AdvantageCluster Compute and File Server Model 5000

Installation/Owner's Guide

Safety

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

Warning	Contains information to prevent personal injury.
Caution	Contains information to prevent damage to equipment.

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

Danger	Signale les informations destinées à prévenir les accidents corporels.
Attention	Signale les informations destinées à prévenir la détérioration du matériel.

Aviso	Contiene información para evitar daños personales.
Precaución	Contiene información para evitar daños al equipo.

Für Bundesrepublik Deutschland
For Federal Republic of Germany
Pour la République féderale d'Allemagne

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15 Funkentstörungsmaßnahmen durch den Benutzer erfordern.

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Originalkabel entsprechen.

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Zulassungsnummer gekennzeichnet und mit einer
Anmeldepostkarte versehen. Sollte Kennzeichnung und
Anmeldepostkarte übergangsweise nicht mit ausgeliefert
werden kontaktieren Sie bitte das nächstgelegene Digital
Equipment Kundendienstbüro.

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5 Installing the ACFS System

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Preface

Overview

This guide provides the information necessary to install the AdvantageCluster Compute Server Model 5000 and the AdvantageCluster File Server Model 5000 systems. Information concerning individual devices used in these systems is contained in other documents as referred to in this guide.

REMINDER

For ease of reference in the remainder of this guide, the AdvantageCluster Compute Server Model 5000 system will be referred to as the ACCS system. The AdvantageCluster File Server Model 5000 system will be referred to as the ACFS system.

Intended Audience

The instructions in this guide are for Digital Customer Service or other Digital qualified service personnel installing an ACCS or ACFS system.

Structure of This Document

This document is organized as follows:

Chapter 1, Introduction — Provides a general description and specifications for the ACCS and ACFS systems.

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

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

Chapter 4, ACCS Installation — Describes how to install the ACCS system.

Chapter 5, ACFS Installation — Describes how to install the ACFS 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.

Appendix B, System Options — Provides the part numbers and description of options available for the ACCS and ACFS systems.

Related Documents

Site Environmental Preparation Guide	EK-CSEPG-MA
H9A10 (600 mm) Cabinet Installation/Owner's Guide	EK-H9A10-IN
GIGAswitch System Installation and Service Manual	EK-GGSVA-IN
GIGAswitch System Network Manager's Guide	EK-GGMGA-MG
GIGAswitch System AGL-2 Manager's Reference Guide	EK-GAGL2-RC
GIGAswitch System Release Notes	AA-PZT9A-TE
AlphaServer 2100 RM Series Installation/Owner's Guide	EK-KN450-RM
DECserver 90M Owner's Manual	EK-DSRVH-OM

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 AdvantageCluster Compute Server Model 5000 (ACCS) and AdvantageCluster File Server Model 5000 (ACFS) systems.

1.2 ACCS System

The ACCS system (shown in Figure 1–1) is a high-performance computing platform that provides fast throughput and turnaround time on compute-intensive applications. It contains Alpha microprocessors, networking devices (Ethernet, FDDI, GIGAswitch), and cluster computing software. The factory-installed software provides the tools for batch and parallel processing, application development, application tuning, and network and system management.

The ACCS system is contained in *two* H9A10 cabinets.

- One cabinet (cabinet 1) contains a GIGAswitch system, a DECserver 90M, and an AlphaServer 2100 RM series workstation.

- The second cabinet (cabinet 2) contains three AlphaServer 2100 RM series servers with space available for the installation of optional BA350 storage shelves.

1.2.1 GIGAswitch System

The GIGAswitch system is a standalone, intelligent, switching system that forwards packets among a set of connected data links. The core of the GIGAswitch system is a crossbar switch (CBS) card that forms point-to-point communication paths by mapping inputs to outputs.

The GIGAswitch system functions as a modular, multiport, FDDI bridge that uses the CBS card as an interconnection mechanism for its line cards and processing engines.

Introduction

In the ACCS system, the GIGAswitch system contains the following four logic modules:

- A DEFGL-BA 4-port FDDI line card that provides input/output ports for the four AlphaServer 2100 RM units.

- A DEFGP-AA switch control processor (SCP) card that forwards multicast packets and packets with an unknown destination address.

- A clock card that provides clock signals for the GIGAswitch system.

- A crossbar switch card that provides interconnection of the ports on the GIGAswitch system.

1.2.2 AlphaServer 2100 RM Units

The AlphaServer 2100 RM unit is a high-performance superserver for multiuser environments. It is an Alpha multiprocessor server system that is supported by multiple operating systems (OSF/1, OpenVMS, Windows NT).

In the ACCS system, all four of the AlphaServer 2100 RM units contain the following:

- One CPU (expandable to four CPUs per unit)

- Memory in one of the following combinations:

  - One CPU and 128 MB of memory per unit

  - One CPU and 512 MB of memory per unit

- One internal RZ28-MY 2 GB hard-disk drive (expandable to 4 GB by adding a second RZ28-MY drive)

- One removable-media RX26 3.5-inch floppy disk drive

- One removable-media RRDxx CD-ROM drive

- One FDDI option card

- One standard I/O card

The AlphaServer 2100 RM series workstation located in cabinet 1 with the GIGAswitch system, also contains a removable-media TLZ07 cassette tape drive and a video card.

Figure 1–1 AdvantageCluster Compute Server Model 5000 System
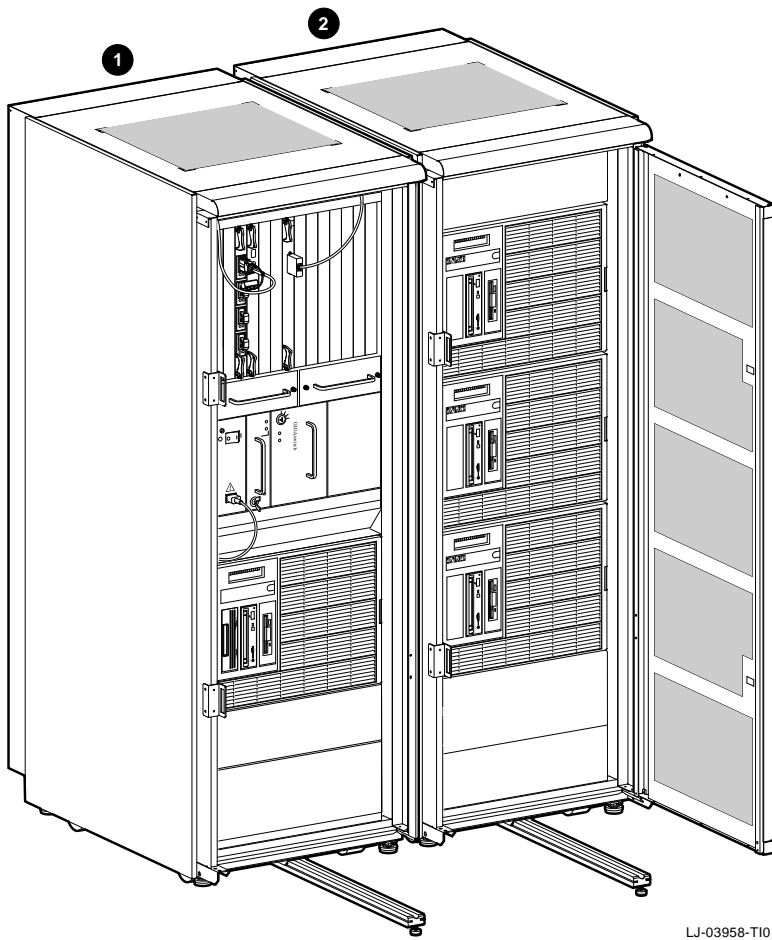
LJ-03958-TI0

❶ Cabinet 1   ❷ Cabinet 2

Introduction

Figure 1–2 shows the front panel layout of the ACCS system.

Figure 1–2 Front Panel Layout for the ACCS System
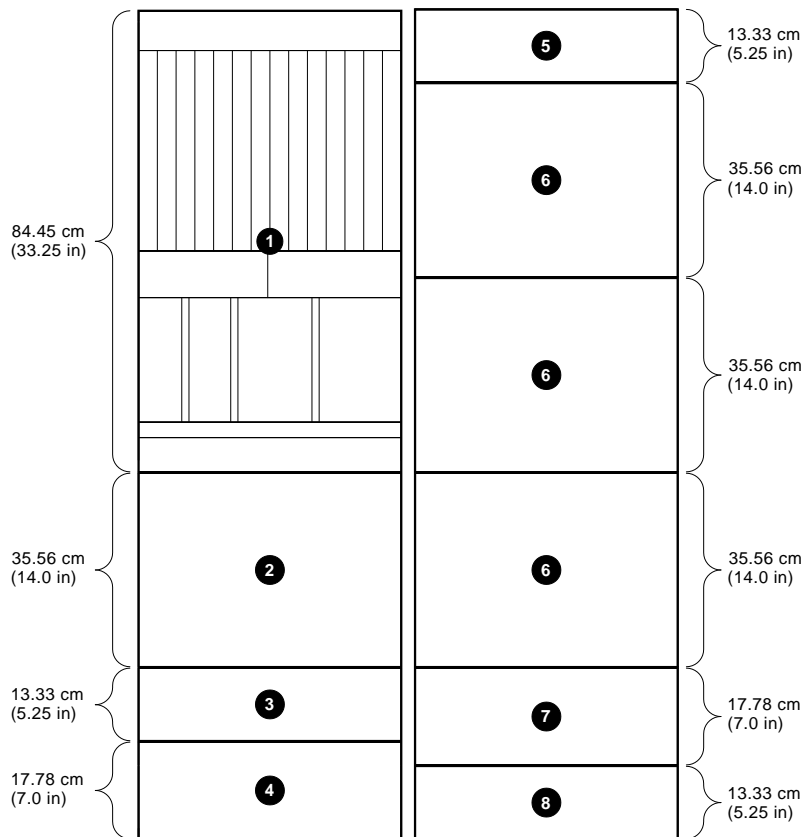
LJ-03959-TI0

❶ GIGAswitch system
❷ AlphaServer 2100 RM workstation
❸ Filler panel
❹ Filler panel (location of two
877-DA or 877-E power controllers
and DECserver 90M)

❺ Filler panel
❻ AlphaServer 2100 RM servers
❼ Filler panel (space available for
optional BA350 storage shelves)
❽ Filler panel (location of two 877-DA or
877-E power controllers)

1.2.3 DECserver 90M

The DECserver 90M is a multisession network access server designed to operate in multivendor environments. It connects to the ThinWire network connecting the AlphaServer 2100 RM units and to the serial ports on the AlphaServer 2100 RM units.

1.2.4 Installed Software

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

Table 1–1   Factory-Installed Software

Product Name	Description
Digital UNIX[1] AXP	The operating system.
Load Sharing Facility (LSF)	Distributes and levels the system workload across a multivendor platform network of workstations and servers.
Parallel Virtual Machine (PVM)	Passes messages between the parallel systems in a cluster.
Digital Extended Math Library for Digital UNIX AXP (DXML)	Provides a collection of high-performance, computationally-intensive mathematical subroutines designed for use in many different types of scientific and engineering applications.
KAP for DEC C for Digital UNIX AXP	A source-to-source preprocessor that restructures C code for improved scalar performance, as well as for performing parallel decomposition to take advantage of shared memory and symmetric multiprocessors.
KAP for DEC Fortran for Digital UNIX AXP	A FORTRAN 77 source-to-source preprocessor that restructures FORTRAN code for improved scalar performance, as well as for performing parallel decomposition to take advantage of shared memory and symmetric multiprocessors.
DEC Fortran 90 for Digital UNIX AXP Systems	A high-performance FORTRAN for parallel application development.
DEC Fortran for Digital UNIX AXP Systems	FORTRAN 77 for application development.

[1]Digital UNIX, formerly DEC OSF/1.

Introduction

Table 1–1 (Cont.)   Factory-Installed Software

Product Name	Description
DEC C++ for Digital UNIX AXP	Provides access to one C++ compiler and three C compilers for application development.
Parallel Software Environment	The execution environment and profiler for parallel Fortran 90 applications running on Digital UNIX.
DEC FUSE for Digital UNIX AXP	An integrated set of tools with an OSF/Motif window interface that allows programmers to edit, build, debug, and analyze programs; and contains special features to make programming more convenient and productive.
DEC FUSE C++ Support	A product designed to be used with DEC FUSE for Digital UNIX AXP to provide a graphics-based C++ Class Browser, and contains special features for analyzing applications written in DEC C++ for Digital UNIX AXP.
Digital UNIX C Developers' Extensions	A product designed for C programmers that includes the Digital UNIX for Alpha AXP C compiler, an assembler, software development environment, worksystem development environment, the source-code control system, and the revision and control system.
POLYCENTER Console Manager	A layered software product that enables a host system to manage, monitor, and control client console devices.
POLYCENTER FullSail	A family of management applications for UNIX system management that provides centralized management of distributed systems, eliminating the need to log into the managed systems directly.
POLYCENTER Advanced File System Utilities for Digital UNIX AXP	A layered product consisting of several management utilities that extend the capabilities of the POLYCENTER Advanced File System.
POLYCENTER NetWork Save and Restore for Digital UNIX AXP	An application that provides backup services to a single system or to a group of systems via a TCP/IP network. It makes copies of data to ensure data availability and retrieves data from backup copies, when needed.

1.3 ACFS System

The ACFS system (shown in Figure 1–3) is a high-performance platform that provides fast throughput and quick access to large amounts of data. It contains Alpha microprocessors, networking devices (Ethernet, FDDI, GIGAswitch), and cluster data accessing software. The factory-installed software provides the tools for quick access to large amounts of data, and network and system management.

The ACFS system is contained in *three* H9A10 cabinets.

- One cabinet (cabinet 1) contains an AlphaServer 2100 RM series workstation, an AlphaServer 2100 RM series server, and four factory-connected BA350 storage shelves (two in the front and two in the rear of the cabinet) with space available for the installation of two additional (optional) BA350 storage shelves.

- The second cabinet (cabinet 2) contains a GIGAswitch system and a DECserver 90M with 35.56 cm (14.0 in.) of extra available space.

- The third cabinet (cabinet 3) contains two AlphaServer 2100 RM series servers and four factory-connected BA350 storage shelves (two in the front and two in the rear of the cabinet) with space available for the installation of two additional (optional) BA350 storage shelves.

1.3.1 GIGAswitch System

The GIGAswitch system is a standalone, intelligent, switching system that forwards packets among a set of connected data links. The core of the GIGAswitch system is a crossbar switch (CBS) card that forms point-to-point communication paths by mapping inputs to outputs.

The GIGAswitch system functions as a modular, multiport, FDDI bridge that uses the CBS card as an interconnection mechanism for its line cards and processing engines.

In the ACFS system, the GIGAswitch system contains the following four logic modules:

- A DEFGL-BA 4-port FDDI line card that provides input/output ports for the four AlphaServer 2100 RM units.

- A DEFGP-AA switch control processor (SCP) card that forwards multicast packets and packets with an unknown destination address.

- A clock card that provides clock signals for the GIGAswitch system.

- A crossbar switch card that provides interconnection of the ports on the GIGAswitch system.

1.3.2 AlphaServer 2100 RM Units

The AlphaServer 2100 RM unit is a high-performance superserver for multiuser environments. It is an Alpha multiprocessor server system that is supported by multiple operating systems (OSF/1, OpenVMS, Windows NT).

In the ACFS system, all four of the AlphaServer 2100 RM units contain the following:

- One CPU (expandable to four CPUs per unit)
- Memory in the following combination:
  - One CPU and 128 MB of memory per unit
- Two internal RZ28-MY 2 GB hard-disk drives
- One removable-media RX26 3.5-inch floppy disk drive
- One removable-media RRDxx CD-ROM drive
- One FDDI option card
- One standard I/O card
- One NVRAM Prestoserve option card

The AlphaServer 2100 RM series workstation located in the bottom of cabinet 1, also contains a removable-media TLZ07 cassette tape drive and a video card.

