

Bull NovaScale 5000/6000 Series

Cabling Guide

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Bull NovaScale 5000/6000 Series

Cabling Guide

Hardware

October 2005

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Intended Readers

This guide is intended for use by qualified personnel in charge of installing, maintaining, servicing, and upgrading Bull NovaScale Servers.

Chapter 1. NovaScale 5080/5160 Server Cabling Diagrams

Chapter 2. NovaScale 6080/6160 Server Cabling Diagrams

Chapter 3. NovaScale 6320 Server Cabling Diagrams

Chapter 4. NovaScale 5xx5/6xx5 Server Cabling Diagrams

Highlighting

The following highlighting conventions are used in this guide:

Bold	Identifies predefined commands, subroutines, keywords, files, structures, buttons, labels, and icons.
<i>Italics</i>	Identifies referenced publications, chapters, sections, figures, and tables.
< >	Identifies parameters to be supplied by the user.

Abbreviations, acronyms and concepts are documented in the *Glossary*.

Related Publications

NovaScale 5xx0/6xx0 Servers / NovaScale 5xx5/6xx5 Servers

Site Preparation Guide, 86 A1 87EF

explains how to prepare a Data Processing Center for Bull NovaScale Servers, in compliance with the standards in force. This guide is intended for use by all personnel and trade representatives involved in the site preparation process.

Bull 1300H/L & 1100H/L Cabinets, 86 A1 91EM

explains how to install and fit out rack cabinets for Bull NovaScale Servers and peripheral devices.

NovaScale 5000/6000 Series PAM Help Message Guide, 86 A7 32ER

provides the complete collection of PAM Help Messages containing valuable troubleshooting information.

Troubleshooting Guide, 86 A7 91EF

explains how to diagnose and solve any problems occurring during Bull NovaScale Server operation. This guide is intended for use by qualified support personnel.

NovaScale 5000/6000 Series Praxidiag Diagnostics Guide, 86 A7 33ER

provides the complete collection solutions to known problems extracted from the Praxidiag database.

Bull NovaScale Series Documentation Overview, 86 A2 27EM

describes the hardware, software and online documentation available for Bull NovaScale Servers, related Operating Systems, and licensed programs.

NovaScale 5xx0/6xx0 Servers

Installation Guide, 86 A1 93EM

explains how to set up and start NovaScale 5xx0/6xx0 Servers for the first time. This guide is intended for use by qualified support personnel.

User's Guide, 86 A1 94EM

explains how to use the NovaScale 5xx0/6xx0 Servers servers. This guide is intended for use by Customer Administrators and Operators.

Maintenance and Service Guide, 86 A7 95EM

explains how to maintain, service, and upgrade NovaScale 5xx0/6xx0 Servers. This guide is intended for use by qualified support personnel.

NovaScale 5xx5/6xx5 Servers

Installation Guide, 86 A1 40EM

explains how to set up and start NovaScale 5xx5/6xx5 Servers for the first time. This guide is intended for use by qualified support personnel.

User's Guide, 86 A1 41EM

explains how to use the NovaScale 5xx5/6xx5 Servers. This guide is intended for use by Customer Administrators and Operators.

Maintenance and Service Guide, 86 A7 42EM

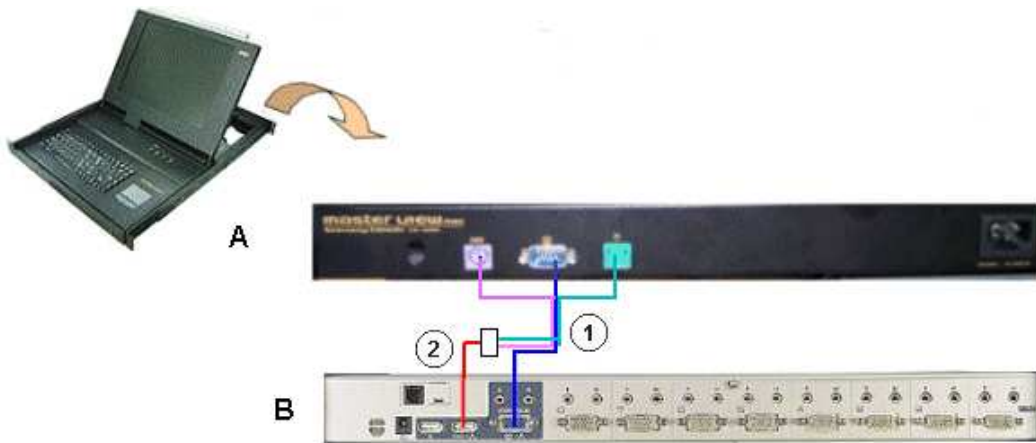
explains how to maintain, service, and upgrade NovaScale 5xx5/6xx5 Servers. This guide is intended for use by qualified support personnel.

Chapter 1. NovaScale 5080/5160 Server Cabling Diagrams

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- ▶ IOR, on page 1-6
- ▶ PAP Unit, on page 1-8
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- ▶ Disk Rack (SR-0812 SCSI RAID), on page 1-12
- ▶ Disk Rack (FDA 1x00 FC), on page 1-13
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- ▶ Ethernet Hub Data Cables, on page 1-16
- ▶ Modem Cables, on page 1-17
- ▶ Power Cables (PDU), on page 1-19

Integrated Console

Slideaway Console

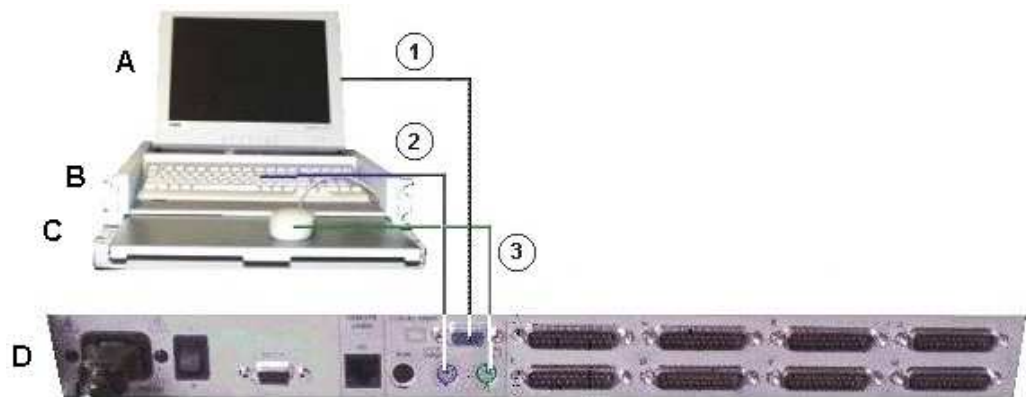


A: Console
B: KVM Switch

Mark	Cable Type	From	To
1	video/PS2/PS2 cable	A (video)	B (video)
2	PS2/USB converter	A (PS2/PS2)	B (USB)

Figure 1. Slideaway console data cabling diagram

Console Drawer



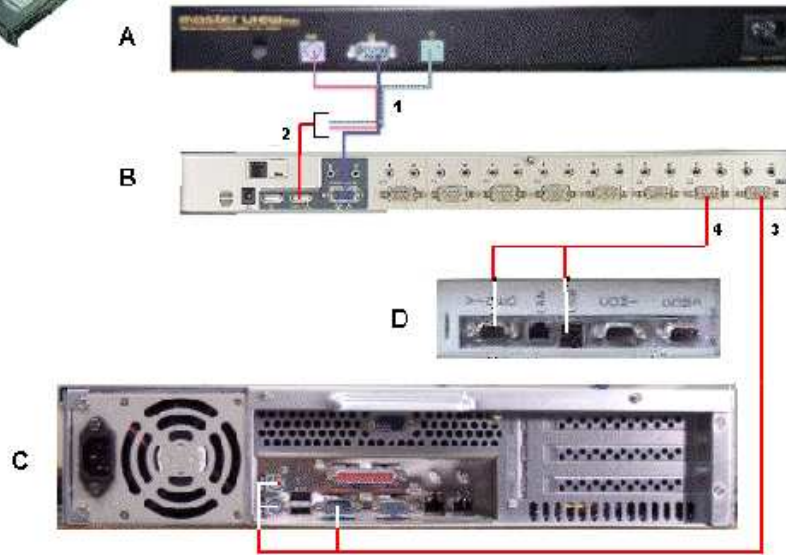
A: Monitor
B: Keyboard
C: Mouse
D: KVM Switch

Mark	Cable Type	From	To
1	HD15 video cable	A (blue)	D (blue)
2	PS2 mini-DIN6 cable + PS2/PS2 extension cable	B (mauve)	D (mauve)
3	PS2 mini-DIN6 cable + PS2/PS2 extension cable	C (green)	D (green)

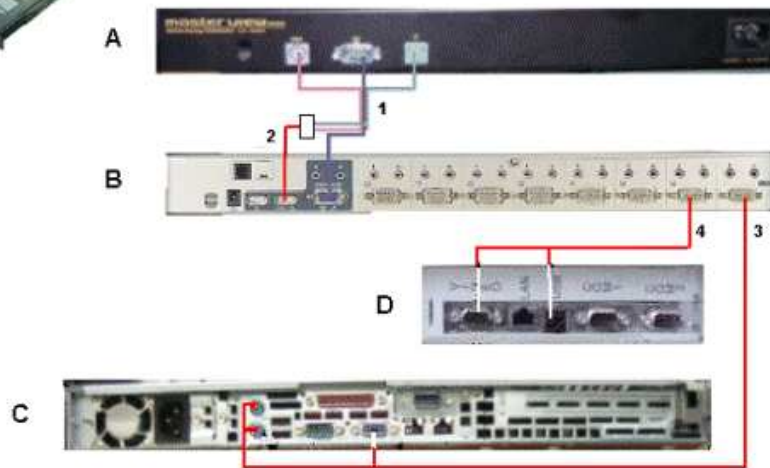
Figure 2. Console drawer data cabling diagram

KVM Switch

Aten 8-Port KVM Switch



or



A: Console

B: KVM Switch

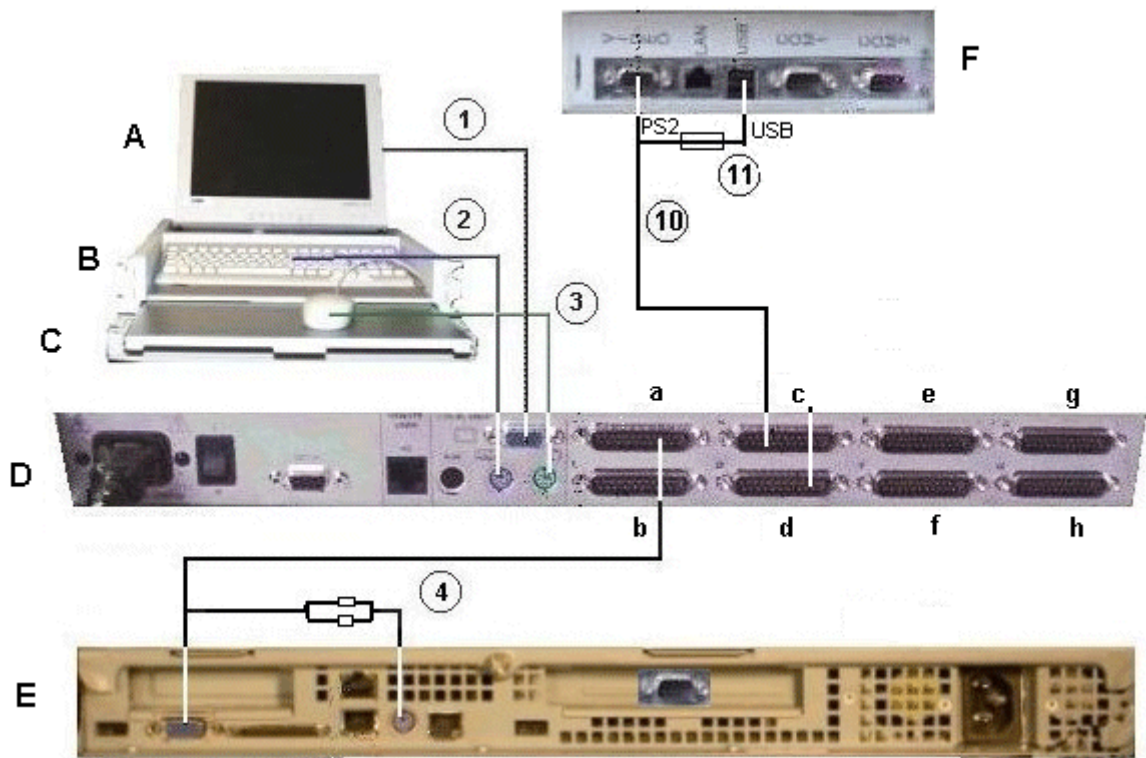
C: PAP unit

D: IOR (IOB0)

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	A (video)	B switch (video)
2	PS2/USB converter	A (PS2/PS2)	B switch (USB)
3	Combined PS2/VGA cable	B Port 1	C (VGA/PS2)
4	Combined USB/VGA cable	B Port 2	D (IOB0) (Video/USB)

Figure 3. 8-port KVM switch data cabling diagram (example 1)

Avocent 8-Port KVM Switch



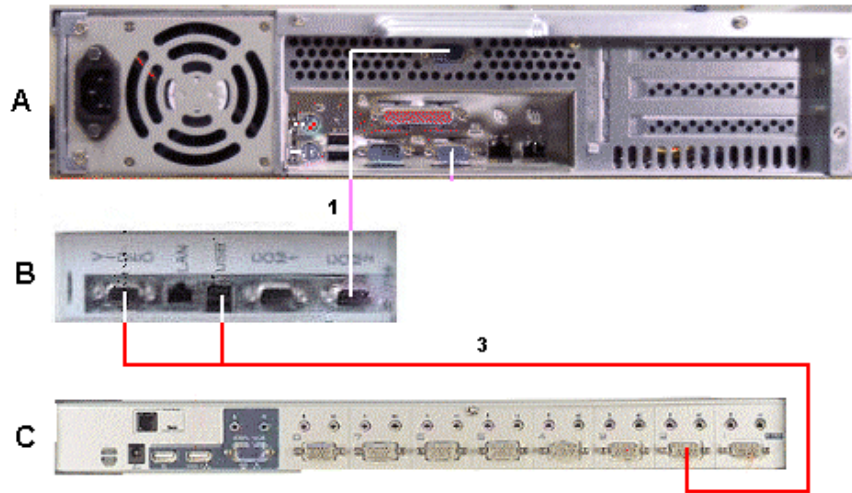
A: Monitor, B: Keyboard, C: Mouse
D: KVM Switch
E: PAP unit
F: IOR (IOB0)

Mark	Cable Type	From	To
1	HD15 video cable	A (blue)	D (blue)
2	PS2 mini-DIN6 cable + PS2/PS2 extension cable	B (mauve)	D (mauve)
3	PS2 mini-DIN6 cable + PS2/PS2 extension cable	C (green)	D (green)
4	Combined PS2/VGA cable	D (Port a)	E (VGA/PS2)
10	Combined USB/VGA cable (Windows)	D (Port c/d)	F (Video/USB)
	Combined PS2/VGA cable (Linux)	D (Port c/d)	F (Video)
11	USB/PS2 converter (Linux)	PS2 cable (mark 10)	F (USB)

Figure 4. 8-port KVM switch data cabling diagram (example 2)

IOR

IOR – 2U PAP Unit – Aten 8-Port KVM Switch



A: PAP unit

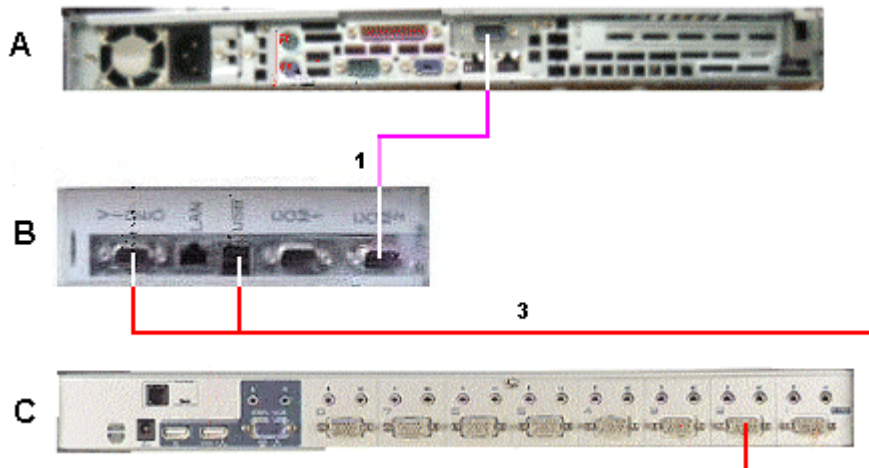
B: IOR (IOB0)

C: KVM Switch

Mark	Cable Type	From	To
1	DB9 to DB9 cross cable	A (COM 2)	B
3	Combined USB/VGA cable	C (Port 2)	B (Video/USB)

Figure 5. IOR data cabling diagram (example 1)

IOR – 1U PAP Unit – Aten 8-Port KVM Switch



A: PAP unit

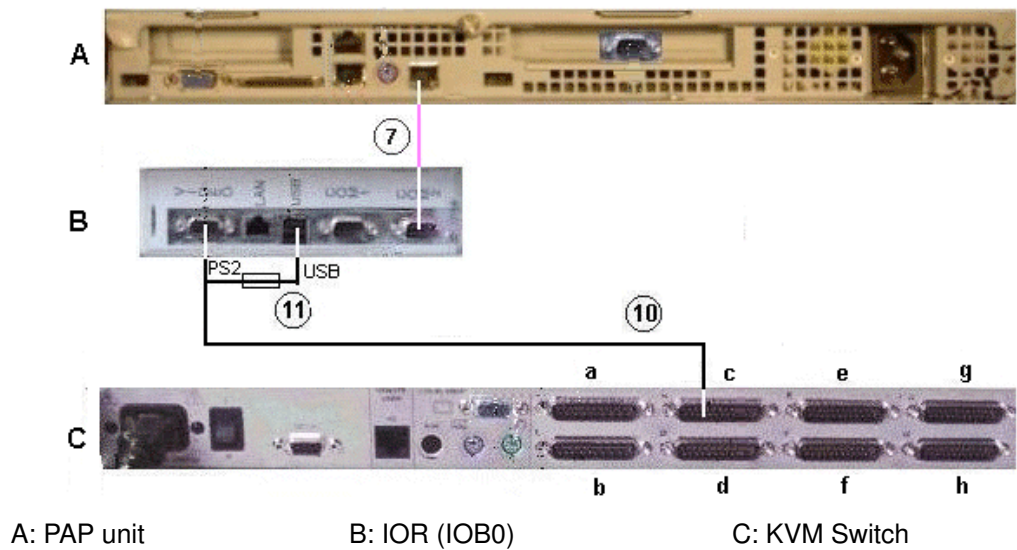
B: IOR (IOB0)

C: KVM Switch

Mark	Cable Type	From	To
1	DB9 to DB9 cross cable	A (COM 2)	B
3	Combined USB/VGA cable	C (Port 2)	B (Video/USB)

Figure 6. IOR data cabling diagram (example 2)

IOR – 1U PAP Unit – Avocent 8-Port KVM Switch

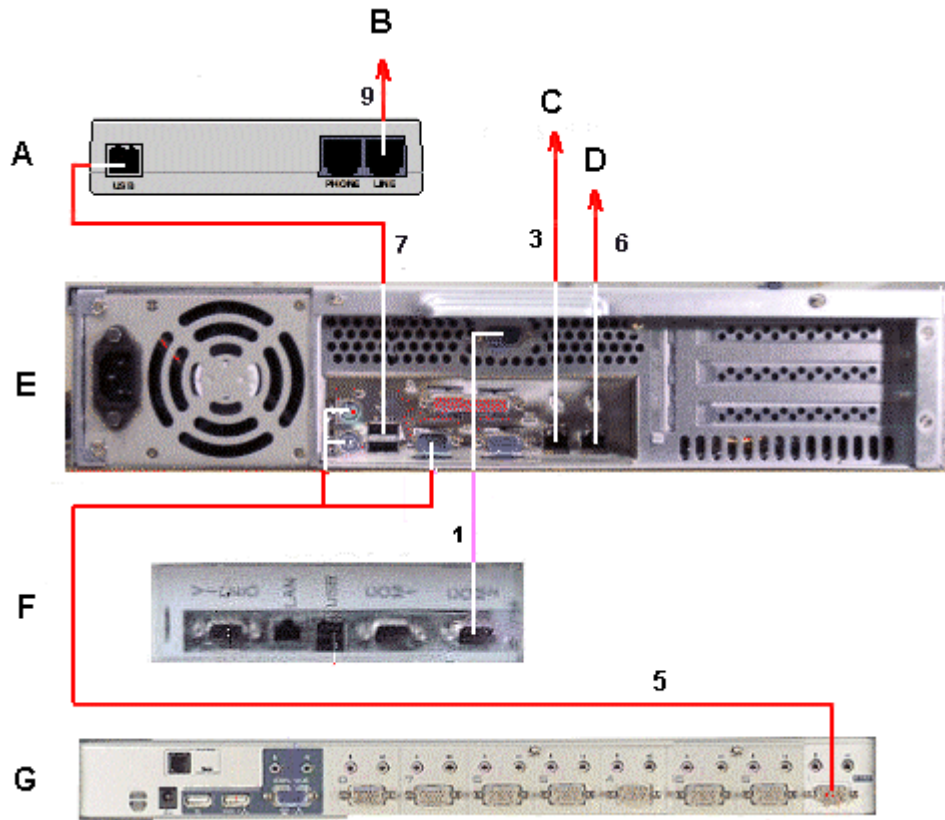


Mark	Cable Type	From	To
7	RJ45/DB9 to DB9 cross cable	A (COM 2)	B (COM2)
10	Combined USB/VGA cable (Windows) or Combined PS2/VGA cable (Linux)	C Port c/d	B (Video/USB) B (Video)
11	USB/PS2 converter (Linux)	PS2 cable (mark 10)	B (USB)

Figure 7. IOR data cabling diagram (example 3)

PAP Unit

2U PAP Unit

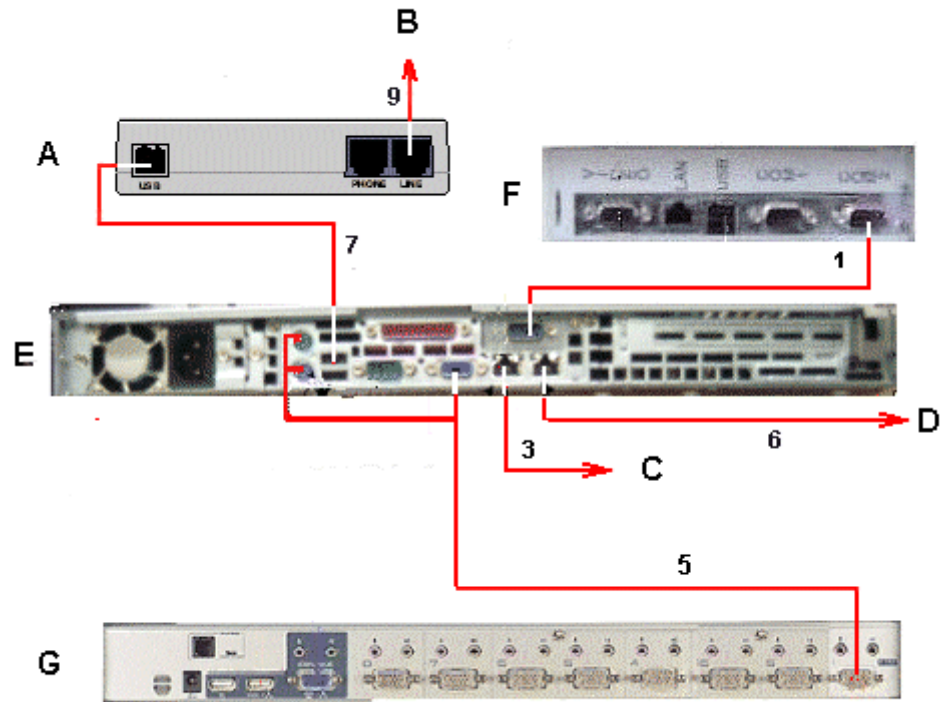


- A: Modem USB
- B: Telephone network socket
- C: PMB or Hub
- D: Enterprise LAN
- E: PAP unit
- F: IOR (IOB0)
- G: KVM Switch

