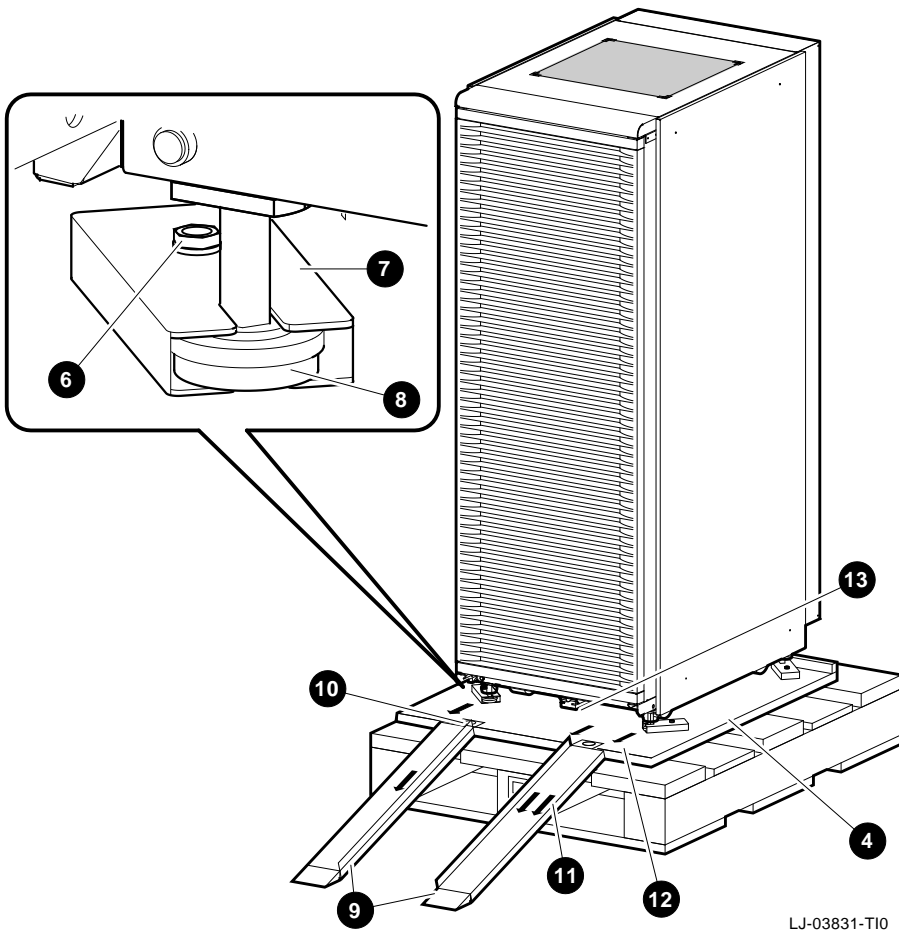
Warning

To prevent personal injury and damage to the cabinet:

- Do not move the cabinet unless there is sufficient personnel available to hold and stabilize the cabinet.
 - Do not attempt to roll the cabinet off the shipping pallet with the stabilizer bar extended.
 - Make sure all the equipment mounted in the cabinet is locked down to prevent the equipment from sliding out when moving the cabinet.
-

Unpacking the Shipment

Figure 3-2 Installing the Ramps



Unpacking the Shipment

Warning

In the following step, use sufficient personnel to move the cabinet off the pallet. The cabinet can weigh up to 633.23 kg (1,396 lb) fully configured.

Equipment installed in the cabinet can make the cabinet top heavy or cause it to accelerate rapidly down the ramps if not restrained. Be prepared to guide and control the motion of the cabinet.

4. Refer to Figure 3-3 and roll the cabinet down the ramps using sufficient personnel for safety.

Caution

The front casters of the cabinet swivel, but the rear casters are fixed.