Figure 1–3 AdvantageCluster File Server Model 5000 System

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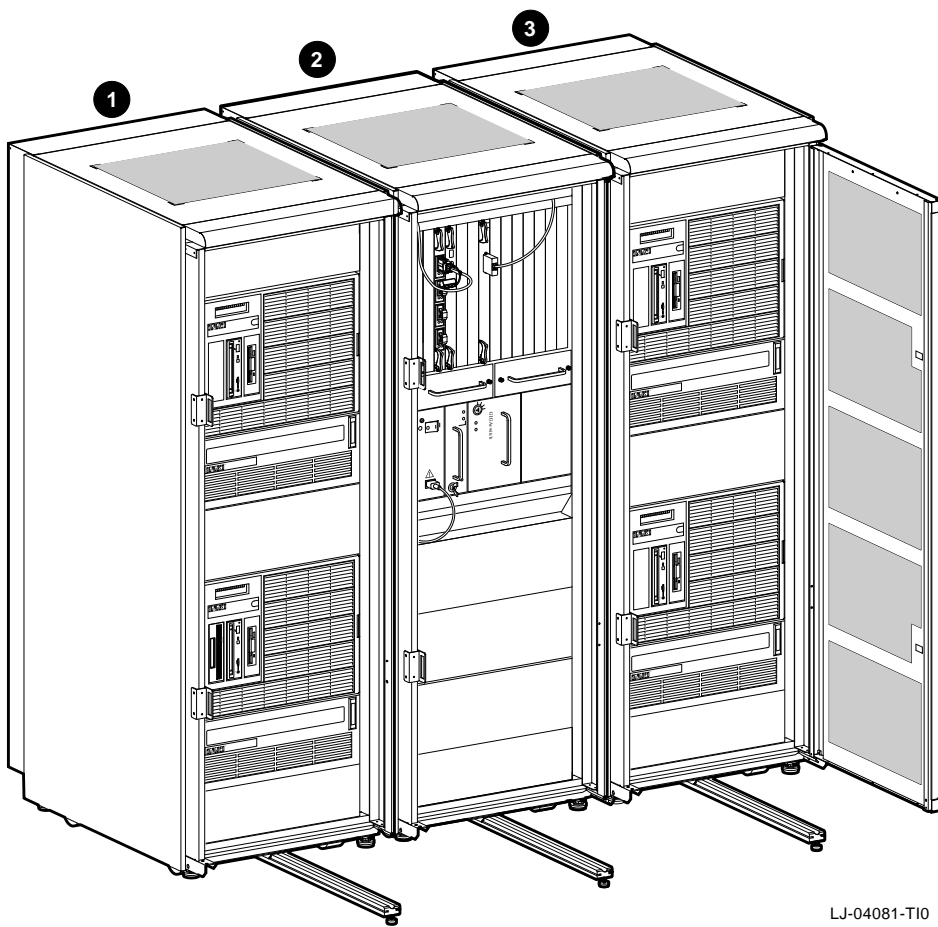
❶ Cabinet 1   ❷ Cabinet 2   ❸ Cabinet 3

Introduction

Figure 1–4 shows the front panel layout of the ACFS system.

Figure 1–4 Front Panel Layout for the ACFS System
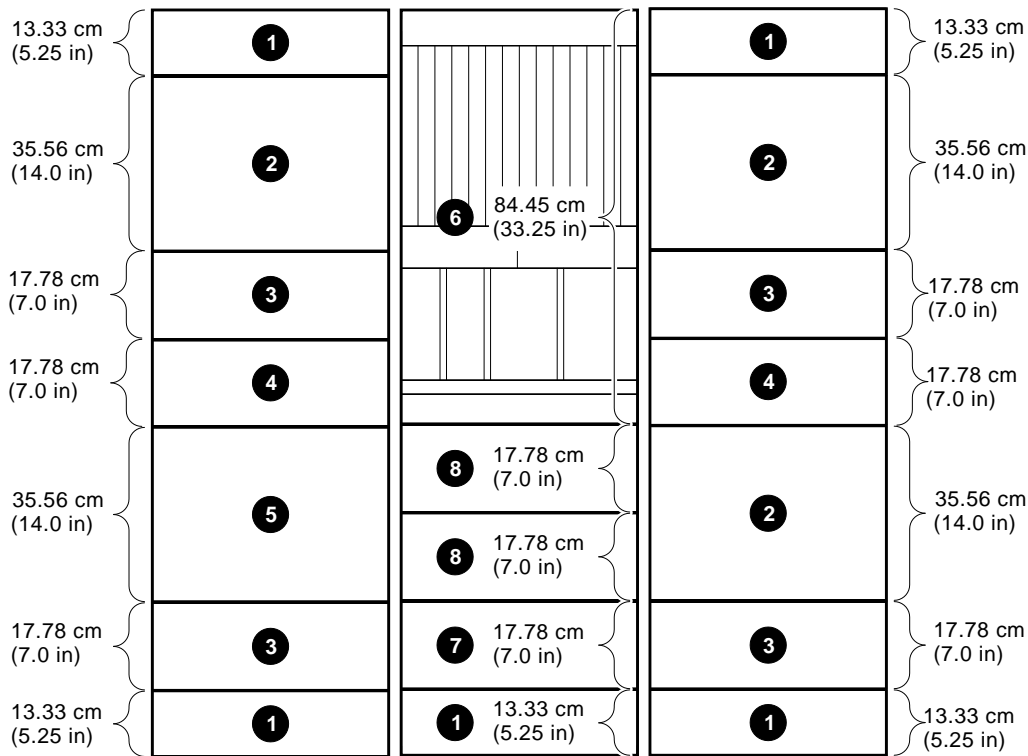
LJ-04082-TI0

❶ Filler panels (bottom panels are location of two 877-DA or 877-E power controllers)
❷ AlphaServer 2100 RM servers
❸ BA350 storage shelves (one front and one rear)
❹ Filler panel (space available for optional BA350 storage shelves)

❺ AlphaServer 2100 RM workstation
❻ GIGAswitch system
❼ Filler panel (location of DECserver 90M)
❽ Filler panels

1.3.3 DECserver 90M

The DECserver 90M is a multisession network access server designed to operate in multivendor environments. It connects to the ThinWire network connecting the AlphaServer 2100 RM units and to the serial ports on the AlphaServer 2100 RM units.

1.3.4 Installed Software

Table 1–2 contains a list of the factory-installed software that comes with the ACFS system.

Table 1–2 Factory-Installed Software

Product Name	Description
Digital UNIX[1] AXP	The operating system.
Logical Storage Manager (LSM)	Allows data spanning across physical disks by creating file systems that span multiple disks to improve performance.
POLYCENTER Console Manager	A layered software product that enables a host system to manage, monitor, and control client console devices.
POLYCENTER FullSail	A family of management applications for UNIX system management that provides centralized management of distributed systems, eliminating the need to log into the managed systems directly.
POLYCENTER Advanced File System Utilities for Digital UNIX AXP	A layered product consisting of several management utilities that extend the capabilities of the POLYCENTER Advanced File System.
POLYCENTER NetWork Save and Restore for Digital UNIX AXP	An application that provides backup services to a single system or to a group of systems via a TCP/IP network. It makes copies of data to ensure data availability and retrieves data from backup copies, when needed.

[1]Digital UNIX, formerly DEC OSF/1.

1.4 ACCS and ACFS System Specifications

This section describes the physical, environmental, and electrical specifications of the ACCS and ACFS 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 [1]) 59.5 in. (English RETMA [2])
Maximum vertical rackmounting space (with power controllers 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 controllers - Cabinet with two power controllers plus packing material - Fully configured (filled) cabinet - Fully configured (filled) cabinet plus packing material	 126 kg (280 lb) 159.3 kg (354 lb) Up to 576 kg (1,280 lb) Up to 609.3 kg (1,354 lb)

Casters, swivel, nonlocking:
  Diameter:
  Maximum capacity:
	
	7.62 cm (3 in.)
	225 kg (500 lb)

Casters, fixed, nonlocking:
  Diameter:
  Maximum capacity:
	
	7.62 cm (3 in.)
	225 kg (500 lb)

Enclosure finish	Painted Digital standard light gray

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

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

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

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 877-DA power controller	120 Vac, 80 to 135 Vac, single-phase, 3-wire
AC input voltage for 877-E power controller	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 6-30P connectors

2

Site Preparation

2.1 Overview

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

Warning

When installing ACCS or ACFS systems in a computer room with raised floors, <u>DO NOT</u> 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 ACCS system. Figure 2–2 shows the clearance required around the ACFS 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 cabinets 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 the cabinets from the pallet or moving the cabinets to a new location. Each cabinet can weigh up to 576 kg (1,280 lb) fully configured.

_____

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

Figure 2–1   ACCS System Clearance Requirements
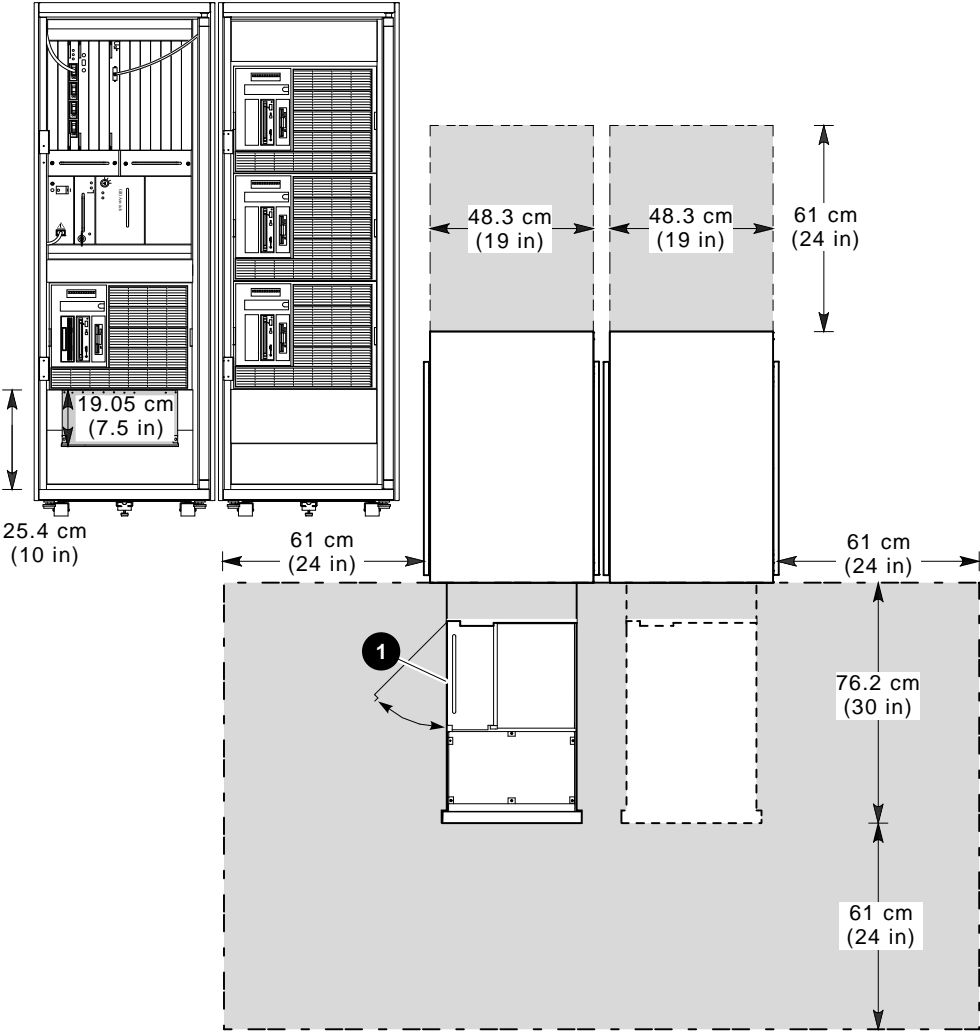
❶ **AlphaServer 2100 PCI/EISA compartment**

Site Preparation

Figure 2–2 ACFS System Clearance Requirements
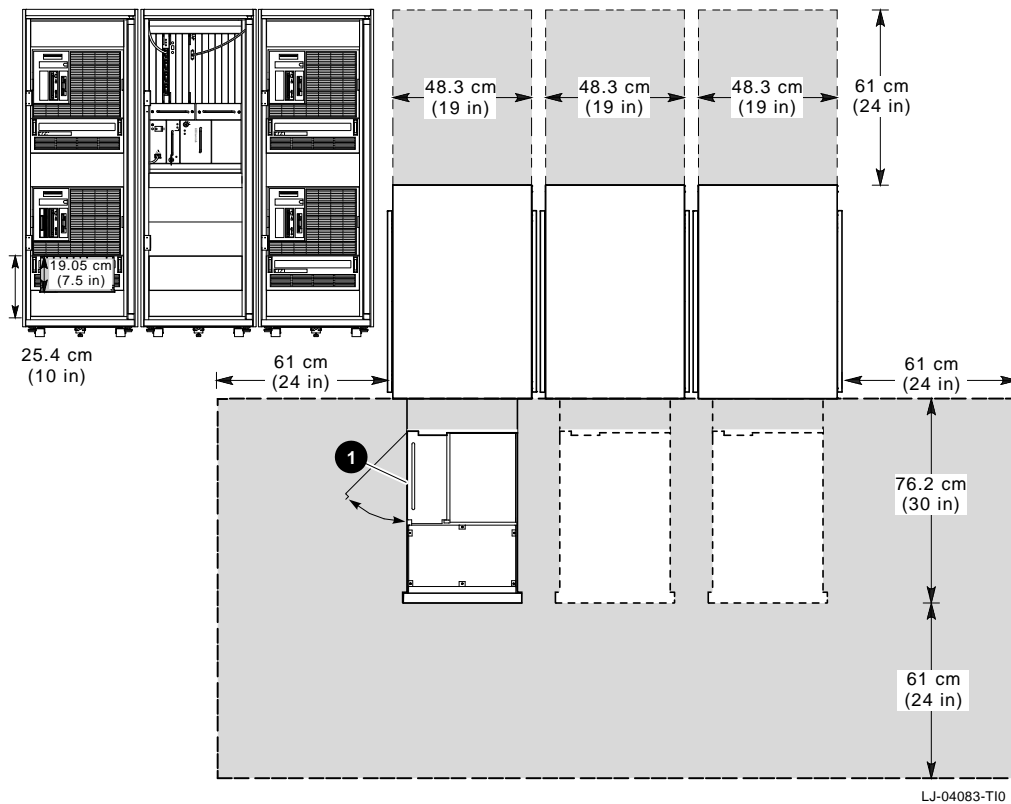
❶ AlphaServer 2100 PCI/EISA compartment

3

Unpacking the Shipment

3.1 Overview

This chapter describes how to unpack an ACCS and ACFS system. The ACCS and ACFS systems are shipped with one cabinet to a wooden pallet. Since the ACCS system consists of two cabinets, repeat the procedure to unpack the second cabinet. Since the ACFS system consists of three cabinets, repeat the procedure twice to unpack the second and third cabinets. Unpacking involves:

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

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.

―――――――――――――――――― **Note** ――――――――――――――――――

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 cabinets and their 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.

