

# SCSI VMScluster RM Systems

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## Installation/Owner's Guide

Order Number: EK-SCSIC-IN. A01

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**June 1995**

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S2960

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## Safety



Any warning or caution that appears in this manual is defined as follows:

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<b>Warning</b>	Contains information to prevent personal injury.
<b>Caution</b>	Contains information to prevent damage to equipment.

---

<b>Vorsicht</b>	Enthält Informationen, die beachtet werden müssen, um den Benutzer vor Schaden zu bewahren.
<b>Achtung</b>	Enthält Informationen, die beachtet werden müssen, um die Geräte vor Schaden zu bewahren.

---

<b>Danger</b>	Signale les informations destinées à prévenir les accidents corporels.
<b>Attention</b>	Signale les informations destinées à prévenir la détérioration du matériel.

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<b>Aviso</b>	Contiene información para evitar daños personales.
<b>Precaución</b>	Contiene información para evitar daños al equipo.

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# Preface

## Overview

This guide provides the information necessary to install the SCSI VMSccluster RM Model 2100 and 1000 systems. Information concerning individual devices used in these systems is contained in other documents as referred to in this guide.

## Intended Audience

The instructions in this guide are for Digital Customer Service or other Digital qualified service personnel installing SCSI VMSccluster RM Model 2100 and 1000 systems.

## Structure of This Document

This document is organized as follows:

**Chapter 1, Introduction** — Provides a general description and specifications for the SCSI VMSccluster RM Model 2100 and 1000 systems.

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

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

**Chapter 4, SCSI VMSccluster RM Installation** — Describes how to install the SCSI VMSccluster RM Model 2100 and 1000 systems.

**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.

**Appendix B, System Options** — Provides the part numbers and description of options available for the SCSI VMSccluster RM Model 2100 and 1000 systems.

## Related Documents

<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>OpenVMS Version 6.2 New Features Manual</i>	AA-QJEEA-TE
<i>OpenVMS Cluster Software Version 6.2 Software Product Description</i>	SPD 29.78.09

## 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 SCSI VMScluster RM Model 2100 and 1000 systems.

### 1.2 SCSI VMScluster RM Systems

The SCSI VMScluster RM Model 2100 system (shown in Figure 1-1) and the SCSI VMScluster RM Model 1000 system (shown in Figure 1-3) are high-performance platforms that provide improved data availability and application uptime. They contain Alpha microprocessors, Ethernet networking devices, and file management software. The factory-installed software provides flexible storage allocation and management, and network and system management.

Each SCSI VMScluster RM system is contained in *one* H9A10 cabinet.

- The SCSI VMScluster RM Model 2100 system contains two AlphaServer 2100 RM series systems, a BA35R-SF storage shelf, a shelf with two DWZZA-AA 8-bit FSE-to-FD SCSI converters, and space available for the installation of optional BA35R-SF/SR storage shelves.
- The SCSI VMScluster RM Model 1000 system contains two AlphaServer 1000 RM series systems, a BA35R-SF storage shelf, a shelf with two DWZZA-AA 8-bit FSE-to-FD SCSI converters, and space available for the installation of optional BA35R-SF/SR storage shelves.

## Introduction

### 1.2.1 AlphaServer 2100 RM Series Systems

The AlphaServer 2100 RM series system is a high-performance superserver for multiuser environments. It is an Alpha multiprocessor server system that, for this prepackaged system, uses the OpenVMS operating system.

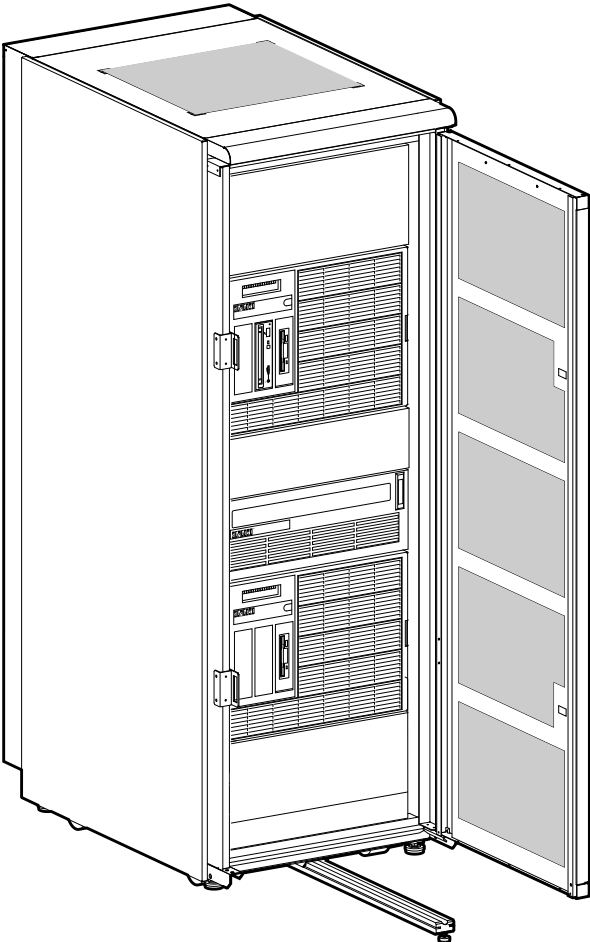
In the SCSI VMSccluster RM Model 2100 system, both of the AlphaServer 2100 RM series systems contain the following:

- One CPU (expandable to four CPUs per unit)
- Memory in the following combination:
  - One CPU and 64 MB of memory per unit
- One KZPAA PCI-to-SCSI bus adapter
- One standard I/O card
- One VGA graphics adapter

The top AlphaServer 2100 RM series system in the cabinet also contains a removable-media RRD43 CD-ROM drive.

Introduction

Figure 1-1 SCSI VMSccluster RM Model 2100 System

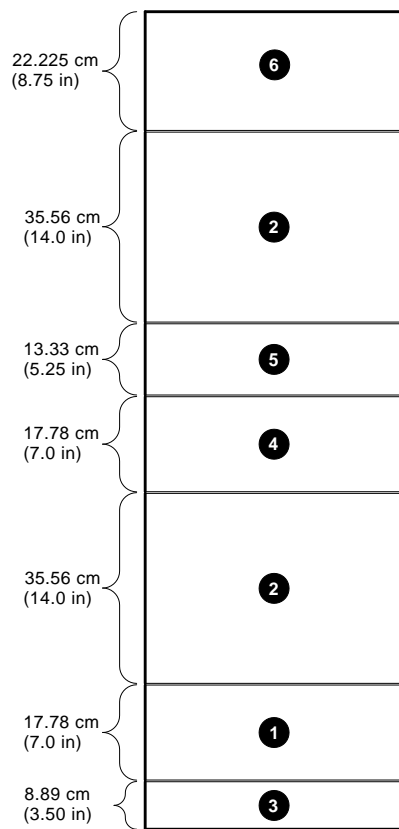


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## Introduction

Figure 1–2 shows the front panel layout of the SCSI VMSccluster RM Model 2100 system.

**Figure 1–2 Front Panel Layout for the SCSI VMSccluster RM Model 2100 System**



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- ❶ Filler panel (space for optional BA35R-SF/SR storage shelves)
- ❷ AlphaServer 2100 RM series systems
- ❸ Filler panel (location of two H7600-AA or H7600-AB power distribution units)

- ❹ BA35R-SF storage shelf
- ❺ Filler panel (location of shelf with two DWZZA-AA SCSI converters)
- ❻ Filler panel



### 1.2.2 AlphaServer 1000 RM Series Systems

The AlphaServer 1000 RM series system is a high-performance superserver for multiuser environments. It is an Alpha multiprocessor server system that, for this prepackaged system, uses the OpenVMS operating system.