Mark	Cable Type	From	To
1	DB9 to DB9 cross cable	E (COM 2)	F (COM2)
3	RJ45 – RJ45 Ethernet cable	E (LAN Maint)	C
5	Combined PS2/VGA cable	E (VGA/PS2)	G (Port 1)
6	RJ45 to RJ45 Ethernet cable	E (LAN Enter)	D (optional)
7	USB cable	E (USB)	A (USB)
9	RJ11 – RJ11 cable	A (Line)	B

Figure 8. PAP unit 2U data cabling diagram

1U PAP Unit

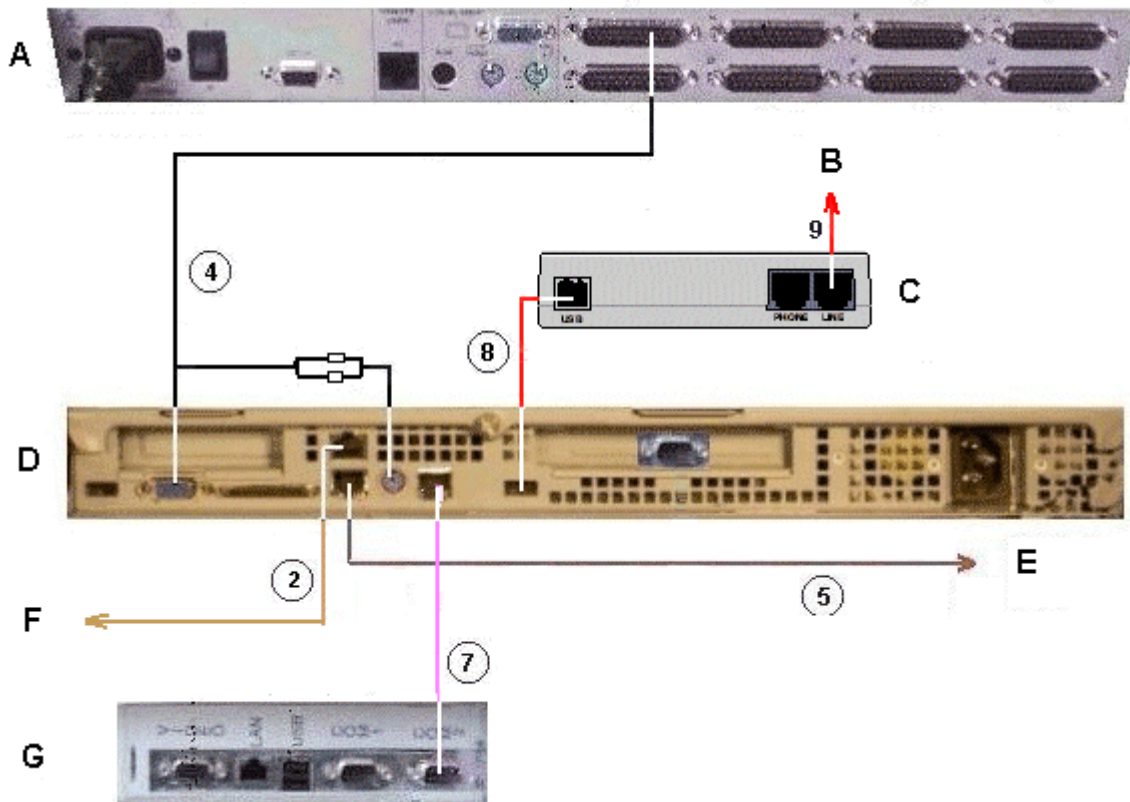


- A: Modem USB
- B: Telephone network socket
- C: PMB or Hub
- D: Enterprise LAN
- E: PAP unit
- F: IOR (IOB0)
- G: KVM Switch

Mark	Cable Type	From	To
1	DB9 to DB9 cross cable	E (COM 2)	F (COM2)
3	RJ45 – RJ45 Ethernet cable	E (LAN Maint)	C
5	Combined PS2/VGA cable	E (VGA/PS2)	G (Port 1)
6	RJ45 to RJ45 Ethernet cable	E (LAN Enter)	D (optional)
7	USB cable	E (USB)	A (USB)
9	RJ11 – RJ11 cable	A (Line)	B

Figure 9. PAP unit 1U data cabling diagram (1)

or

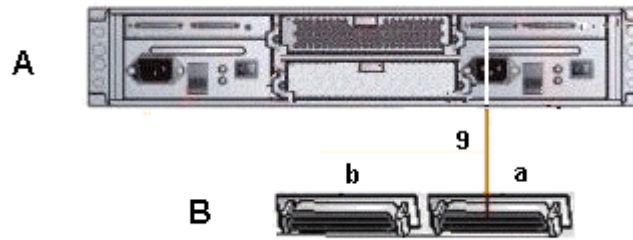


- A: KVM Switch
- B: Telephone network socket
- C: Modem USB
- D: PAP unit
- E: Enterprise LAN
- F: PMB or Hub
- G: IOR (IOB0)

Mark	Cable Type	From	To
2	RJ45 – RJ45 Ethernet cable	D (LAN Maint)	F
4	Combined PS2/VGA cable	D (VGA/PS2)	A (Port A)
5	RJ45 to RJ45 Ethernet cable	D (LAN Enter)	E (optional)
7	RJ45/DB9 to DB9 cross cable	D (COM 2)	G (COM2)
8	USB cable	D (USB)	C (USB)
9	RJ11 – RJ11 cable	C (Line)	B

Figure 10. PAP unit 1U data cabling diagram (2)

Disk Rack (SJ-0812 SCSI JBOD)

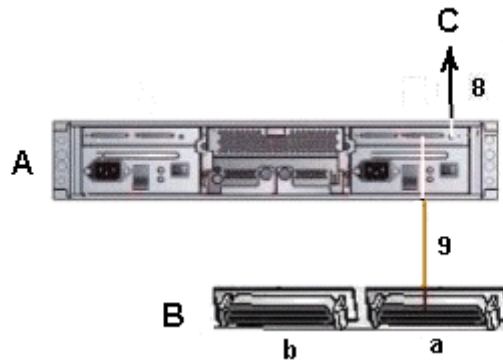


A: S/S Disk
 B: HBA SCSI RAID

Mark	Cable Type	From	To
9	SCSI-3 68-pin VHDCl to VHDCl cable	A (Extension port)	B (IOB0)

Figure 11. SJ-0812 SCSI JBOD disk rack data cabling diagram

Disk Rack (SR-0812 SCSI RAID)



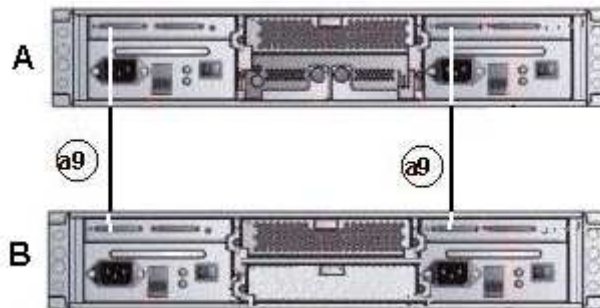
A: S/S Disk
 B: HBA SCSI
 C: PAP

Mark	Cable Type	From	To
8*	DB9 to Jack cable	A (RS232)	C (COM 1)
9	SCSI-3 68-pin VHDCI to VHDCI cable	A (Host port)	B (IOB0)

* cable used to configure the disk S/S.

Figure 12. SR-0812 SCSI RAID disk rack data cabling diagram

Extension Disk Rack (SR-0812 SCSI RAID – SJ-0812 SCSI JBOD)

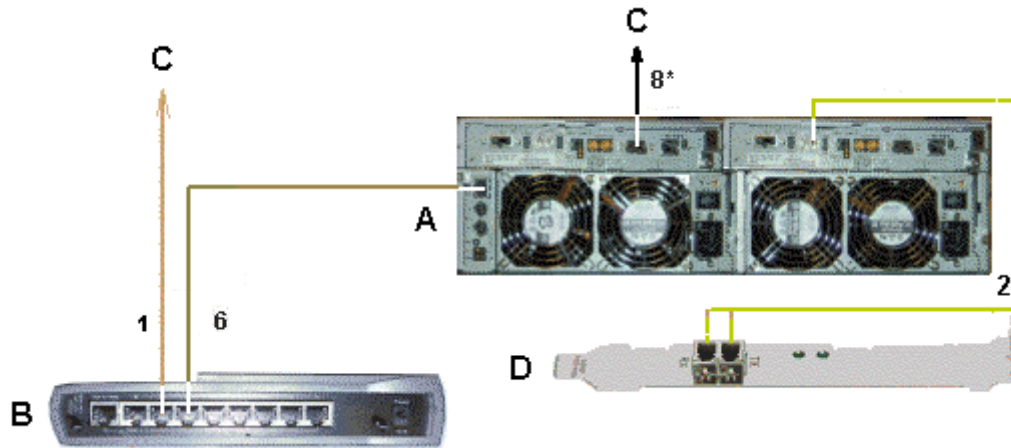


A: SR-0812 SCSI RAID
 B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 13. SJ-0812 SCSI JBOD extension disk rack data cabling diagram

Disk Rack (FDA 1x00 FC)



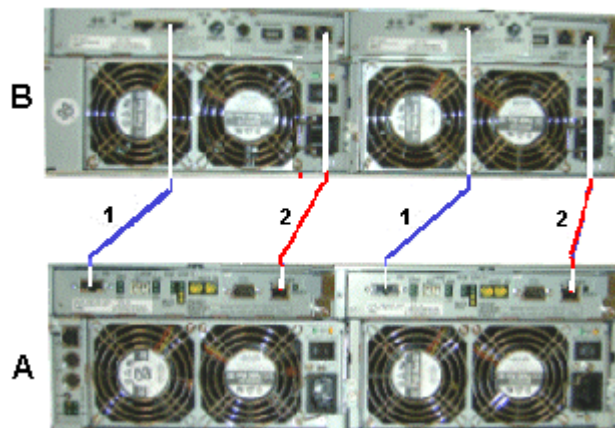
A: S/S Disk
 C: PAP unit
 B: Hub
 D: FC Adapter

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	B (port 7)	C
2	LC–LC cable	A (CTL 0)	D (IOB 0)
6	RJ45 – RJ45 Ethernet cable	A	B (port 6)
8*	DB9 to DB9 serial cable *	C (COM 1)	A (RS232)

* optional cable used to configure the S/S disk.

Figure 14. FDA 1x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC)



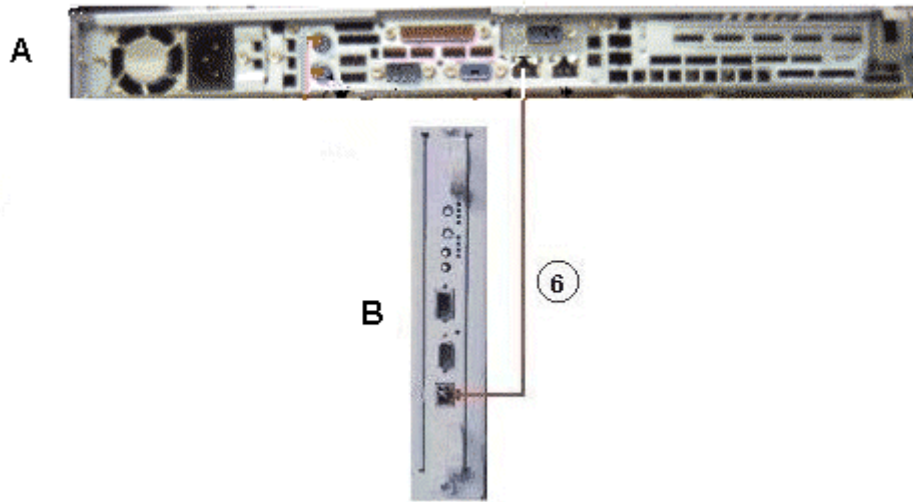
A: S/S Disk
 B: S/S Disk Extension

Mark	Cable Type	From	To
1	HSSDC–HSSDC cable	A	B
2	DE diagnosis cable	A	B

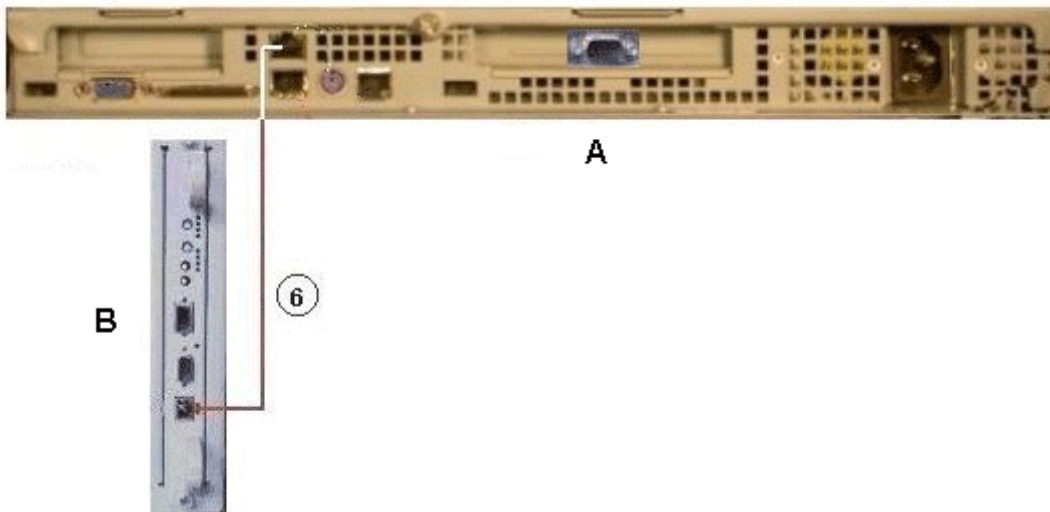
Figure 15. FDA 1x00 FC – FDA 1x00 FC extension disk rack data cabling diagram

PMB

1U PAP Unit



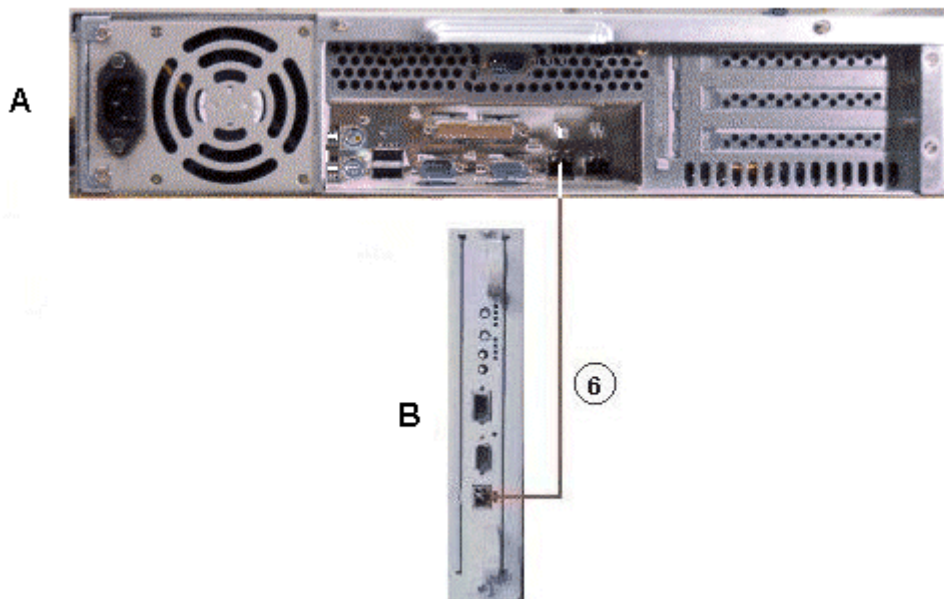
or



A: PAP unit
B: PMB

Mark	Cable Type	From	To
6	RJ45 – RJ45 Ethernet cross cable	A (Ethernet)	B (Ethernet)

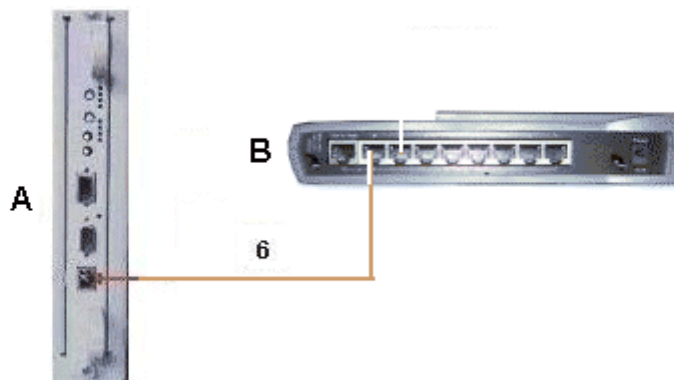
2U PAP Unit



A: PAP unit
B: PMB

Mark	Cable Type	From	To
6	RJ45 – RJ45 Ethernet cross cable	A (Ethernet)	B (Ethernet)

Ethernet Hub

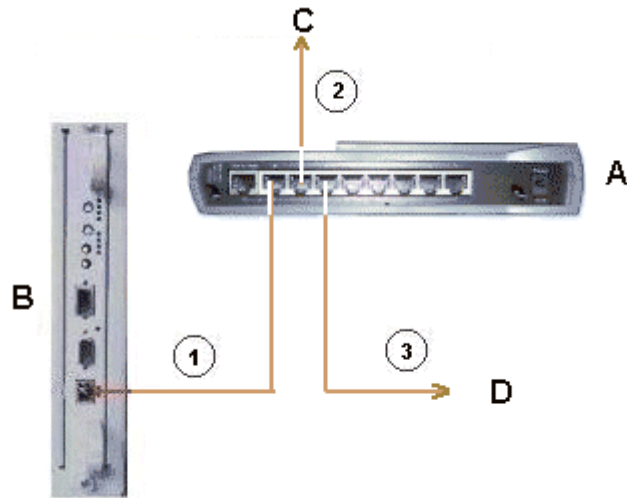


A: PMB
B: Hub

Mark	Cable Type	From	To
6	RJ45 – RJ45 Ethernet cross cable	A (Ethernet)	B

Figure 16. PMB data cabling diagram examples

Ethernet Hub



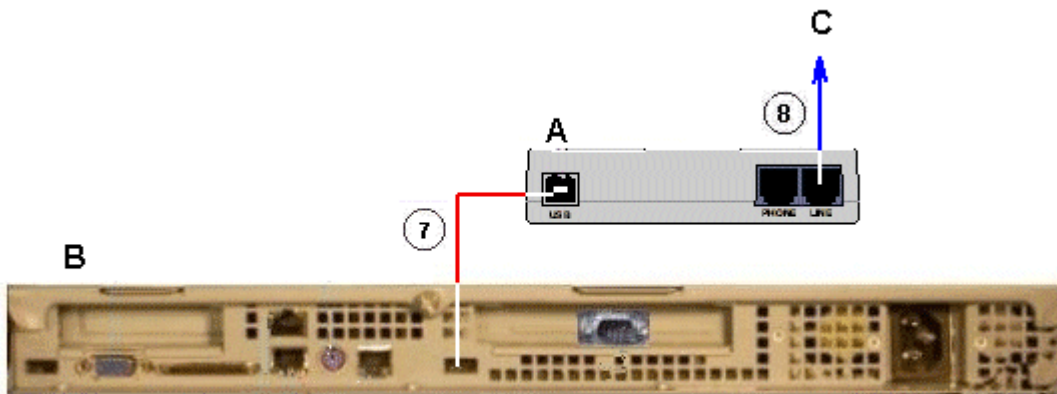
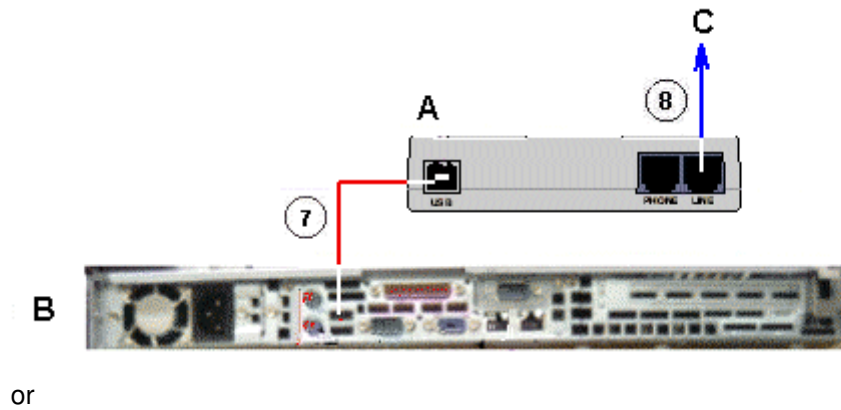
A: Hub Ethernet
 B: PMB
 C: PAP unit
 D: S/S Disk FC

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	A (port 8)	B (Ethernet)
2	RJ45 – RJ45 Ethernet cable	A (port 7)	C (LAN Maint)
3	RJ45 – RJ45 Ethernet cable	A (port 6)	D

Figure 17. Ethernet hub data cabling diagram

Modem

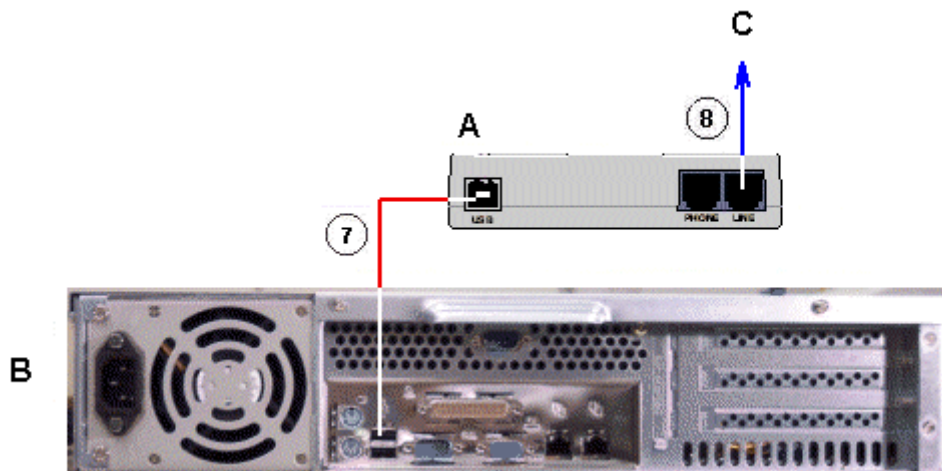
1U PAP Unit



- A: Modem USB
- B: PAP unit
- C: Telephone network socket

Mark	Cable Type	From	To
7	USB cable	A (USB)	B (USB)
8	RJ11 – RJ11 cable	A (Line)	C

2U PAP Unit



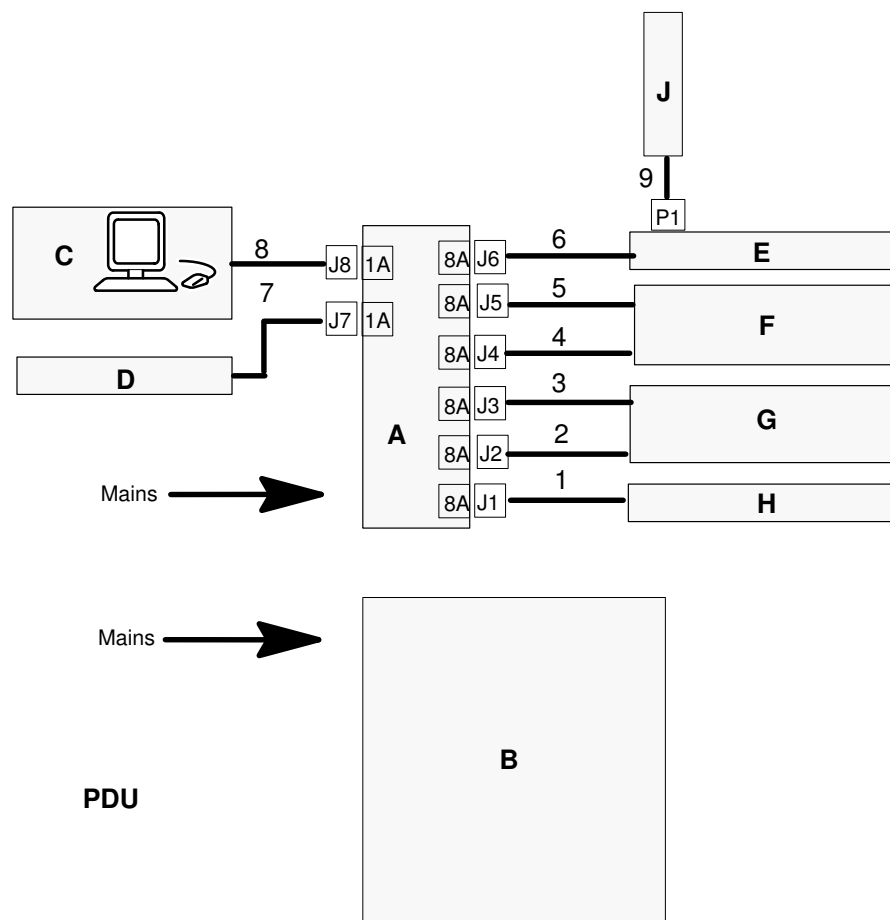
A: Modem USB
B: PAP unit
C: Telephone network socket

Mark	Cable Type	From	To
7	USB cable	A (USB)	B (USB)
8	RJ11 – RJ11 cable	A (Line)	C

Figure 18. Modem data cabling diagram

Power Cables

The CSS Module is equipped with a dedicated power supply cable. All other server component power supply cables are connected to the internal PDU, as shown below:



A: PDU, B: CSS module, C: Monitor, D: KVM switch, E: Power bar, F: S/S Disk (optional), G: S/S Disk, H: PAP unit, J: Hub.