Figure 3–1 Unpacking the Cabinet
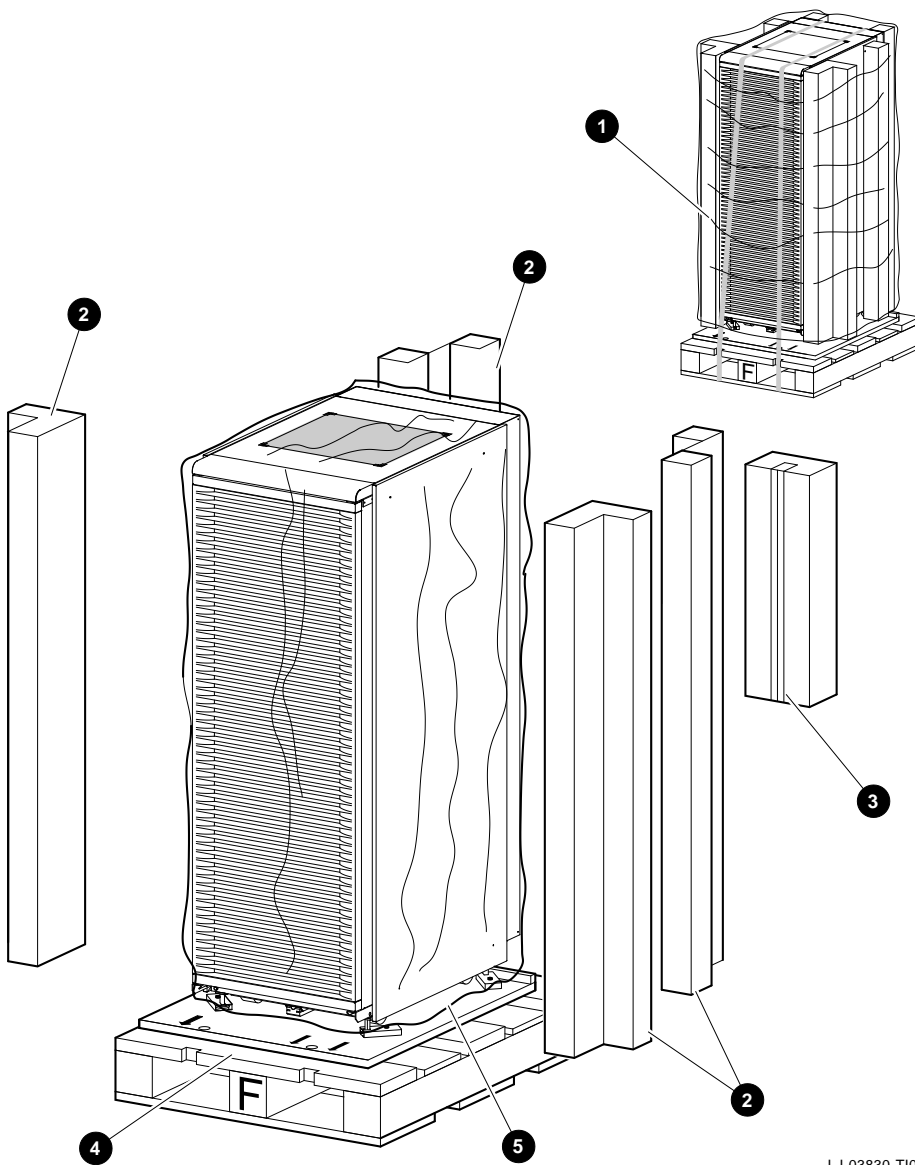
LJ-03830-TI0

3.4 Removing the System Cabinets from the Pallets

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

1. Remove the four shipping bolts ❻ and brackets ❼ that secure the four cabinet leveler feet ❽ to the pallet ❹.

---------------------------------- **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 ❾ from the shipping carton and set the ramps in the holes ❿ provided at the front of the pallet ❹. Ensure that the arrows ⓫ on the ramps match the pallet arrows ⓬ 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 ❽ and the leveler foot on the stabilizer bar ⓭ to the maximum upward position.

-------------------------------- **Warning** --------------------------------

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.

Figure 3–2   Installing the Ramps

LJ-03831-TI0
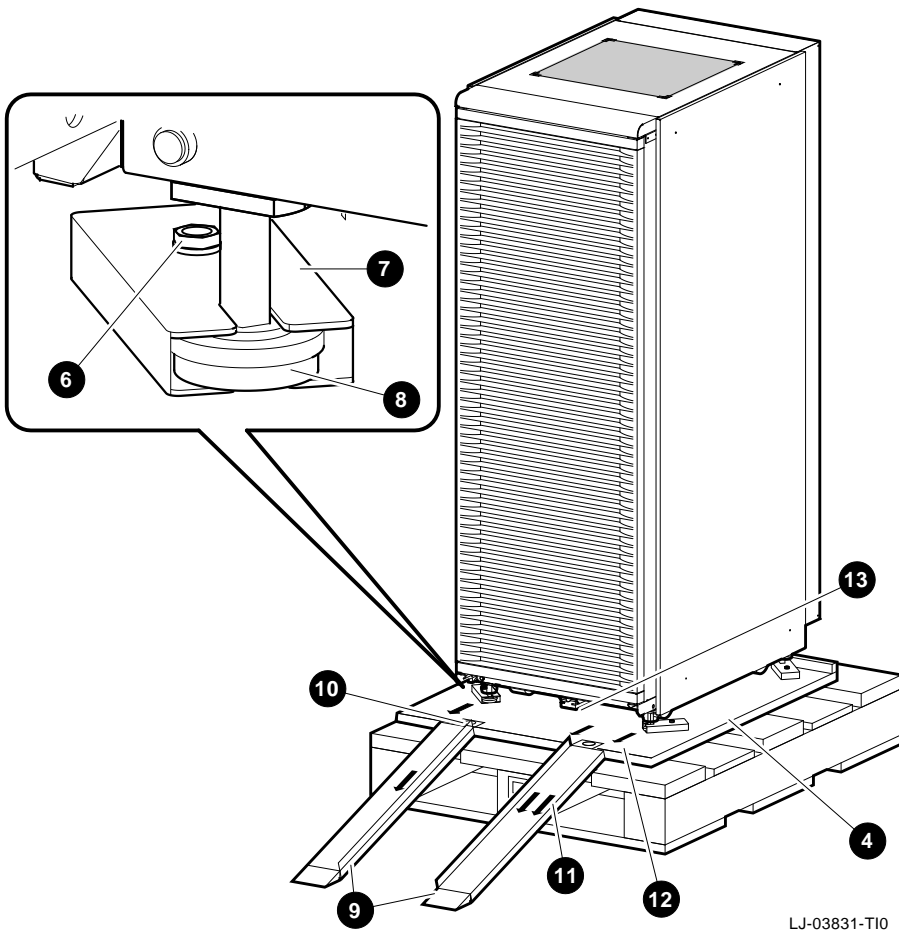
Unpacking the Shipment

_____ **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** _____

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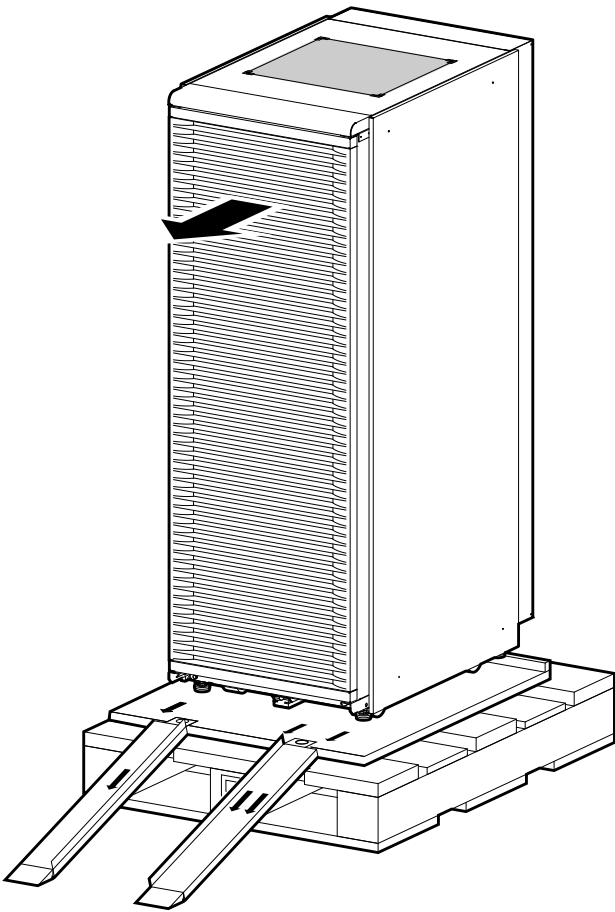
_____

_____ **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.

_____

Figure 3–3 Deskidding the Cabinet

LJ-03832-TI0

4

Installing the ACCS System

4.1 Overview

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

_____ **Warning** _____

When installing ACCS systems in a computer room with raised floors, <u>DO NOT</u> 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.

_____

The ACCS system is delivered in *two* cabinets that must be positioned side by side. Before positioning the cabinets, 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 *each* cabinet.

_____

Position the cabinets side by side in their final location with the front of each cabinet facing in the same direction.

Installing the ACCS System

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

Caution

Ensure that the leveler feet extend enough to carry the load of the cabinets 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:

- Connecting the FDDI (BN24B-10) cables
- Connecting the MMJ (17-01364-01/17-01364-02) cables
- Connecting the ThinWire (BC16M-15) cable
- Connecting the keyboard/mouse/video extension cables
- Connecting power
- Starting the system

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

Figure 4–1   AlphaServer 2100 Connections
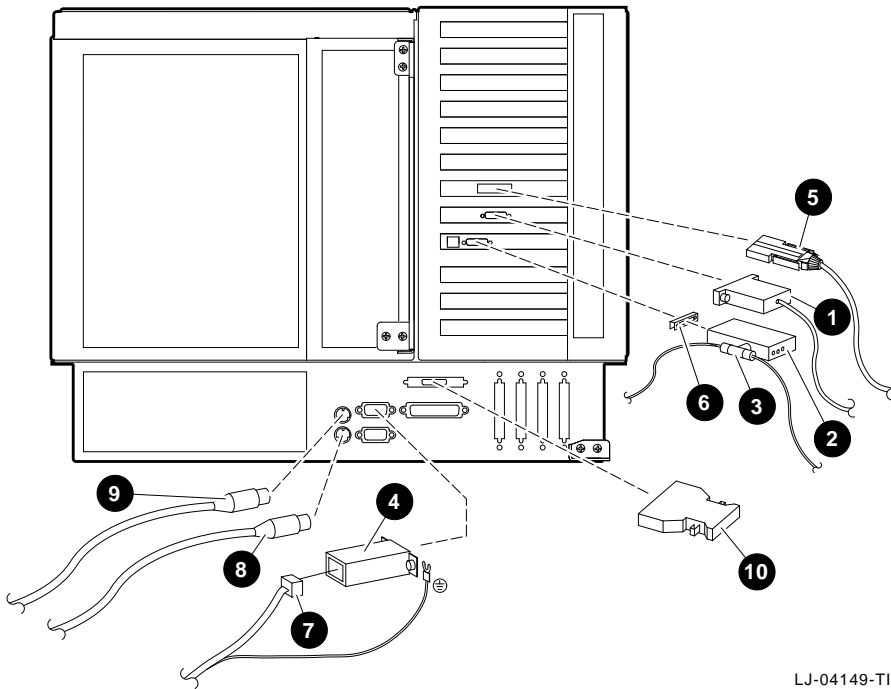
LJ-04149-TI0

❶ BC13L-10/video extension cables
(workstation only)
❷ DECXM-AA AUI to BCN
ThinWire MAU
❸ H8223 ThinWire T-connector
❹ H8571-J adapter
❺ BN24B-10 FDDI cable

❻ Hex nut to slide latch adapter
❼ 17-01364-01/02 MMJ cable
❽ Mouse cable (workstation only)
❾ Keyboard cable (workstation only)
❿ SCSI terminator

Installing the ACCS System

Figure 4–2 shows a complete cabling diagram of the ACCS system.

Figure 4–2   ACCS Cabling Diagram (Rear View)
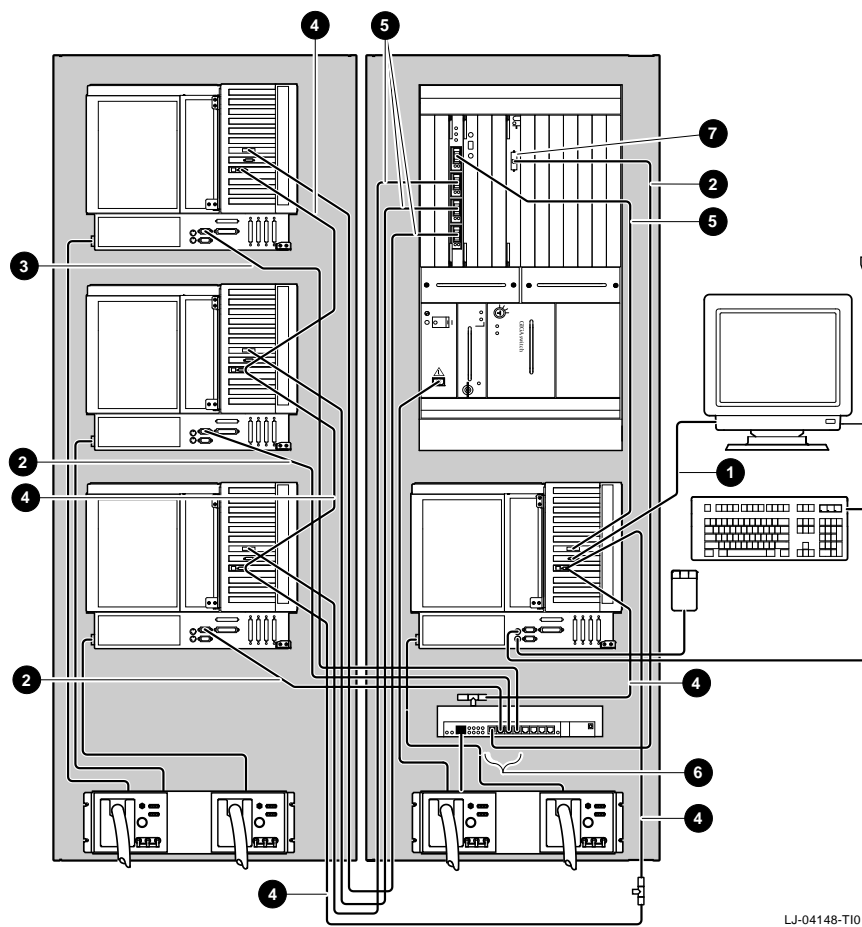
LJ-04148-TI0

❶ BC13L-10/video extension cables   ❺ BN24B-10 FDDI cables
❷ 17-01364-01 MMJ cables   ❻ H8584-AA (MMJ to MJ8) adapters
❸ 17-01364-02 MMJ cable   ❼ H8575-A (MMJ to 25-pin) adapter
❹ BC16M-15 ThinWire cables

4.2 Connecting the FDDI (BN24B-10) Cables

The ACCS system has four FDDI cables that connect the FDDI option card in each of the four AlphaServer 2100 RM series systems to the DEFGL-BA 4-port FDDI line card in the GIGAswitch system.

The FDDI cable from the AlphaServer 2100 RM series workstation in cabinet 1 to port 1 of the FDDI line card in the GIGAswitch system (see Figure 4–4 ❶) is factory connected. The three remaining FDDI cables are factory connected to the FDDI option cards in the three AlphaServer 2100 RM series servers in cabinet 2, and coiled up in the rear of cabinet 2. These three cables need to be routed to cabinet 1 and connected to ports 2, 3, and 4 of the FDDI line card in the GIGAswitch system.

Refer to Figure 4–3, Figure 4–4, and the following procedure to route and connect the three FDDI cables from cabinet 2 to the FDDI line card in the GIGAswitch system in cabinet 1.

1. Open the front door on cabinet 1.

2. Remove the rear door from both cabinets (see Section A.2).

3. Locate the three unconnected ends of the FDDI cables that are coiled up in the bottom rear of cabinet 2.

4. Route these cables out through the cable egress area at the bottom rear of cabinet 2, and in through the cable egress area at the bottom rear of cabinet 1 (see Figure 4–3).