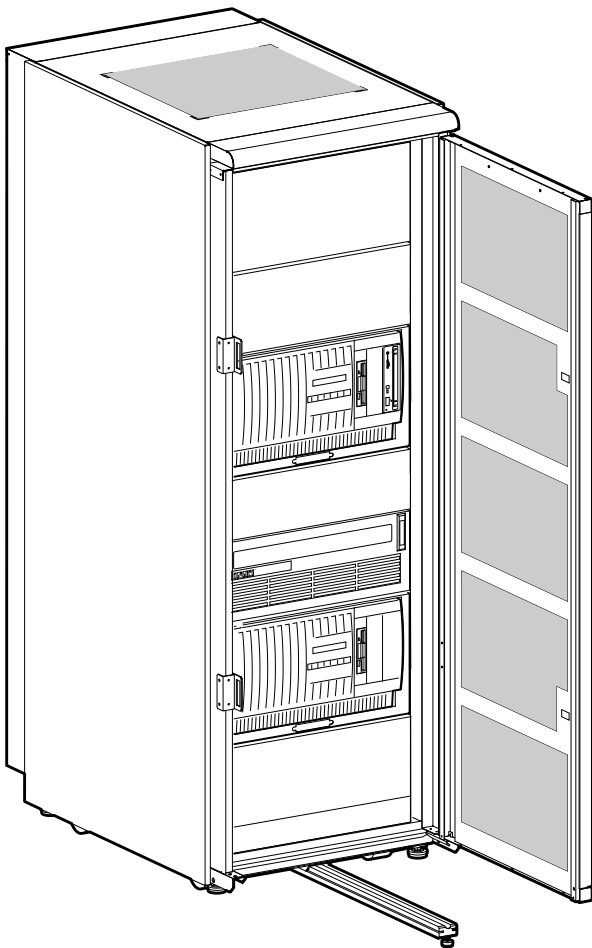
In the SCSI VMSccluster RM Model 1000 system, both of the AlphaServer 1000 RM series systems contain the following:

- One CPU
- Memory in the following combination:
  - One CPU and 64 MB of memory per unit
- One KZPAA PCI-to-SCSI bus adapter
- One PCI Ethernet adapter (DE435-AA)
- One onboard VGA graphics controller

The top AlphaServer 1000 RM series system in the cabinet also contains a removable-media RRD43 CD-ROM drive.

## Introduction

Figure 1-3 SCSI VMScluster RM Model 1000 System

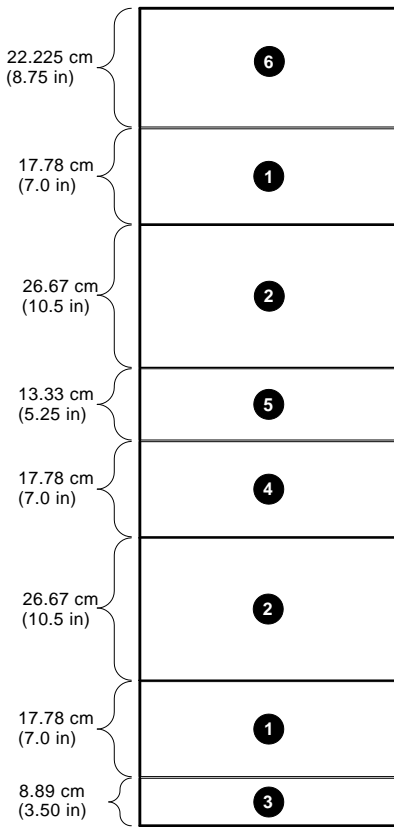


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## Introduction

Figure 1–4 shows the front panel layout of the SCSI VMSccluster RM Model 1000 system.

**Figure 1–4 Front Panel Layout for the SCSI VMSccluster RM Model 1000 System**



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- ❶ Filler panel (space for optional BA35R-SF/SR storage shelves)
- ❷ AlphaServer 1000 RM series systems
- ❸ Filler panel (location of two H7600-AA or H7600-AB power distribution units)

- ❹ BA35R-SF storage shelf
- ❺ Filler panel (location of shelf with two DWZZA-AA SCSI converters)
- ❻ Filler panel

## Introduction

### 1.2.3 BA35R-SF Storage Shelf

The BA35R-SF storage shelf in the SCSI VMScluster RM Model 2100 and 1000 systems contains the following:

- A power module
- A DWZZA-VA FD-to-FSE SCSI converter
- Two 2 GB RZ28-VA disk drives

The BA35R-SF storage shelf also has space available for four optional RZ26, RZ28, or RZ29 disk drives.

### 1.2.4 DWZZA Shelf

The DWZZA shelf, located above the BA35R-SF storage shelf, contains two DWZZA-AA 8-bit FSE-to-FD SCSI converters. This shelf also contains space for two optional DWZZA-AA SCSI converters.

### 1.2.5 Installed Software

The OpenVMS Alpha Version 6.2 operating system is the factory-installed software that comes with the SCSI VMScluster RM Model 2100 and 1000 systems.

### 1.3 SCSI VMScluster RM System Specifications

This section describes the physical, environmental, and electrical specifications of the SCSI VMScluster RM Model 2100 and 1000 systems.

#### Physical (Each Cabinet)

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 <sup>1</sup> ) 59.5 in. (English RETMA <sup>2</sup> )
Maximum vertical rackmounting space (with power distribution units installed)	153.5 cm (metric RETMA <sup>1</sup> ) 54.25 in. (English RETMA <sup>2</sup> )
Horizontal rack width	Standard 48.26-cm (19-in.) EIA rail spacing <sup>3</sup>
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

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

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

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

## Introduction

### Environmental

#### Temperature

Operating 10°C (50°F) to 35°C (95°F)

Nonoperating -40°C (-40°F) to 66°C (151°F)

#### Relative Humidity

Model 2100      Model 1000

Operating 10% to 90%      20% to 80%

Nonoperating Up to 95%      Up to 80%

#### 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

# 2

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## Site Preparation

### 2.1 Overview

Site preparation and planning are necessary before installing the SCSI VMScluster RM Model 2100 and 1000 systems. Before installing a system, ensure that the installation site conforms to the physical, electrical, and environmental specifications provided in Chapter 1.

---

#### Warning

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When installing SCSI VMScluster RM systems 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 SCSI VMScluster RM Model 2100 system. Figure 2-2 shows the clearance required around the SCSI VMScluster RM Model 1000 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

The tools required to install the system cabinet are:

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

---

### Warning

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**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

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Use sufficient personnel when unloading the cabinet from the pallet or moving the cabinet to a new location. The cabinet can weigh up to 576 kg (1,280 lb) fully configured.

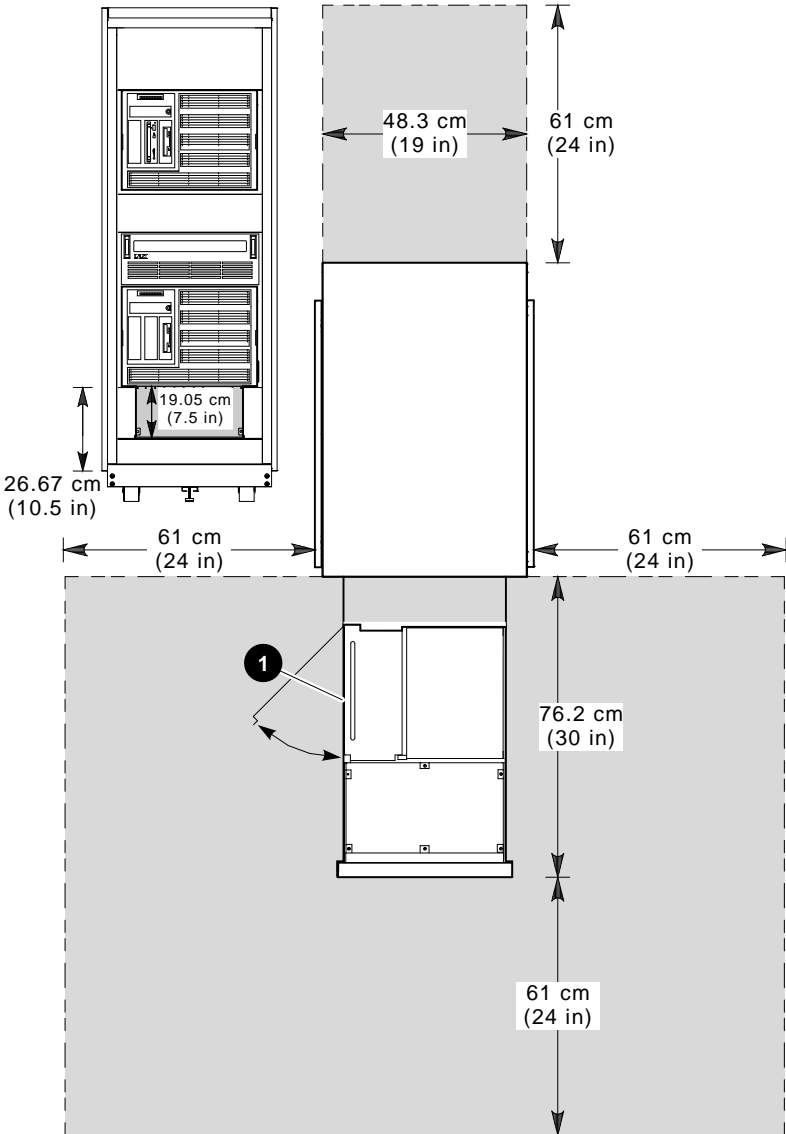
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For site preparation details concerning the system devices installed in the cabinet, refer to the documentation for those systems.