Mark	Cable Type	From	To
1	Power cable	H	A (J1)
2	Power cable	G	A (J2)
3	Power cable	G	A (J3)
4	Power cable	F (optional)	A (J4)
5	Power cable	F (optional)	A (J5)
6	Power cable	E	A (J6)
7	Power cable	D	A (J7)
8	Power cable	C	A (J8)
9	Power cable	J	E (P1)

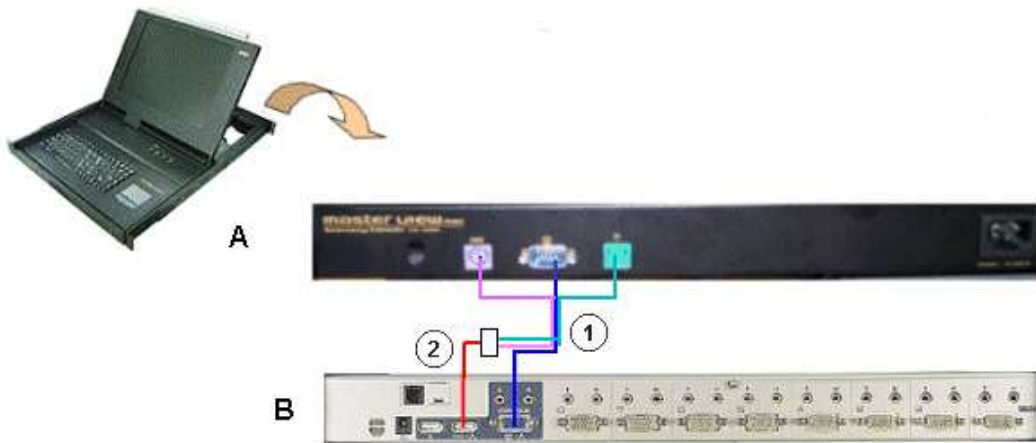
Figure 19. Power cabling diagram

Chapter 2. NovaScale 6080/6160 Server Cabling Diagrams

- ▶ Console, on page 2-3
- ▶ KVM Switch, on page 2-4
- ▶ IOR, on page 2-7
- ▶ PAP Unit, on page 2-9
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- ▶ Disk Rack (SR-0812 SCSI RAID), on page 2-12
- ▶ NPort Server, on page 2-13
- ▶ Disk Rack (FDA 1x00 FC), on page 2-14
- ▶ Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC), on page 2-14
- ▶ PMB, on page 2-15
- ▶ Ethernet Hub, on page 2-17
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- ▶ Power, on page 2-20

Integrated Console

Slideaway Console

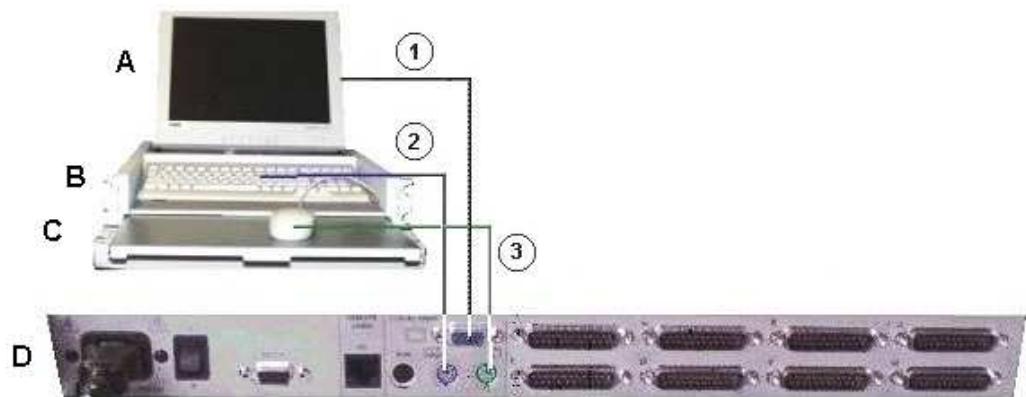


A: Console
B: KVM Switch

Mark	Cable Type	From	To
1	video/PS2/PS2 cable	A (video)	B (video)
2	PS2/USB converter	A (PS2/PS2)	B (USB)

Figure 20. Slideaway console data cabling diagram

Console Drawer



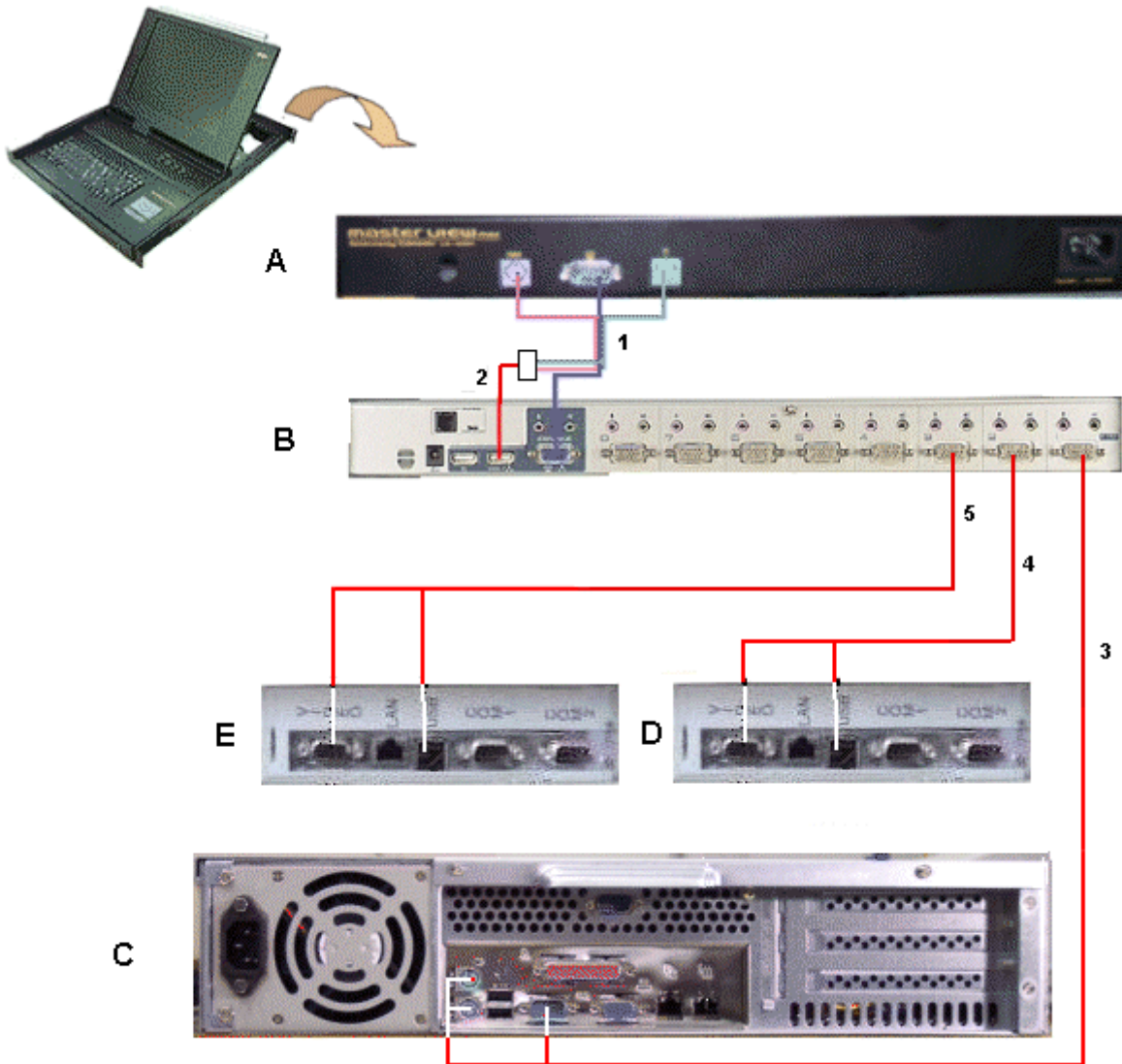
A: Monitor
B: Keyboard
C: Mouse
D: KVM Switch

Mark	Cable Type	From	To
1	HD15 video cable	A (blue)	D (blue)
2	PS2 mini-DIN6 cable + PS2/PS2 extension cable	B (mauve)	D (mauve)
3	PS2 mini-DIN6 cable + PS2/PS2 extension cable	C (green)	D (green)

Figure 21. Console drawer data cabling diagram

KVM Switch

Aten 8-Port KVM Switch – PAP 2U

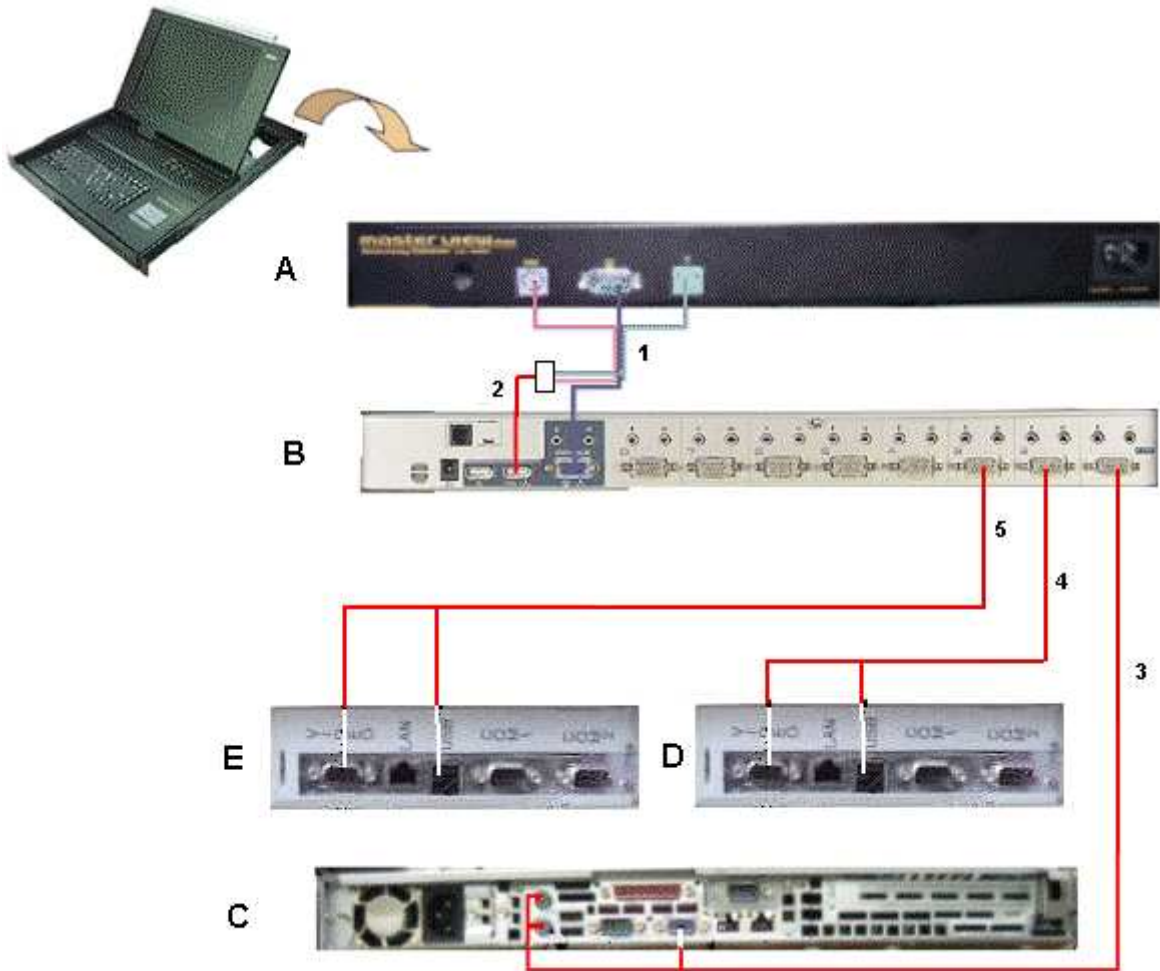


- A: Console
- B: KVM Switch
- C: PAP unit
- D: IOR (IOB0)
- E: IOR (IOB1)

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	A (video)	B switch (video)
2	PS2/USB converter	A (PS2/PS2)	B switch (USB)
3	Combined PS2/VGA cable	B Port 1	C (VGA/PS2)
4	Combined USB/VGA cable	B Port 2	D (IOB0) (Video/USB)
5	Combined USB/VGA cable	B Port 3	E (IOB1) (Video/USB)

Figure 22. 8-port KVM switch data cabling diagram (example 1)

Aten 8-Port KVM Switch – PAP 1U

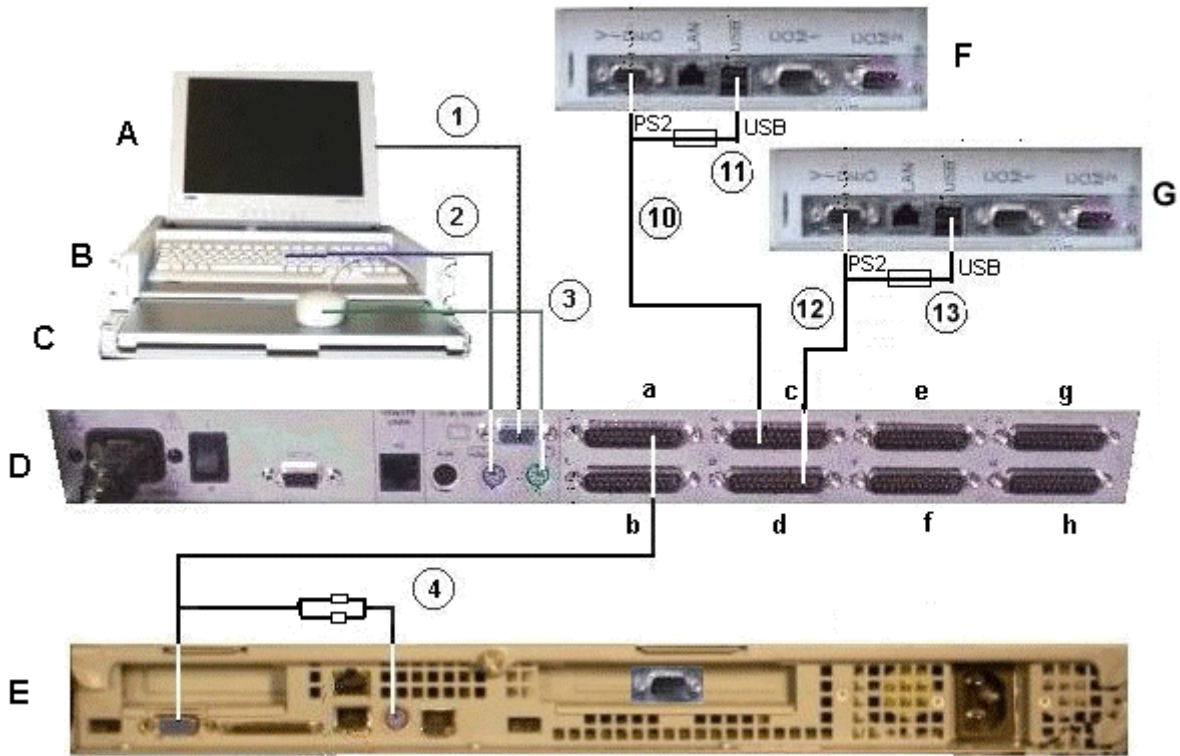


- A: Console
- B: KVM Switch
- C: PAP unit
- D: IOR (IOB0)
- E: IOR (IOB1)

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	A (video)	B switch (video)
2	PS2/USB converter	A (PS2/PS2)	B switch (USB)
3	Combined PS2/VGA cable	B Port 1	C (VGA/PS2)
4	Combined USB/VGA cable	B Port 2	D (IOB0) (Video/USB)
5	Combined USB/VGA cable	B Port 3	E (IOB1) (Video/USB)

Figure 23. 8-port KVM switch data cabling diagram (example 1)

Avocent 8-Port KVM Switch



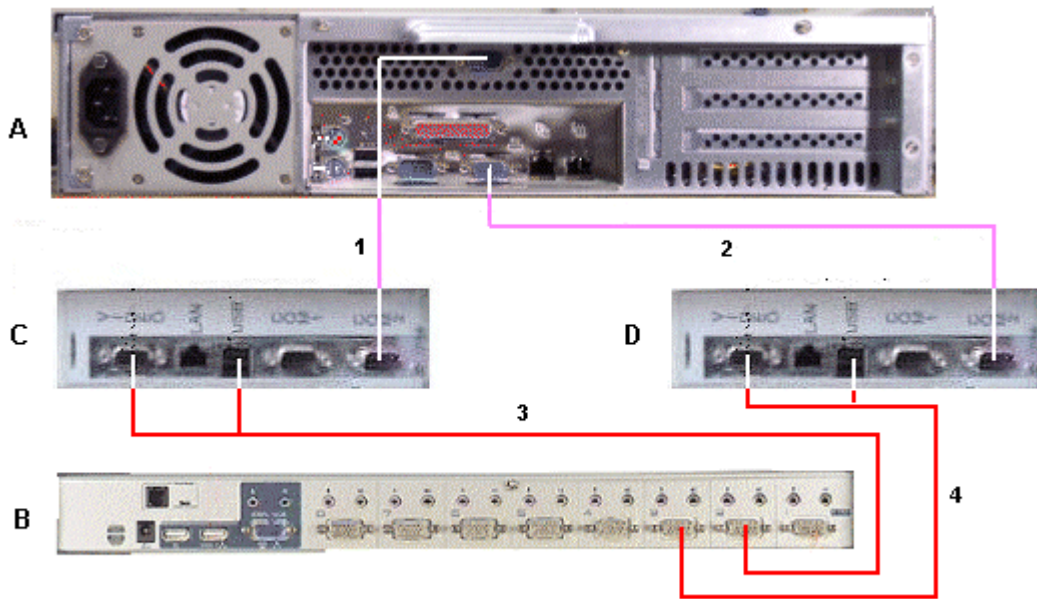
A: Monitor, B: Keyboard, C: Mouse
 D: KVM Switch
 E: PAP unit
 F: IOR (IOB0)
 G: IOR (IOB1)

Mark	Cable Type	From	To
1	HD15 video cable	A (blue)	D (blue)
2	PS2 mini-DIN6 cable + PS2/PS2 extension cable	B (mauve)	D (mauve)
3	PS2 mini-DIN6 cable + PS2/PS2 extension cable	C (green)	D (green)
4	Combined PS2/VGA cable	D (Port a)	E (VGA/PS2)
10	Combined USB/VGA cable (Windows)	D (Port c)	F (Video/USB)
	Combined PS2/VGA cable (Linux)	D (Port c)	F (Video)
11	USB/PS2 converter (Linux)	PS2 cable (mark 10)	F (USB)
12	Combined USB/VGA cable (Windows)	D (Port d)	G (Video/USB)
	Combined PS2/VGA cable (Linux)	D (Port d)	G (Video)
13	USB/PS2 converter (Linux)	PS2 cable (mark 10)	G (USB)

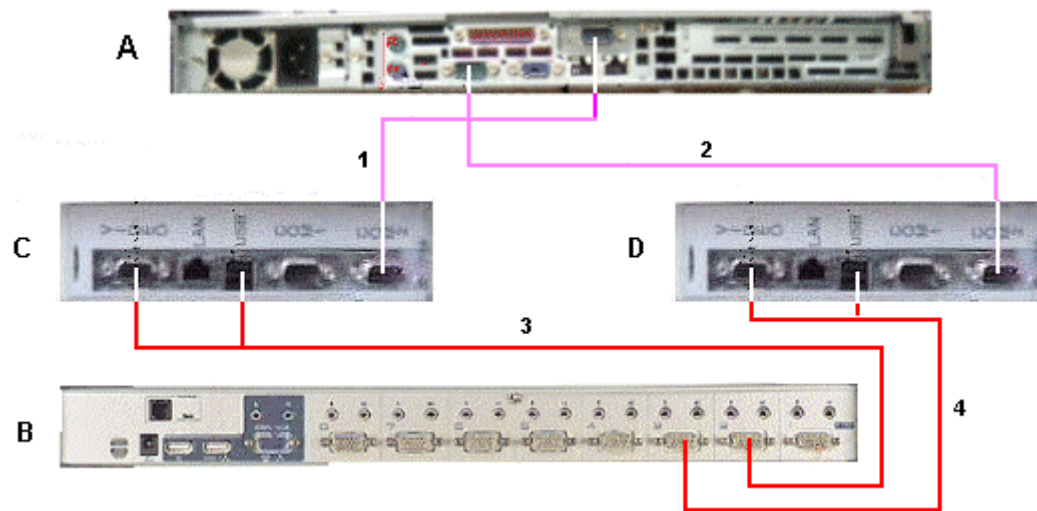
Figure 24. 8-port KVM switch data cabling diagram (example 2)

IOR

IOR – 1 or 2U PAP Unit – Aten 8-Port KVM Switch



or



A: PAP unit

B: KVM Switch

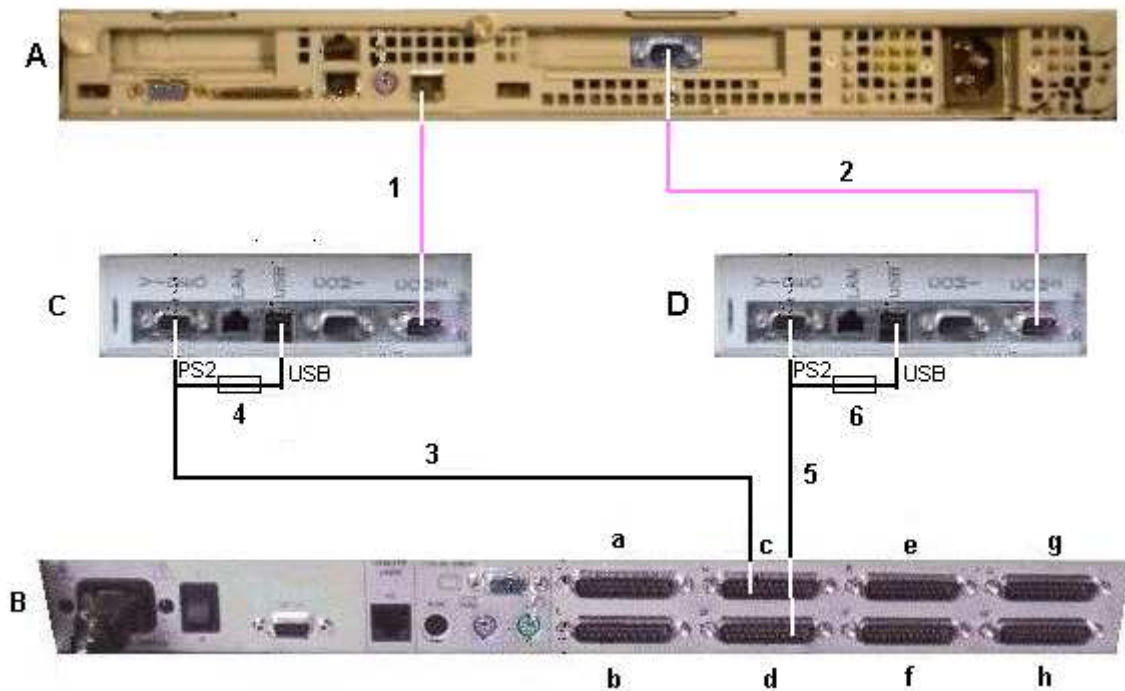
C: IOR (IOB0)