5. Route the three cables up over the top of the GIGAswitch system (see Figure 4–3) to the front of cabinet 1.

Installing the ACCS System

Figure 4–3   FDDI Cable Routing (Rear View)

LJ-03963-TI0
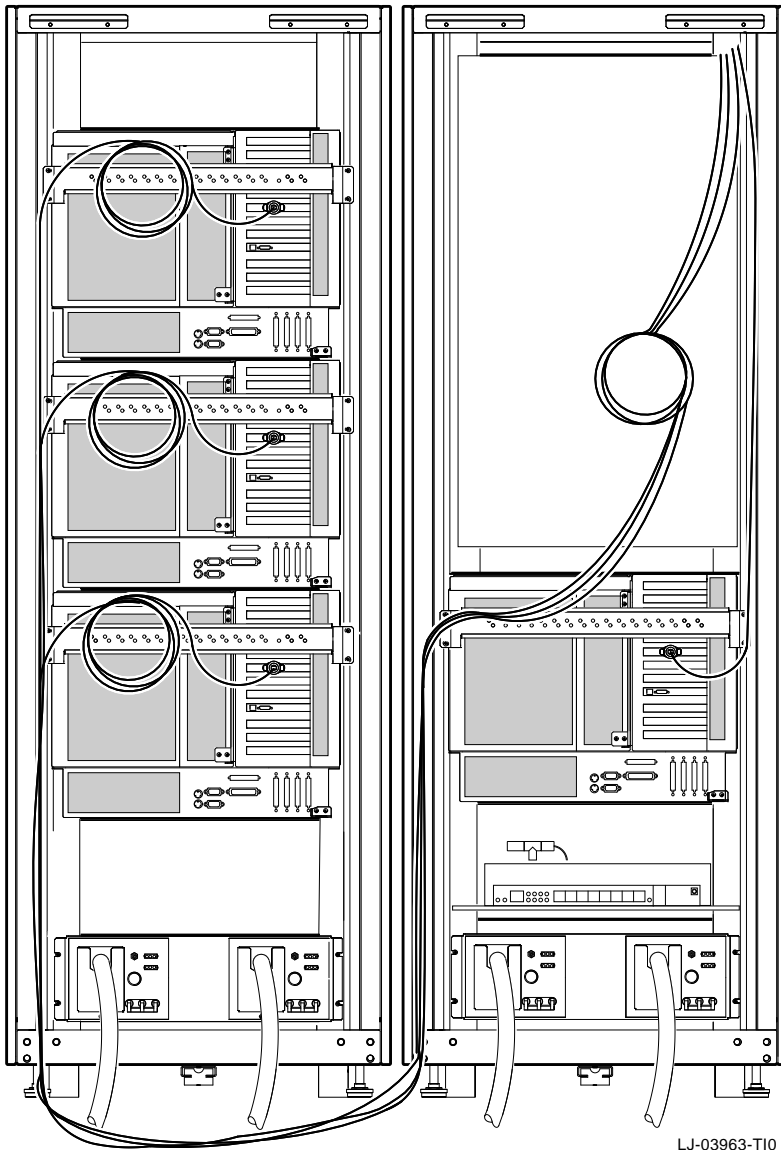
6. Access the front of cabinet 1 and remove the dust caps ❺ from ports 2, 3, and 4 of the FDDI line card in the GIGAswitch system (see Figure 4–4).

7. Remove the dust cap from the FDDI cable connector ❷ (labeled 2) and connect it to port 2 of the FDDI line card in the GIGAswitch system.

8. Remove the dust cap from the FDDI cable connector ❸ (labeled 3) and connect it to port 3 of the FDDI line card in the GIGAswitch system.

9. Remove the dust cap from the FDDI cable connector ❹ (labeled 4) and connect it to port 4 of the FDDI line card in the GIGAswitch system.

After connecting the three FDDI cables to the FDDI line card in the GIGAswitch system, use cable tie wraps to properly dress the excess FDDI cable to the cabinet cable management bracket at the rear of cabinet 1.

Installing the ACCS System

Figure 4–4 Connecting the FDDI Cables (Front View)

LJ-03962-TI0
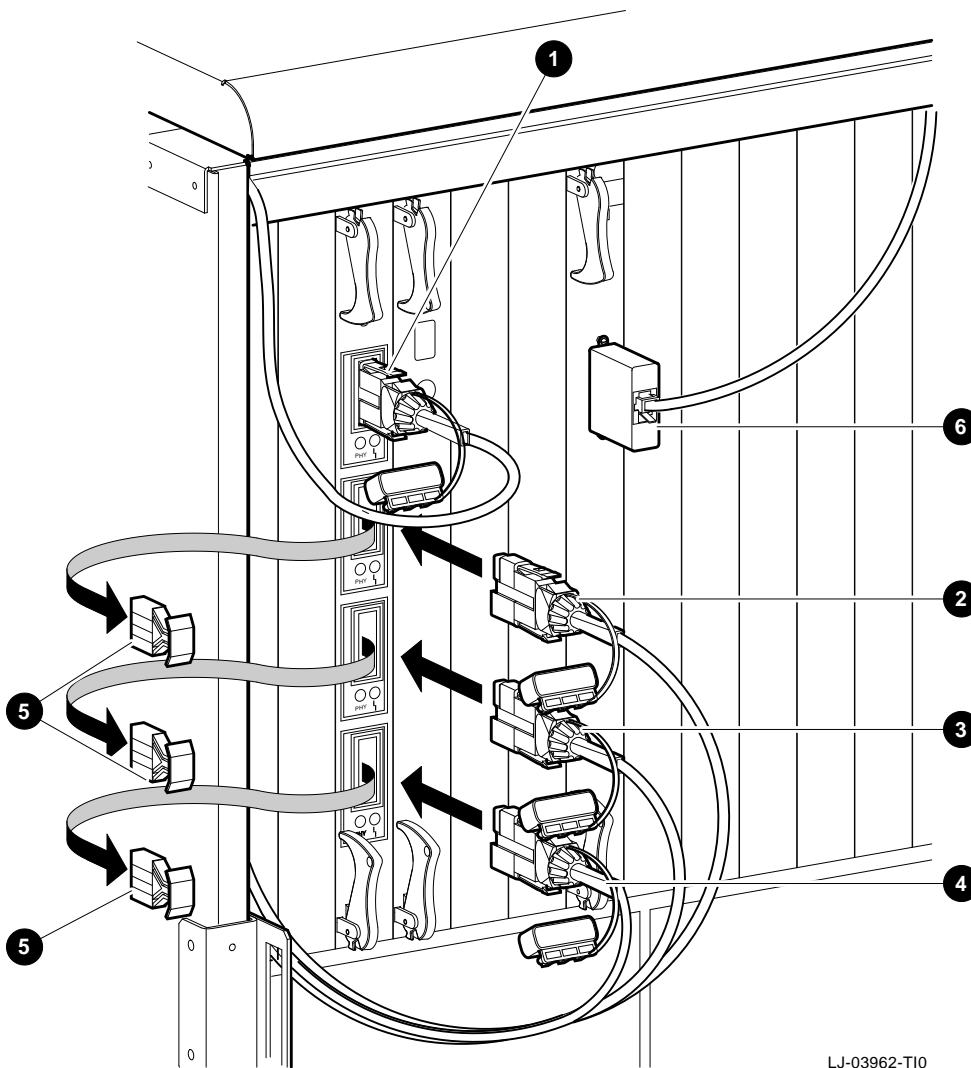
4.3 Connecting the MMJ (17-01364-01/17-01364-02) Cables

The ACCS system has four MMJ cables. Three MMJ cables connect the serial port (COM1) on the AlphaServer 2100 RM series servers in cabinet 2 to ports 2, 3, and 4 of the DECserver 90M in cabinet 1. The other MMJ cable connects port 1 of the DECserver 90M to the clock card in the GIGAswitch system.

The MMJ cable from port 1 of the DECserver 90M to the clock card in the GIGAswitch system is factory connected using an H8584-AA (MMJ to MJ8) adapter at port 1 of the DECserver 90M, and an H8575-A (MMJ to 25-pin) adapter (see Figure 4–4 ❻) at the clock card.

The three remaining MMJ cables are factory connected to the serial port (COM1) on the three AlphaServer 2100 RM series servers in cabinet 2 using H8571-J (MMJ to 9-pin) adapters, and are coiled up in the rear of cabinet 2. These three cables need to be routed to cabinet 1 and connected to ports 2, 3, and 4 of the DECserver 90M using H8584-AA (MMJ to MJ8) adapters.

Refer to Figure 4–5 and the following procedure to route and connect the three MMJ cables from cabinet 2 to the DECserver 90M ports in cabinet 1.

1. Remove the rear door from both cabinets (see Section A.2).

2. Locate the three unconnected ends of the MMJ cables that are coiled up in the bottom rear of cabinet 2.

3. Route these cables out through the cable egress area at the bottom rear of cabinet 2, and in through the cable egress area at the bottom rear of cabinet 1 (see Figure 4–5).

4. Locate the MMJ cable connector labeled 2 and connect it to port 2 of the DECserver 90M using an H8584-AA (MMJ to MJ8) adapter.

5. Locate the MMJ cable connector labeled 3 and connect it to port 3 of the DECserver 90M using an H8584-AA (MMJ to MJ8) adapter.

6. Locate the MMJ cable connector labeled 4 and connect it to port 4 of the DECserver 90M using an H8584-AA (MMJ to MJ8) adapter.

After connecting the three MMJ cables to the DECserver 90M, use cable tie wraps to properly dress the excess MMJ cable to the cabinet cable management bracket at the rear of cabinet 1.

Installing the ACCS System

Figure 4–5 MMJ Cable Routing (Rear View)
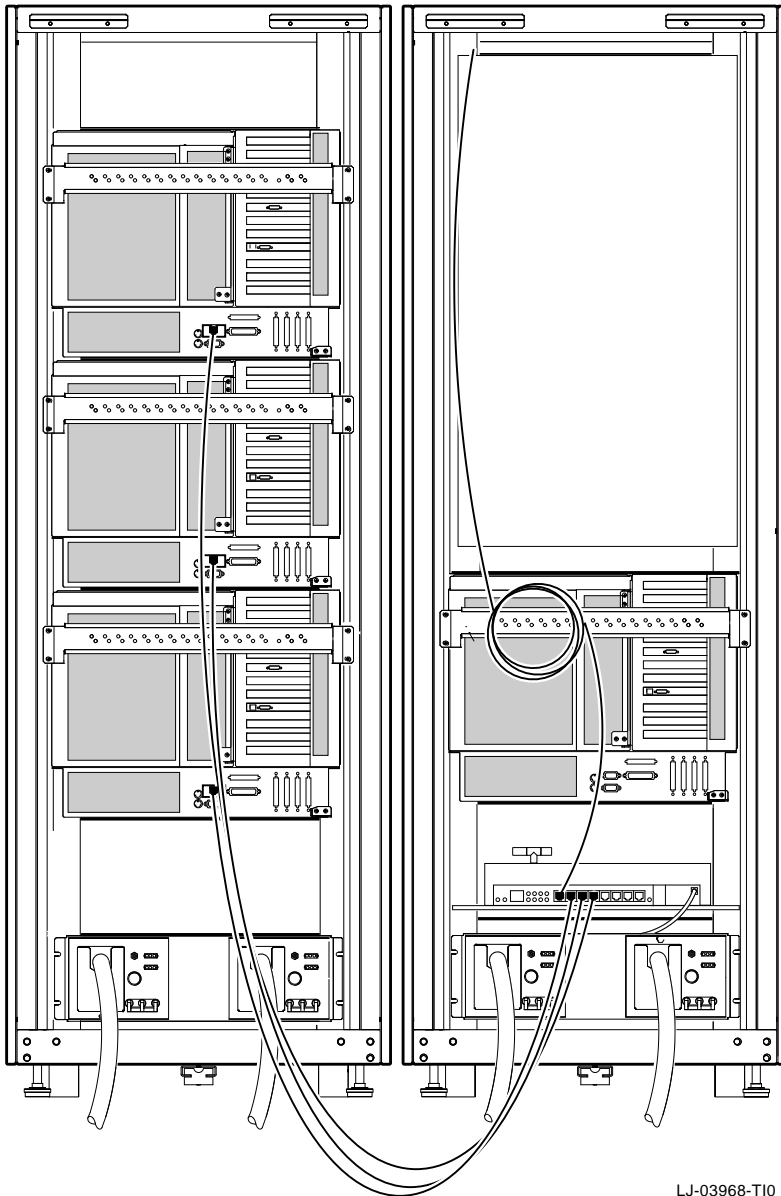
LJ-03968-TI0

4.4 Connecting the ThinWire (BC16M-15) Cables

The ACCS system has five ThinWire cables. The ThinWire cables are used to daisychain the standard I/O cards in the four AlphaServer 2100 RM series systems to the DECserver 90M.

Each AlphaServer 2100 RM series system has a DECXM-AA AUI to BNC ThinWire media access unit (MAU) factory connected to the standard I/O card connector on the rear of the chassis. An H8223 ThinWire T-connector is factory connected to each of the four MAUs and to the DECserver 90M. H8225 ThinWire terminators are factory connected to one end of the T-connectors attached to the DECserver 90M and to the fourth AlphaServer 2100 RM series system (the top system in cabinet 2) MAU.

The five ThinWire cables are factory connected inside each cabinet. In cabinet 2, one cable is connected between the T-connector on the fourth AlphaServer 2100 RM series system (the top system in cabinet 2) and the T-connector on the third AlphaServer 2100 RM series system (the middle system in cabinet 2). Another cable is connected between the T-connector on the third AlphaServer 2100 RM series system (the middle system in cabinet 2) and the T-connector on the second AlphaServer 2100 RM series system (the bottom system in cabinet 2). Another cable is connected to the T-connector on the second AlphaServer 2100 RM series system (the bottom system in cabinet 2) with the other end coiled up in the bottom rear of cabinet 2.

In cabinet 1, one cable is connected between the T-connector on the DECserver 90M (in the bottom of cabinet 1) and the T-connector on the first AlphaServer 2100 RM series system (the only system in cabinet 1). Another cable is connected between the T-connector on the first AlphaServer 2100 RM series system (the only system in cabinet 1) and a T-connector that is attached to the cabinet cable management bracket with cable tie wraps.

Refer to Figure 4–6 and the following procedure to route the *coiled* ThinWire cable from cabinet 2 to the T-connector that is attached to the cabinet cable management bracket in cabinet 1.

1. Remove the rear door from both cabinets (see Section A.2).

2. Locate the unconnected end of the ThinWire cable that is coiled up in the bottom rear of cabinet 2.

3. Route this cable out through the cable egress area at the bottom rear of cabinet 2, and in through the cable egress area at the bottom rear of cabinet 1 (see Figure 4–6).

Installing the ACCS System

4. Connect the BNC connector on the end of the ThinWire cable to the T-connector that is attached to the cabinet cable management bracket in cabinet 1 (see Figure 4–6).

After connecting the ThinWire cable to the T-connector on the cabinet cable management bracket, use cable tie wraps to properly dress the excess ThinWire cable to the cabinet cable management bracket at the rear of cabinet 1.

Figure 4–6 ThinWire Cable Routing (Rear View)
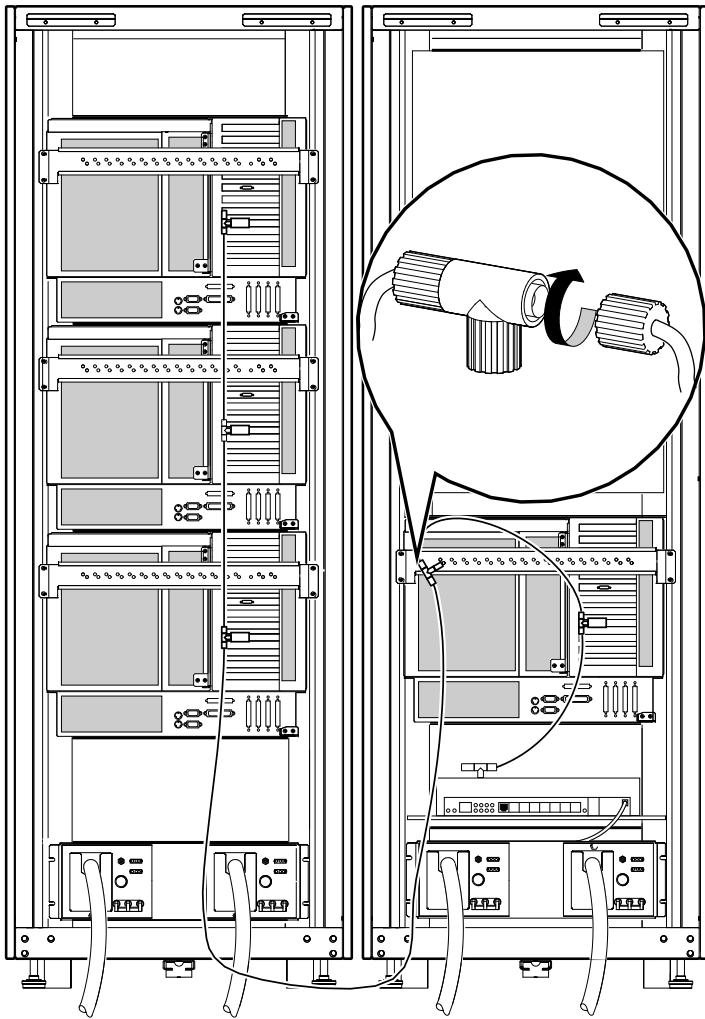
LJ-03965-TI0

4.5 Connecting the Keyboard/Mouse/Video Extension Cables

The keyboard/mouse/video extension cables are used with AlphaServer 2100 RM series systems to extend the keyboard, mouse, and video monitor cables; and to allow the keyboard, mouse, and video monitor to be located *outside* the system equipment cabinet. The keyboard and mouse extension cables are 5 m (16.40 ft) cables and the video extension cable is a 2 m (6.56 ft) cable.