Site Preparation

Figure 2-1 SCSI VMScluster RM Model 2100 System Clearance Requirements

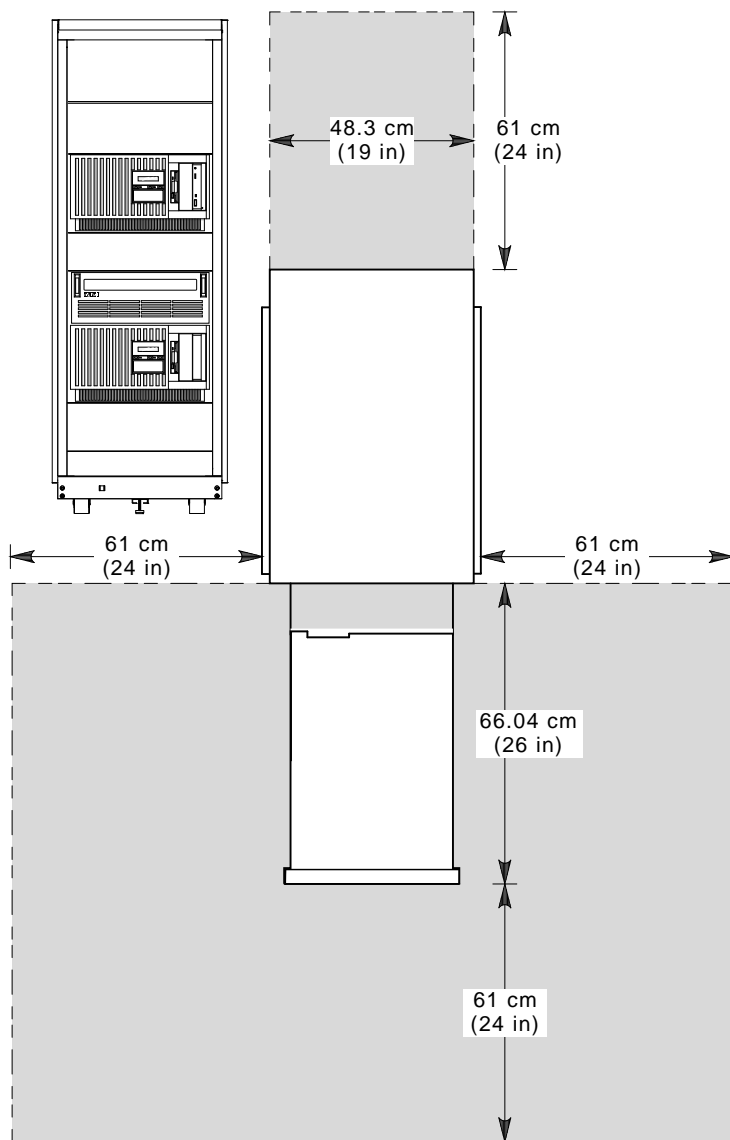


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1 AlphaServer 2100 PCI/EISA compartment

## Site Preparation

Figure 2-2 SCSI VMScluster RM Model 1000 System Clearance Requirements



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# 3

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## Unpacking the Shipment

### 3.1 Overview

This chapter describes how to unpack a SCSI VMSccluster RM system. The SCSI VMSccluster RM Model 2100 and 1000 systems are 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 item needs 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 Service or a Digital sales office, and to the responsible freight carrier.

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**Note**

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

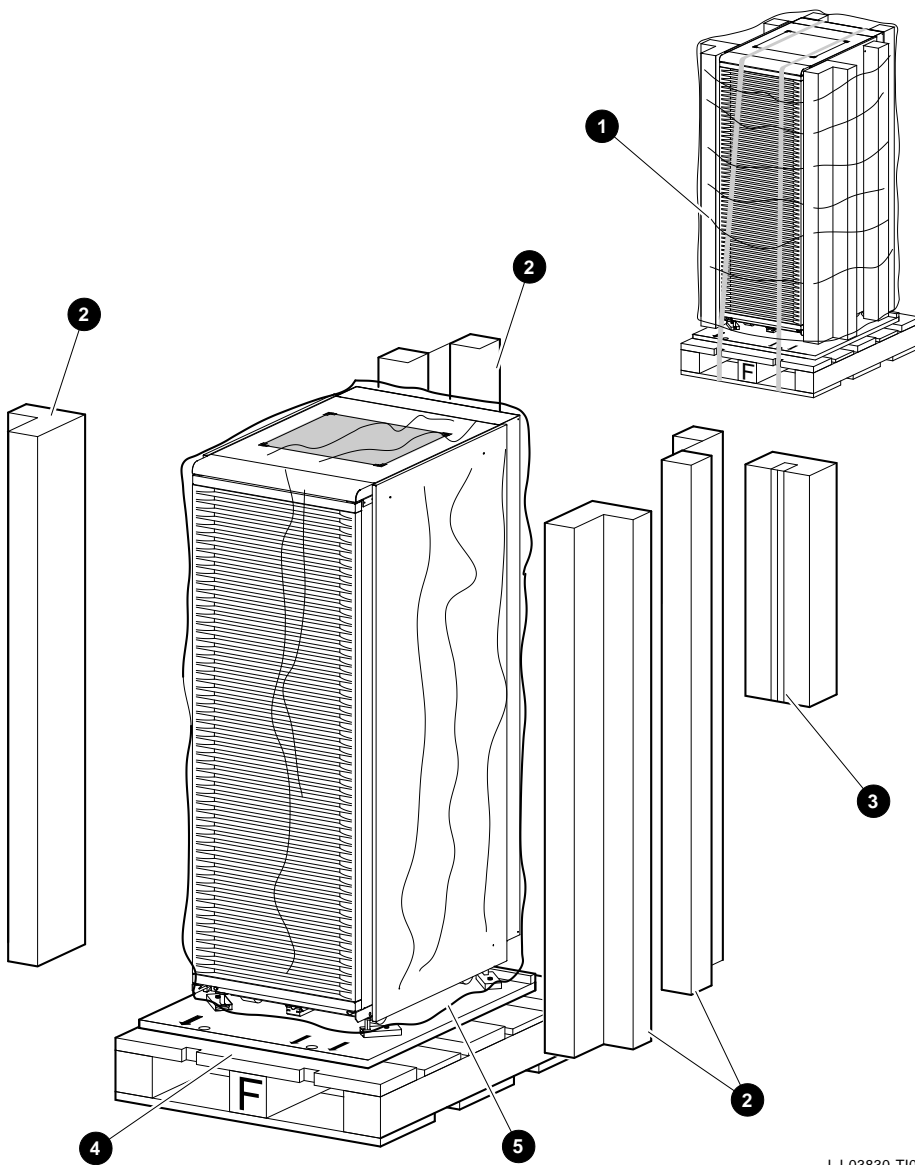
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### 3.3 Checking the Shipment

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.

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

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**Warning**

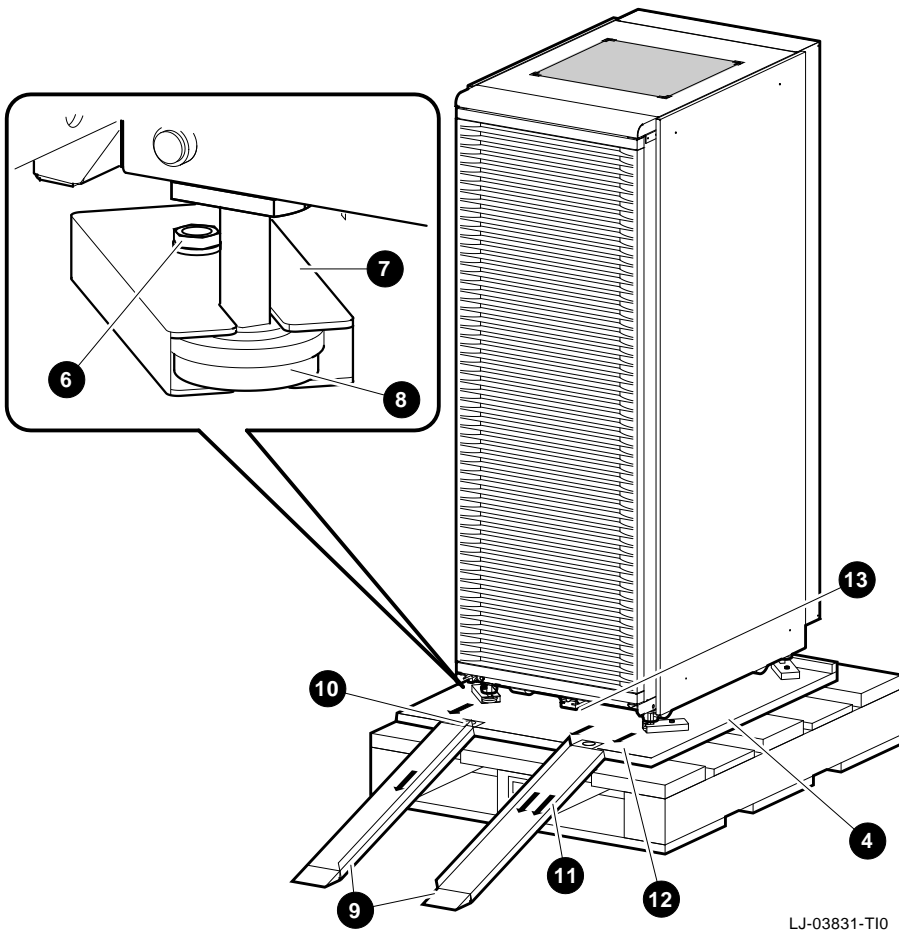
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To prevent personal injury and damage to the cabinet:

- Do not move the cabinet unless there are two people 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 576 kg (1,280 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

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

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### Warning

---

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

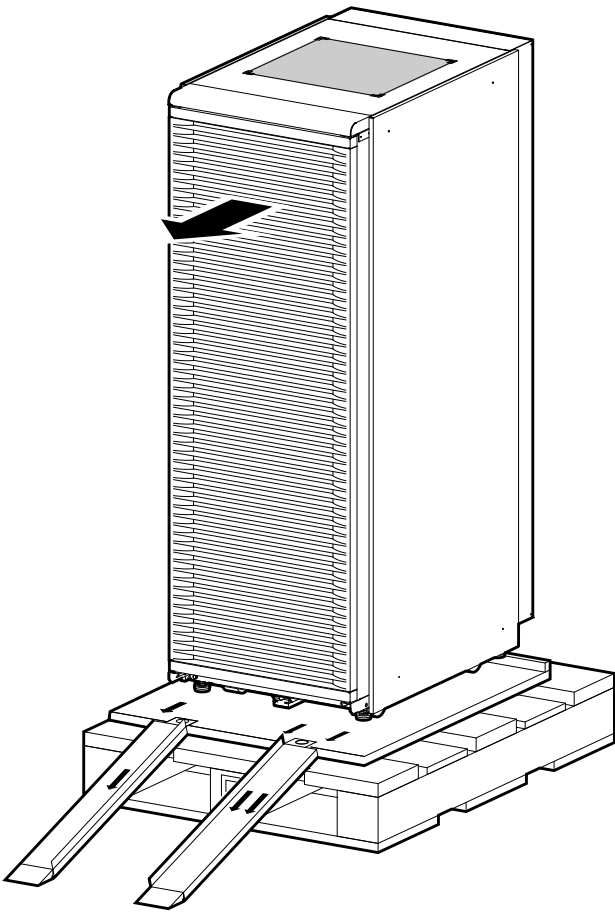
Also, tipping the cabinet more than 15 degrees may cause an unstable situation.

---



## Unpacking the Shipment

Figure 3-3 Deskidding the Cabinet



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# 4

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## Installing the SCSI VMSccluster RM 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 SCSI VMSccluster RM systems 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 SCSI VMSccluster RM system is delivered in *one* H9A10 cabinet. Before positioning the cabinet, note the following warning precaution:

---

#### Warning

---

The floor must be smooth and level, and capable of supporting up to 576 kg (1,280 lb) for the cabinet.

---

Position the cabinet in its final location.

## Installing the SCSI VMSccluster RM 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

## Installing the SCSI VMScluster RM System

### 4.2 Checking the Factory-Connected Cabling

The following sections describe the factory-connected cabling of the SCSI VMScluster RM Model 2100 and 1000 systems.

#### 4.2.1 SCSI VMScluster RM Model 2100 Cabling

The SCSI VMScluster RM Model 2100 system cabling is factory connected and should be checked before starting the system. The *Ethernet cabling* is used to connect the standard I/O cards in the two AlphaServer 2100 RM series systems. The *SCSI cabling* is used to connect the KZPAA-AA PCI-to-SCSI bus adapters in the two AlphaServer 2100 RM series systems to the BA35R-SF storage shelf. Refer to Figure 4-1, Figure 4-2, Figure 4-3, and the following description to check for proper system cabling.

Each AlphaServer 2100 RM series system has a BNE4C-02 2 m (6.6 ft) thickwire Ethernet cable factory connected to the standard I/O card connector on the rear of the chassis.

A DEEXM-AA AUI-to-BNC ThinWire media access unit (MAU) is factory connected to the other end of each thickwire Ethernet cable.

An H8223 ThinWire T-connector is factory connected to each of the two MAUs and an H8225 ThinWire terminator is factory connected to one end of each of the T-connectors.

A BC16M-15 ThinWire cable is factory connected between the other ends of the two T-connectors.

Each AlphaServer 2100 RM series system has a BN23G-01 single-ended SCSI cable factory connected to the KZPAA-AA PCI-to-SCSI bus adapter connector on the rear of the chassis. The other end of these cables are connected to different DWZZA-AA SCSI converters mounted on the shelf located above the BA35R-SF storage shelf.

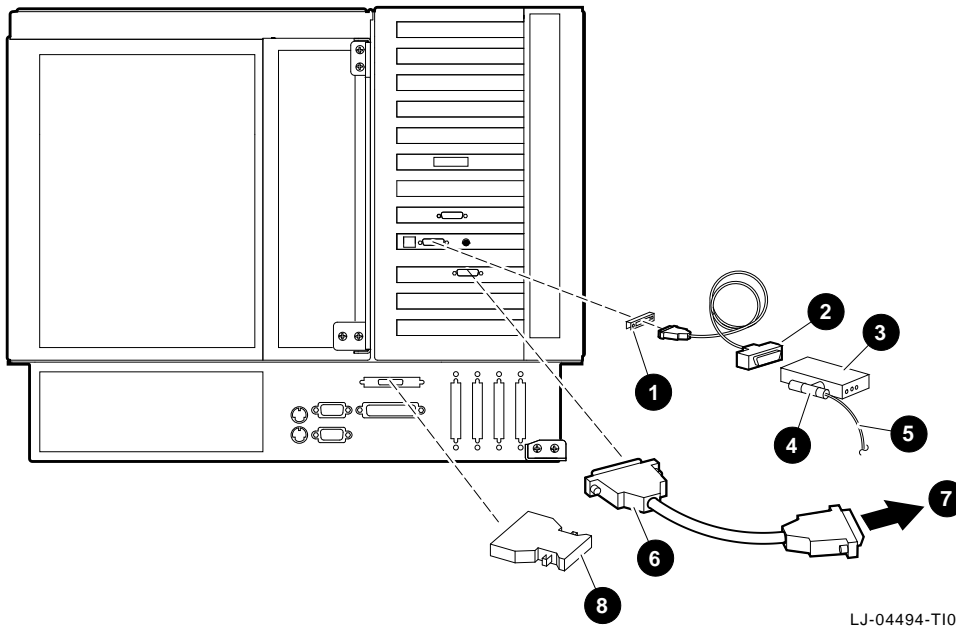
Each of the two DWZZA-AA SCSI converters has an H885-AA tri-link connector block attached to the other side with an H879-AA SCSI-3 terminator connected to one of the connectors.

The other connector on each of the H885-AA tri-link connector blocks has a BN21K-01 SCSI cable factory connected to it. The other end of these cables are connected to an H885-AA tri-link connector block that is attached to the DWZZA-VA SCSI converter mounted in the BA35R-SF storage shelf.

## Installing the SCSI VMScluster RM System

Figure 4-1 shows the AlphaServer 2100 RM series system connections.