D: IOR (IOB1)

Mark	Cable Type	From	To
1	DB9 to DB9 cross cable	A (COM 2)	C (IOB0)
2	DB9 to DB9 cross cable	A (COM 1)	D (IOB1)
3	Combined USB/VGA cable	B (Port 2)	C (IOB0) Video/USB
4	Combined USB/VGA cable	B (Port 3)	D (IOB1) Video/USB

Figure 25. IOR data cabling diagram (example 1)

IOR – 1U PAP Unit – Avocent 8-Port KVM Switch



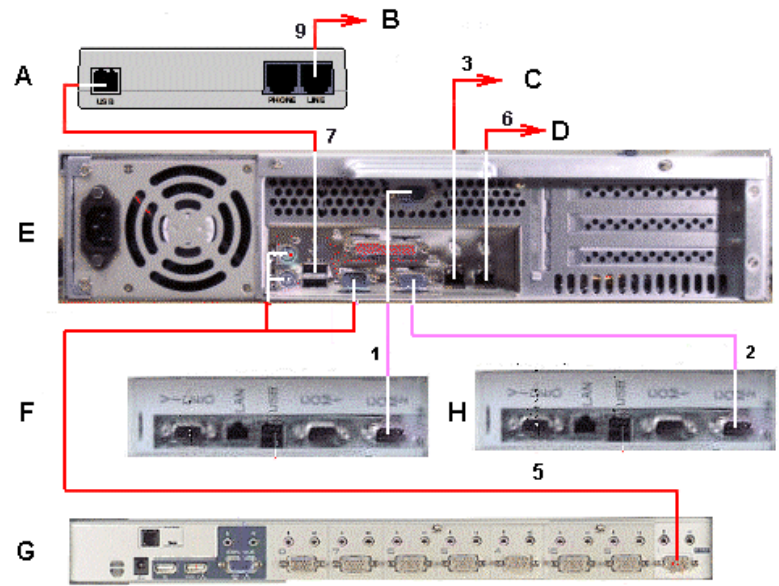
A: PAP unit
 B: KVM Switch
 C: IOR (IOB0)
 D: IOR (IOB1)

Mark	Cable Type	From	To
1	RJ45/DB9 to DB9 cross cable	A (COM 2)	C (IOB0)
2	DB9 to DB9 cross cable	A (COM 1)	D (IOB1)
3	Combined USB/VGA cable (Windows)	B (Port c)	C Video/USB
	Combined PS2/VGA cable (Linux)	B (Port c)	C (Video)
4	USB/PS2 converter (Linux)	PS2 cable (mark 10)	C (USB)
5	Combined USB/VGA cable (Windows)	B (Port d)	D Video/USB
	Combined PS2/VGA cable (Linux)	B (Port d)	D (Video)
6	USB/PS2 converter (Linux)	PS2 cable (mark 10)	D (USB)

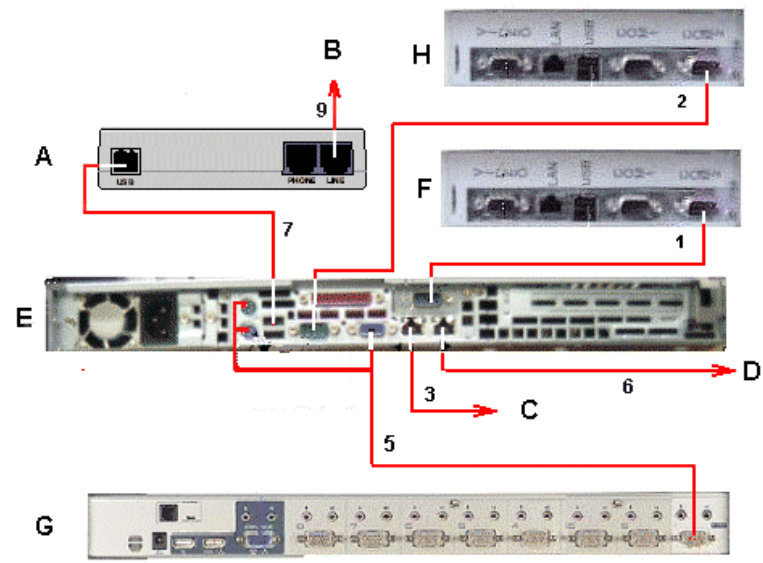
Figure 26. IOR data cabling diagram (example 2)

PAP Unit

1 & 2U PAP Unit



or



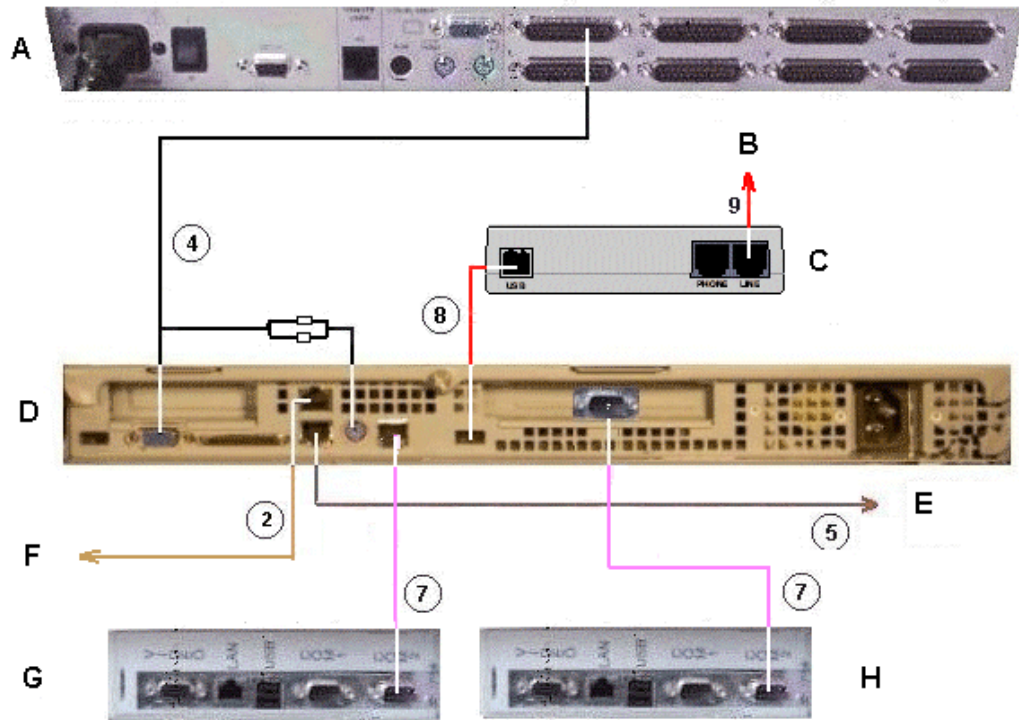
- A: Modem USB
- B: Telephone network socket
- C: PMB or Hub
- D: Enterprise LAN
- E: PAP unit
- F: IOR (IOB0)
- G: KVM Switch
- H: IOR (IOB1)

Mark	Cable Type	From	To
1	DB9 to DB9 cross cable	E (COM 2)	F (IOB0) COM2
2	DB9 to DB9 cross cable	E (COM 1)	H (IOB1) COM2
3	RJ45 – RJ45 Ethernet cable	E (LAN Maint)	C
5	Combined PS2/VGA cable	E (VGA/PS2)	G (Port 1)
6	RJ45 to RJ45 Ethernet cable	E (LAN Enter)	D (optional)

Mark	Cable Type	From	To
7	USB cable	E (USB)	A (USB)
9	RJ11 – RJ11 cable	A (Line)	B

Figure 27. PAP unit data cabling diagram (example 1)

PAP Unit (express 5800)



A: KVM Switch
D: PAP unit
G: IOR (IOB0)

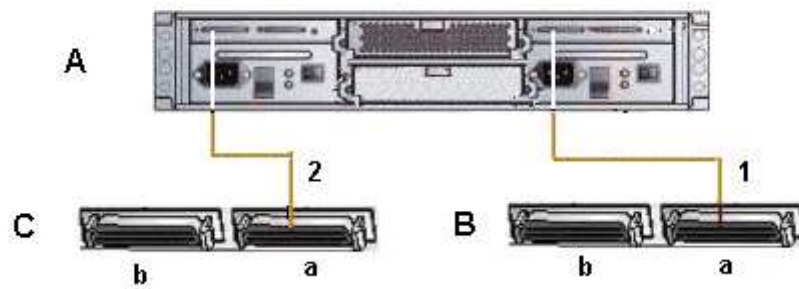
B: Telephone network socket
E: Enterprise LAN
H: IOR (IOB1)

C: Modem USB
F: PMB or Hub

Mark	Cable Type	From	To
2	RJ45 – RJ45 Ethernet cable	D (LAN Maint)	F
4	Combined PS2/VGA cable	D (VGA/PS2)	A (Port A)
5	RJ45 to RJ45 Ethernet cable	D (LAN Enter)	E (optional)
7	RJ45/DB9 to DB9 cross cable	D (COM 2)	G (COM2)
	DB9 to DB9 cross cable	D (COM 1)	H (COM2)
8	USB cable	D (USB)	C (USB)
9	RJ11 – RJ11 cable	C (Line)	B

Figure 28. PAP unit data cabling diagram (example 2)

Disk Rack (SJ-0812 SCSI JBOD)

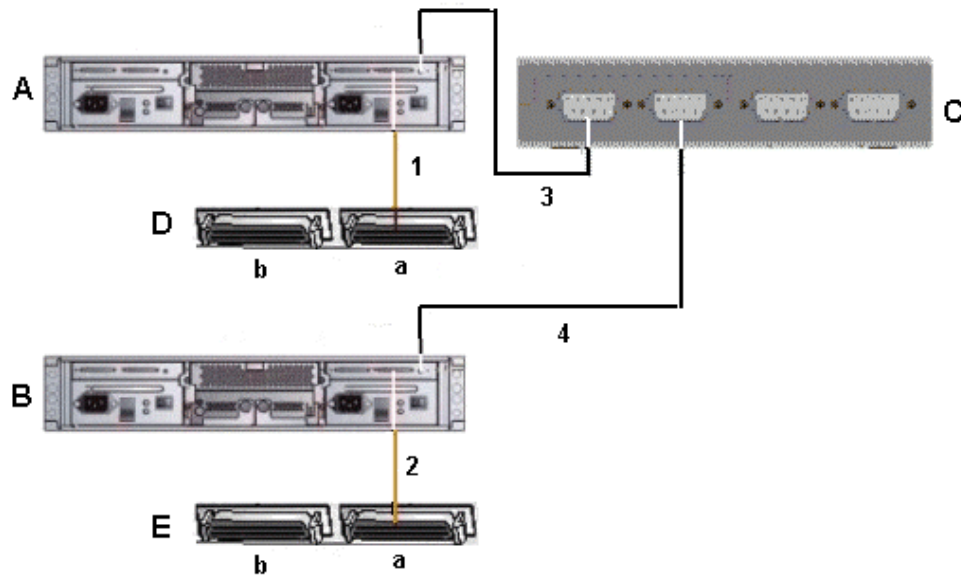


A: S/S Disk
 B: HBA SCSI RAID (IOB 0)
 C: HBA SCSI RAID (IOB 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port)	B (IOB0)
2	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port)	C (IOB1)

Figure 29. SJ-0812 SCSI JBOD disk rack data cabling diagram

Disk Rack (SR-0812 SCSI RAID)



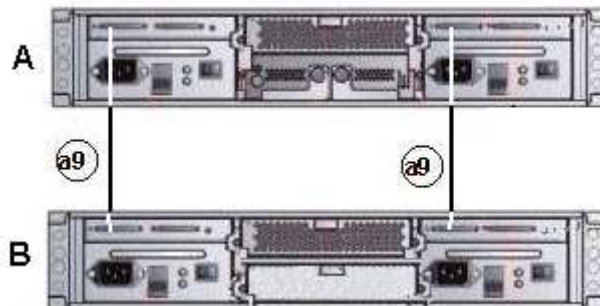
A: S/S Disk 1, B: S/S Disk 2 C: Nport server
 D: HBA SCSI (IOB 0), E: HBA SCSI (IOB 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	D (a)	A (Host port)
2	SCSI-3 68-pin VHDCI to VHDCI cable	E (a)	B (Host port)
3*	DB9 to Jack cable	C	A (RS232)
4*	DB9 to Jack cable	C	B (RS232)

* cable used to configure the disk S/S.

Figure 30. SR-0812 SCSI RAID disk rack data cabling diagram

Extension Disk Rack (SR-0812 SCSI RAID – SJ-0812 SCSI JBOD)

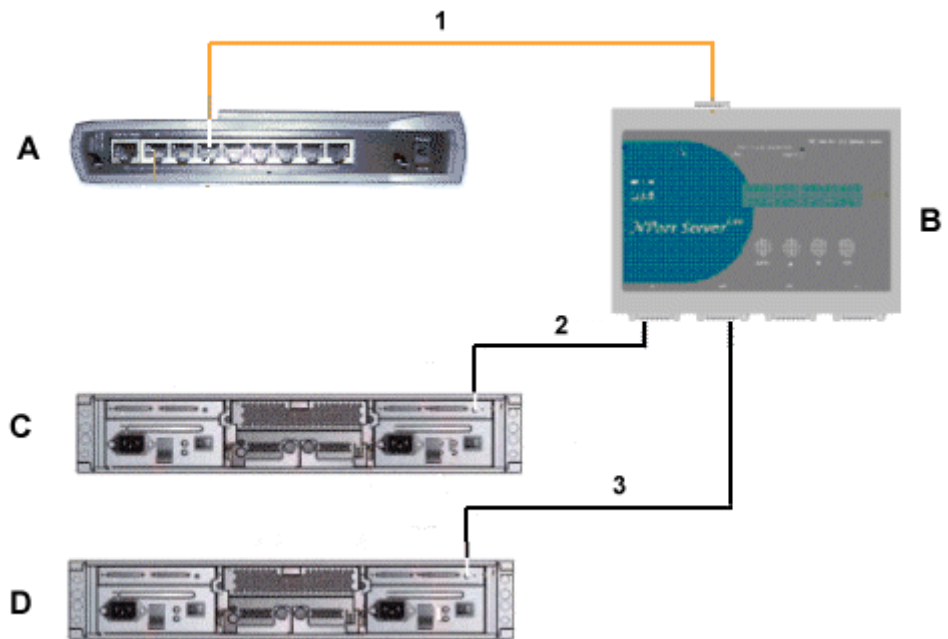


A: SR-0812 SCSI RAID
 B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 31. SJ-0812 SCSI JBOD extension disk rack data cabling diagram

NPort Server

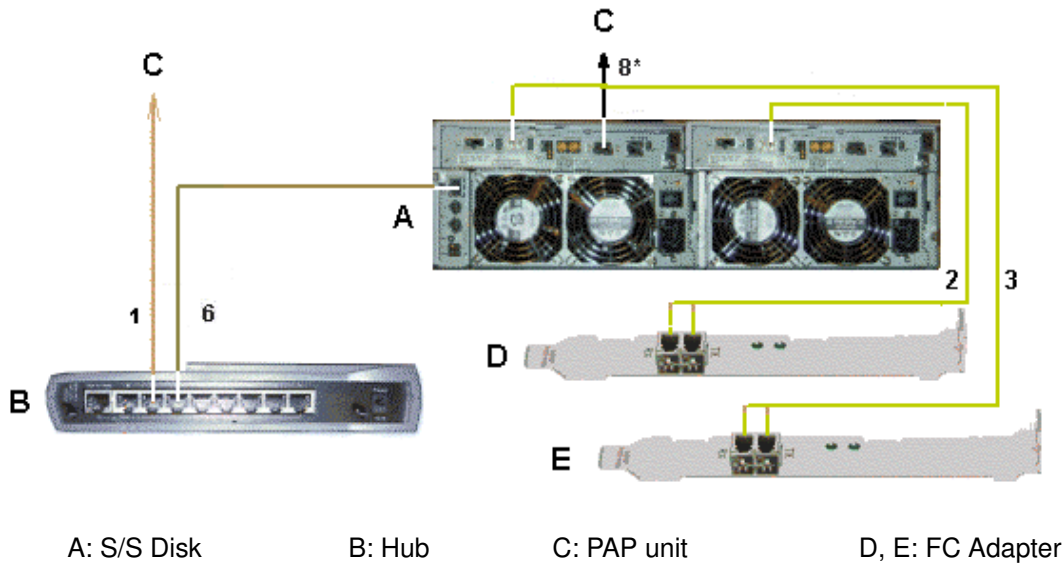


- A: Hub
- B: NPort server
- C: S/S Disk SCSI 1
- D: S/S Disk SCSI 2

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	B	A
2	DB9 to Jack cable	B	C
3	DB9 to Jack cable	B	D

Figure 32. NPort Server data cabling diagram

Disk Rack (FDA 1x00 FC)

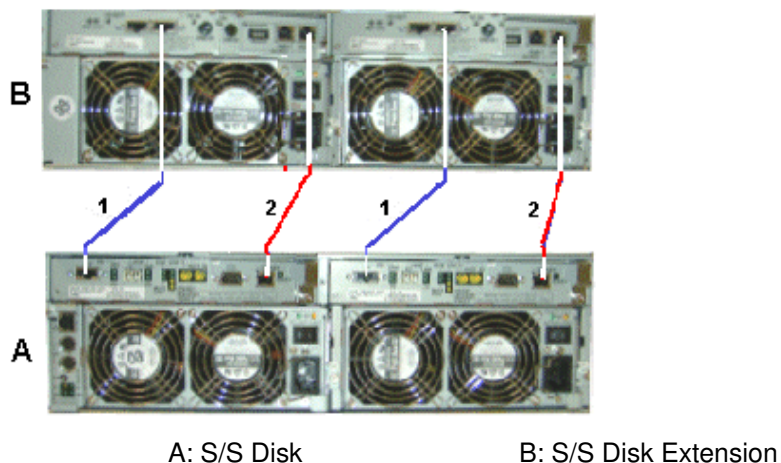


Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	B (port 7)	C
2	LC–LC cable	A (CTL 0)	D (IOB 0)
3	LC–LC cable	A (CTL 1)	E (IOB 1)
6	RJ45 – RJ45 Ethernet cable	A	B (port 6)
8*	DB9 to DB9 serial cable *	C (COM 1)	A (RS232)

* optional cable used to configure the S/S disk.

Figure 33. FDA 1x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC)

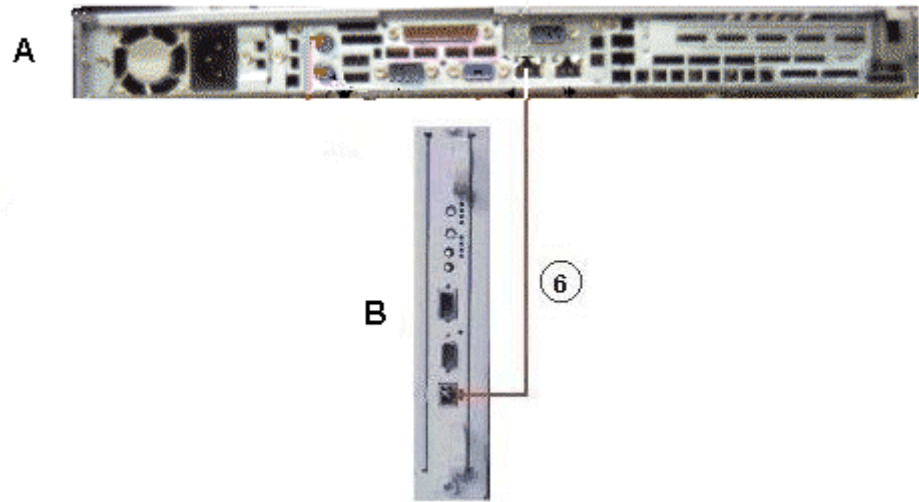


Mark	Cable Type	From	To
1	HSSDC–HSSDC cable	A	B
2	DE diagnosis cable	A	B

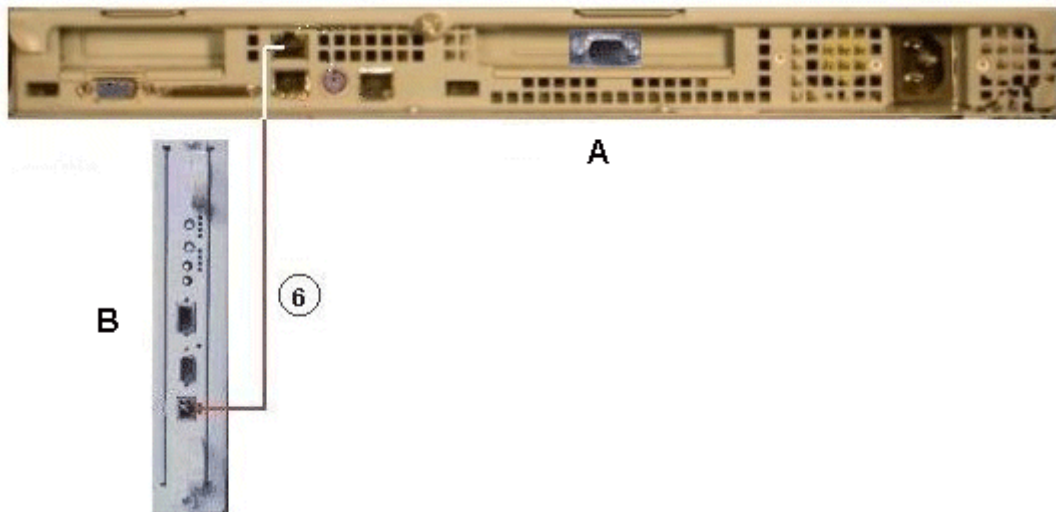
Figure 34. FDA 1x00 FC – FDA 1x00 FC extension disk rack data cabling diagram

PMB

1U PAP Unit



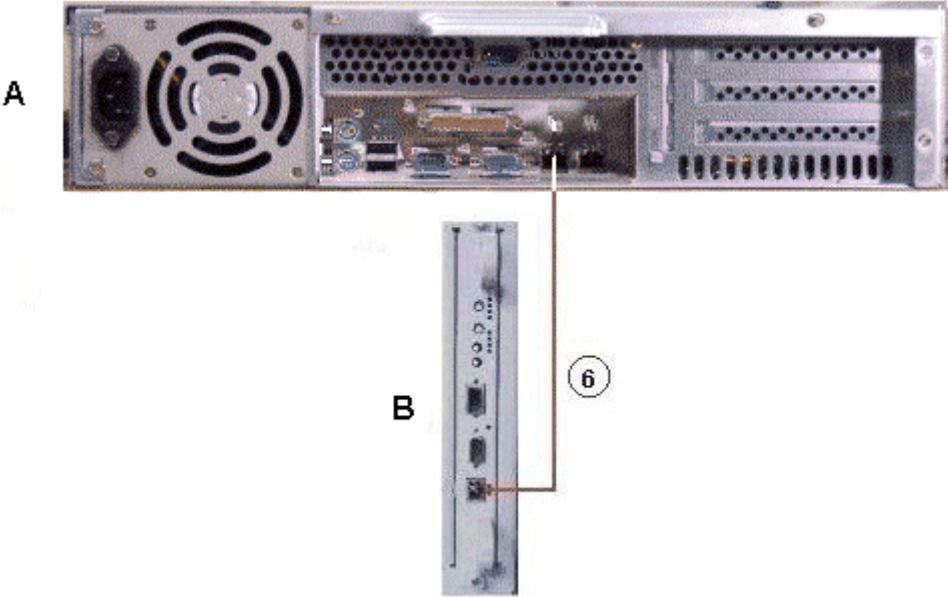
or



A: PAP unit
B: PMB

Mark	Cable Type	From	To
6	RJ45 – RJ45 Ethernet cross cable	A (Ethernet)	B (Ethernet)