Use Figure 4–7 and the following procedure to connect the keyboard/mouse/video extension cables to the AlphaServer 2100 RM series workstation in cabinet 1.

1. Remove the rear door from cabinet 1 (see Section A.2).

2. Connect the male end of one of the 5 m (16.40 ft) extension cables to the keyboard connector ❶ on the rear of the AlphaServer 2100 RM series workstation.

3. Route this extension cable to the cable management bracket ❷ on the rear of the AlphaServer 2100 RM series chassis and secure it to the bracket using cable tie wraps.

4. Route this extension cable to the cabinet cable management bracket ❸ and secure it along the outside of the bracket using cable tie wraps.

_____ **Caution** _____

Ensure that there is enough slack in the extension cable to prevent stress (pulling) where the extension cable is attached to the two cable management brackets when the chassis is fully extended on the slides.

_____

5. Route this extension cable down and out through the cable egress area located at the bottom rear of cabinet 1.

6. Connect the female end of the keyboard extension cable ❹ to the keyboard cable ❺.

7. Connect the male end of the other 5 m (16.40 ft) extension cable to the mouse connector ❻ on the rear of the AlphaServer 2100 RM series workstation.

8. Route this extension cable to the cable management bracket ❷ on the rear of the AlphaServer 2100 RM series chassis and secure it to the bracket using cable tie wraps.

9. Route this extension cable to the cabinet cable management bracket ❸ and secure it along the outside of the bracket using cable tie wraps.

_____ **Caution** _____

Ensure that there is enough slack in the extension cable to prevent stress (pulling) where the extension cable is attached to the two cable management brackets when the chassis is fully extended on the slides.

_____

10. Route this extension cable down and out through the cable egress area located at the bottom rear of cabinet 1.

11. Connect the female end of the mouse extension cable ❼ to the mouse cable ❽.

12. Connect the male end of the 2 m (6.56 ft) extension cable to the video card connector ❾ on the rear of the AlphaServer 2100 RM series workstation.

13. Route this extension cable to the cable management bracket ❷ on the rear of the AlphaServer 2100 RM series chassis and secure it to the bracket using cable tie wraps.

14. Route this extension cable to the cabinet cable management bracket ❸ and secure it along the outside of the bracket using cable tie wraps.

_____ **Caution** _____

Ensure that there is enough slack in the extension cable to prevent stress (pulling) where the extension cable is attached to the two cable management brackets when the chassis is fully extended on the slides.

_____

15. Route this extension cable down and out through the cable egress area located at the bottom rear of cabinet 1.

16. On the female end of the video extension cable ❿, ensure that two washers and standoffs ⓫ are installed.

17. Connect the female end of the video extension cable ❿ to the male end of the BC13L-10 video monitor cable ⓬.

18. Connect the female end of the BC13L-10 video monitor cable to the video monitor.

Installing the ACCS System

Figure 4–7 Installing the Keyboard/Mouse/Video Extension Cables
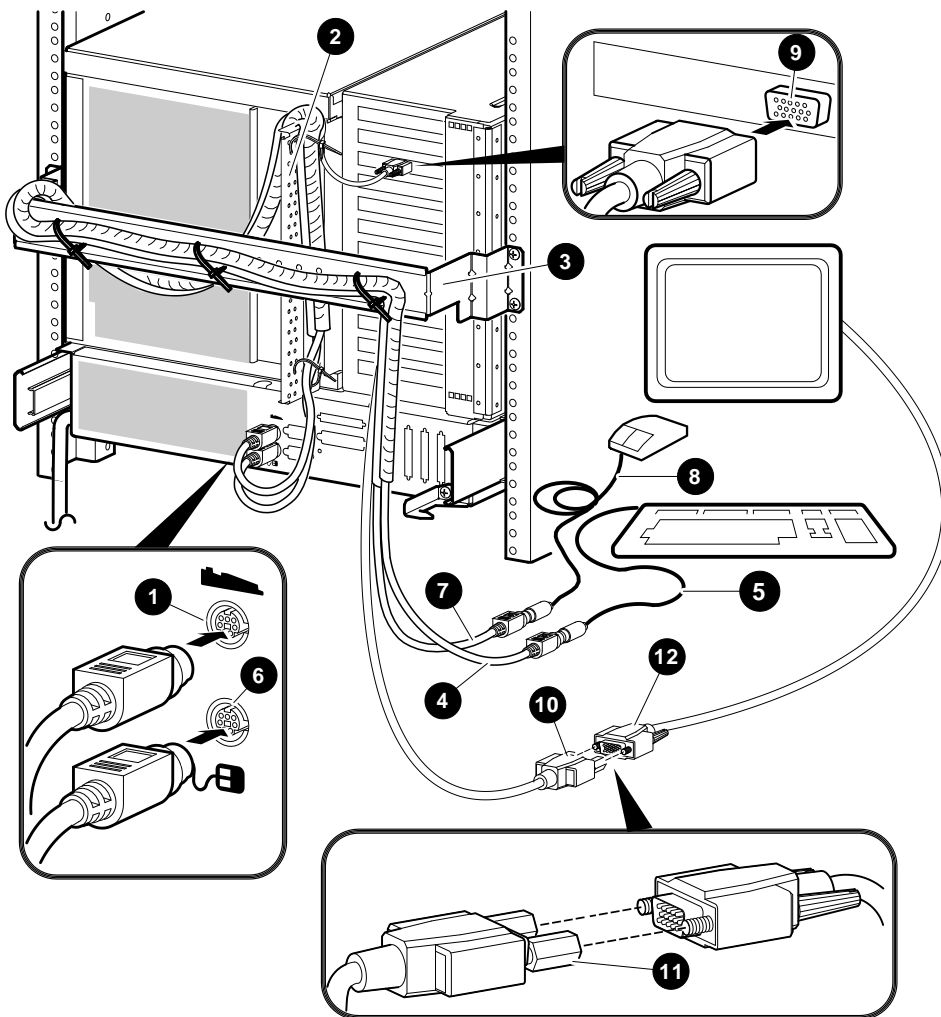
LJ-03885-TI0B

4.6 Connecting Power

Each cabinet of the ACCS system contains two power cords. The actual power connections depend on the power controllers installed in the cabinets.

For 120 Vac (80 to 135 Vac) operation, 877-DA power controllers are installed. The power cord connector (NEMA L5-30P) mates with a NEMA L5-30R wall receptacle.

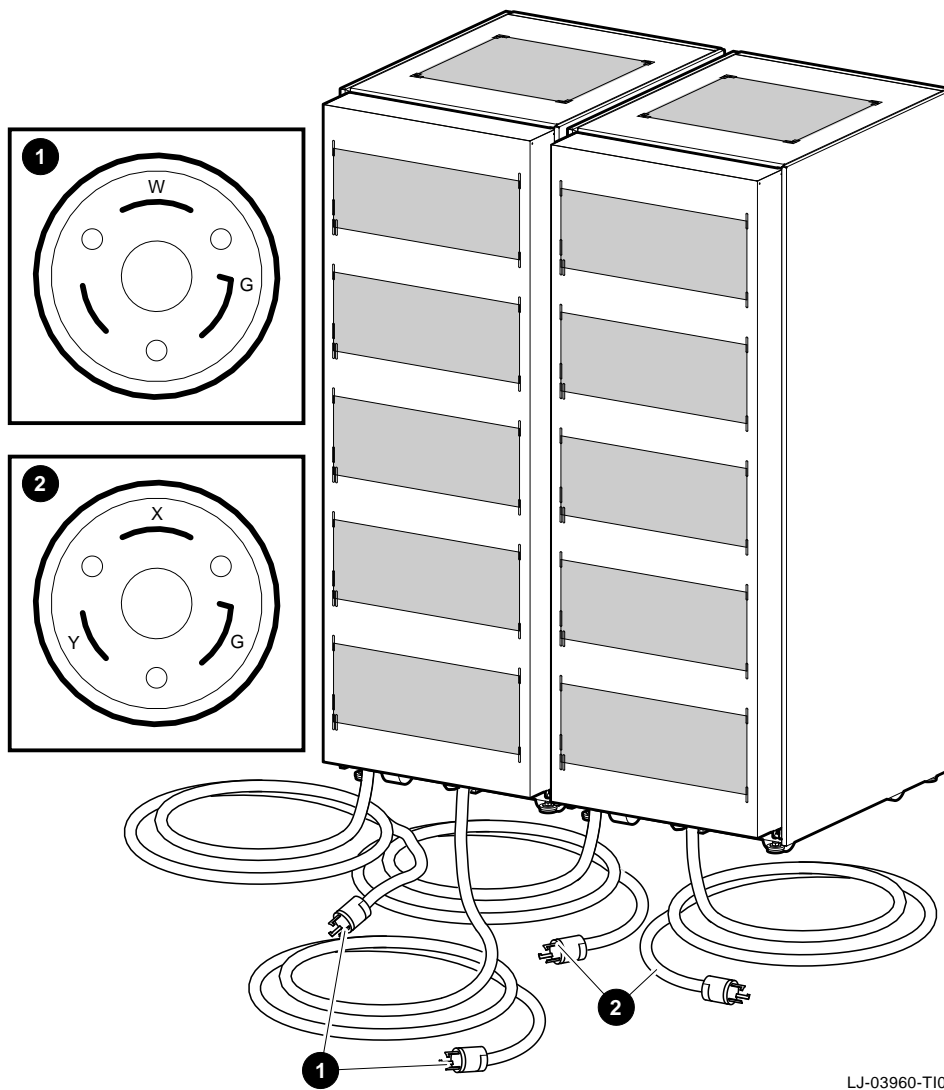For 240 Vac (180 to 264 Vac) operation, 877-E power controllers are installed. The power cord connector (NEMA L6-30P) mates with a NEMA L6-30R wall receptacle.

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

Installing the ACCS System

Figure 4–8 Power Connectors

LJ-03960-TI0

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

❷ End view of a NEMA L6-30P power
connector

4.7 Starting the System

To start the ACCS system, proceed as follows:

_____ **Note** _____

Before starting the system, ensure that the four power controller cords
(two from each cabinet) are plugged into the proper wall receptacles.

_____

1. Plug the Video Graphics Array (VGA) monitor power cord into an electrical
    outlet, and place the power switch to the ON position.

2. Place the main power circuit breakers on all four power controllers to the ON
    position.

3. Set the security switch on the front of the GIGAswitch system to position 4.

4. Place the power switch on the front of the GIGAswitch system to the ON
    position.

5. Use the key to open the operator control panel door on the first AlphaServer
    2100 RM series system (the system in cabinet 1), and press the DC On/Off
    switch.

6. Use the key to open the operator control panel door on the second
    AlphaServer 2100 RM series system (the bottom system in cabinet 2),
    and press the DC On/Off switch.

7. Use the key to open the operator control panel door on the third AlphaServer
    2100 RM series system (the middle system in cabinet 2), and press the DC
    On/Off switch.

8. Use the key to open the operator control panel door on the fourth AlphaServer
    2100 RM series system (the top system in cabinet 2), and press the DC On/Off
    switch.

9. 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.

Installing the ACCS System

10. 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.

_____

5

Installing the ACFS System

5.1 Overview

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

Warning

When installing ACFS 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.

The ACFS system is delivered in *three* cabinets that must be positioned side by side. Before positioning the cabinets, 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 *each* cabinet.

Position the cabinets side by side in their final location with the front of each cabinet facing in the same direction.

Installing the ACFS System

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

Caution

Ensure that the leveler feet extend enough to carry the load of the cabinets 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:

- Connecting the FDDI (BN24B-10) cables
- Connecting the MMJ (17-01364-01/17-01364-02) cables
- Connecting the ThinWire (BC16M-15) cable
- Connecting the keyboard/mouse/video extension cables
- Connecting power
- Starting the system

Figure 5–1 shows the AlphaServer 2100 RM series system connections.

Figure 5–1   AlphaServer 2100 Connections
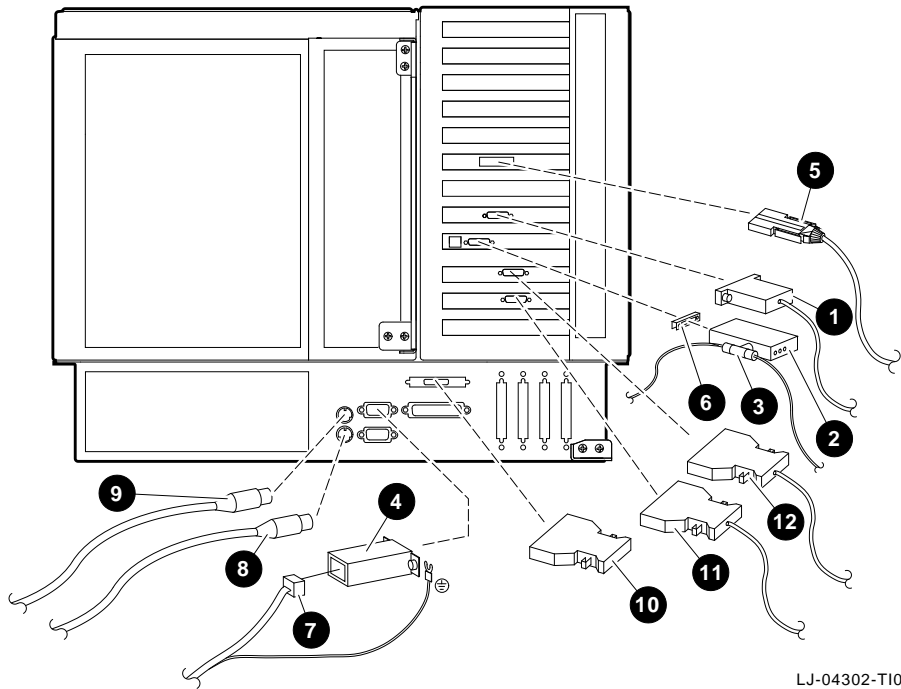
LJ-04302-TI0

❶ BC13L-10/video extension cables (workstation only)
❷ DECXM-AA AUI to BCN ThinWire MAU
❸ H8223 ThinWire T-connector
❹ H8571-J adapter
❺ BN24B-10 FDDI cable
❻ Hex nut to slide latch adapter

❼ 17-01364-01/02 MMJ cable
❽ Mouse cable (workstation only)
❾ Keyboard cable (workstation only)
❿ SCSI terminator
⓫ BN21H-02 SCSI cable to rear BA350
⓬ BN21H-03 SCSI cable to front BA350

Installing the ACFS System

Figure 5–2 shows a complete cabling diagram of the ACFS system.