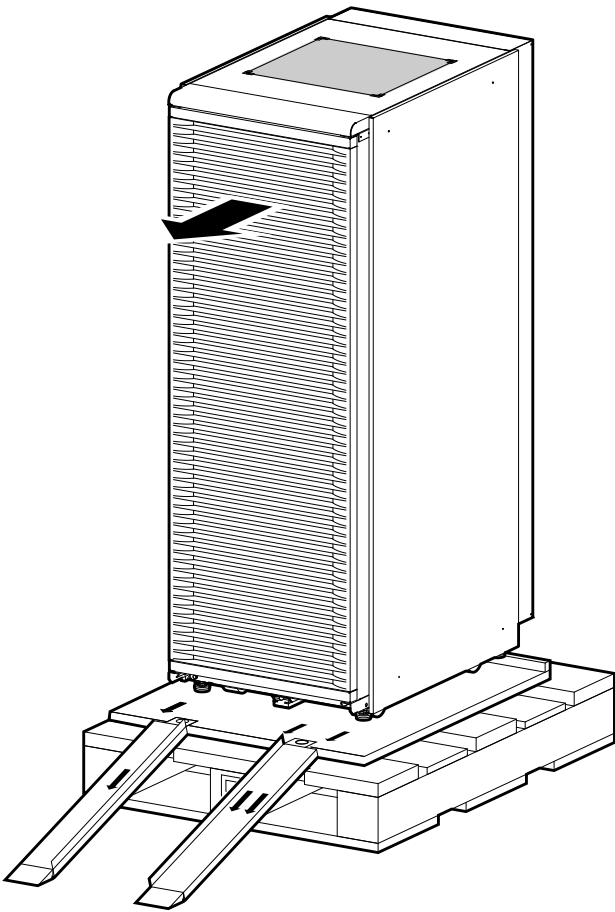
Warning

Do not leave the cabinet unattended without lowering the leveler feet. The cabinet may roll because the casters do not lock.

Also, tipping the cabinet more than 15 degrees may cause an unstable situation.

Unpacking the Shipment

Figure 3-3 Deskidding the Cabinet



LJ-03832-T10

4

Installing the TCAS System

4.1 Overview

After verifying that the system installation site is suitable and unpacking the system cabinet, move the system cabinet to the selected location.

Warning

When installing a TCAS system in a computer room with raised floors, DO NOT use vented tiles under any of the system casters. The tiles will crease and may eventually collapse. This could cause personal injury or equipment damage.

Each TCAS system is delivered in one or more cabinets. Before positioning the cabinets, note the following precaution:

Warning

The floor must be smooth and level, and capable of supporting up to 633.23 kg (1,396 lb) for each cabinet.

Position each cabinet in its final location.

Installing the TCAS System

Adjust the leveler feet downward so that the cabinet is level and the load is completely removed from the casters.

Caution

Ensure that the leveler feet extend enough to carry the load of the cabinet so that the casters spin freely. If not, damage to the casters will result over an extended period of time.

Installing the system consists of the following:

- Checking the factory-connected cabling
- Connecting power
- Starting the system

4.2 Checking Factory-Connected Cabling and Installing Cables Between Cabinets

The following sections describe the factory-connected cabling of the TCAS system and cables between cabinets.

4.2.1 TCAS System Cabling

The TCAS system cabling is factory connected if the systems and storage are housed in one cabinet, and should be checked before starting the system. If the TCAS system is in more than one cabinet, you will need to connect the cables between cabinets as described in the following procedure:

1. Connect and/or check connections to the console.
 - a. On graphics systems, ensure that the keyboard, mouse, and monitor are connected to each system.
 - b. On nongraphics systems, connect the printer to the terminal and the terminal to the system.
2. Check that local storage is connected. (In most cases, local storage is where the system disk and load media are located.)
3. Check that all shared SCSI buses are terminated at each end.

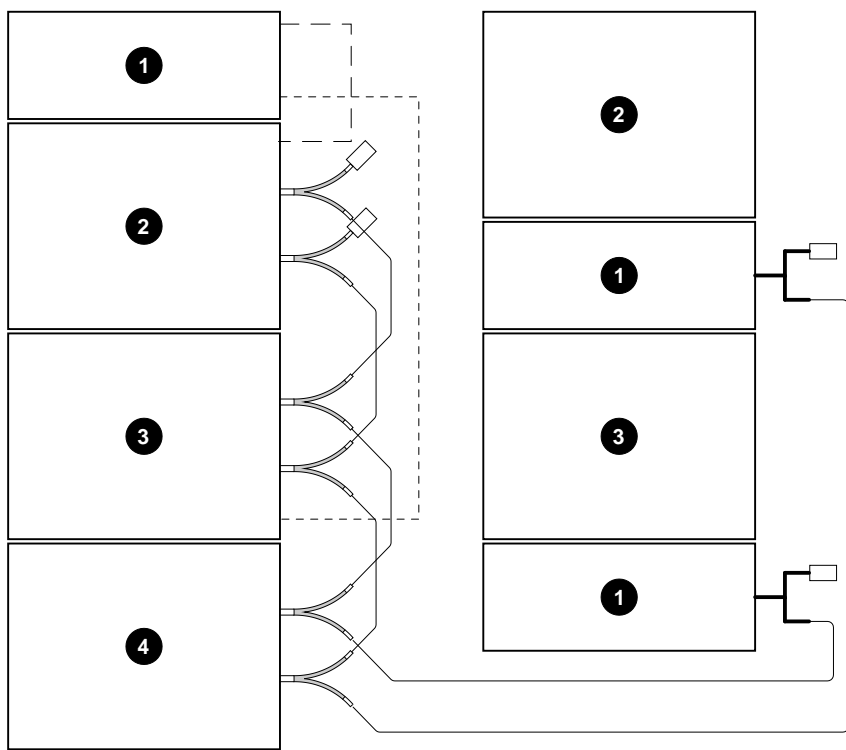
Note

Storage may be located at the end-bus position. See Figure 4-1.