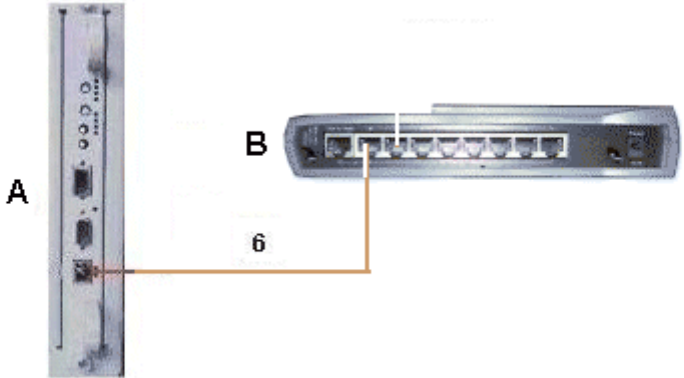
2U PAP Unit



A: PAP unit
 B: PMB

Mark	Cable Type	From	To
6	RJ45 – RJ45 Ethernet cross cable	A (Ethernet)	B (Ethernet)

Ethernet Hub

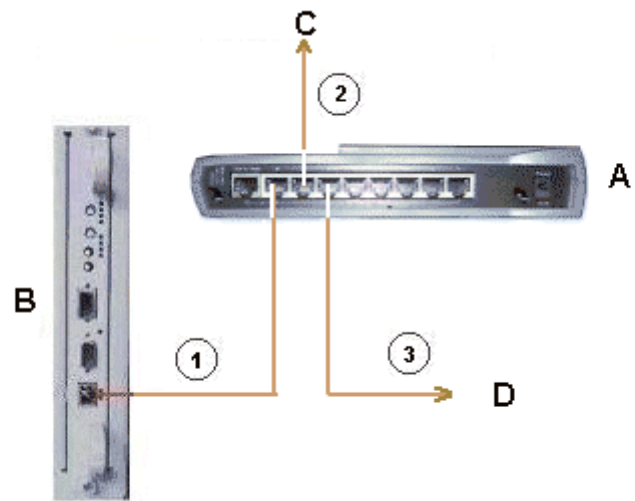


A: PMB
 B: Hub

Mark	Cable Type	From	To
6	RJ45 – RJ45 Ethernet cross cable	A (Ethernet)	B

Figure 35. PMB data cabling diagram examples

Ethernet Hub



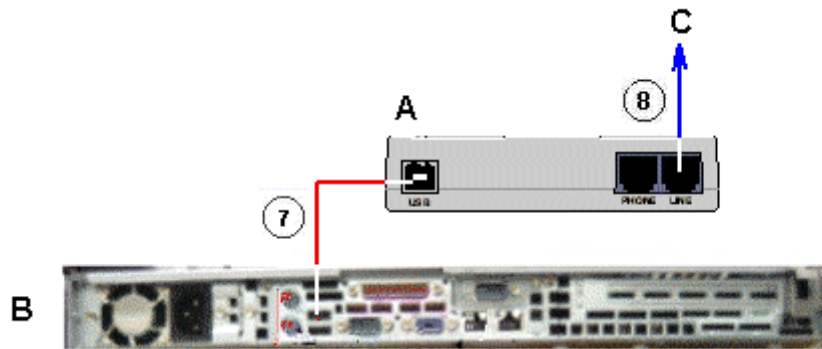
- A: Hub Ethernet
- B: PMB
- C: PAP unit
- D: S/S Disk FC or NPort Server (SCSI RAID Disk)

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	A (port 8)	B (Ethernet)
2	RJ45 – RJ45 Ethernet cable	A (port 7)	C (LAN Maint)
3	RJ45 – RJ45 Ethernet cable	A (port 6)	D

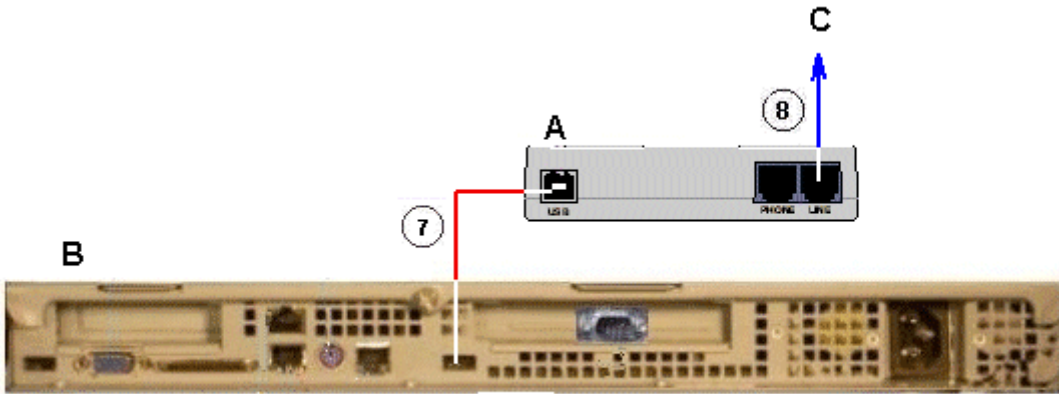
Figure 36. Ethernet hub data cabling diagram

Modem

1U PAP Unit



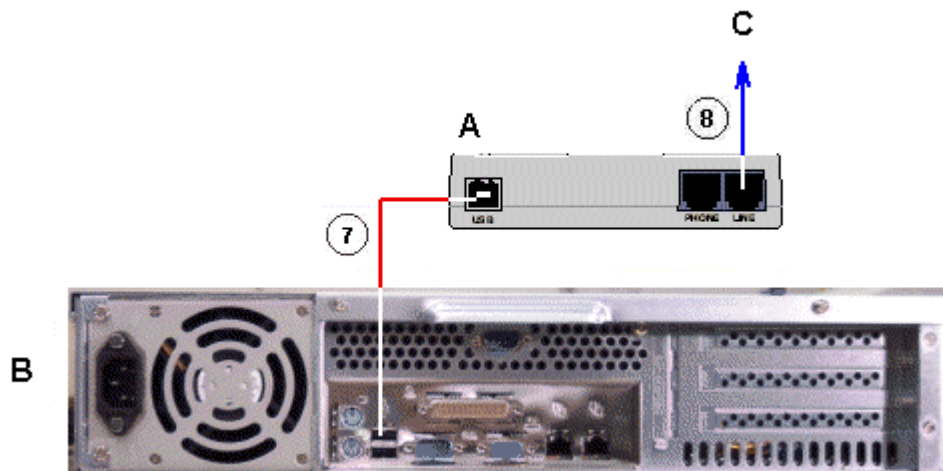
or



- A: Modem USB
- B: PAP unit
- C: Telephone network socket

Mark	Cable Type	From	To
7	USB cable	A (USB)	B (USB)
8	RJ11 – RJ11 cable	A (Line)	C

2U PAP Unit



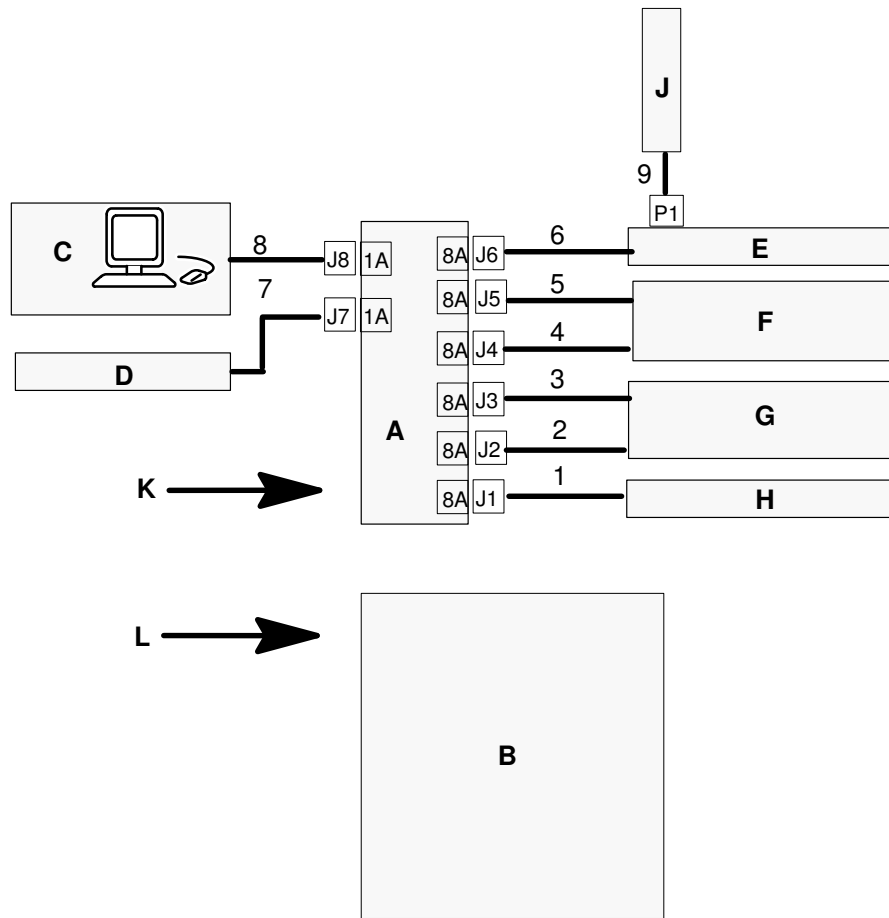
- A: Modem USB
- B: PAP unit
- C: Telephone network socket

Mark	Cable Type	From	To
7	USB cable	A (USB)	B (USB)
8	RJ11 – RJ11 cable	A (Line)	C

Figure 37. Modem data cabling diagram

Power

The CSS Module is equipped with a dedicated power supply cable. All other server component power supply cables are connected to the internal PDU, as shown below:



A: PDU, B: CSS module, C: Monitor, D: KVM switch, E: Power bar, F: S/S Disk (optional),
 G: S/S Disk, H: PAP unit, J: Hub
 K, L: Mains.

Mark	Cable Type	From	To
1	Power cable	H	A (J1)
2	Power cable	G	A (J2)
3	Power cable	G	A (J3)
4	Power cable	F (optional)	A (J4)
5	Power cable	F (optional)	A (J5)
6	Power cable	E	A (J6)
7	Power cable	D	A (J7)
8	Power cable	C	A (J8)
9	Power cable	J	E (P1)

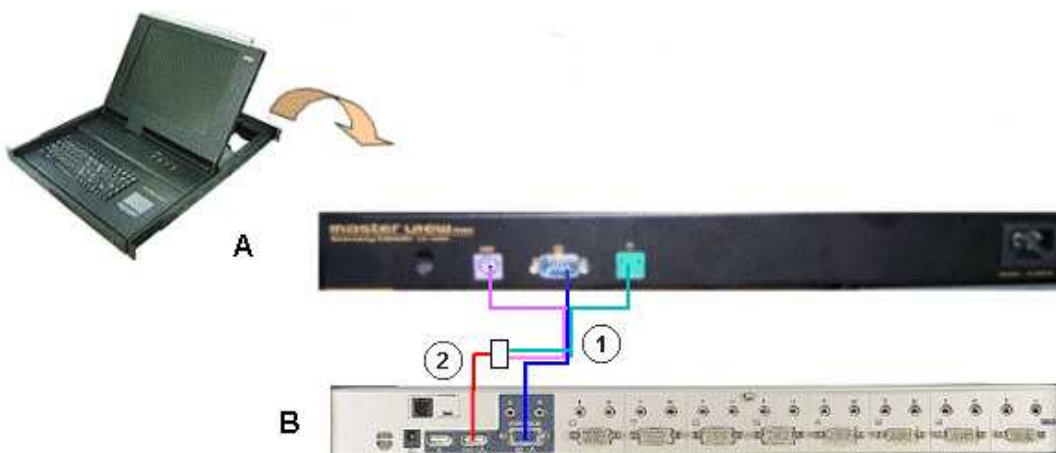
Figure 38. Power cabling diagram

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- ▶ PAP Unit, on page 3-8
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- ▶ Disk Rack (SR-0812 SCSI RAID), on page 3-11
- ▶ Extension Disk Rack (SR-0812 SCSI RAID – SJ-0812 SCSI JBOD), on page 3-12
- ▶ NPort Server, on page 3-13
- ▶ Disk Rack (FDA 1x00 FC), on page 3-14
- ▶ Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC), on page 3-15
- ▶ Disk Rack (FDA 2x00 FC), on page 3-16
- ▶ Extension Disk Rack (FDA 2x00 FC – FDA 1x00 FC), on page 3-17
- ▶ PMB – Hub – Pap Unit, on page 3-18
- ▶ Ethernet Hub, on page 3-19
- ▶ Modem, on page 3-20
- ▶ Power, on page 3-23
- ▶ Inter-Cabinet (PMB – Ethernet Hub), on page 3-25
- ▶ Inter-Cabinet (IOR – KVM Switch), on page 3-26
- ▶ Inter-Cabinet (IOB HBA RAID – SJ-0812 SCSI JBOD), on page 3-27
- ▶ Inter-Cabinet (IOB HBA – SR-0812 SCSI RAID), on page 3-28
- ▶ Inter-Cabinet (IOB HBA – FDA 1x00 FC), on page 3-29
- ▶ Inter-Cabinet (IOB HBA – FDA 2x00 FC), on page 3-30

Console

Slideaway Console



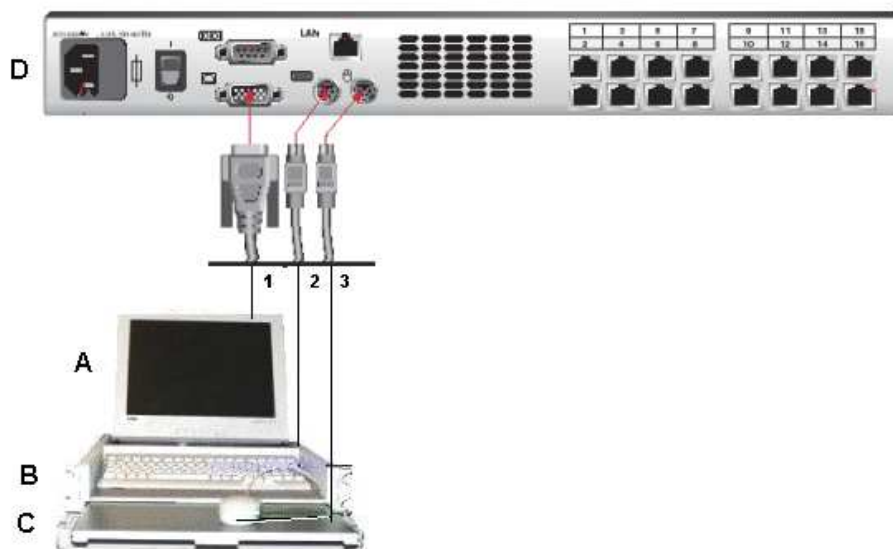
A: Console

B: KVM Switch

Mark	Cable Type	From	To
1	video/PS2/PS2 cable	A	B
2	PS2/USB converter	A (PS2/PS2)	B (USB)

Figure 39. Slideaway console data cabling diagram

Console Drawer



A: Monitor

B: Keyboard

C: Mouse

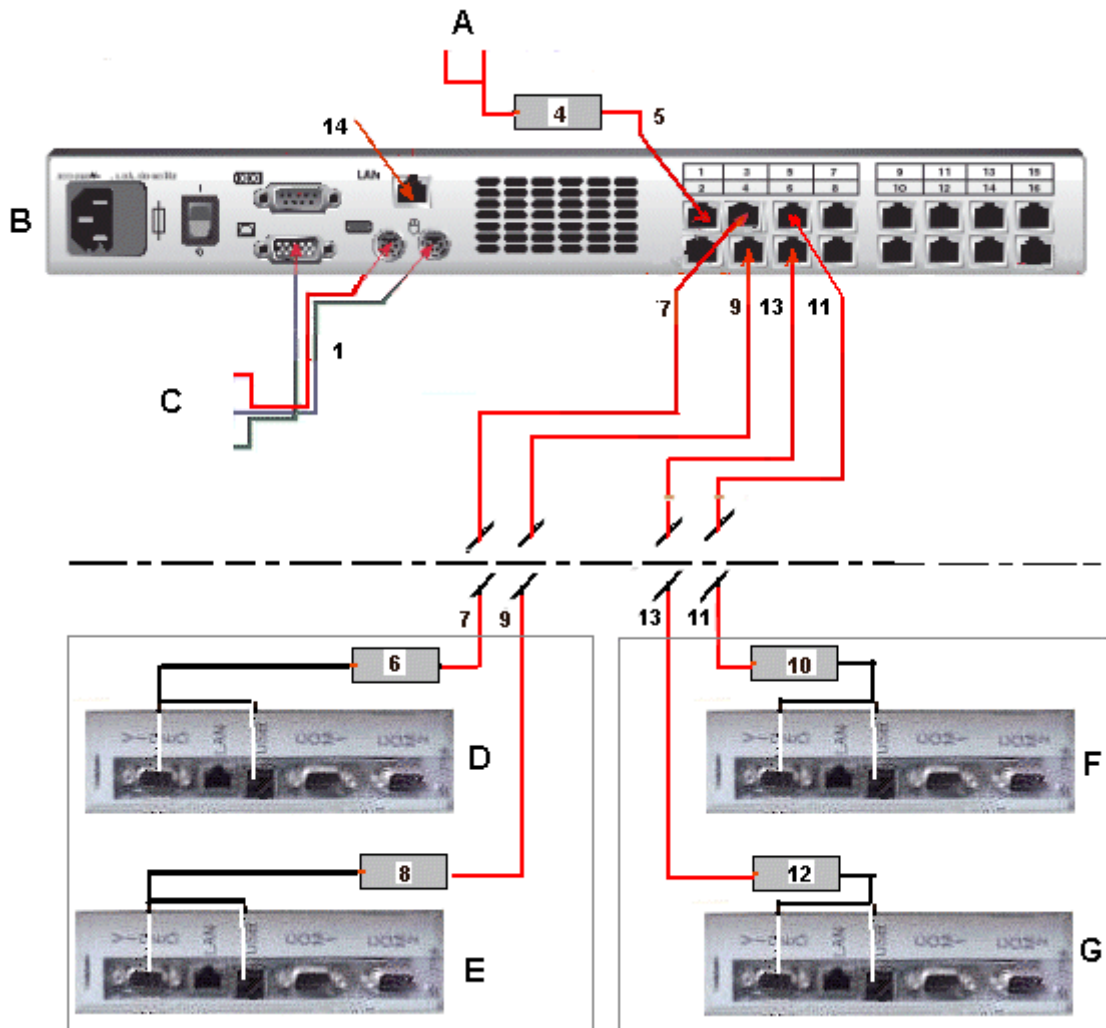
D: KVM Switch

Mark	Cable Type	From	To
1	HD15 video cable	A (blue)	D (blue)
2	PS2 mini-DIN6 cable + PS2/PS2 extension cable	B (mauve)	D (mauve)
3	PS2 mini-DIN6 cable + PS2/PS2 extension cable	C (green)	D (green)

Figure 40. Integrated console data cabling diagram

16-Port KVM Switch

Slideaway Console



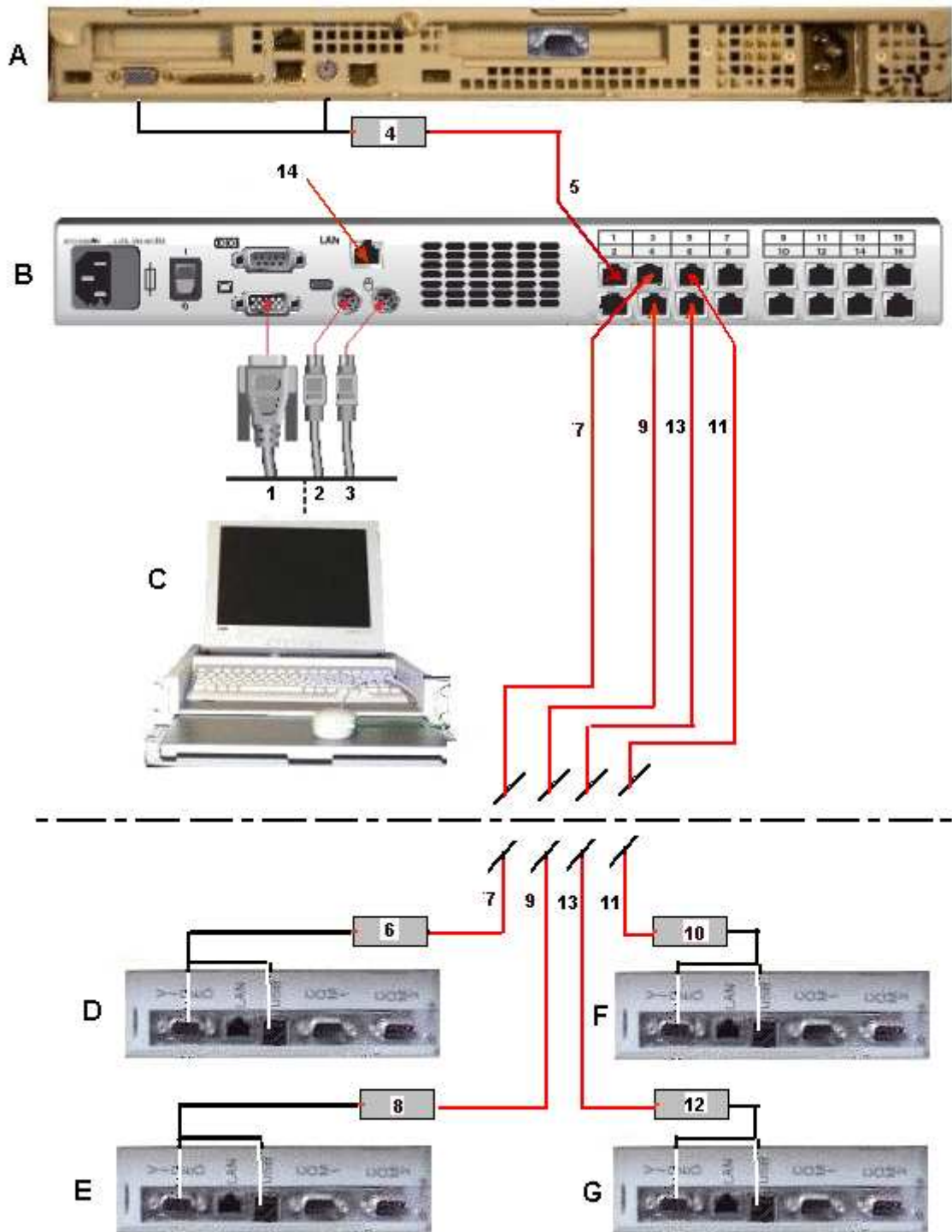
- A: PAP unit (I/O cabinet),
- B: KVM Switch (I/O cabinet),
- C: Slideaway console: Monitor, Keyboard, Mouse (I/O cabinet),
- D: IOR (IOB 0, module 0, main cabinet)
- E: IOR (IOB 1, module 0, main cabinet)
- F: IOR (IOB 0, module 1, main cabinet)
- G: IOR (IOB 1, module 1, main cabinet)

Mark	Cable Type	From	To
1	video/PS2/PS2 cable	C	B
5	RJ45/RJ45 cable	A (VGA and PS2 via AVRIQ (4))	B (Port 1)
7*	RJ45/RJ45 cable	D (VGA and USB via AVRIQ (6))	B (Port 3)
9*	RJ45/RJ45 cable	E (VGA and USB via AVRIQ (8))	B (Port 4)
11*	RJ45/RJ45 cable	F (VGA and USB via AVRIQ (10))	B (Port 5)
13*	RJ45/RJ45 cable	G (VGA and USB via AVRIQ (12))	B (Port 6)
14	RJ45/RJ45 cable	Enterprise LAN	B (LAN)