Figure 5–2   ACFS Cabling Diagram (Rear View)

LJ-04150-TI0
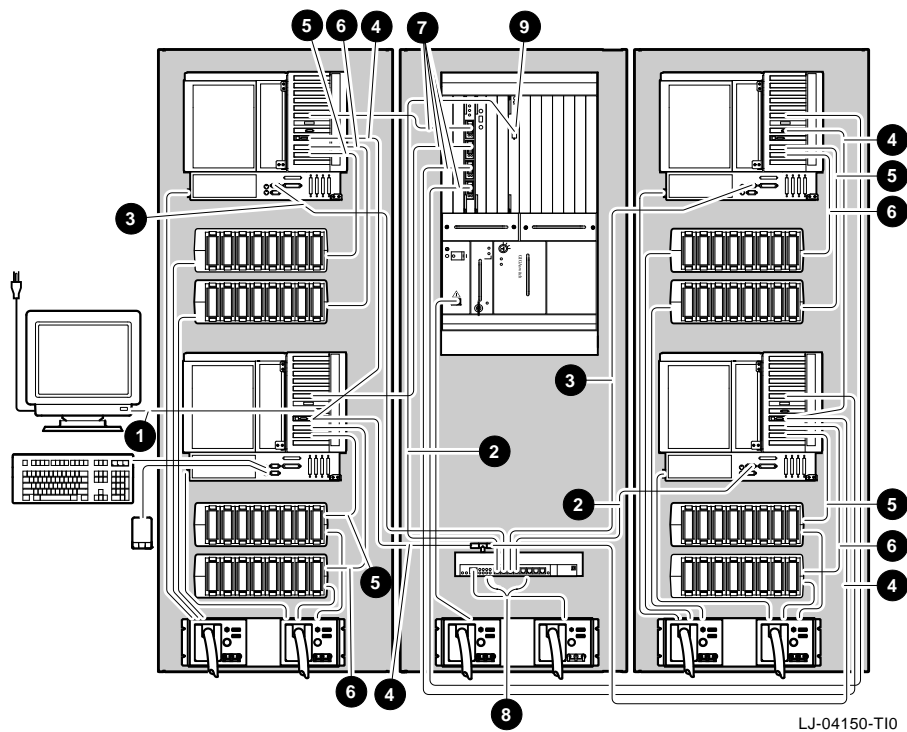
❶ BC13L-10/video extension cables
❷ 17-01364-01 MMJ cables
❸ 17-01364-02 MMJ cables
❹ BC16M-15 ThinWire cables
❺ BN21H-03 SCSI cable to front BA350

❻ BN21H-02 SCSI cable to rear BA350
❼ BN24B-10 FDDI cables
❽ H8584-AA (MMJ to MJ8) adapters
❾ H8575-A (MMJ to 25-pin) adapter

5.2 Connecting the FDDI (BN24B-10) Cables

The ACFS system has four FDDI cables that connect the FDDI option card in each of the four AlphaServer 2100 RM series systems to the DEFGL-BA 4-port FDDI line card in the GIGAswitch system.

Two FDDI cables are factory connected to the FDDI option cards in the AlphaServer 2100 RM series workstation and the AlphaServer 2100 RM series server in cabinet 1, and coiled up in the rear of cabinet 1. The two remaining FDDI cables are factory connected to the FDDI option cards in the two AlphaServer 2100 RM series servers in cabinet 3, and coiled up in the rear of cabinet 3. These four cables need to be routed to cabinet 2 and connected to ports 1, 2, 3, and 4 of the FDDI line card in the GIGAswitch system.

Refer to Figure 5–3, Figure 5–4, and the following procedure to route and connect the four FDDI cables (two from cabinet 1, two from cabinet 3) to the FDDI line card in the GIGAswitch system in cabinet 2.

1. Open the front door on cabinet 2.

2. Remove the rear door from all three cabinets (see Section A.2).

3. Locate the two unconnected ends of the FDDI cables that are coiled up in the bottom rear of cabinet 1.

4. Route these cables out through the cable egress area at the bottom rear of cabinet 1, and in through the cable egress area at the bottom rear of cabinet 2 (see Figure 5–3).

5. Route these two cables up over the top of the GIGAswitch system (see Figure 5–3) to the front of cabinet 2.

6. Locate the two unconnected ends of the FDDI cables that are coiled up in the bottom rear of cabinet 3.

7. Route these cables out through the cable egress area at the bottom rear of cabinet 3, and in through the cable egress area at the bottom rear of cabinet 2 (see Figure 5–3).

8. Route these two cables up over the top of the GIGAswitch system (see Figure 5–3) to the front of cabinet 2.

Installing the ACFS System

Figure 5–3 FDDI Cable Routing (Rear View)
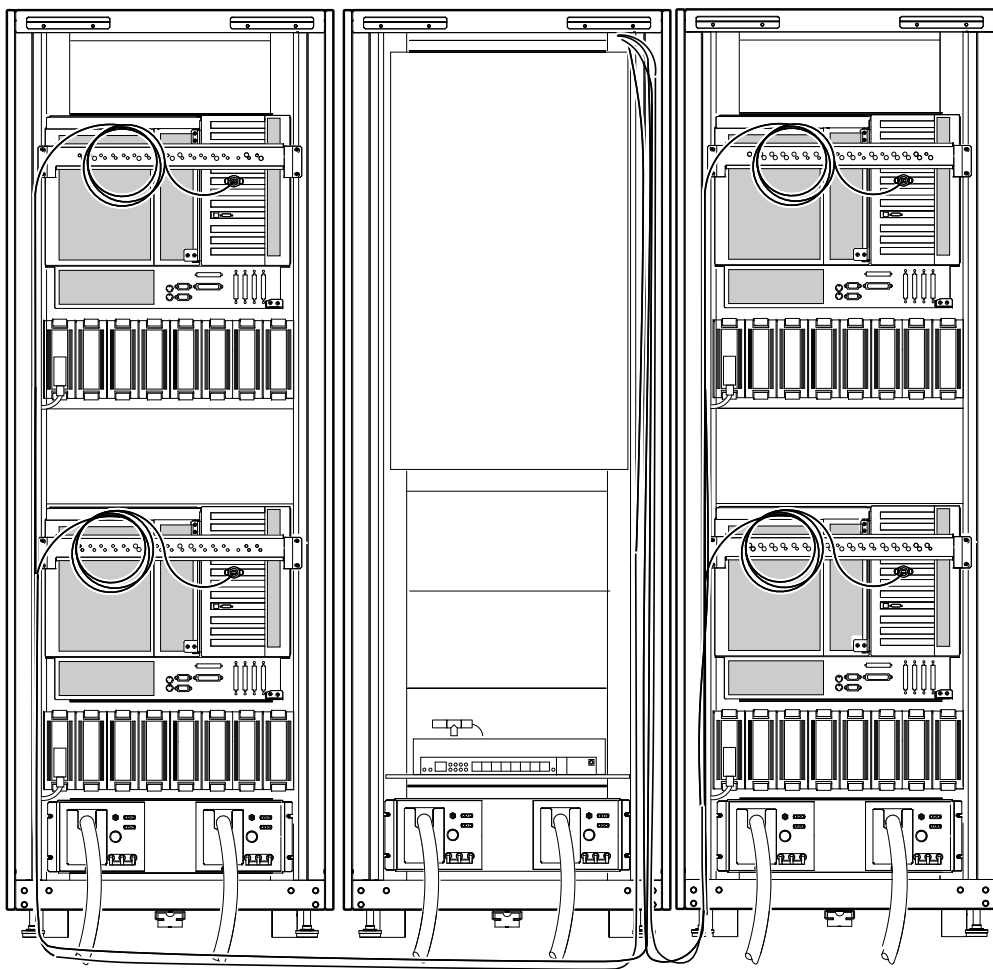
LJ-04084-TI0

9. Access the front of cabinet 2 and remove the dust caps ❺ from ports 1, 2, 3, and 4 of the FDDI line card in the GIGAswitch system (see Figure 5–4).

10. Remove the dust cap from the FDDI cable connector ❶ (labeled 1) and connect it to port 1 of the FDDI line card in the GIGAswitch system. This cable is shown already connected in Figure 5–4.

11. Remove the dust cap from the FDDI cable connector ❷ (labeled 2) and connect it to port 2 of the FDDI line card in the GIGAswitch system.

12. Remove the dust cap from the FDDI cable connector ❸ (labeled 3) and connect it to port 3 of the FDDI line card in the GIGAswitch system .

13. Remove the dust cap from the FDDI cable connector ❹ (labeled 4) and connect it to port 4 of the FDDI line card in the GIGAswitch system.

After connecting the four FDDI cables to the FDDI line card in the GIGAswitch system, use cable tie wraps to properly dress the excess FDDI cable to the cabinet cable management bracket at the rear of cabinet 2.

Installing the ACFS System

Figure 5–4   Connecting the FDDI Cables (Front View)

LJ-03962-TI0
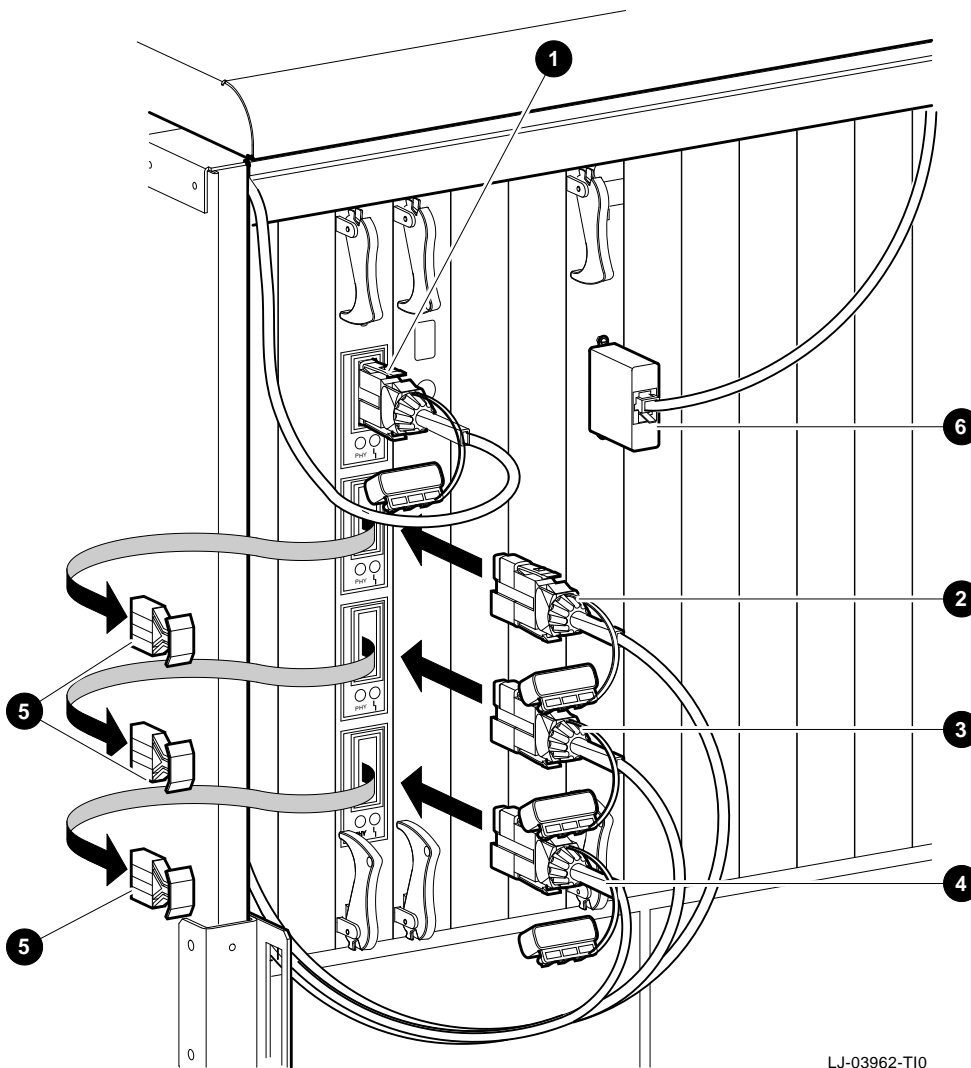
5.3 Connecting the MMJ (17-01364-01/17-01364-02) Cables

The ACFS system has four MMJ cables. Three MMJ cables connect the serial port (COM1) on the AlphaServer 2100 RM series servers in cabinets 1 and 3 to ports 2, 3, and 4 of the DECserver 90M in cabinet 2. The other MMJ cable connects port 1 of the DECserver 90M to the clock card in the GIGAswitch system.

The MMJ cable from port 1 of the DECserver 90M to the clock card in the GIGAswitch system is factory connected using an H8584-AA (MMJ to MJ8) adapter at port 1 of the DECserver 90M, and an H8575-A (MMJ to 25-pin) adapter (see Figure 5–4 ❻) at the clock card.

The three remaining MMJ cables are factory connected to the serial port (COM1) on the three AlphaServer 2100 RM series servers (one in cabinet 1 and two in cabinet 3) using H8571-J (MMJ to 9-pin) adapters. One MMJ cable is coiled up in the rear of cabinet 1 and two MMJ cables are coiled up in the rear of cabinet 3. These three cables need to be routed to cabinet 2 and connected to ports 2, 3, and 4 of the DECserver 90M using H8584-AA (MMJ to MJ8) adapters.

Refer to Figure 5–5 and the following procedure to route and connect the three MMJ cables from cabinets 1 and 3 to the DECserver 90M ports in cabinet 2.

1. Remove the rear door from all three cabinets (see Section A.2).

2. Locate the unconnected end of the MMJ cable that is coiled up in the bottom rear of cabinet 1.

3. Route this cable out through the cable egress area at the bottom rear of cabinet 1, and in through the cable egress area at the bottom rear of cabinet 2 (see Figure 5–5).

4. Locate the two unconnected ends of the MMJ cables that are coiled up in the bottom rear of cabinet 3.

5. Route these cables out through the cable egress area at the bottom rear of cabinet 3, and in through the cable egress area at the bottom rear of cabinet 2 (see Figure 5–5).

6. Locate the MMJ cable connector labeled 2 and connect it to port 2 of the DECserver 90M using an H8584-AA (MMJ to MJ8) adapter.

7. Locate the MMJ cable connector labeled 3 and connect it to port 3 of the DECserver 90M using an H8584-AA (MMJ to MJ8) adapter.

Installing the ACFS System

8. Locate the MMJ cable connector labeled 4 and connect it to port 4 of the DECserver 90M using an H8584-AA (MMJ to MJ8) adapter.

After connecting the three MMJ cables to the DECserver 90M, use cable tie wraps to properly dress the excess MMJ cable to the cabinet cable management bracket at the rear of cabinet 2.