Figure 4-1 AlphaServer 2100 Connections



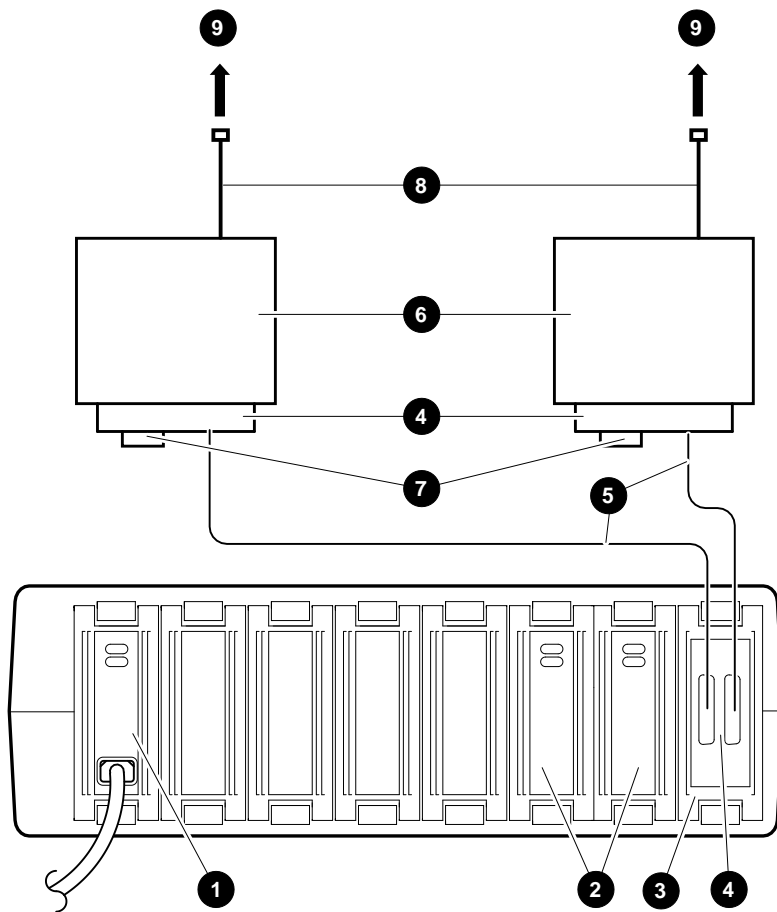
- ❶ Hex nut to slide latch adapter
- ❷ BNE4C-02 thickwire Ethernet cable
- ❸ DECXM-AA AUI-to-BNC ThinWire MAU
- ❹ H8223 ThinWire T-connector

- ❺ BC16M-15 ThinWire cable
- ❻ BN23G-01 SCSI cable
- ❼ To shelf mounted DWZZA-AA
- ❽ SCSI terminator

## Installing the SCSI VMScluster RM System

Figure 4-2 shows the SCSI VMScluster RM Model 2100 system DWZZA-AA and DWZZA-VA SCSI connections.

Figure 4-2 Model 2100 DWZZA-AA and DWZZA-VA SCSI Connections



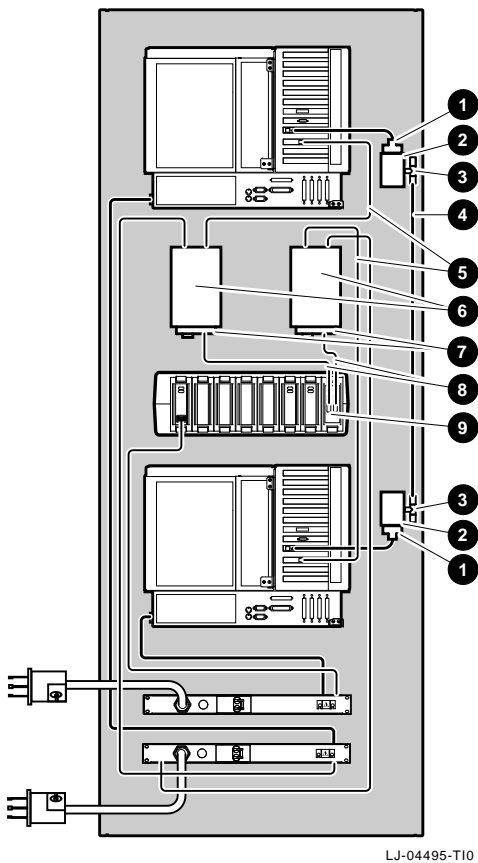
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- |                                     |   |
|-------------------------------------|---|
| ① Power supply                      | ⑥ DWZZA-AA SCSI converters              |
| ② RZ28 disk drives                  | ⑦ H879-AA SCSI-3 terminators            |
| ③ DWZZA-VA SCSI converter           | ⑧ BN23G-01 SCSI cables                  |
| ④ H885-AA tri-link connector blocks | ⑨ To AlphaServer 2100 RM series systems |
| ⑤ BN21K-01 SCSI cables              |   |

## Installing the SCSI VMScluster RM System

Figure 4-3 shows a *complete* cabling diagram of the SCSI VMScluster RM Model 2100 system.

Figure 4-3 SCSI VMScluster RM Model 2100 Cabling Diagram (Rear View)



- ❶ BNE4C-02 thickwire Ethernet cables
- ❷ DECXM-AA AUI-to-BNC ThinWire MAUs
- ❸ H8223 ThinWire T-connectors
- ❹ BC16M-15 ThinWire cable
- ❺ BN23G-01 SCSI cables

- ❻ DWZZA-AA SCSI converters
- ❼ H885-AA tri-link connector blocks
- ❽ BN21K-01 SCSI cables
- ❾ H885-AA tri-link connector block attached to DWZZA-VA SCSI converter



## Installing the SCSI VMScluster RM System

### 4.2.2 SCSI VMScluster RM Model 1000 Cabling

The SCSI VMScluster RM Model 1000 system cabling is factory connected and should be checked before starting the system. The *Ethernet cabling* is used to connect the Ethernet adapters in the two AlphaServer 1000 RM series systems. The *SCSI cabling* is used to connect the KZPAA-AA PCI-to-SCSI bus adapters in the two AlphaServer 1000 RM series systems to the BA35R-SF storage shelf. Refer to Figure 4-6, Figure 4-5, Figure 4-6, and the following description to check for proper system cabling.

Each AlphaServer 1000 RM series system has an H8223 ThinWire T-connector factory connected to the Ethernet adapter connector on the rear of the chassis.

An H8225 ThinWire terminator is factory connected to one end of each of the T-connectors.

A BC16M-15 ThinWire cable is factory connected between the other ends of the two T-connectors.

Each AlphaServer 1000 RM series system has a BN23G-01 single-ended SCSI cable factory connected to the KZPAA-AA PCI-to-SCSI bus adapter connector on the rear of the chassis. The other end of these cables are connected to different DWZZA-AA SCSI converters mounted on the shelf located above the BA35R-SF storage shelf.

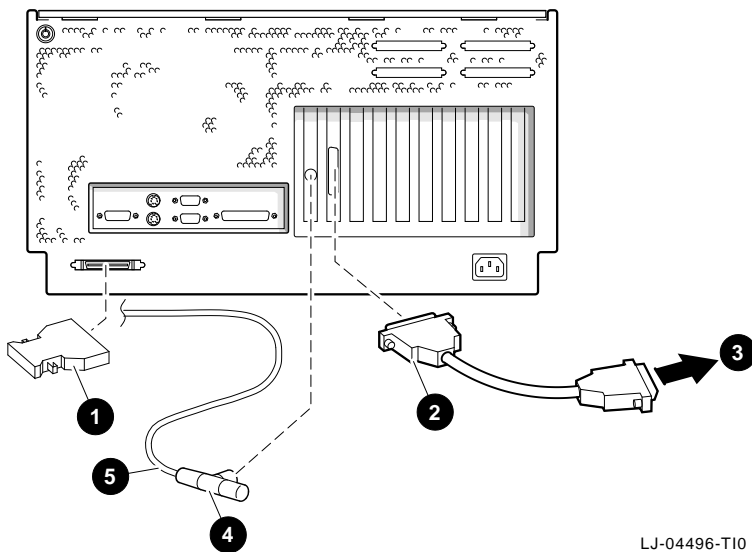
Each of the two DWZZA-AA SCSI converters has an H885-AA tri-link connector block attached to the other side with an H879-AA SCSI-3 terminator connected to one of the connectors.

The other connector on each of the H885-AA tri-link connector blocks has a BN21K-01 SCSI cable factory connected to it. The other end of these cables are connected to an H885-AA tri-link connector block that is attached to the DWZZA-VA SCSI converter mounted in the BA35R-SF storage shelf.

## Installing the SCSI VMScluster RM System

Figure 4-4 shows the AlphaServer 1000 RM series system connections.