* Inter-cabinet data cable

Figure 41. 16-port KVM switch data cabling diagram (example 1)

Console Drawer



A: PAP unit (I/O cabinet),
 C: Monitor, Keyboard, Mouse (I/O cabinet),
 D: IOR (IOB 0, module 0, main cabinet)
 F: IOR (IOB 0, module 1, main cabinet)

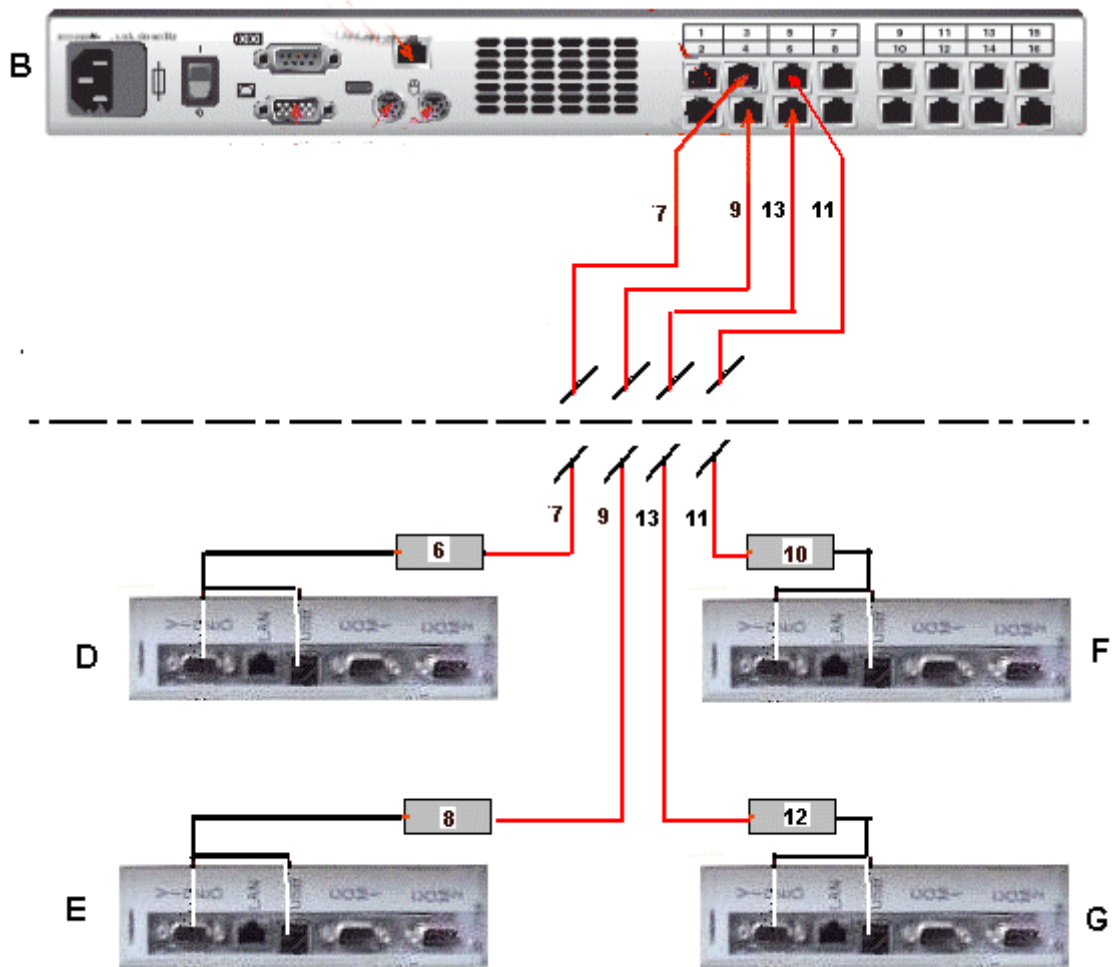
B: KVM Switch (I/O cabinet),
 E: IOR (IOB 1, module 0, main cabinet)
 G: IOR (IOB 1, module 1, main cabinet)

Mark	Cable Type	From	To
1	HD15 video cable	C (blue)	B (blue)
2	PS2 mini-DIN6 cable + PS2/PS2 extension cable	C (mauve)	B (mauve)
3	PS2 mini-DIN6 cable + PS2/PS2 extension cable	C (green)	B (green)
5	RJ45/RJ45 cable	A (VGA and PS2 via AVRIQ (4))	B (Port 1)
7*	RJ45/RJ45 cable	D (VGA and USB via AVRIQ (6))	B (Port 3)
9*	RJ45/RJ45 cable	E (VGA and USB via AVRIQ (8))	B (Port 4)
11*	RJ45/RJ45 cable	F (VGA and USB via AVRIQ (10))	B (Port 5)
13*	RJ45/RJ45 cable	G (VGA and USB via AVRIQ (12))	B (Port 6)
14	RJ45/RJ45 cable	Enterprise LAN	B (LAN)

* Inter-cabinet data cable

Figure 42. 16-port KVM switch data cabling diagram (example 2)

IOR



- B: KVM Switch (I/O cabinet),
- D: IOR (IOB 0, module 0, main cabinet)
- E: IOR (IOB 1, module 0, main cabinet)
- F: IOR (IOB 0, module 1, main cabinet)
- G: IOR (IOB 1, module 1, main cabinet)

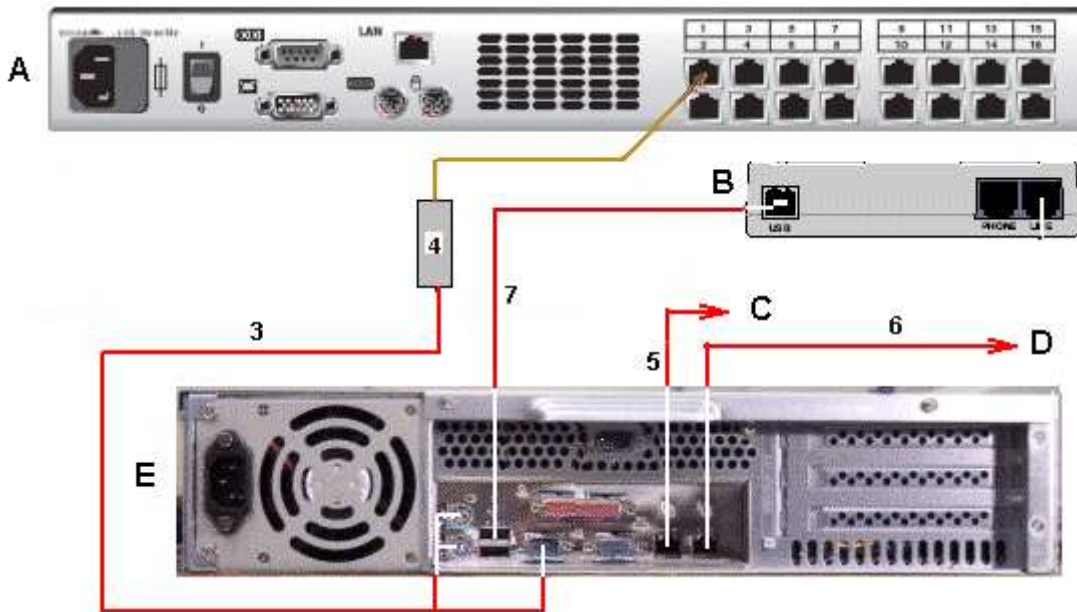
Mark	Cable Type	From	To
7*	RJ45/RJ45 cable	D (VGA and USB via AVRIQ (6))	B (Port 3)
9*	RJ45/RJ45 cable	E (VGA and USB via AVRIQ (8))	B (Port 4)
11*	RJ45/RJ45 cable	F (VGA and USB via AVRIQ (10))	B (Port 5)
13*	RJ45/RJ45 cable	G (VGA and USB via AVRIQ (12))	B (Port 6)

* Inter-cabinet data cable

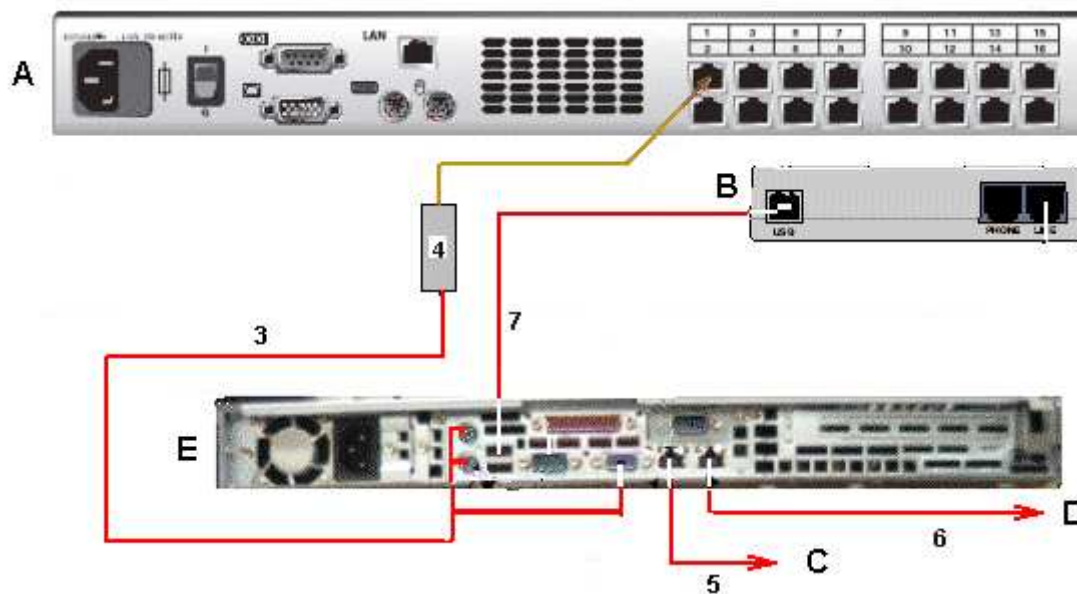
Figure 43. IOR data cabling diagram (16-port KVM switch)

PAP Unit

2U PAP Unit



1U PAP Unit



A: KVM Switch
D: Enterprise LAN

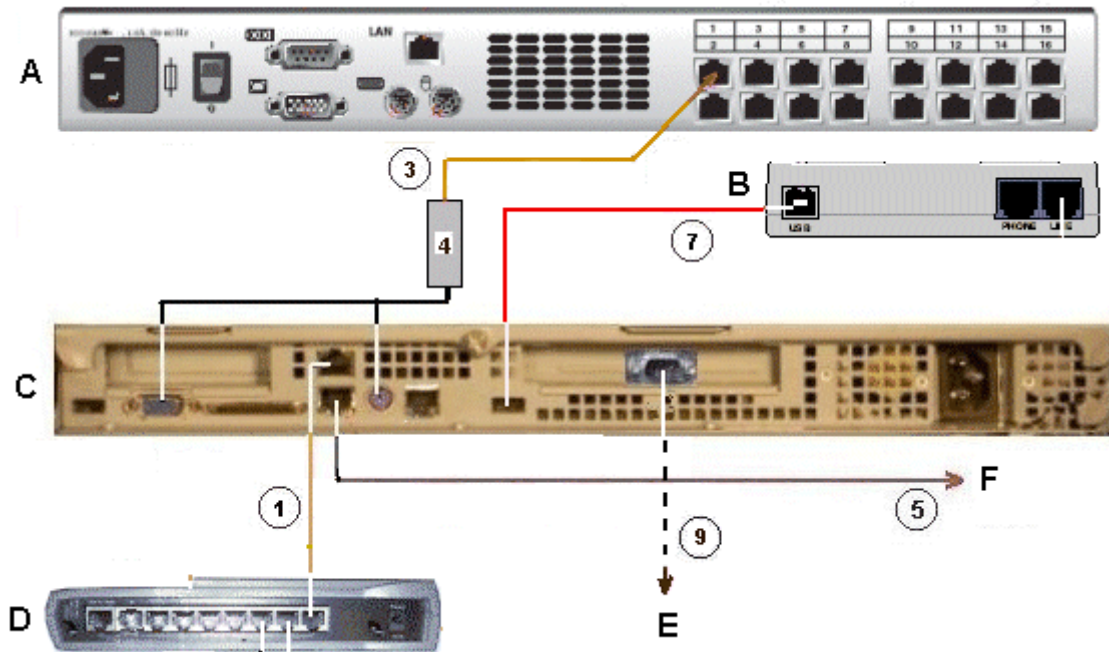
B: Modem USB
E: PAP unit

C: Hub

Mark	Cable Type	From	To
3	RJ45 – RJ45 Ethernet cable	E (VGA and PS2) via AVRIQ (4)	A Port 1
5	RJ45 – RJ45 Ethernet cable	E (Ethernet)	C
6	RJ45 – RJ45 Ethernet cable	E (LAN Enter)	D
7	USB cable	E (USB)	B (USB)

Figure 44. PAP unit (1 & 2U) data cabling diagram

PAP Unit (Xpress 5800)



- A: KVM Switch
- B: Modem USB
- C: PAP unit
- D: Hub
- E: S/S Disk
- F: Enterprise LAN

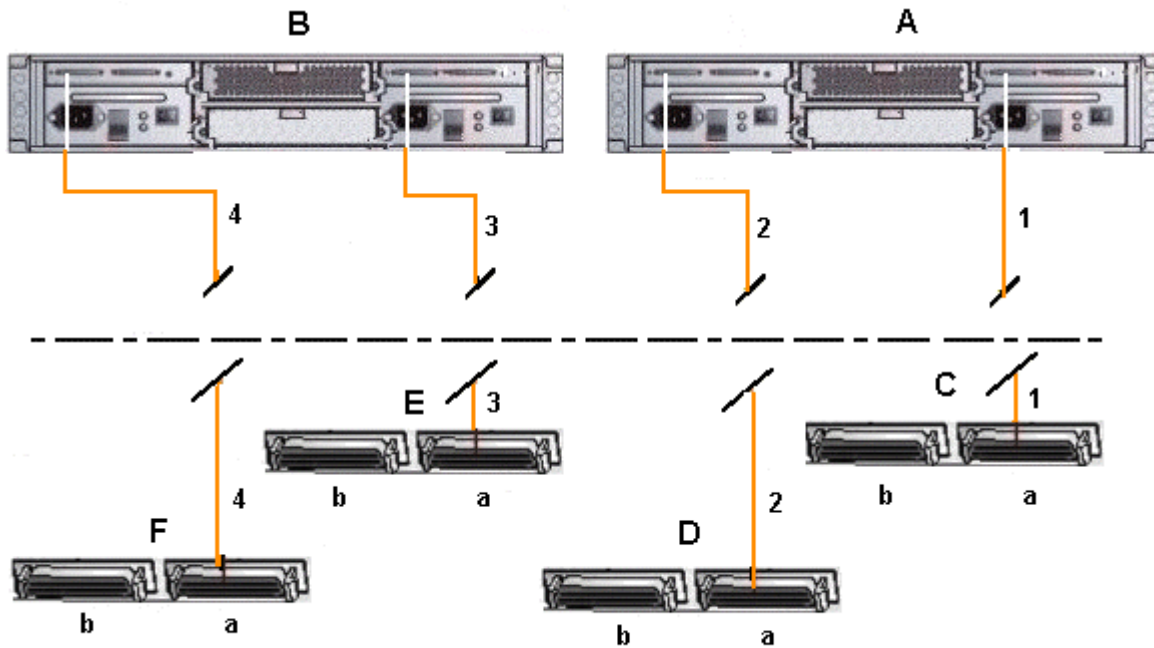
Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	C (Ethernet)	D
3	RJ45 – RJ45 Ethernet cable	C (VGA and PS2) via AVRIQ (4)	A (Port 1)
5	RJ45 – RJ45 Ethernet cable	C (LAN)	F
7	USB cable	C (USB)	B (USB)
9 #	DB9 to DB9 serial cable *	C (COM 1)	E (RS232)

* Inter-cabinet data cable

optional cable used to configure the disk S/S.

Figure 45. PAP unit (xpress 5800) data cabling diagram

Disk Rack (SJ-0812 SCSI JBOD)

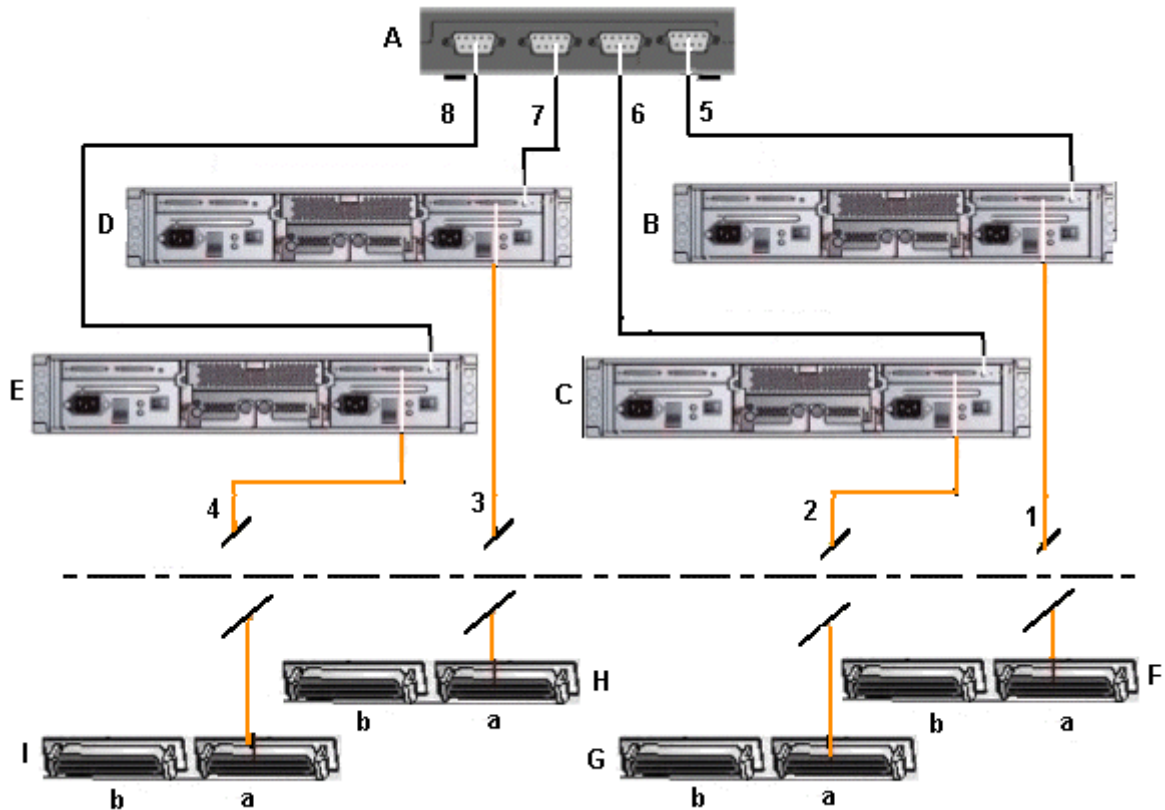


- A: S/S Disk 1
- B: S/S Disk 2
- C: HBA SCSI RAID (IOB 0, Module 0)
- D: HBA SCSI RAID (IOB 1, Module 0)
- E: HBA SCSI RAID (IOB 0, Module 1)
- F: HBA SCSI RAID (IOB 1, Module 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port) (I/O cabinet)	C (port a, main cabinet)
2	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port) (I/O cabinet)	D (port a, main cabinet)
3	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	E (port a, main cabinet)
4	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	F (port a, main cabinet)

Figure 46. SJ-0812 SCSI JBOD disk rack data cabling diagram

Disk Rack (SR-0812 SCSI RAID)



A: NPort server

B: S/S Disk 1 (module 0)

D: S/S Disk 3 (module 1)

F: HBA SCSI RAID (IOB 0, Module 0)

H: HBA SCSI RAID (IOB 0, Module 1)

C: S/S Disk 2 (module 0)

E: S/S Disk 4 (module 1)

G: HBA SCSI RAID (IOB 1, Module 0)

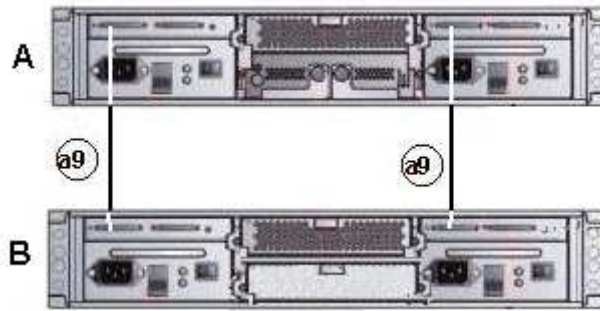
I: HBA SCSI RAID (IOB 1, Module 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	F (port a, main cabinet)
2	SCSI-3 68-pin VHDCI to VHDCI cable	C (Extension port) (I/O cabinet)	G (port a, main cabinet)
3	SCSI-3 68-pin VHDCI to VHDCI cable	D (Extension port) (I/O cabinet)	H (port a, main cabinet)
4	SCSI-3 68-pin VHDCI to VHDCI cable	E (Extension port) (I/O cabinet)	I (port a, main cabinet)
5*	DB9 to Jack cable	A	B (RS232)
6*	DB9 to Jack cable	A	C (RS232)
7*	DB9 to Jack cable	A	D (RS232)
8*	DB9 to Jack cable	A	E (RS232)

*cable used to configure the disk S/S.