4. Check that all shared SCSI buses are connected to each system and shared storage.
5. Check that all network cables and adapters are connected.
6. If memory channel is installed, ensure that the BN21N-10 cable is connected to a hub (CCMHA-AA) for three or more systems, or between channel cards in a two-node configuration.

Installing the TCAS System

Figure 4-1 System and Storage Locations



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① Storage ②, ③, ④ Systems

Note

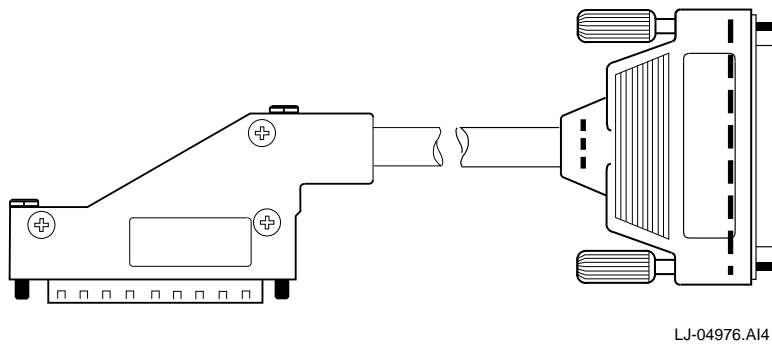
In most cases, if the systems are located in one cabinet and the storage is located in another, the end-bus position would be used to limit the passing of multiple cables between cabinets.

7. Components of the shared bus include:
 - a. KZPSA-BB FWD controller: One or more in each system.
 - b. BN21W-0B Y SCSI cable: One off each KZPSA-BB FWD controller.
 - c. H879 -AA 68-pin SCSI terminator: Two, one on each end of the SCSI bus.

Installing the TCAS System

- d. H885 -AA trilink: Used on DWZZxs and HSZ40s to provide connections for BN21x cables.
- e. BN21K-xx 68-pin SCSI cable ST-RT: Used between systems and storage or between systems and systems. See Figure 4-2.

Figure 4-2 BN21K-xx SCSI Cable ST-RT



- f. BN21L-xx 68-pin SCSI cable RT-RT: Used between storage options. See Figure 4-3.

Figure 4-3 BN21L-xx SCSI Cable RT-RT

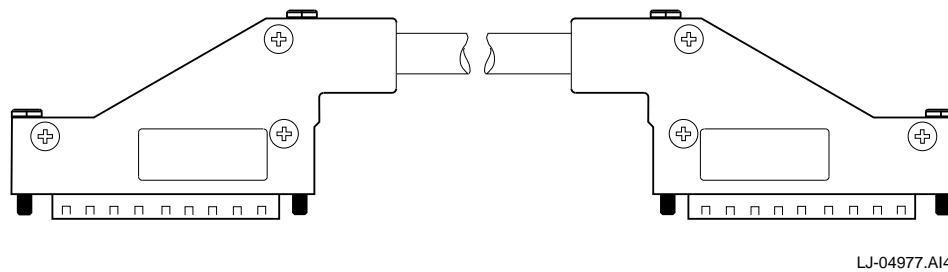
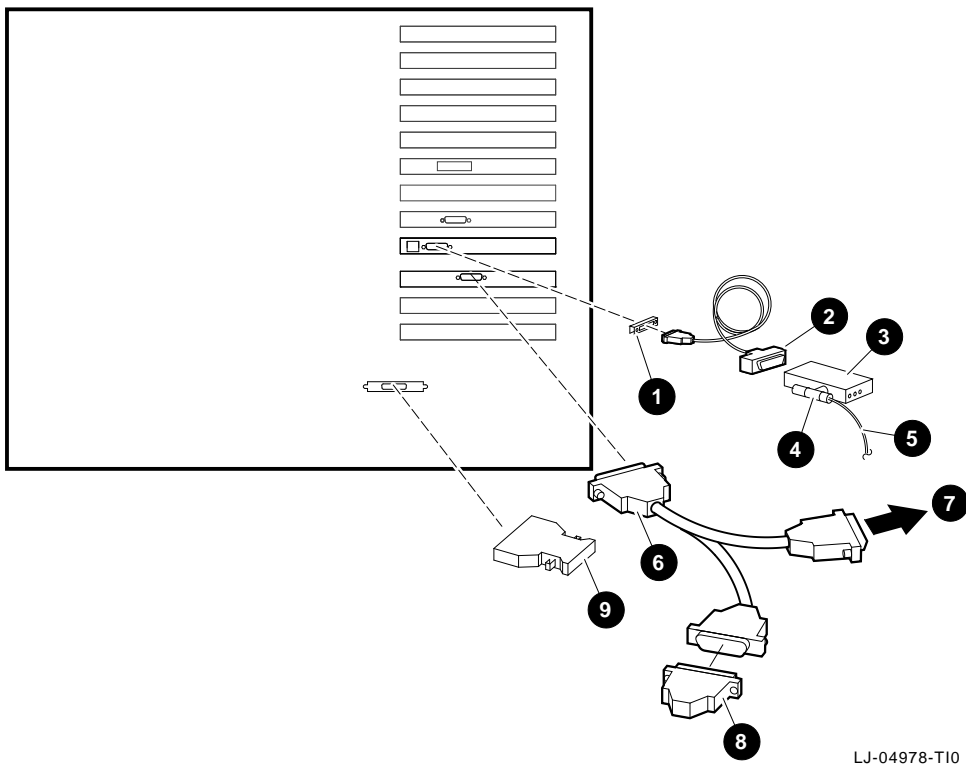


Figure 4-4 shows the AlphaServer 2100 RM series system connections.