**Figure 4-4 AlphaServer 1000 Connections**



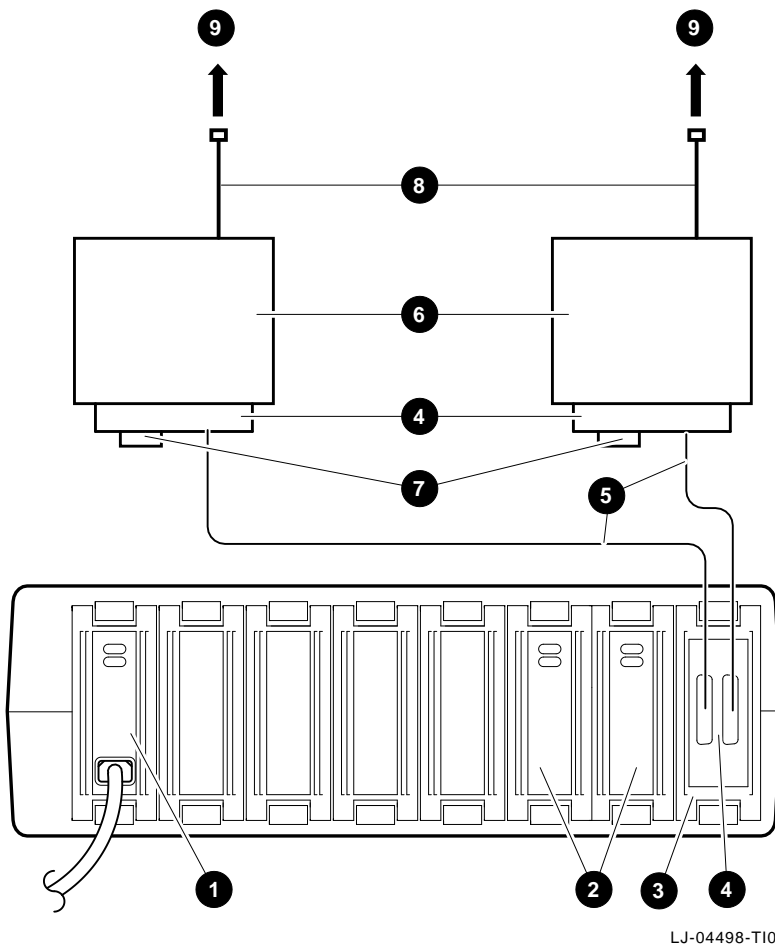
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- ❶ SCSI terminator
- ❷ BN23G-01 SCSI cable
- ❸ To shelf mounted DWZZA-AA
- ❹ H8223 ThinWire T-connector
- ❺ BC16M-15 ThinWire cable

## Installing the SCSI VMScluster RM System

Figure 4-5 shows the SCSI VMScluster RM Model 1000 system DWZZA-AA and DWZZA-VA SCSI connections.

Figure 4-5 Model 1000 DWZZA-AA and DWZZA-VA SCSI Connections

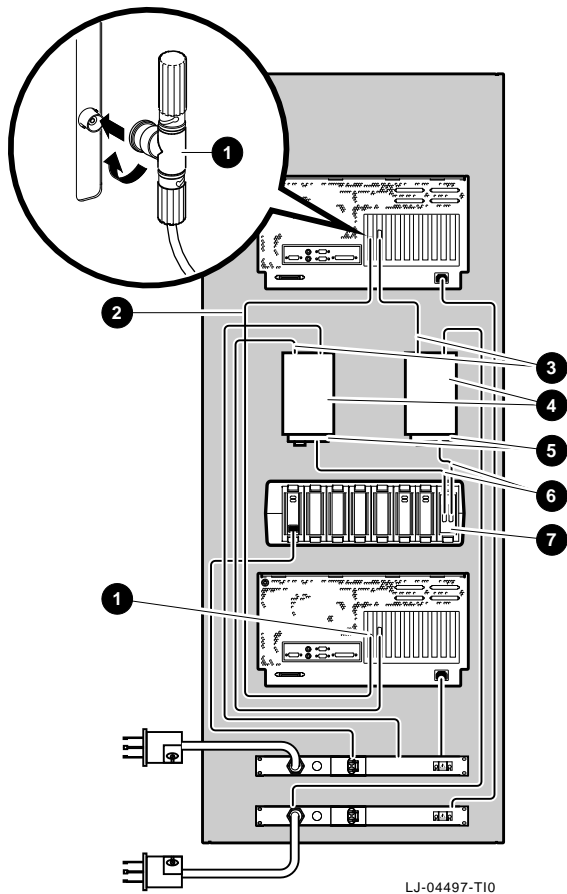


- |                                     |   |
|-------------------------------------|---|
| ① Power supply                      | ⑥ DWZZA-AA SCSI converters              |
| ② RZ28 disk drives                  | ⑦ H879-AA SCSI-3 terminators            |
| ③ DWZZA-VA SCSI converter           | ⑧ BN23G-01 SCSI cables                  |
| ④ H885-AA tri-link connector blocks | ⑨ To AlphaServer 1000 RM series systems |
| ⑤ BN21K-01 SCSI cables              |   |

## Installing the SCSI VMScluster RM System

Figure 4-6 shows a *complete* cabling diagram of the SCSI VMScluster RM Model 1000 system.

Figure 4-6 SCSI VMScluster RM Model 1000 Cabling Diagram (Rear View)



- ❶ H8223 ThinWire T-connectors
- ❷ BC16M-15 ThinWire cable
- ❸ BN23G-01 SCSI cables
- ❹ DWZZA-AA SCSI converters

- ❺ H885-AA tri-link connector blocks
- ❻ BN21K-01 SCSI cables
- ❼ H885-AA tri-link connector block attached to DWZZA-VA SCSI converter

## Installing the SCSI VMSccluster RM System

### 4.3 Connecting Power

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

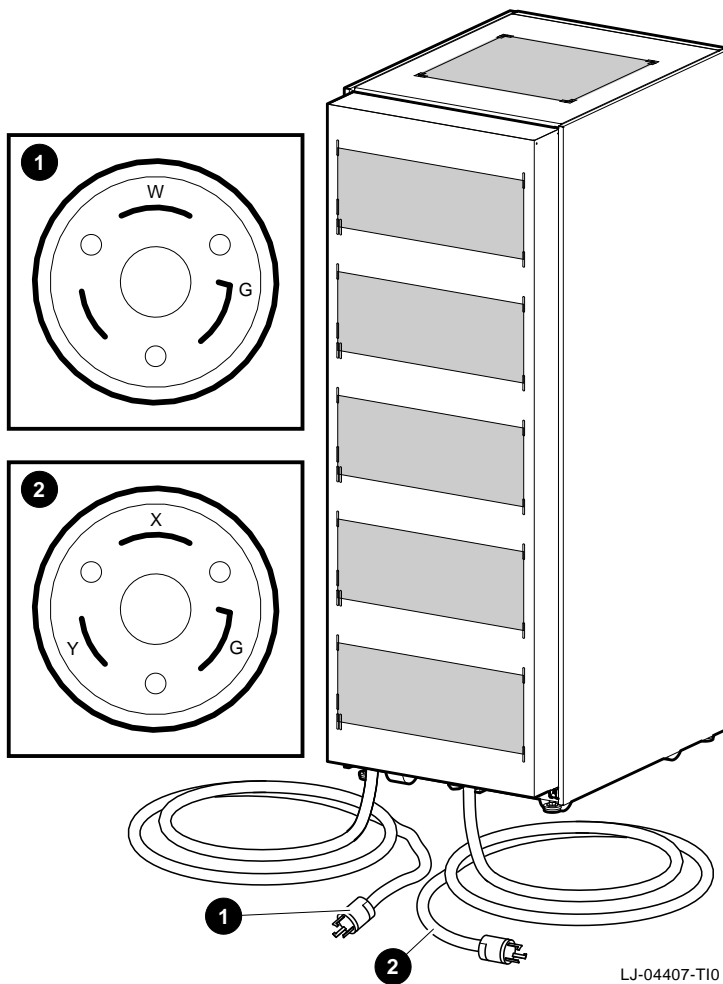
For 120 Vac (80 to 135 Vac) operation, H7600-AA power distribution units are installed. The power cord connector (NEMA L5-30P) mates with a NEMA L5-30R wall receptacle.

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 4-7 shows the difference between the NEMA L5-30P ❶ and the NEMA L6-20P ❷ power connectors.

## Installing the SCSI VMScluster RM System

Figure 4-7 Power Connectors



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

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

## Installing the SCSI VMScluster RM System

### 4.4 Starting the SCSI VMScluster RM Systems

The following sections provide the procedures for starting the SCSI VMScluster RM Model 2100 and 1000 systems. Refer to the *OpenVMS Version 6.2 New Features Manual* for more information on the SCSI VMScluster systems.

#### 4.4.1 Starting the SCSI VMScluster RM Model 2100 System

To start the SCSI VMScluster RM Model 2100 system, proceed as follows:

---

**Note**

---

Before starting the system, ensure that the two power distribution unit cords are plugged into the proper wall receptacles.

---

1. Place the main power circuit breakers on both power distribution units to the ON position.
2. Use the key to open the operator control panel door on the first AlphaServer 2100 RM series system (the top system in the cabinet), and press the DC On/Off switch.
3. Use the key to open the operator control panel door on the second AlphaServer 2100 RM series system (the bottom system in the cabinet), and press the DC On/Off switch.
4. After system self-tests have completed, the systems will automatically boot into multiuser mode.  
After a few minutes, the operating system login banner is displayed on the monitor.
5. Log in at the login prompt. Once the operating system prompt is displayed, the system is ready for normal operation.