Figure 47. SR-0812 SCSI RAID disk rack data cabling diagram

Extension Disk Rack (SR-0812 SCSI RAID – SJ-0812 SCSI JBOD)



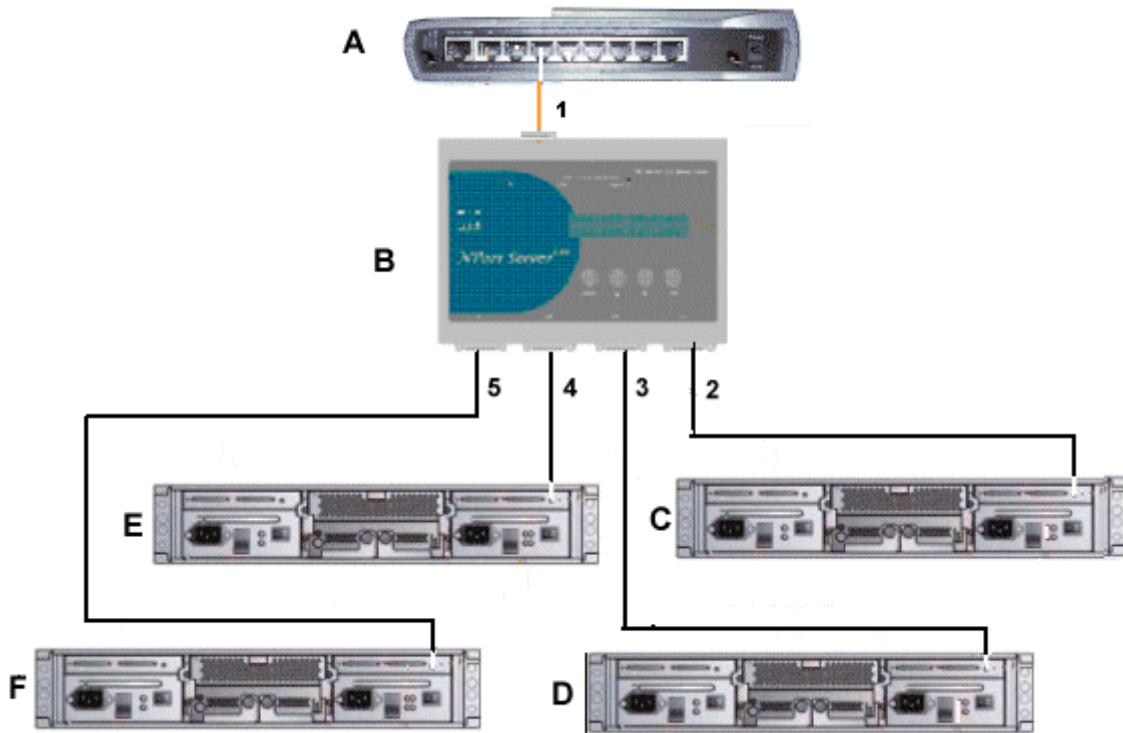
A: SR-0812 SCSI RAID

B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 48. SJ-0812 SCSI JBOD extension disk rack data cabling diagram

NPort Server

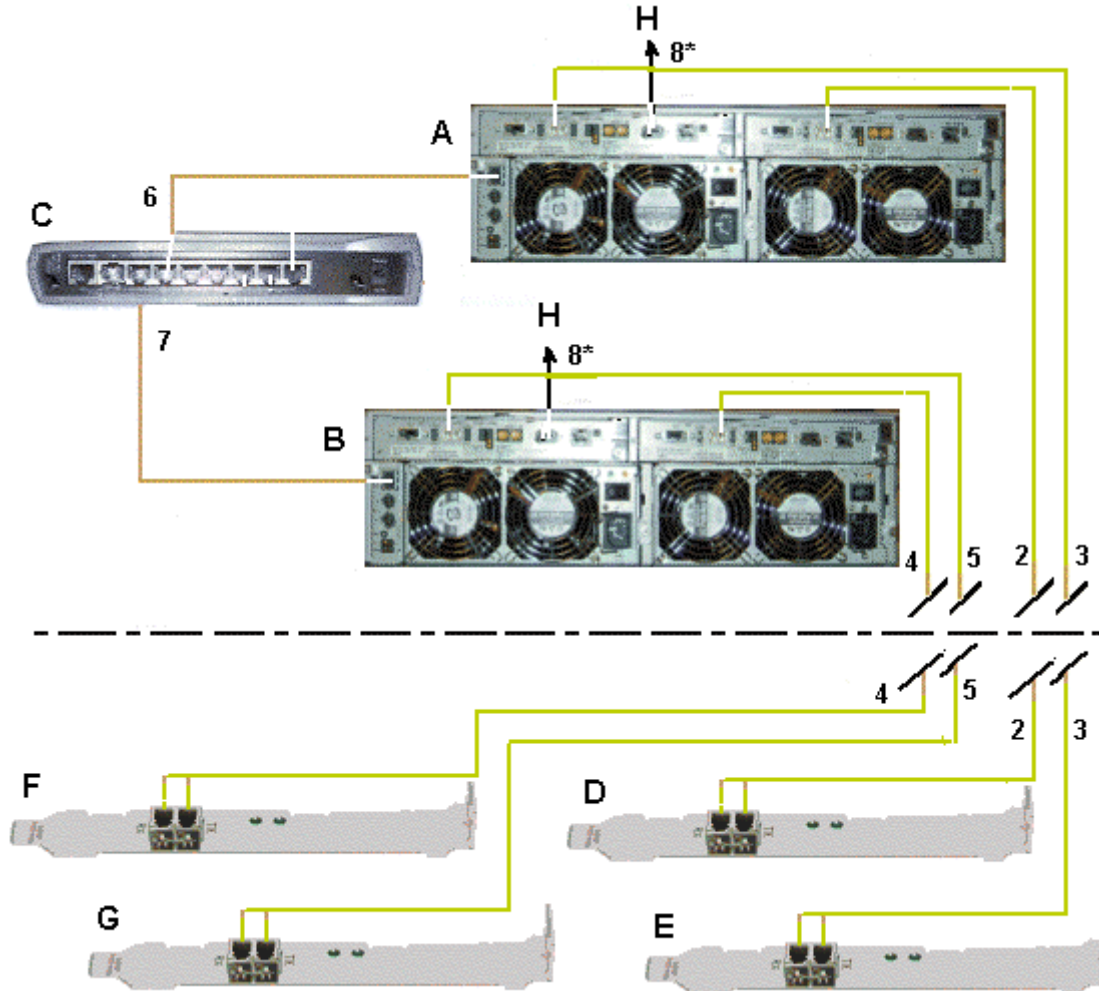


- A: Hub
- B: NPort server
- C: S/S Disk 1 (module 0)
- D: S/S Disk 2 (module 0)
- E: S/S Disk 3 (module 1)
- F: S/S Disk 4 (module 1)

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	B	A
2	DB9 to Jack cable	B	C (RS232)
6*	DB9 to Jack cable	B	D (RS232)
7*	DB9 to Jack cable	B	E (RS232)
8*	DB9 to Jack cable	B	F (RS232)

Figure 49. NPort Server data cabling diagram

Disk Rack (FDA 1x00 FC)



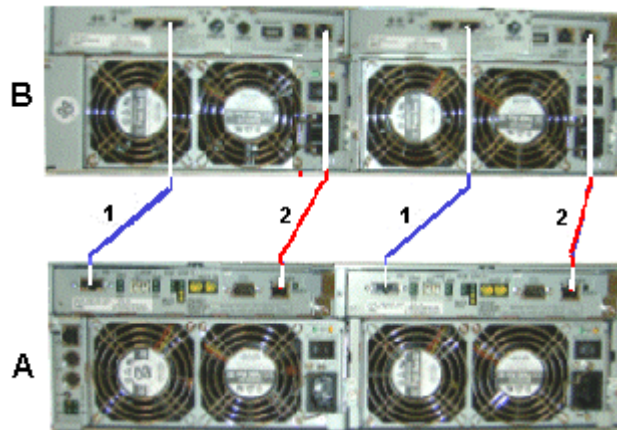
- A: S/S Disk 1 (extension cabinet)
- B: S/S Disk 2 (extension cabinet)
- C: Hub (extension cabinet)
- D: FC Adapter (main cabinet)
- E: FC Adapter (main cabinet)
- F: FC Adapter (main cabinet)
- G: FC Adapter (main cabinet)
- H: PAP unit (extension cabinet)

Mark	Cable Type	From	To
2	LC-LC cable	A (CTL 0)	D (IOB 0 module 0)
3	LC-LC cable	A (CTL 1)	E (IOB 1 module 0)
4	LC-LC cable	B (CTL 0)	F (IOB 0 module 1)
5	LC-LC cable	B (CTL 1)	G (IOB 1 module 1)
6	RJ45 – RJ45 Ethernet cable	A	C (port 6)
7	RJ45 – RJ45 Ethernet cable	B	C (port 7)
8*	DB9 to DB9 serial cable *	H (COM 1)	A or B (RS232)

* optional cable used to configure the S/S disk.

Figure 50. FDA 1x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC)

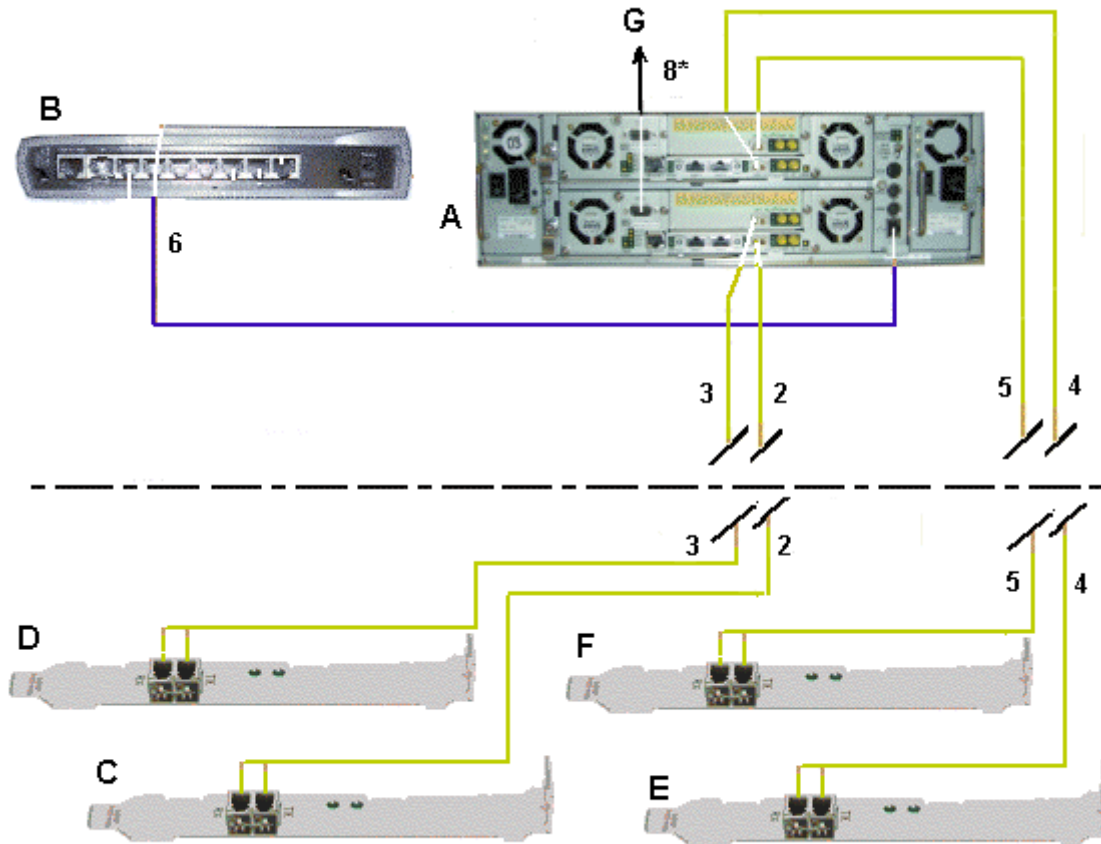


A: S/S Disk
B: S/S Disk Extension

Mark	Cable Type	From	To
1	HSSDC–HSSDC cable	A	B
2	DE diagnosis cable	A	B

Figure 51. FDA 1x00 FC – FDA 1x00 FC extension disk rack data cabling diagram

Disk Rack (FDA 2x00 FC)



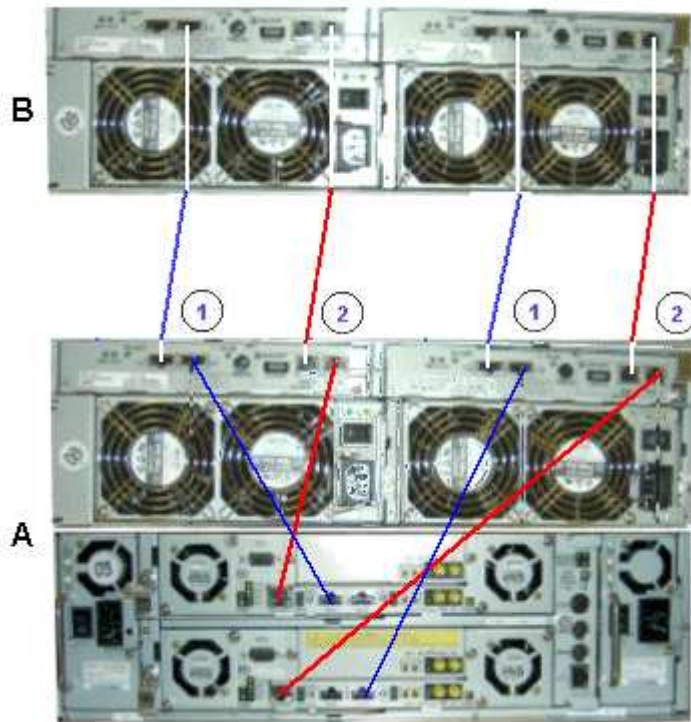
- A: S/S Disk (extension cabinet)
- B: Hub (extension cabinet)
- C: FC Adapter (main cabinet)
- D: FC Adapter (main cabinet)
- E: FC Adapter (main cabinet)
- F: FC Adapter (main cabinet)
- G: PAP unit (extension cabinet)

Mark	Cable Type	From	To
2	LC-LC cable	A (CTL0-HF0)	C (IOB 0 Module 0)
3	LC-LC cable	A (CTL0-HF1)	D (IOB 1 Module 0)
4	LC-LC cable	A (CTL1-HF0)	E (IOB 0 Module 1)
5	LC-LC cable	A (CTL1-HF1)	F (IOB 1 Module 1)
6	RJ45 – RJ45 Ethernet cable	A	B (port 6)
8 *	DB9 to DB9 serial cable	A (RS232)	G (COM 1)

* optional cable used to configure the S/S disk.

Figure 52. FDA 2x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 2x00 FC – FDA 1x00 FC)

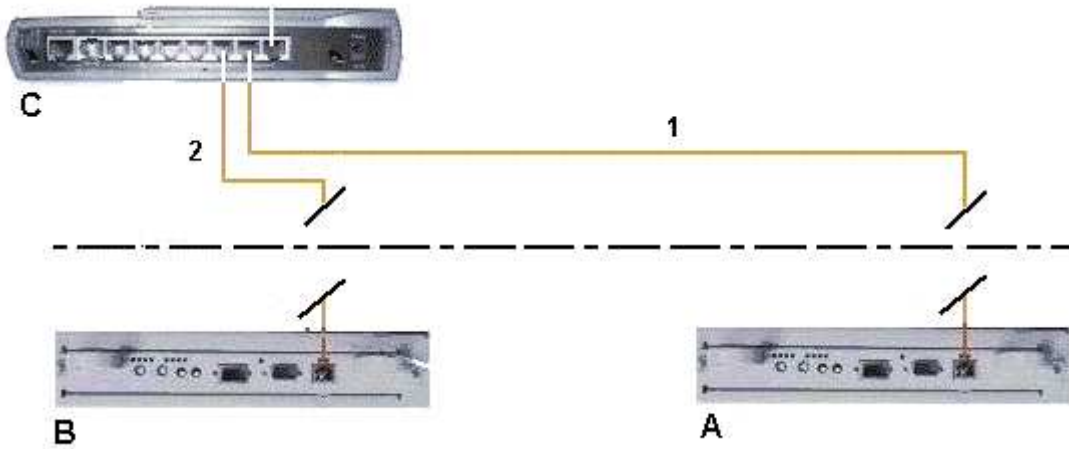


A: S/S Disk FDA 2x00 FC
 B: S/S Disk FDA 1x00 FC (extension)

Mark	Cable Type	From	To
1	HSSDC-HSSDC cable	A	B
2	DE diagnosis cable	A	B

Figure 53. FDA 2x00 FC – FDA 1x00 FC extension data cabling diagram

PMB



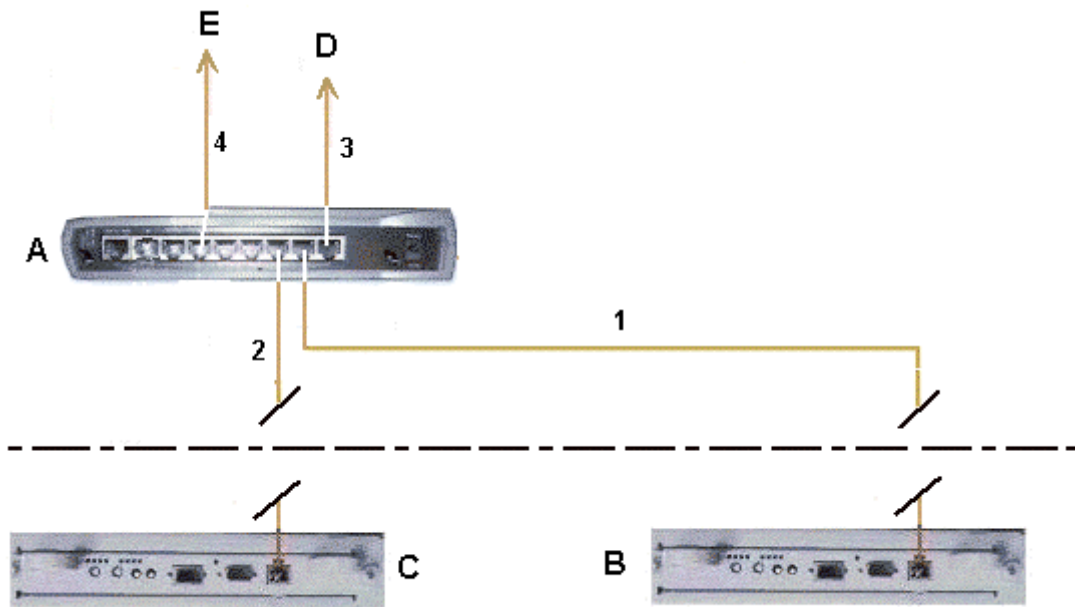
A: PMB (main cabinet)
 B: PMB (main cabinet)
 C: Hub (extension cabinet)

Mark	Cable Type	From	To
1*	RJ45 – RJ45 Ethernet cross cable	A (ethernet, module 0)	C (port 2)
2*	RJ45 – RJ45 Ethernet cross cable	B (Ethernet, module 1)	C (port 3)

* Inter-cabinet data cable

Figure 54. PMB – Hub data cabling diagram

Ethernet Hub



- A: Hub Ethernet (extension cabinet)
- B: PMB module 0 (main cabinet)
- C: PMB module 1 (main cabinet)
- D: PAP unit (extension cabinet)
- E: S/S Disk FC or NPort Server (SCSI RAID Disk) (extension cabinet)

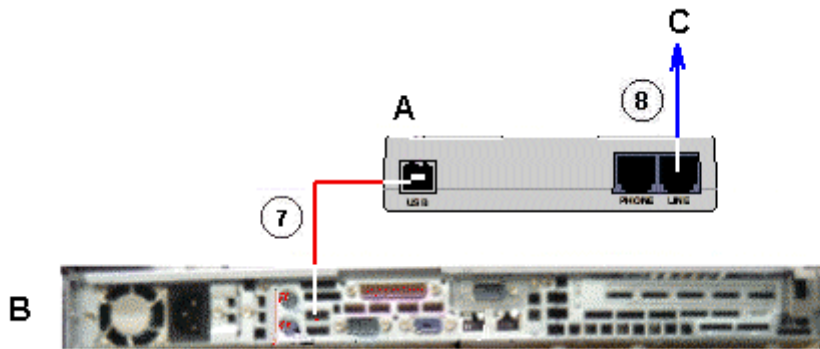
Mark	Cable Type	From	To
1*	RJ45 – RJ45 Ethernet cable	A (port 6)	B (Ethernet)
2*	RJ45 – RJ45 Ethernet cable	A (port 7)	C (Ethernet)
3	RJ45 – RJ45 Ethernet cable	A (port 8)	D (LAN Maint)
4	RJ45 – RJ45 Ethernet cable	A (port 3)	E

* Inter-cabinet data cable

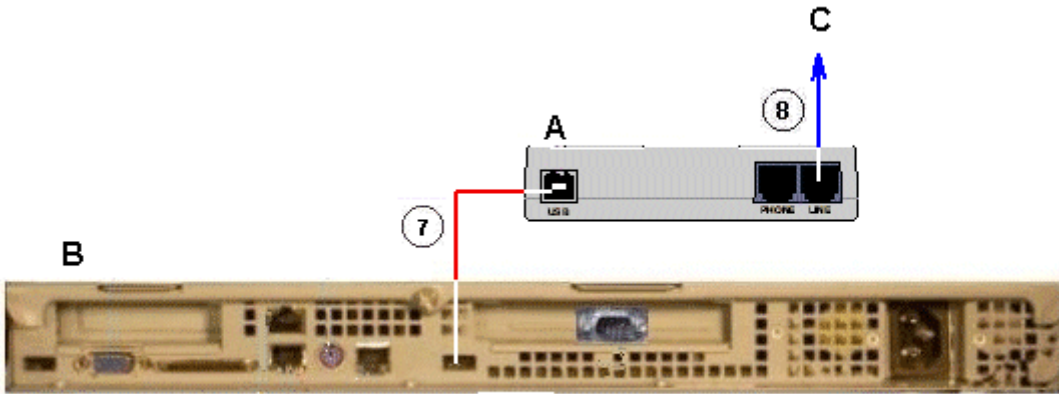
Figure 55. Ethernet hub data cabling diagram

Modem

1U PAP Unit



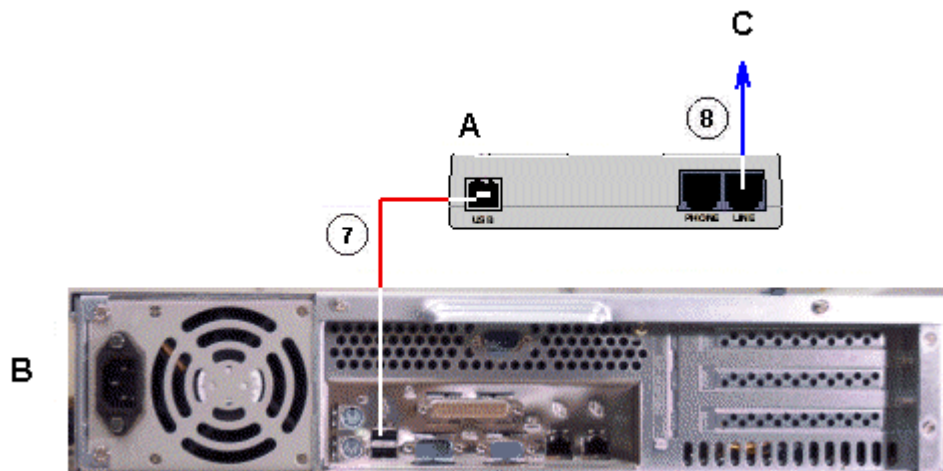
or



- A: Modem USB
- B: PAP unit
- C: Telephone network socket

Mark	Cable Type	From	To
7	USB cable	A (USB)	B (USB)
8	RJ11 – RJ11 cable	A (Line)	C

2U PAP Unit

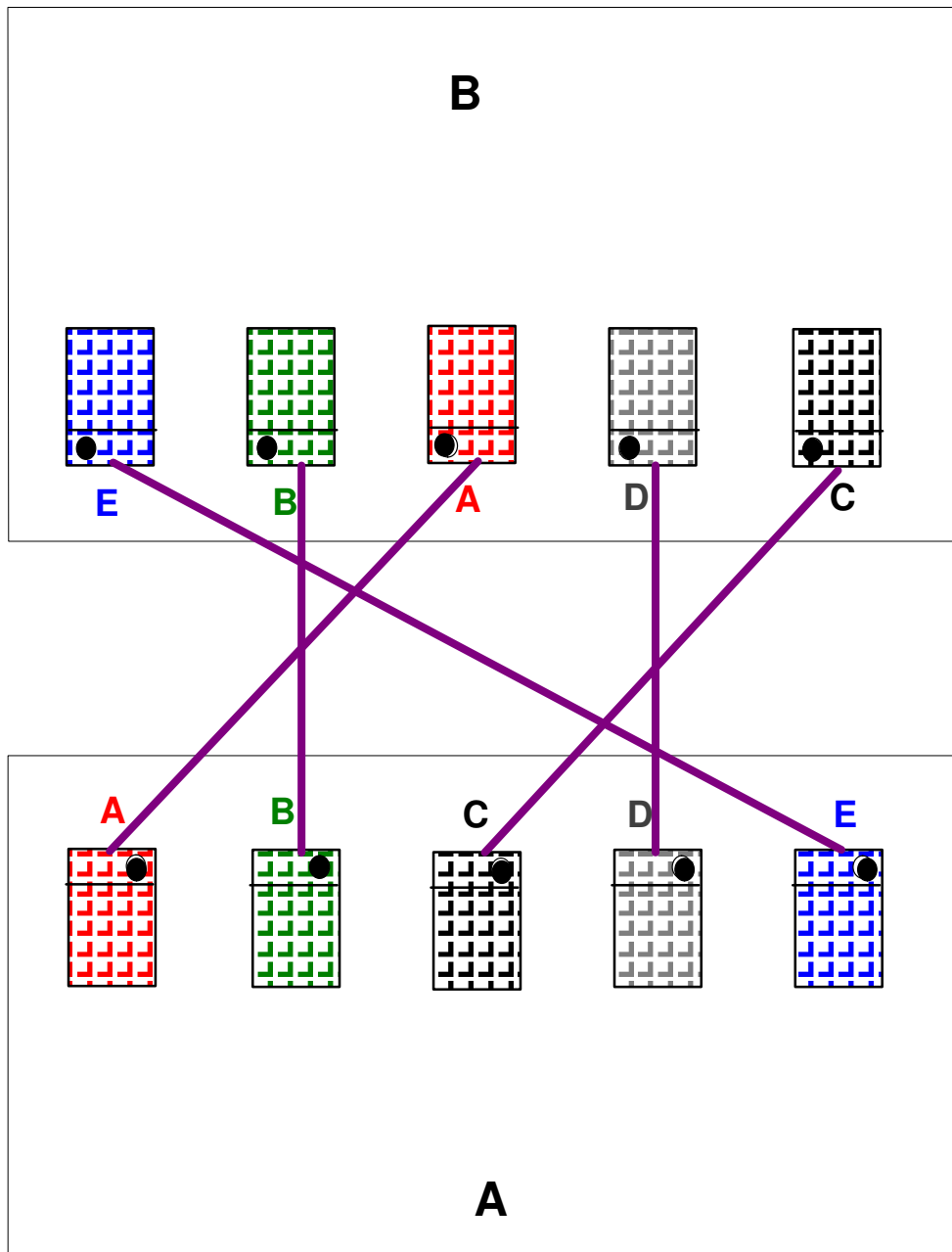


- A: Modem USB
- B: PAP unit
- C: Telephone network socket

Mark	Cable Type	From	To
7	USB cable	A (USB)	B (USB)
8	RJ11 – RJ11 cable	A (Line)	C