Installing the TCAS System

Figure 4-4 AlphaServer Connections



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- | | |
|-------------------------------------|----------------------------|
| ① Hex nut to slide latch adapter | ⑥ BN21W-0B SCSI Y cable |
| ② BNE4C-02 thickwire Ethernet cable | ⑦ To storage option |
| ③ DECXM-AA AUI-to-BNC ThinWire MAU | ⑧ H879 -AA SCSI terminator |
| ④ H8223 ThinWire T-connector | ⑨ SCSI terminator |
| ⑤ BC16M-15 ThinWire cable | |

Note

Figure 4-4 is an example of components used in a TCAS system. Your system may be different; therefore, refer to the installation guide that comes with your system.

Installing the TCAS System

8. Check that the network connections to all members are installed.

10 Mb Network Connections

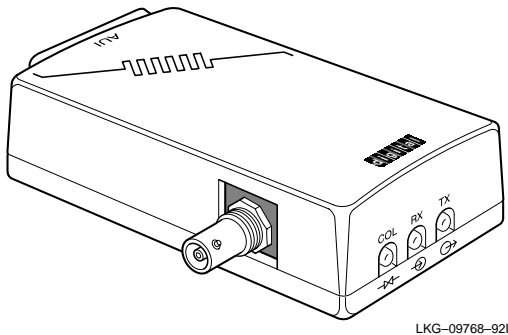
AUI — 15-pin D-subminiature
10Base2 — BNC connector
10BaseT — RJ45 connector

Media access units (MAUs) may be needed to adapt the system to the network. The following list and Figure 4-5, Figure 4-6, and Figure 4-7 show the units and conversions.

10 Mb Network Connections

DECXM — AUI to 10Base2
DETPM — AUI to 10BaseT
DEFLM — AUI to 10BaseF fiber

Figure 4-5 DECXM Adapter



Installing the TCAS System

Figure 4-6 DETPM Adapter

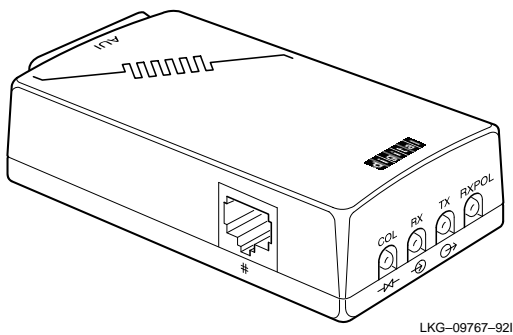
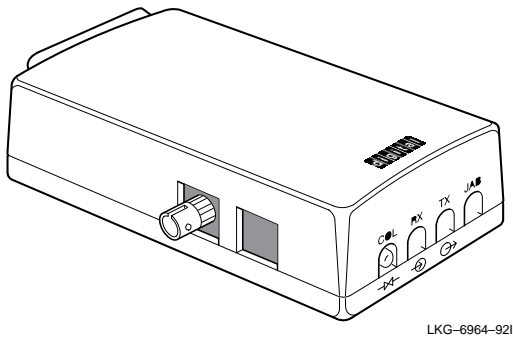


Figure 4-7 DEFLM Adapter



Optional FDDI may also be used. The following lists the connection types:

100 Mb Network Connections

- Small connector — SC MIC
- Bayonet — ST

Installing the TCAS System

4.3 Connecting Power

The TCAS system cabinet contains two power cords. The actual power connections depend on the power distribution units installed in the cabinet.