---

**Note**

---

After verifying proper system operation, the customer can proceed to connect the system to the in-house FDDI or ThinWire LAN.

---

## Installing the SCSI VMScluster RM System

### 4.4.2 Starting the SCSI VMScluster RM Model 1000 System

To start the SCSI VMScluster RM Model 1000 system, proceed as follows:

---

**Note**

---

Before starting the system, ensure that the two power distribution unit cords are plugged into the proper wall receptacles.

---

1. Place the main power circuit breakers on both power distribution units to the ON position.
2. Press the On/Off switch on the operator control panel on the first AlphaServer 1000 RM series system (the top system in the cabinet).
3. Press the On/Off switch on the operator control panel on the second AlphaServer 1000 RM series system (the bottom system in the cabinet).
4. After system self-tests have completed, the systems will automatically boot into multiuser mode.

After a few minutes, the operating system login banner is displayed on the monitor.

5. Log in at the login prompt. Once the operating system prompt is displayed, the system is ready for normal operation.

---

**Note**

---

After verifying proper system operation, the customer can proceed to connect the system to the in-house FDDI or ThinWire LAN.

---



# A

---

## Additional Installation Information

### A.1 Overview

During the installation of the SCSI VMScuser RM system 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

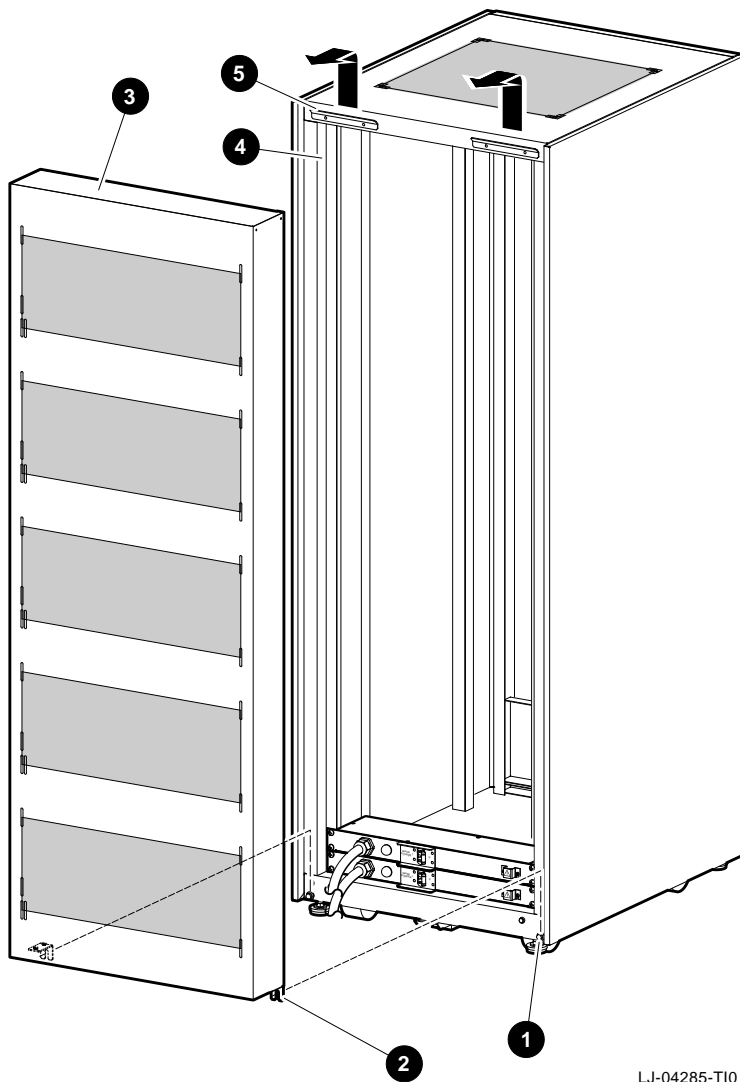
1. Loosen the two M6 screws ❶ securing the tabs ❷ on the rear door ❸ to the cabinet ❹.
2. Grasp both sides of the rear door ❸ about midway up the door. Then lift the door off and away from the two brackets ❺ and the M6 screws ❶.
3. Place the rear door ❸ aside and out of the way.

#### 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 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

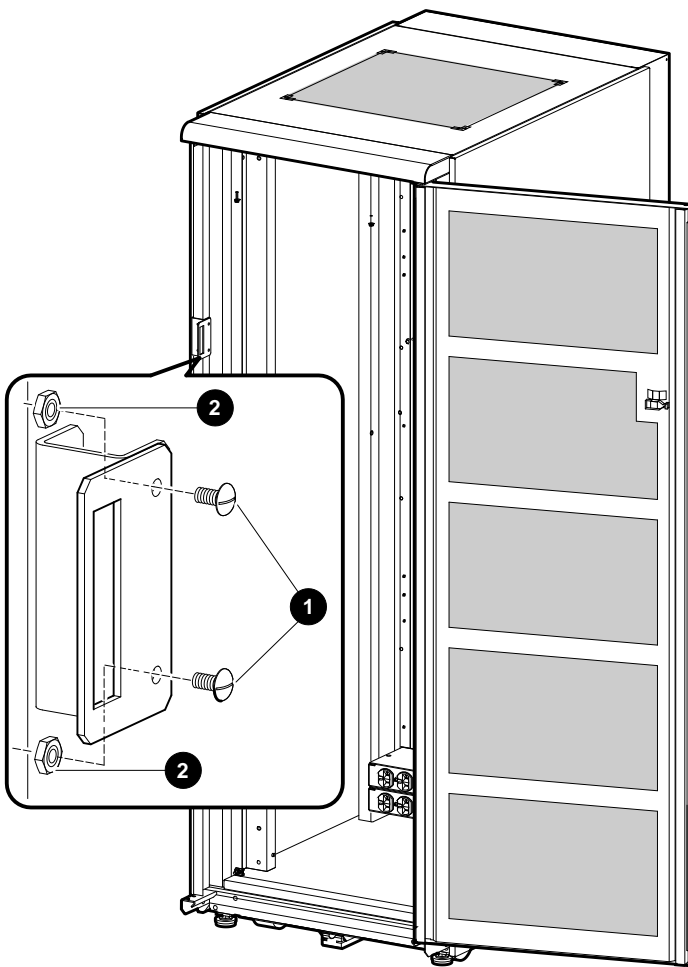
Remove the two 8-32 screws ❶ and two 8-32 kepnuts ❷ that secure the front door latch bracket to the cabinet frame.

#### 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



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## 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

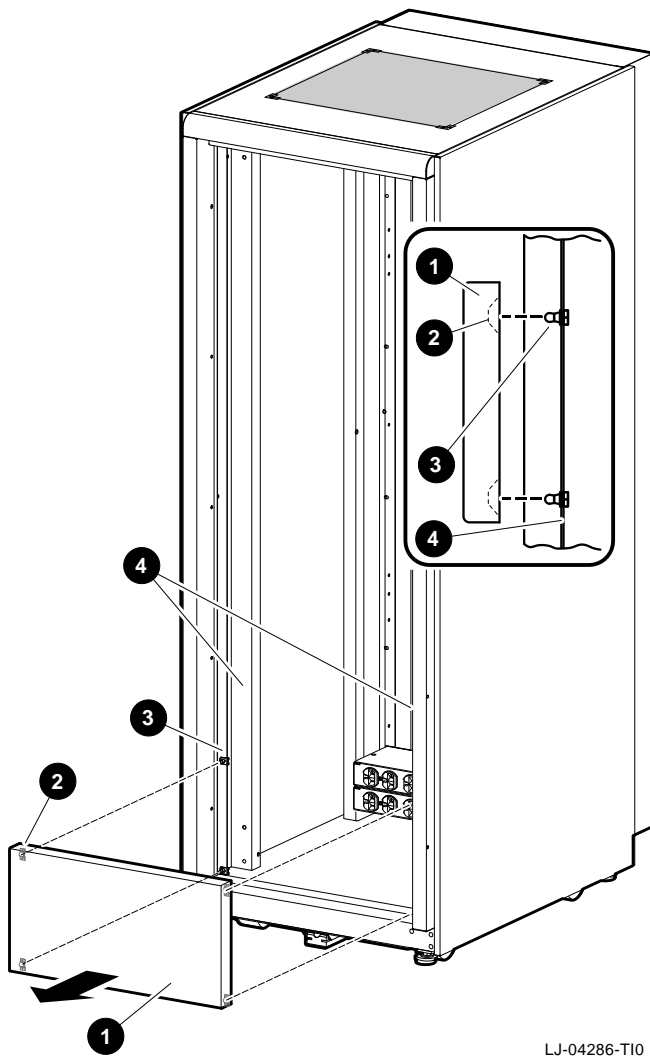
Grasp the front filler panel ❶ on both sides and then pull straight back away from the cabinet.