Figure 5–5 MMJ Cable Routing (Rear View)
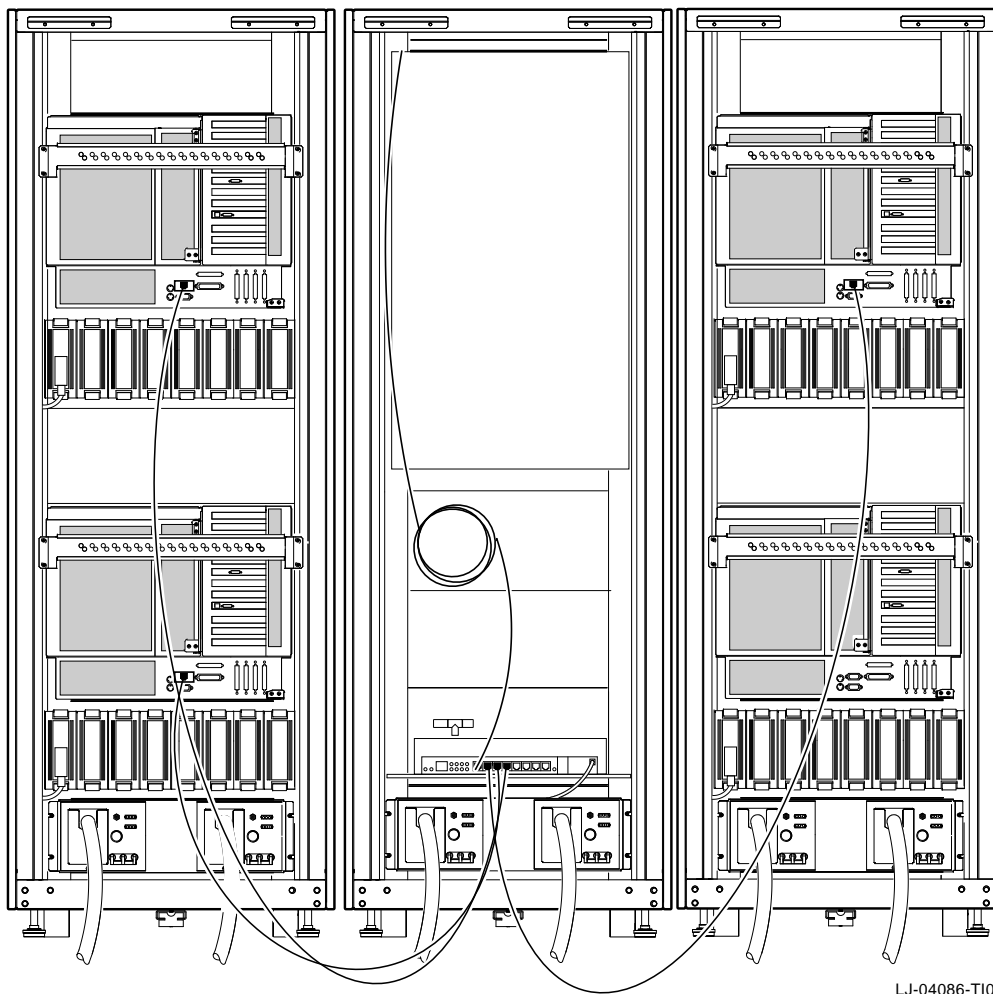
LJ-04086-TI0

5.4 Connecting the ThinWire (BC16M-15) Cables

The ACFS system has four ThinWire cables. The ThinWire cables are used to daisychain the standard I/O cards in the four AlphaServer 2100 RM series systems to the DECserver 90M.

Each AlphaServer 2100 RM series system has a DECXM-AA AUI to BNC ThinWire media access unit (MAU) factory connected to the standard I/O card connector on the rear of the chassis. An H8223 ThinWire T-connector is factory connected to each of the four MAUs and to the DECserver 90M. H8225 ThinWire terminators are factory connected to one end of the T-connectors attached to the second and the fourth AlphaServer 2100 RM series system (the top system in cabinet 1 and cabinet 3) MAUs.

The four ThinWire cables are factory connected inside each cabinet. In cabinet 1, one cable is connected between the T-connector on the second AlphaServer 2100 RM series system (the top system in cabinet 1) and the T-connector on the first AlphaServer 2100 RM series system (the bottom system in cabinet 1). Another cable is connected to the T-connector on the first AlphaServer 2100 RM series system (the bottom system in cabinet 1) with the other end coiled up in the bottom rear of cabinet 1. In cabinet 3, one cable is connected between the T-connector on the fourth AlphaServer 2100 RM series system (the top system in cabinet 3) and the T-connector on the third AlphaServer 2100 RM series system (the bottom system in cabinet 3). Another cable is connected to the T-connector on the third AlphaServer 2100 RM series system (the bottom system in cabinet 3) with the other end coiled up in the bottom rear of cabinet 3.

Refer to Figure 5–6 and the following procedure to route the *coiled* ThinWire cables from cabinets 1 and 3 to the T-connector that is attached to the DECserver 90M in cabinet 2.

1. Remove the rear door from all three cabinets (see Section A.2).

2. Locate the unconnected end of the ThinWire cable that is coiled up in the bottom rear of cabinet 1.

3. Route this cable out through the cable egress area at the bottom rear of cabinet 1, and in through the cable egress area at the bottom rear of cabinet 2 (see Figure 5–6).

4. Connect the BNC connector on the end of the ThinWire cable to one end of the T-connector that is attached to the DECserver 90M in cabinet 2 (see Figure 5–6).

5. Locate the unconnected end of the ThinWire cable that is coiled up in the bottom rear of cabinet 3.
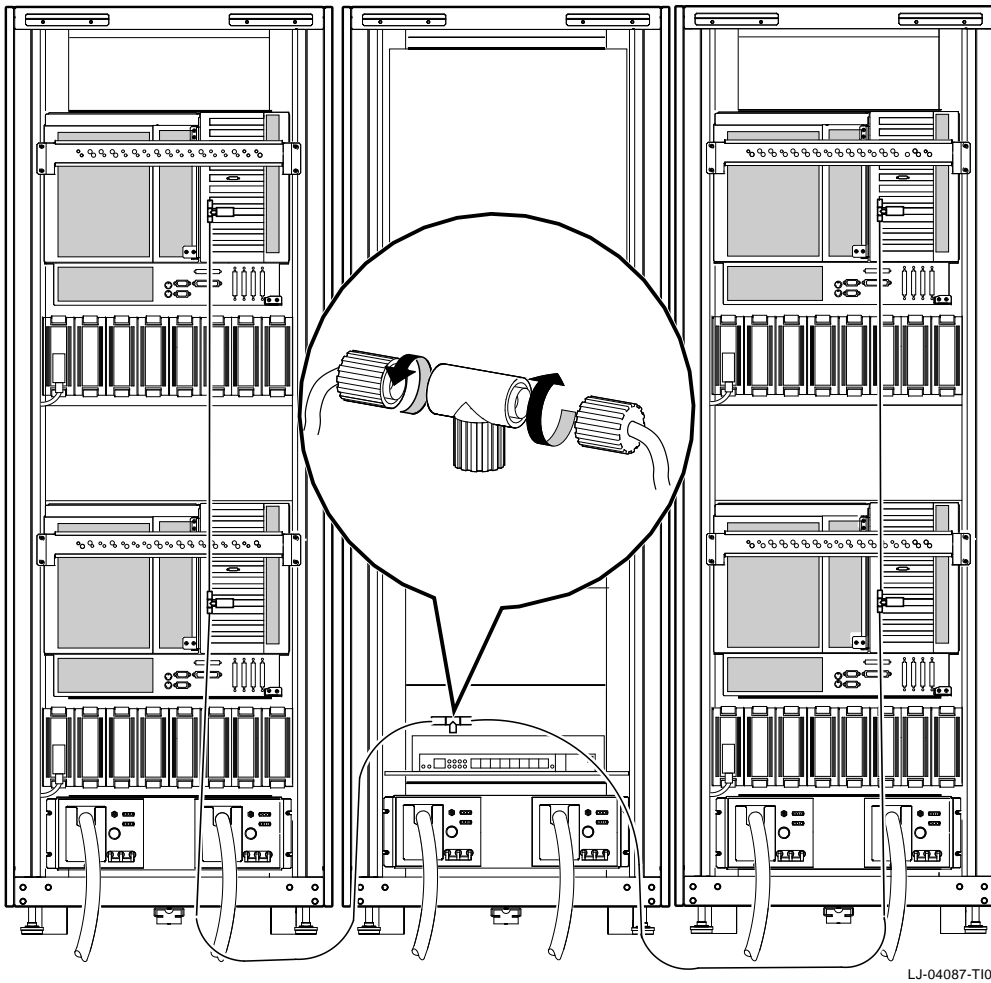
Installing the ACFS System

6. Route this cable out through the cable egress area at the bottom rear of
    cabinet 3, and in through the cable egress area at the bottom rear of cabinet
    2 (see Figure 5–6).

7. Connect the BNC connector on the end of the ThinWire cable to the *other* end
    of the T-connector that is attached to the DECserver 90M in cabinet 2 (see
    Figure 5–6).

After connecting the ThinWire cables to the T-connector on the DECserver 90M,
use cable tie wraps to properly dress the excess ThinWire cable to the cabinet
cable management bracket at the rear of cabinet 2.

Figure 5–6   ThinWire Cable Routing (Rear View)

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5.5 Connecting the Keyboard/Mouse/Video Extension Cables

The keyboard/mouse/video extension cables are used with AlphaServer 2100 RM series systems to extend the keyboard, mouse, and video monitor cables; and to allow the keyboard, mouse, and video monitor to be located *outside* the system equipment cabinet. The keyboard and mouse extension cables are 5 m (16.40 ft) cables and the video extension cable is a 2 m (6.56 ft) cable.

Use Figure 5–7 and the following procedure to connect the keyboard/mouse/video extension cables to the AlphaServer 2100 RM series workstation in cabinet 1.

1. Remove the rear door from cabinet 1 (see Section A.2).

2. Connect the male end of one of the 5 m (16.40 ft) extension cables to the keyboard connector ❶ on the rear of the AlphaServer 2100 RM series workstation.

3. Route this extension cable to the cable management bracket ❷ on the rear of the AlphaServer 2100 RM series chassis and secure it to the bracket using cable tie wraps.

4. Route this extension cable to the cabinet cable management bracket ❸ and secure it along the outside of the bracket using cable tie wraps.

Cauti on

Ensure that there is enough slack in the extension cable to prevent stress (pulling) where the extension cable is attached to the two cable management brackets when the chassis is fully extended on the slides.

---

5. Route this extension cable down and out through the cable egress area located at the bottom rear of cabinet 1.

6. Connect the female end of the keyboard extension cable ❹ to the keyboard cable ❺.

7. Connect the male end of the other 5 m (16.40 ft) extension cable to the mouse connector ❻ on the rear of the AlphaServer 2100 RM series workstation.

8. Route this extension cable to the cable management bracket ❷ on the rear of the AlphaServer 2100 RM series chassis and secure it to the bracket using cable tie wraps.

9. Route this extension cable to the cabinet cable management bracket ❸ and secure it along the outside of the bracket using cable tie wraps.

    _____ **Caution** _____

    Ensure that there is enough slack in the extension cable to prevent stress (pulling) where the extension cable is attached to the two cable management brackets when the chassis is fully extended on the slides.

    _____

10. Route this extension cable down and out through the cable egress area located at the bottom rear of cabinet 1.

11. Connect the female end of the mouse extension cable ❼ to the mouse cable ❽.

12. Connect the male end of the 2 m (6.56 ft) extension cable to the video card connector ❾ on the rear of the AlphaServer 2100 RM series workstation.

13. Route this extension cable to the cable management bracket ❷ on the rear of the AlphaServer 2100 RM series chassis and secure it to the bracket using cable tie wraps.

14. Route this extension cable to the cabinet cable management bracket ❸ and secure it along the outside of the bracket using cable tie wraps.

    _____ **Caution** _____

    Ensure that there is enough slack in the extension cable to prevent stress (pulling) where the extension cable is attached to the two cable management brackets when the chassis is fully extended on the slides.

    _____

15. Route this extension cable down and out through the cable egress area located at the bottom rear of cabinet 1.

16. On the female end of the video extension cable ❿, ensure that two washers and standoffs ⓫ are installed.

17. Connect the female end of the video extension cable ❿ to the male end of the BC13L-10 video monitor cable ⓬.

18. Connect the female end of the BC13L-10 video monitor cable to the video monitor.

Installing the ACFS System

Figure 5–7   Installing the Keyboard/Mouse/Video Extension Cables
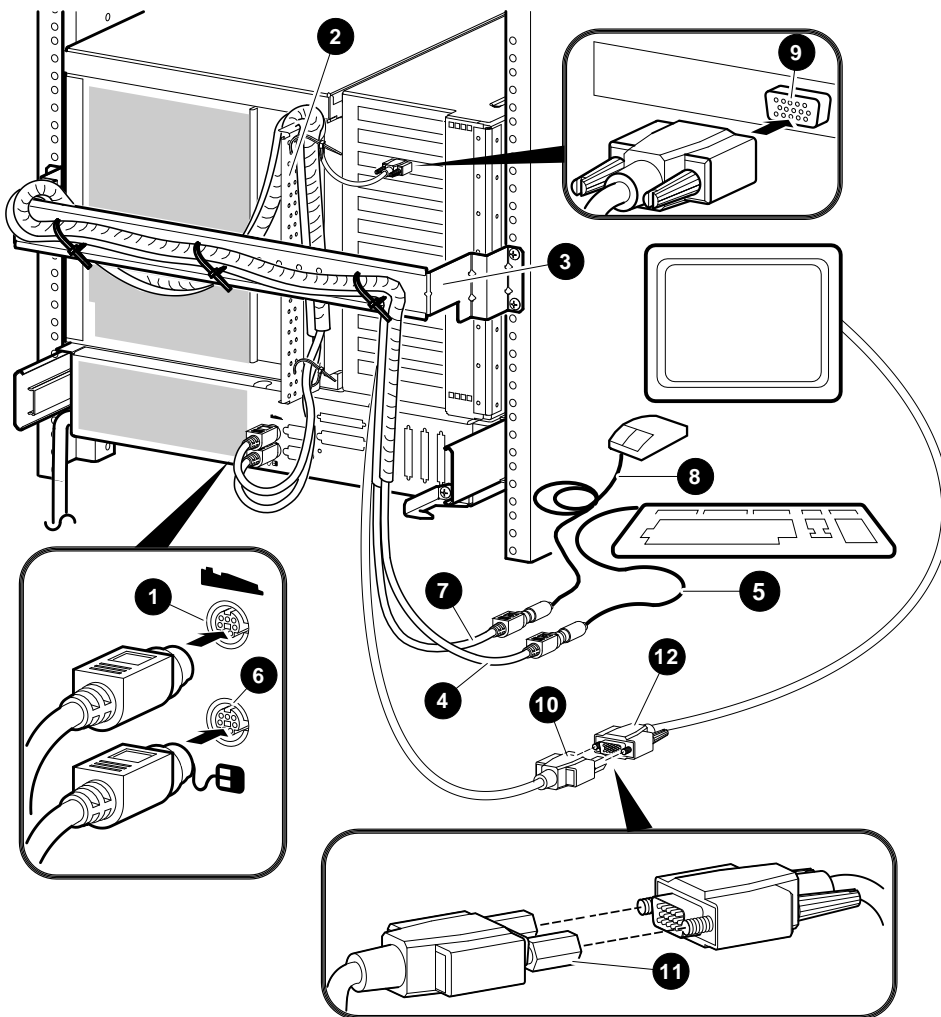
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5.6 Connecting Power

Each cabinet of the ACFS system contains two power cords. The actual power connections depend on the power controllers installed in the cabinets.

For 120 Vac (80 to 135 Vac) operation, 877-DA power controllers 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, 877-E power controllers are installed. The power cord connector (NEMA L6-30P) mates with a NEMA L6-30R wall receptacle.

Figure 5–8 shows the difference between the NEMA L5-30P ❶ and the NEMA L6-30P ❷ power connectors.