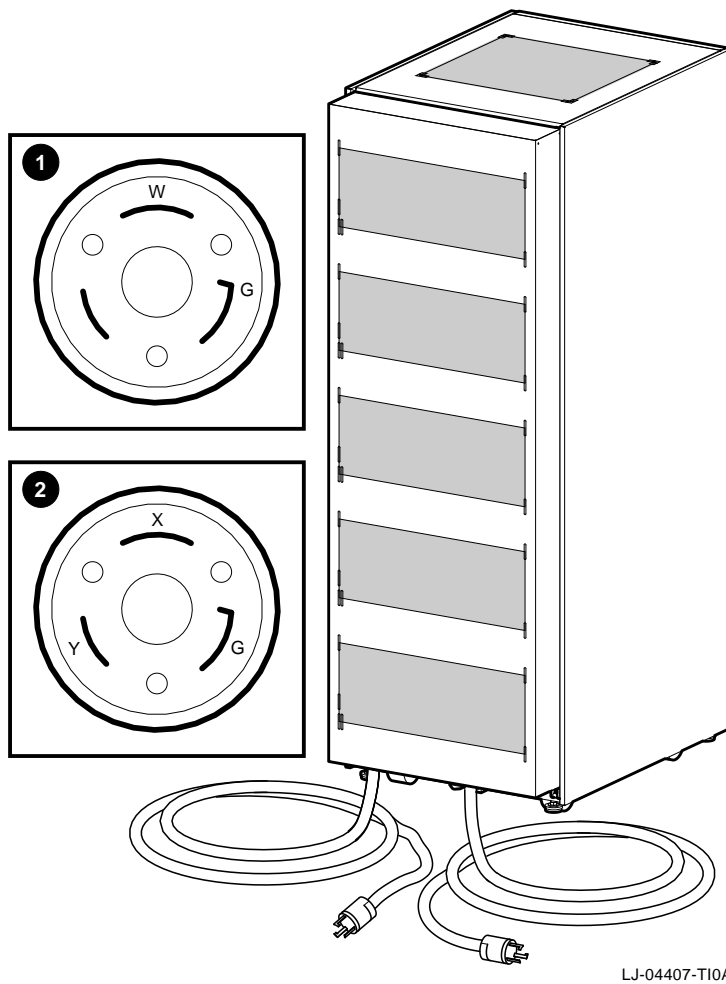
For 120 Vac (80 to 135 Vac) operation, H7600-AA power distribution units are installed. The power cord connector (NEMA L5-30P) mates with a NEMA L5-30R wall receptacle.

For 240 Vac (180 to 264 Vac) operation, H7600-AB power distribution units are installed. The power cord connector (NEMA L6-20P) mates with a NEMA L6-20R wall receptacle.

Figure 4–8 shows the difference between the NEMA L5-30P ❶ and the NEMA L6-20P ❷ power connectors.

Installing the TCAS System

Figure 4-8 Power Connectors



❶ End view of a NEMA L5-30P power connector

❷ End view of a NEMA L6-20P power connector

Installing the TCAS System

4.4 Starting the TCAS System

To start the TCAS system, proceed as follows:

Note

Before starting the system, ensure that all power distribution unit cords are plugged into the proper wall receptacles. Also, make sure that all equipment inside each cabinet is plugged into the power distribution units.

1. Place the main power circuit breakers on all power distribution units to the ON position.
2. Ensure that all storage boxes are powered up by checking the DC OK LED on each BA350 or BA356 storage shelf. Refer to the BA350 or BA356 user's guide.
3. Refer to the AlphaServer series system user's guide for instructions on how to power up each system. Repeat these instructions until all units have been powered up.
4. After all units are powered up, refer to the AlphaServer series system user's guide for instructions on booting the operating system.

A

Additional Installation Information

A.1 Overview

During the installation of the TCAS cabinet, one or more of the following procedures may be needed:

- Removing and Replacing the Rear Door (Section A.2)
- Removing and Replacing the Front Door Latch Bracket (Section A.3)
- Removing and Replacing the Front Filler Panels (Section A.4)
- Adjusting the Stabilizer Bar (Section A.5)
- Using the Interlock System (Section A.6)

Additional Installation Information

A.2 Removing and Replacing the Rear Door

The rear door provides access into the rear of the cabinet. To remove the rear door, refer to Figure A-1 and proceed as follows:

Removal

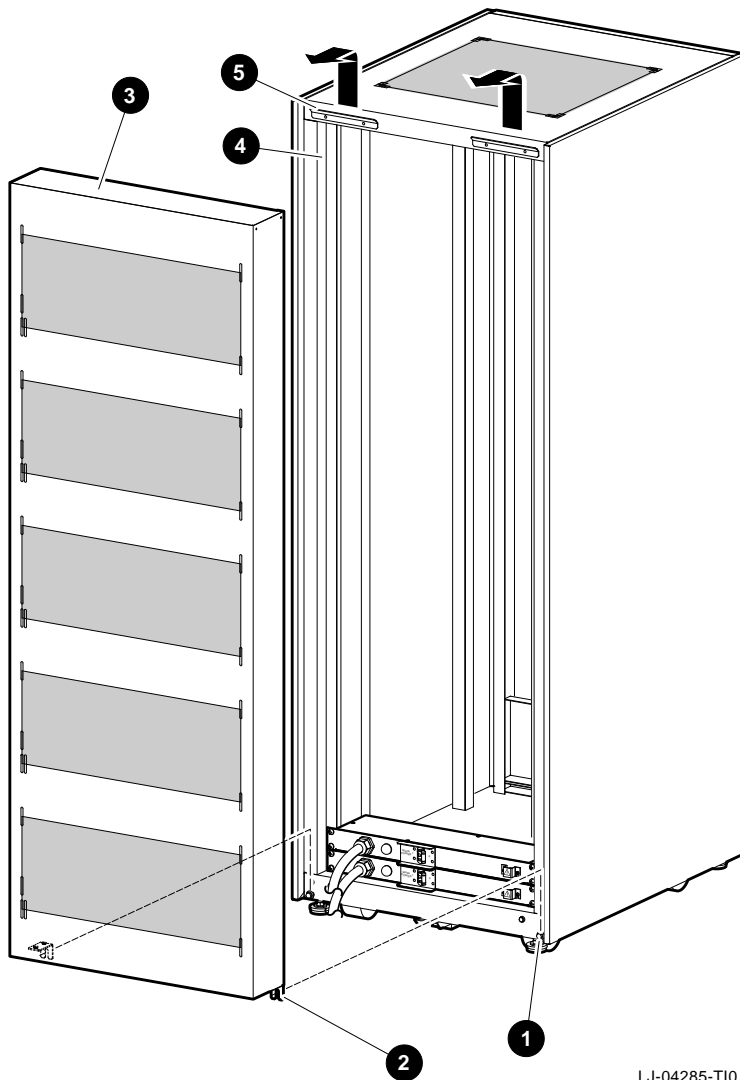
1. Loosen the two M6 screws ❶ securing the tabs ❷ on the rear door ❸ to the cabinet ❹.
2. Grasp both sides of the rear door ❸ about midway up the door. Then lift the door up and away from the two slots ❺ and the M6 screws ❶.
3. Place the rear door ❸ aside and out of the way.

Replacement

To replace the rear door, reverse the removal procedure, steps 1 through 3.

Additional Installation Information

Figure A-1 Removing and Replacing the Rear Door



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Additional Installation Information

A.3 Removing and Replacing the Front Door Latch Bracket

The front door latch bracket prevents the left-side access door on an AlphaServer 2100 or 2100A RM series system installed in the top of the H9A10 cabinet from being fully opened, and must be removed to allow access.

To remove the front door latch bracket, refer to Figure A-2 and proceed as follows:

Removal

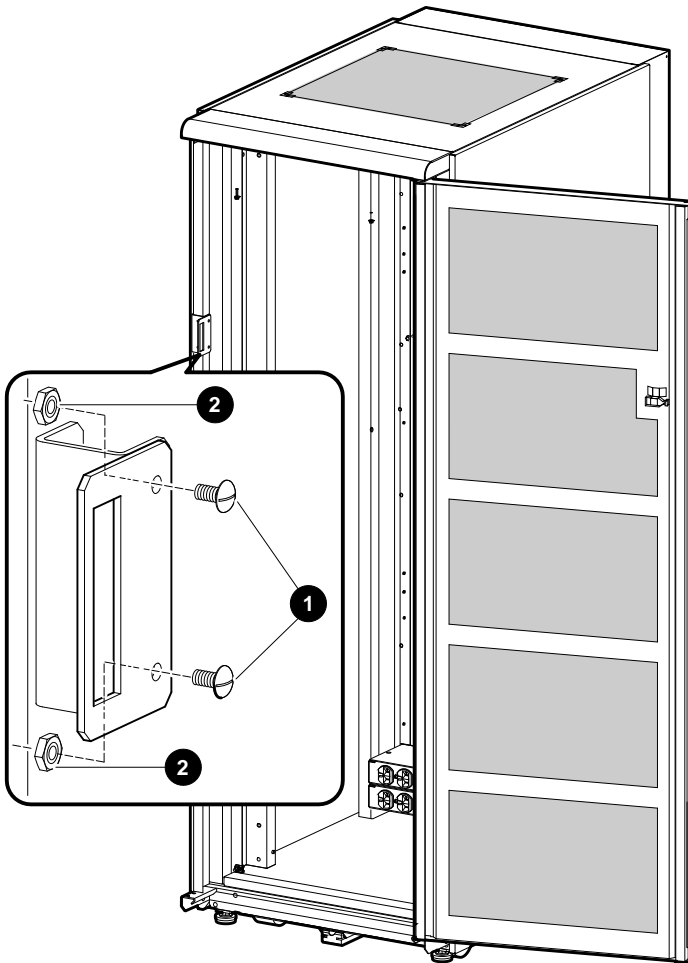
Remove the two 8-32 screws ❶ and two 8-32 kepnuts ❷ that secure the front door latch bracket to the cabinet frame.

Replacement

To replace the front door latch bracket, align the two holes on the front door latch bracket with the two holes on the cabinet frame, and secure it in place with the two 8-32 screws ❶ and two 8-32 kepnuts ❷.