#### 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



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## 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.

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#### Warning

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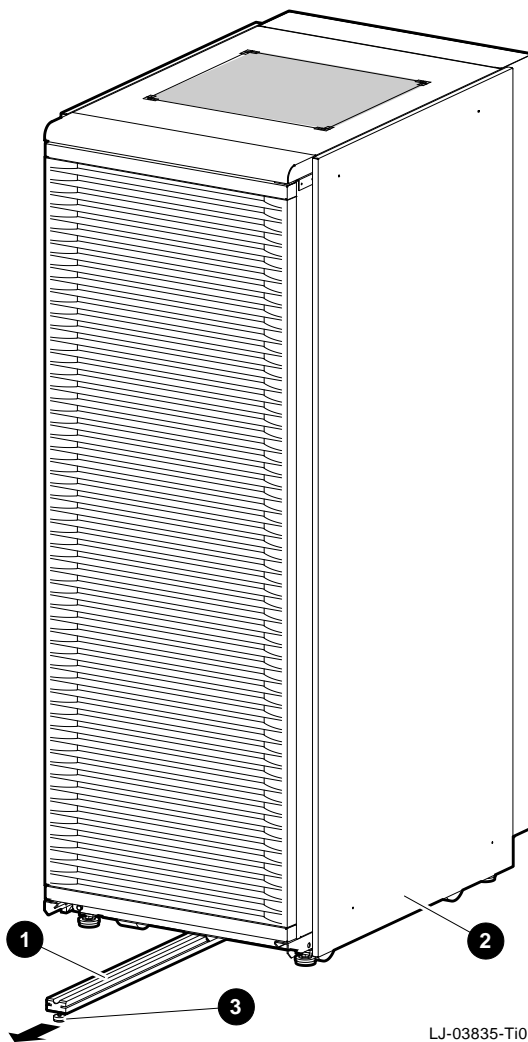
The stabilizer bar must be fully extended before any system is extended out of the cabinet on its slides.

---



## 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 2100 RM series and AlphaServer 1000 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.

---

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### Warning

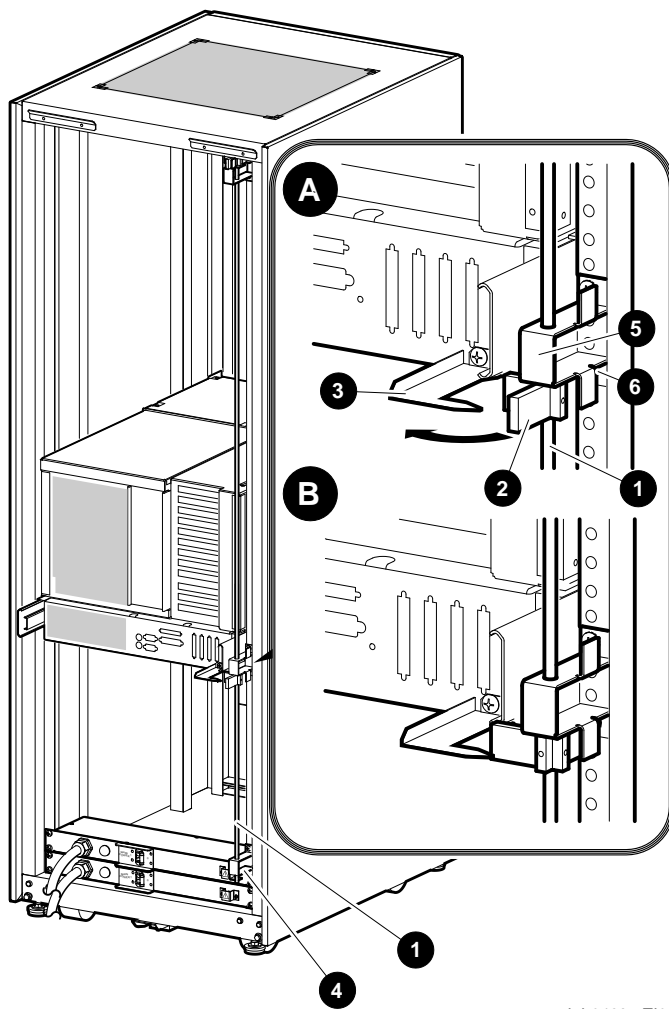
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If a system is installed without an interlock actuator bracket or the vertical bar in the cabinet does not engage properly with the system interlock actuator bracket, it is the customer's responsibility to provide a stable cabinet.

---

## Additional Installation Information

Figure A-5 The Interlock System



LJ-04287-T10

# B

## Options

### B.1 SCSI VMScluster RM Model 2100 System Options

Table B-1 provides a list of the options available for the SCSI VMScluster RM Model 2100 system. This list is not intended to include complete ordering information, configuration information, or recommend choices. Refer to the "Systems and Options Catalog" ordering menus for detailed information.

**Table B-1 SCSI VMScluster RM Model 2100 System Options**

Part Number	Description
455AR-AA	EV4 SMP CPU card
MS450-BA	64 MB memory module
MS451-DA	128 MB memory module
MS451-FA	512 MB memory module
TLZ07-LG	8 GB, 4 mm DAT tape drive
TZK11-LG	QIC cartridge tape drive
RZ26	Internal 1 GB disk drive
RZ28	Internal 2 GB disk drive
RZ29	Internal 4 GB disk drive
H7804-AA	Redundant (N+1) power supply for AlphaServer 2100 RM (120 Vac)
H7804-AB	Redundant (N+1) power supply for AlphaServer 2100 RM (240 Vac)
BA35R-SF	Storage shelf for front of cabinet (8-bit)
BA35R-SR	Storage shelf for rear of cabinet (8-bit)
DWZZA-VA	FD-to-FSE SCSI converter
DWZZA-AA	FSE-to-FD SCSI converter

(continued on next page)

## Options

**Table B–1 (Cont.) SCSI VMScluster RM Model 2100 System Options**

<b>Part Number</b>	<b>Description</b>
RZ26	Plug-in 1 GB disk drive for BA350 storage shelf
RZ28	Plug-in 2 GB disk drive for BA350 storage shelf
RZ29	Plug-in 4.3 GB disk drive for BA350 storage shelf
BA35X-HF	Redundant (N+1) power supply for BA350 storage shelf
H9C00-MH/MJ <sup>1</sup>	Top of cabinet fan pack

<sup>1</sup>Used when more than two shelves with RZ29 disk drives are installed.

## B.2 SCSI VMSccluster RM Model 1000 System Options

Table B-2 provides a list of the options available for the SCSI VMSccluster RM Model 1000 system. This list is not intended to include complete ordering information, configuration information, or recommend choices. Refer to the "Systems and Options Catalog" ordering menus for detailed information.

**Table B-2 SCSI VMSccluster RM Model 1000 System Options**

Part Number	Description
PB7MA-AA	16 MB 70 ns (5 x 4 MB SIMMs) memory kit
PB7MA-AB	32 MB 70 ns (5 x 8 MB SIMMs) memory kit
PB7MA-AC	64 MB 70 ns (5 x 16 MB SIMMs) memory kit
PB7MA-AD	128 MB 70 ns (5 x 32 MB SIMMs) memory kit
TLZ07-MF	8 GB, 4 mm DAT tape drive
TZK11-MF	QIC cartridge tape drive
RZ26	Internal 1 GB disk drive
RZ28	Internal 2 GB disk drive
BA35R-SF	Storage shelf for front of cabinet (8-bit)
BA35R-SR	Storage shelf for rear of cabinet (8-bit)
DWZZA-VA	FD-to-FSE SCSI converter
DWZZA-AA	FSE-to-FD SCSI converter
RZ26	Plug-in 1 GB disk drive for BA350 storage shelf
RZ28	Plug-in 2 GB disk drive for BA350 storage shelf
RZ29	Plug-in 4.3 GB disk drive for BA350 storage shelf
BA35X-HF	Redundant (N+1) power supply for BA350 storage shelf
H9C00-MH/MJ <sup>1</sup>	Top of cabinet fan pack

<sup>1</sup>Used when more than two shelves with RZ29 disk drives are installed.





## Reader's Comments

SCSI VMSccluster RM Systems  
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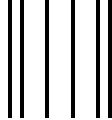
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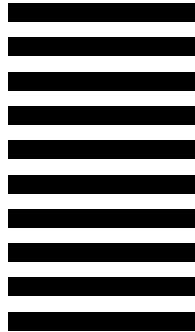
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