Installing the ACFS System

Figure 5–8 Power Connectors
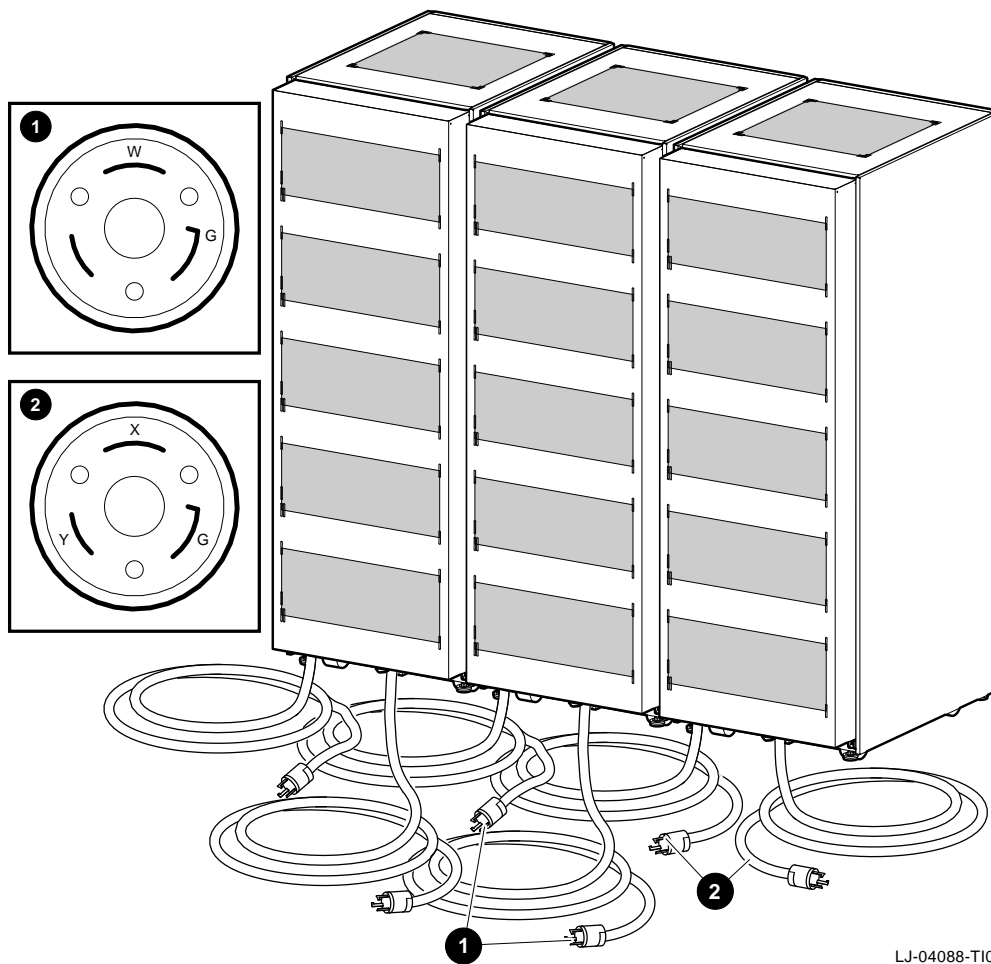
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❶ End view of a NEMA L5-30P power connector

❷ End view of a NEMA L6-30P power connector

5.7 Starting the System

To start the ACFS system, proceed as follows:

_____ **Note** _____

Before starting the system, ensure that the six power controller cords (two from each cabinet) are plugged into the proper wall receptacles.

_____

1. Plug the Video Graphics Array (VGA) monitor power cord into an electrical outlet, and place the power switch to the ON position.

2. Place the main power circuit breakers on all six power controllers to the ON position.

3. Set the security switch on the front of the GIGAswitch system to position 4.

4. Place the power switch on the front of the GIGAswitch system to the ON position.

5. Use the key to open the operator control panel door on the first AlphaServer 2100 RM series system (the bottom system in cabinet 1), and press the DC On/Off switch.

6. Use the key to open the operator control panel door on the second AlphaServer 2100 RM series system (the top system in cabinet 1), and press the DC On/Off switch.

7. Use the key to open the operator control panel door on the third AlphaServer 2100 RM series system (the bottom system in cabinet 3), and press the DC On/Off switch.

8. Use the key to open the operator control panel door on the fourth AlphaServer 2100 RM series system (the top system in cabinet 3), and press the DC On/Off switch.

9. 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.

Installing the ACFS System

10. 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 cabinets, 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)

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.

Figure A–1 Removing and Replacing the Rear Door
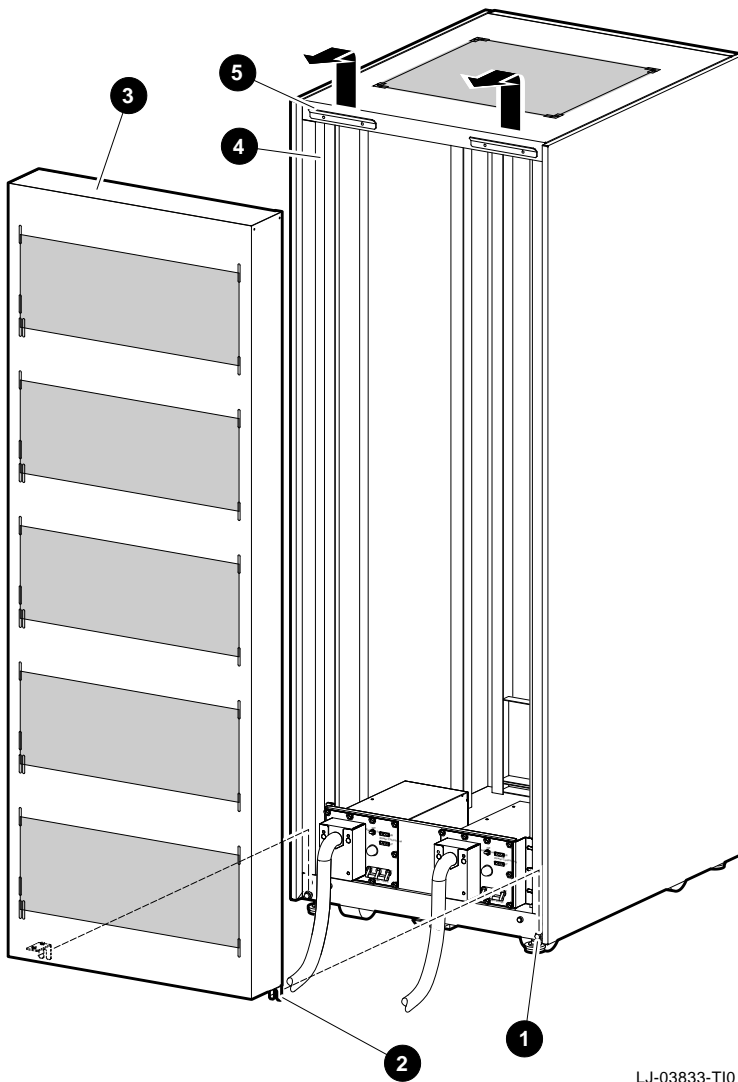
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A.3 Removing and Replacing the Front Door Latch Bracket

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:
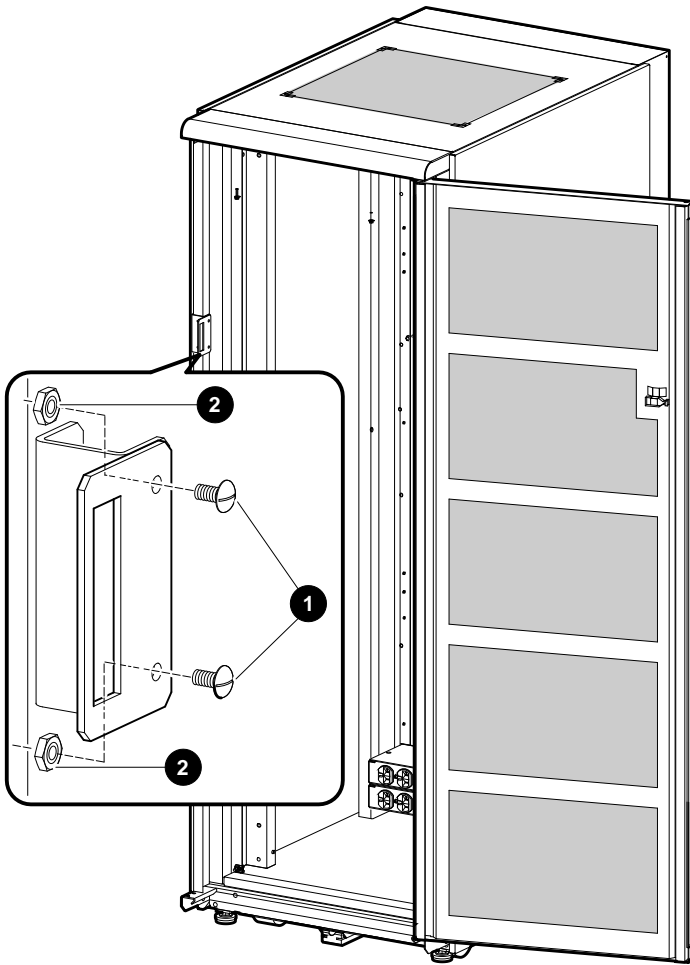
Removal

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.

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:
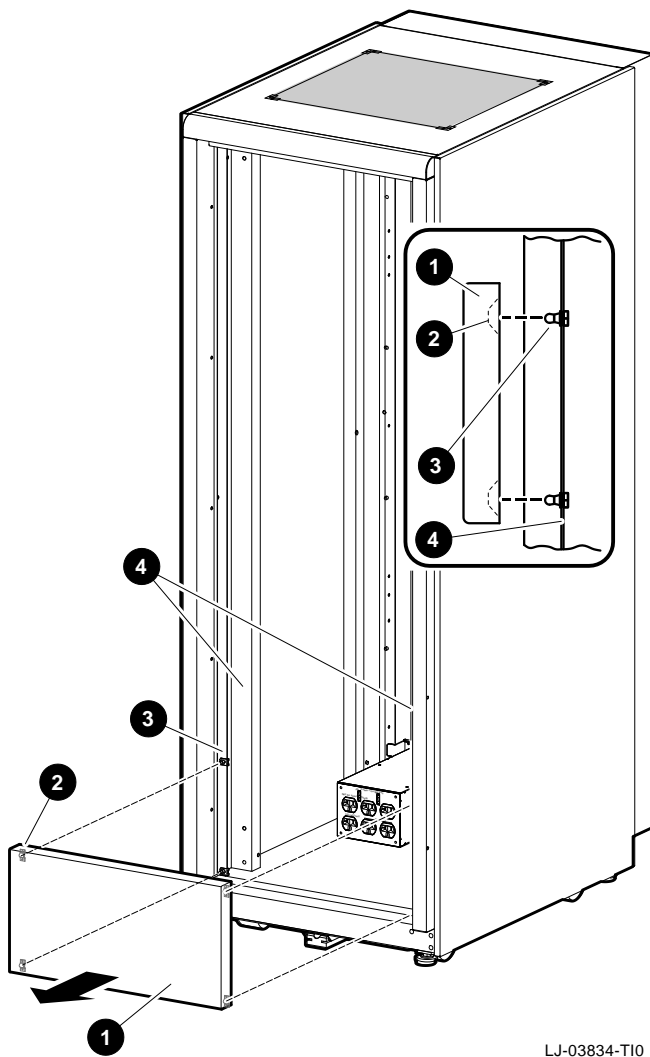
Removal

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.

Figure A–3 Removing and Replacing the Front Filler Panels

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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.

_____

Figure A–4 Pulling Out and Adjusting the Stabilizer Bar

LJ-03835-Ti0
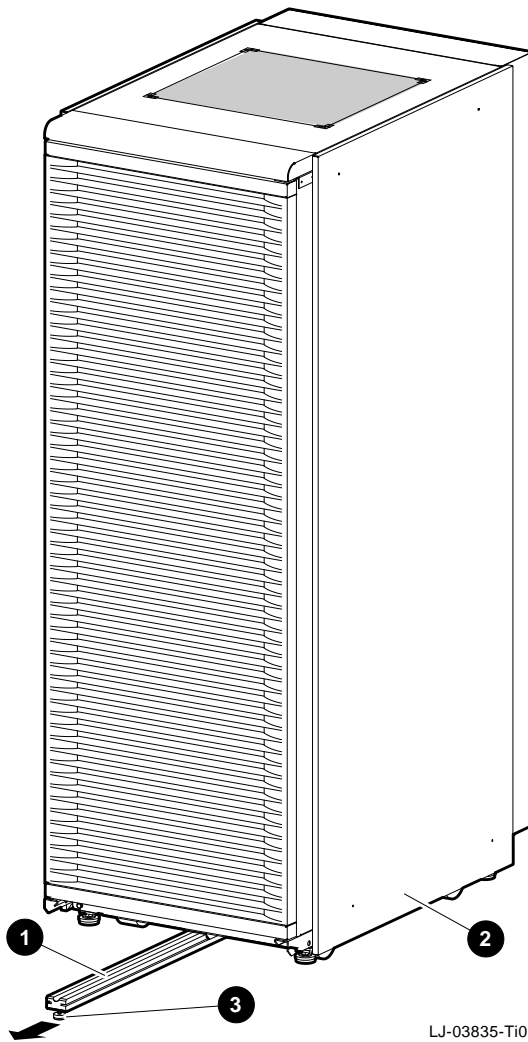
A.6 Using the Interlock System

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 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
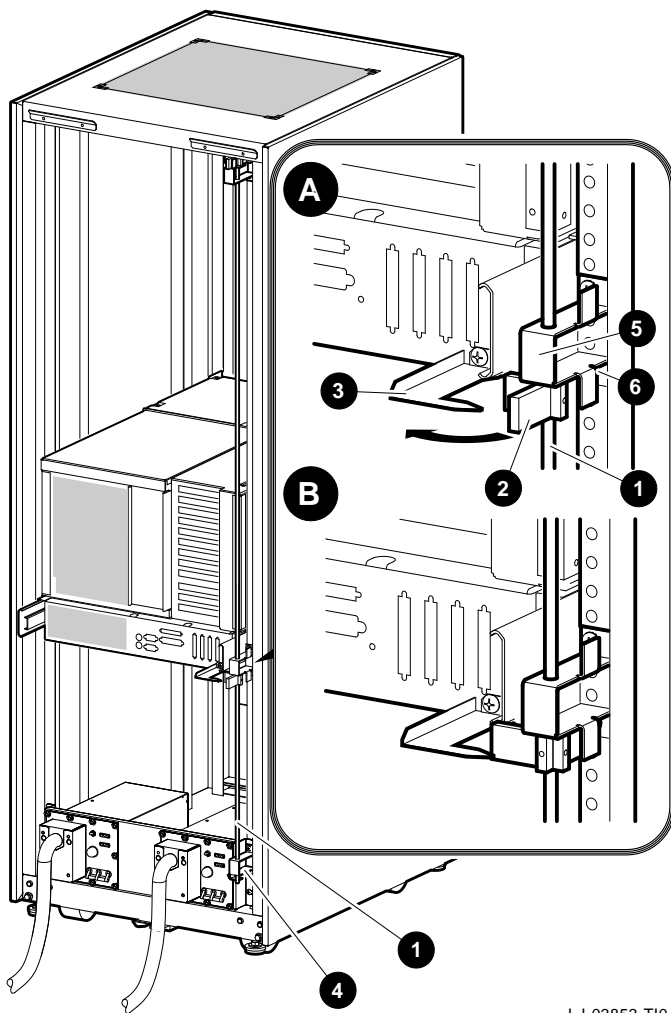
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B

Options

B.1 ACCS System Options

Table B–1 provides a list of the options available for the ACCS system.

Table B–1 ACCS System Options

Part Number	Description
450AR-AA	EV4 SMP CPU card
460AR-AA	EV4.5 SMP CPU card
MS450-CA	128 MB memory module
MS451-CA	512 MB memory module
TLZ06-LG	4 GB, 4 mm DAT tape drive
TLZ07-LG	8 GB, 4 mm DAT tape drive
TZK11-LG	QIC cartridge tape drive
RZ26L-MY	Internal 1 GB disk drive
RZ28-MY	Internal 2 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
BA35R-SR	Storage shelf for rear of cabinet
RZ26L-VA	Plug-in 1 GB disk drive for BA350 storage shelf
RZ28-VA	Plug-in 2 GB disk drive for BA350 storage shelf
BA35X-HA	Redundant (N+1) power supply for BA350 storage shelf

Options

B.2 ACFS System Options

Table B–2 provides a list of the options available for the ACFS system.

Table B–2   ACFS System Options

Part Number	Description
450AR-AA	EV4 SMP CPU card
460AR-AA	EV4.5 SMP CPU card
MS450-CA	128 MB memory module
MS451-CA	512 MB memory module
TLZ06-LG	4 GB, 4 mm DAT tape drive
TLZ07-LG	8 GB, 4 mm DAT tape drive
TZK11-LG	QIC cartridge tape 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
BA35R-SR	Storage shelf for rear of cabinet
RZ26L-VA	Plug-in 1 GB disk drive for BA350 storage shelf
RZ28-VA	Plug-in 2 GB disk drive for BA350 storage shelf
BA35X-HA	Redundant (N+1) power supply for BA350 storage shelf

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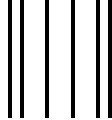
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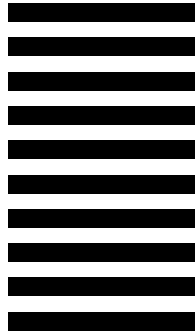
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