Additional Installation Information

Figure A-2 Removing and Replacing the Front Door Latch Bracket



LJ-04290-T10

Additional Installation Information

A.4 Removing and Replacing the Front Filler Panels

To remove a front filler panel, refer to Figure A-3 and proceed as follows:

Removal

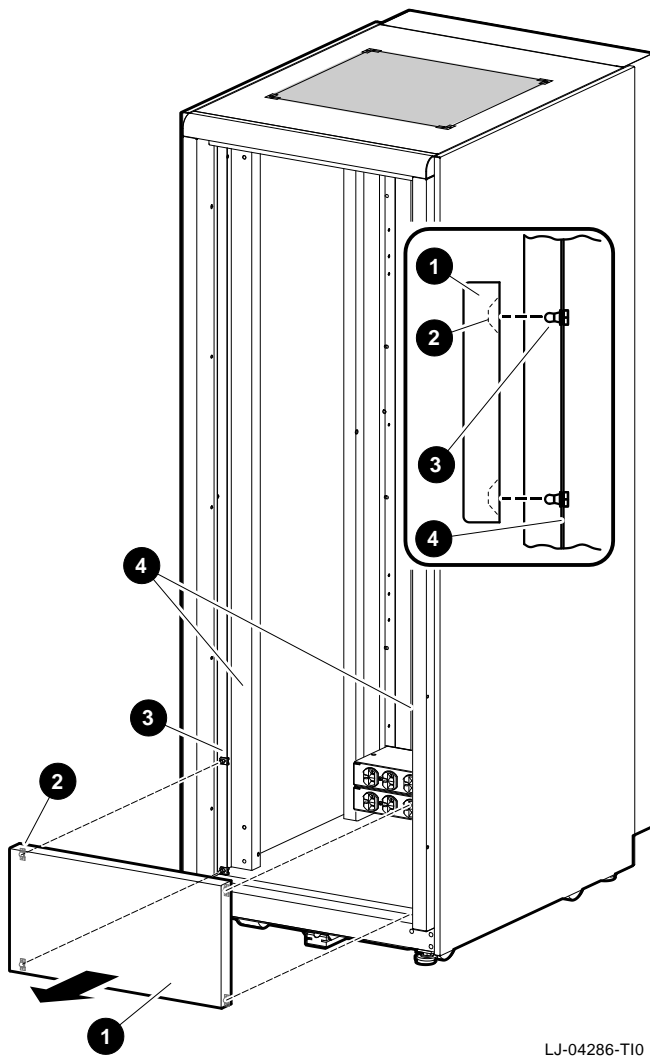
Grasp the front filler panel ❶ on both sides and then pull straight back away from the cabinet.

Replacement

To replace a front filler panel ❶, align the sockets ❷ on the front filler panel (refer to the exploded view) with the appropriate ball studs ❸ on the rails ❹ and push the panel into place.

Additional Installation Information

Figure A-3 Removing and Replacing the Front Filler Panels



LJ-04286-T10

Additional Installation Information

A.5 Adjusting the Stabilizer Bar

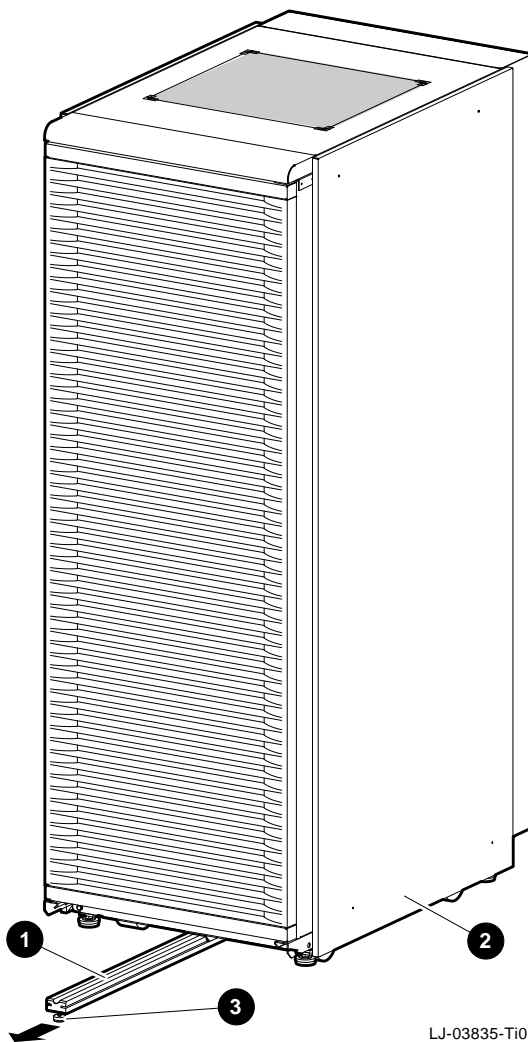
The stabilizer bar ❶ pulls straight out from the bottom front of the cabinet ❷ as shown in Figure A-4. When the stabilizer bar is fully extended, adjust the foot ❸ at the end of the stabilizer bar until it touches the floor.

Warning

The stabilizer bar must be fully extended before any system is extended out of the cabinet on its slides.

Additional Installation Information

Figure A-4 Pulling Out and Adjusting the Stabilizer Bar



Additional Installation Information

A.6 Using the Interlock System

The interlock system (refer to Figure A-5) helps prevent cabinet instability by allowing only one system at any one time to be pulled out of the cabinet.

The interlock system consists of a vertical bar ❶ on which are mounted actuator latches ❷ for each product installed in the cabinet. These actuator latches engage the interlock actuator bracket ❸ on the rear of rackmount systems. When a rackmount system is pulled out of the cabinet, the actuator latches ❷ rotate to prevent any other rackmounted system that has an interlock actuator bracket from being pulled out of the cabinet. The expanded view (A) shows the position of the actuator latches when all systems are pushed into the cabinet. The expanded view (B) shows the position of all actuator latches after one system has been pulled out.

If additional products are installed into the cabinet, actuator latches for those products should be installed. To install actuator latches, proceed as follows:

1. Remove the screws securing the bottom mounting bracket to the cabinet ❹.
2. Slide the mounting bracket off the bottom of the vertical bar ❶.
3. Slide the stabilizer bracket ❺ for the new product onto the bottom of the vertical bar.
4. Slide the actuator latch ❷ for the new product onto the bottom of the vertical bar.
5. Replace the bottom mounting bracket ❹ and install the screws removed in step 1 but *do not* tighten them.
6. Position the stabilizer bracket so that the bottom hole in the stabilizer bracket ❻ aligns with the RETMA rail hole adjacent to the bottom of the installed product. This may require the loosening and sliding of other latches and stabilizer brackets to accommodate the new configuration.
7. Place the nut plate behind the RETMA rail and install and tighten the screws provided to secure the stabilizer bracket.
8. Position the new actuator latch ❷ to properly engage the product, and tighten the set screws to secure the latch.
9. Now tighten the screws to secure the bottom mounting bracket ❹.

Additional Installation Information

Note

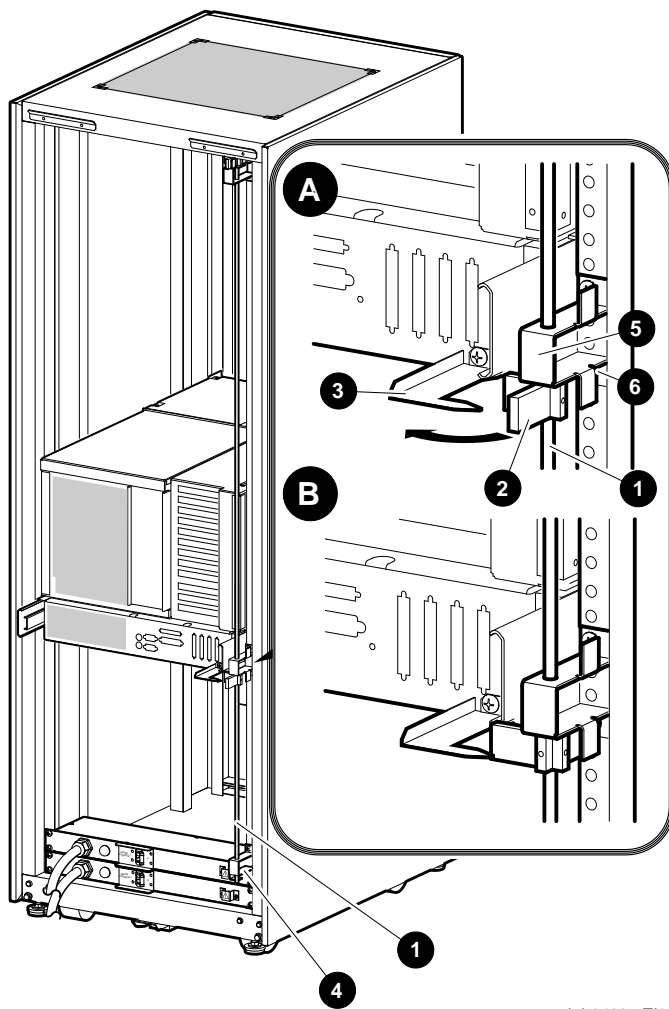
The interlock system is compatible with the AlphaServer 1000, 2100, 2100A, 8200, and 8400 RM series systems. Other systems may not be compatible because the interlock actuator bracket may not engage properly. In these cases, do not install the interlock actuator bracket on those systems.

Warning

If a system is installed without an interlock actuator bracket or the vertical bar in the cabinet does not engage properly with the system interlock actuator bracket, it is the customer's responsibility to provide a stable cabinet.

Additional Installation Information

Figure A-5 The Interlock System



LJ-04287-T10

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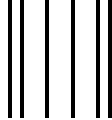
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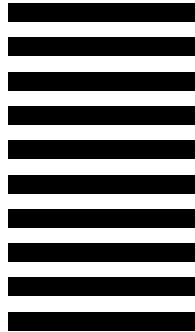
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