Figure 56. Modem data cabling diagrams

XSP Cables



A: module 0
B: module 1

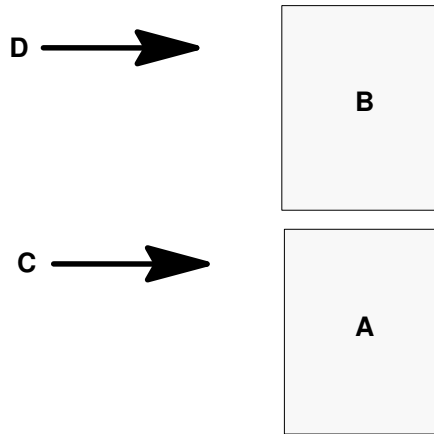
Mark	Cable Type	From	To
A	XSP cable	Module 0 (XSP 0)	Module 1 (XSP 2)
B	XSP cable	Module 0 (XSP 1)	Module 1 (XSP 3)
C	XSP cable	Module 0 (XSP 2)	Module 1 (XSP 0)
D	XSP cable	Module 0 (XSP 3)	Module 1 (XSP 1)
E	XSP cable	Module 0 (XSP 4)	Module 1 (XSP 4)

Figure 57. XSP data cabling diagram (module interconnection)

Power

The CSS Modules in the main cabinet are equipped with dedicated power supply cables. All other server component power supply cables (in the I/O cabinet) are connected to one or two PDU(s), as shown below:

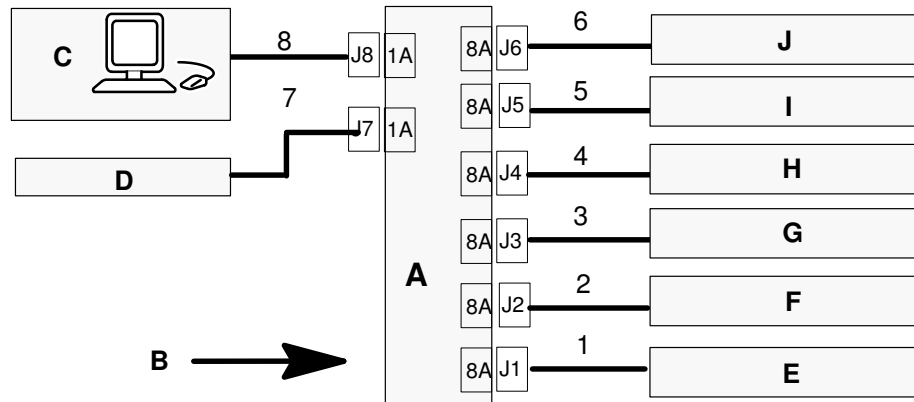
Main Cabinet



A: Module 0, B: Module 1
C: Mains (module 0), D: Mains (module 1)

Figure 58. Main cabinet power cabling diagram

I/O Cabinet – Standard Configuration

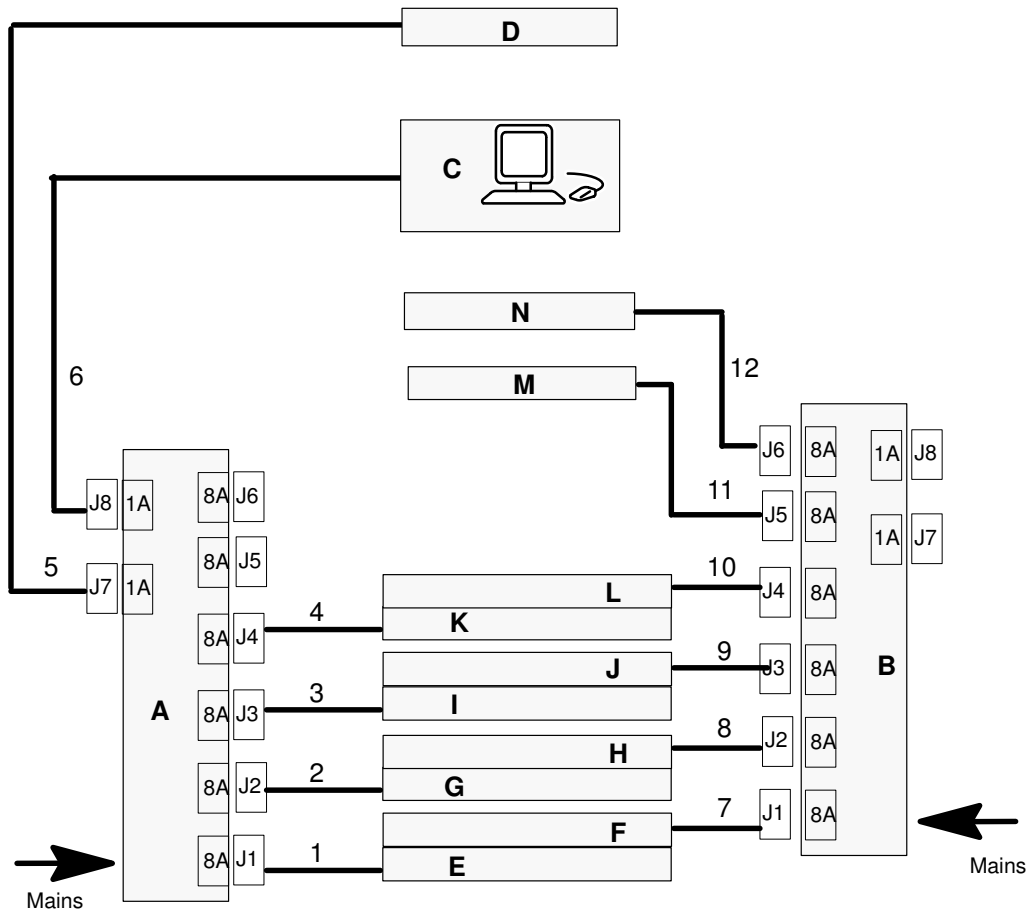


A: PDU, B: Mains, C: Monitor, D: KVM switch,
E: SCSI 1 or FC 1 (PS1), F: SCSI 2 or FC 1 (PS2),
G: SCSI 3 or FC 2 (PS1), H: SCSI 4 or FC 2 (PS2),
I: PAP unit, J: Hub.

Mark	Cable Type	From	To
1	Power cable	E	A (J1)
2	Power cable	F	A (J2)
3	Power cable	G	A (J3)
4	Power cable	H	A (J4)
5	Power cable	I	A (J5)
6	Power cable	J	A (J6)
7	Power cable	D	A (J7)
8	Power cable	C	A (J8)

Figure 59. I/O cabinet power cabling diagram (standard)

I/O Cabinet – Optional High Availability Configuration

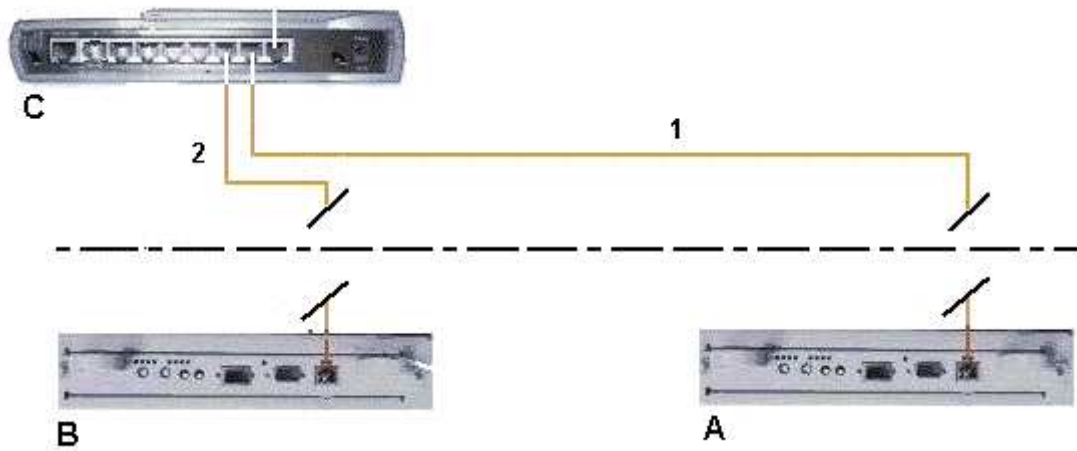


A: PDU 1, B: PDU 2, C: Monitor, D: KVM switch,
 E: SCSI 1 (PS1) or FC 1 (PS1), F: SCSI 1 (PS2) or FC 1 (PS2),
 G: SCSI 2 (PS1) or FC 2 (PS1), H: SCSI 2 (PS2) or FC 2 (PS2),
 I: SCSI 3 (PS1), J: SCSI 3 (PS2),
 K: SCSI 4 (PS1), L: SCSI 4 (PS2),
 M: PAP unit, N: Hub.

Mark	Cable Type	From	To
1	Power cable	E	A (J1)
2	Power cable	G	A (J2)
3	Power cable	I	A (J3)
4	Power cable	K	A (J4)
5	Power cable	D	A (J7)
6	Power cable	C	A (J8)
7	Power cable	F	B (J1)
8	Power cable	H	B (J2)
9	Power cable	J	B (J3)
10	Power cable	L	B (J4)
11	Power cable	M	B (J5)
12	Power cable	N	B (J6)

Figure 60. Power cabling diagram

Inter-Cabinet (PMB – Ethernet Hub)

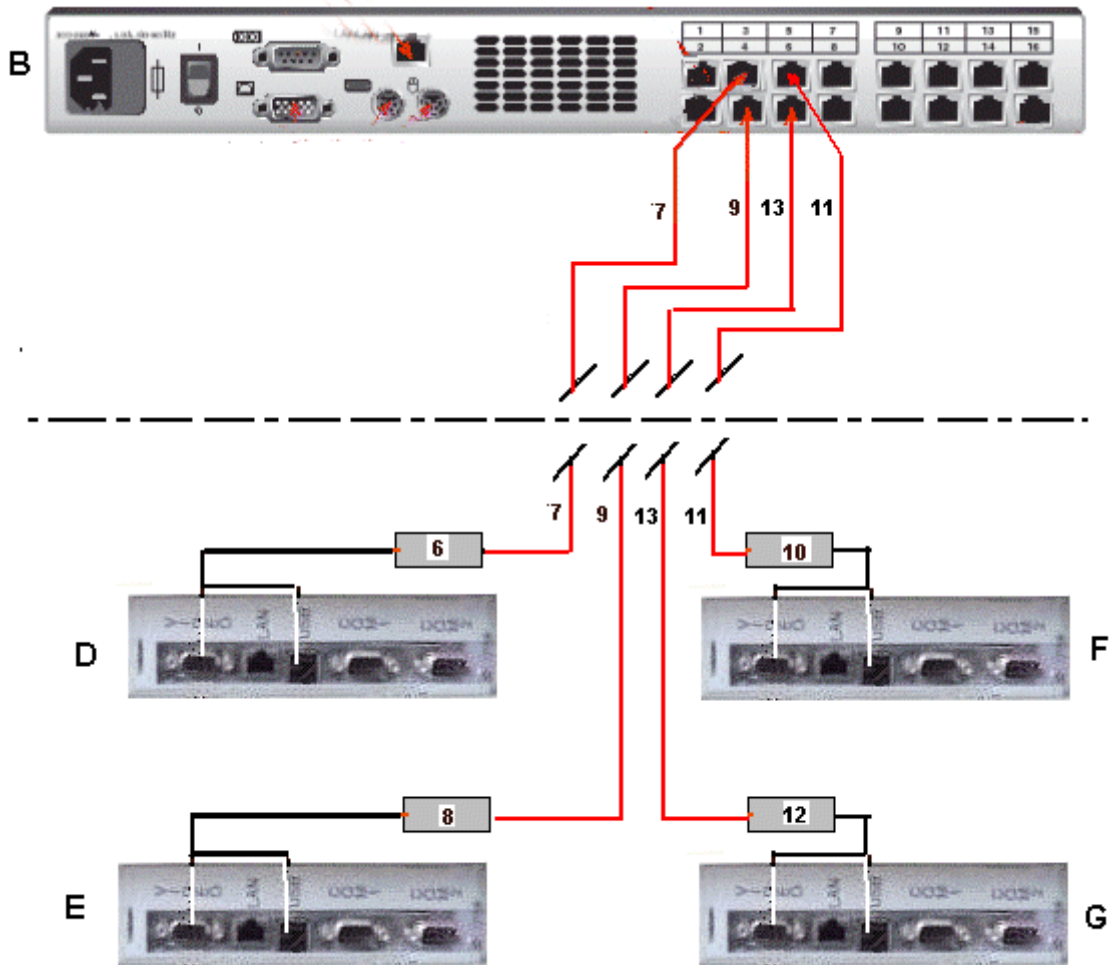


A: PMB (main cabinet)
 B: PMB (main cabinet)
 C: Hub (extension cabinet)

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cross cable	A (ethernet, module 0)	C (port 2)
2	RJ45 – RJ45 Ethernet cross cable	B (Ethernet, module 1)	C (port 3)

Figure 61. PMB – Ethernet Hub inter-cabinet cabling diagram

Inter-Cabinet (IOR – KVM Switch)

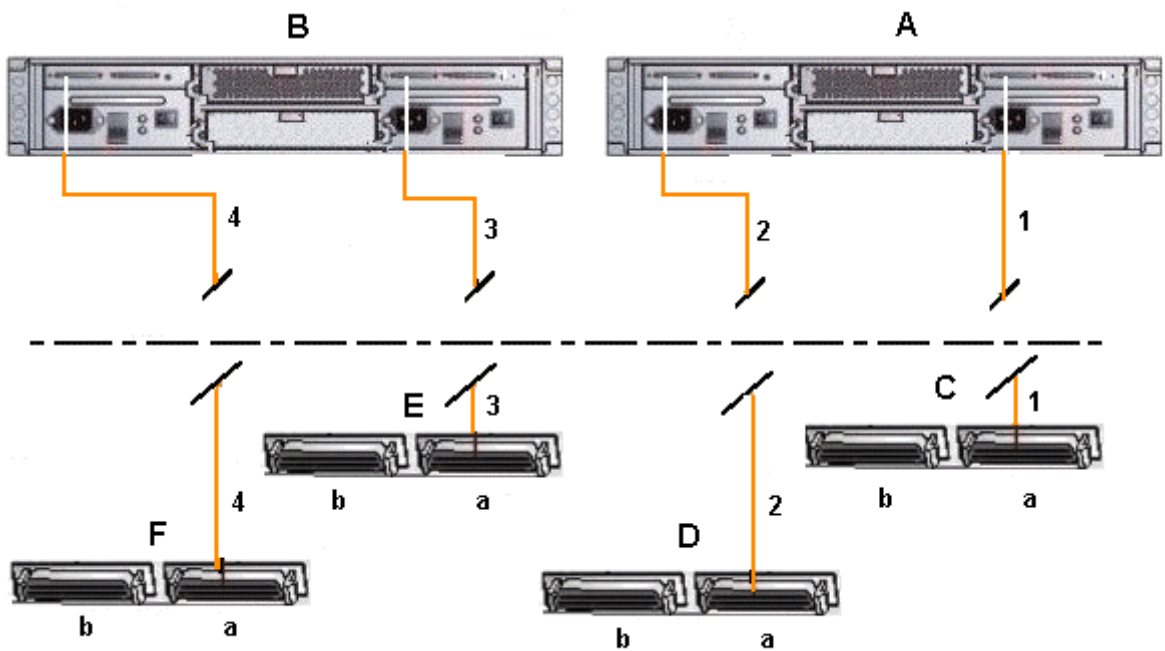


B: KVM Switch (I/O cabinet),
 D: IOR (IOB 0, module 0, main cabinet)
 E: IOR (IOB 1, module 0, main cabinet)
 F: IOR (IOB 0, module 1, main cabinet)
 G: IOR (IOB 1, module 1, main cabinet)

Mark	Cable Type	From	To
7	RJ45/RJ45 cable	D (VGA and USB via AVRIQ (6))	B (Port 3)
9	RJ45/RJ45 cable	E (VGA and USB via AVRIQ (8))	B (Port 4)
11	RJ45/RJ45 cable	F (VGA and USB via AVRIQ (10))	B (Port 5)
13	RJ45/RJ45 cable	G (VGA and USB via AVRIQ (12))	B (Port 6)

Figure 62. IOR – 16-port KVM switch inter-cabinet cabling diagram

Inter-Cabinet (IOB HBA RAID – SJ-0812 SCSI JBOD)

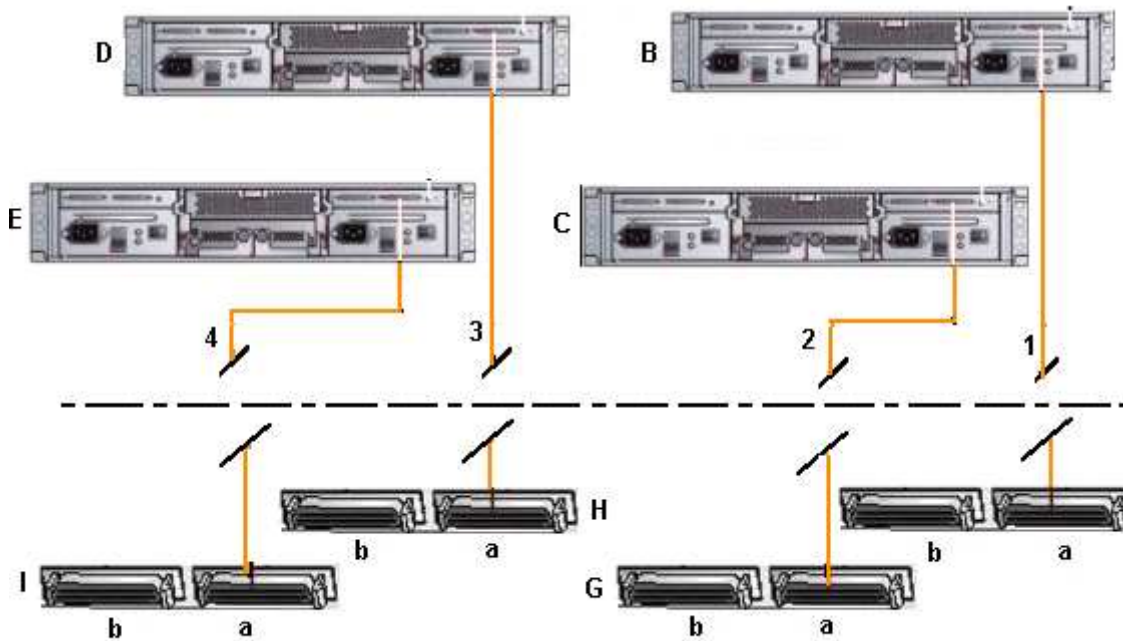


- A: S/S Disk 1
- B: S/S Disk 2
- C: HBA SCSI RAID (IOB 0, Module 0)
- D: HBA SCSI RAID (IOB 1, Module 0)
- E: HBA SCSI RAID (IOB 0, Module 1)
- F: HBA SCSI RAID (IOB 1, Module 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port) (I/O cabinet)	C (port a, main cabinet)
2	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port) (I/O cabinet)	D (port a, main cabinet)
3	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	E (port a, main cabinet)
4	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	F (port a, main cabinet)

Figure 63. IOB HBA RAID – SJ-0812 SCSI JBOD disk rack inter-cabinet cabling diagram

Inter-Cabinet (IOB HBA – SR-0812 SCSI RAID)

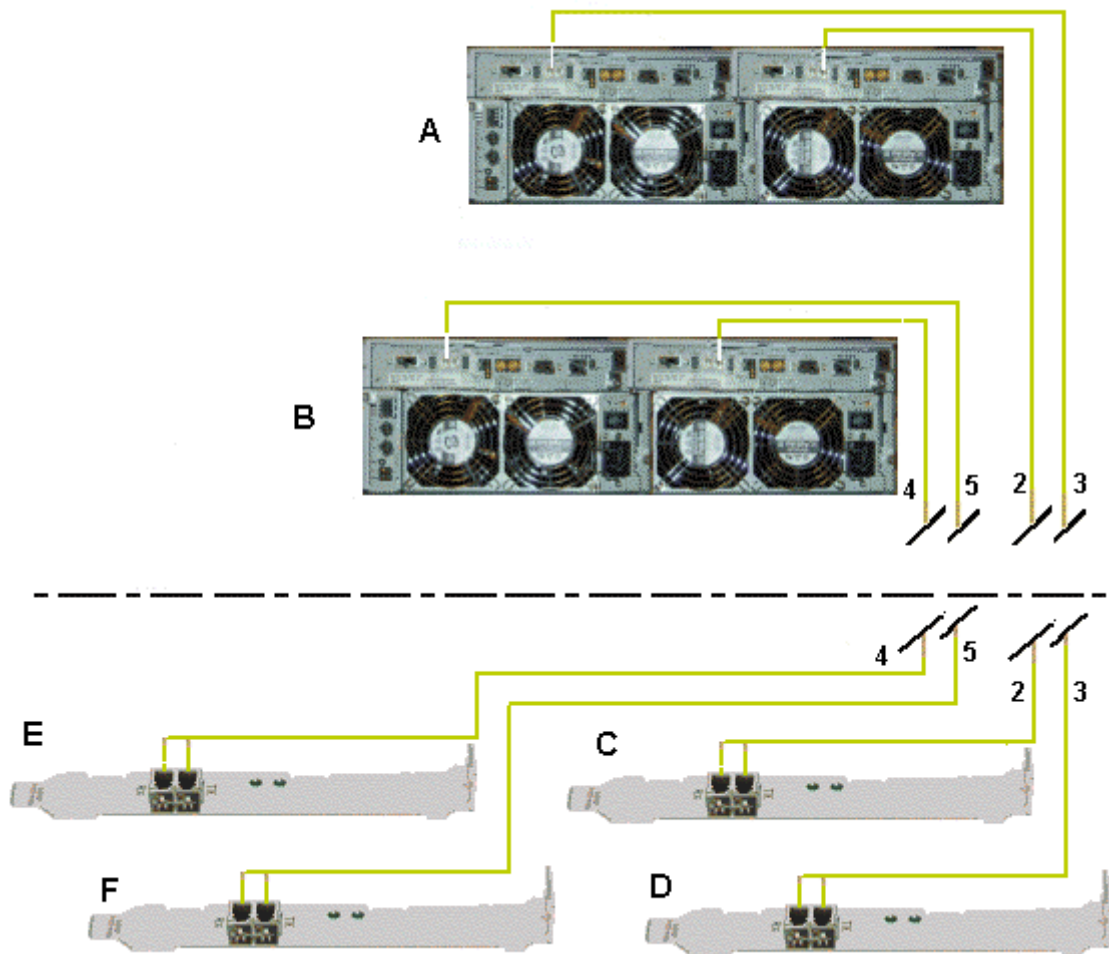


- B: S/S Disk 1 (module 0)
- C: S/S Disk 2 (module 0)
- D: S/S Disk 3 (module 1)
- E: S/S Disk 4 (module 1)
- F: HBA SCSI RAID (IOB 0, Module 0)
- G: HBA SCSI RAID (IOB 1, Module 0)
- H: HBA SCSI RAID (IOB 0, Module 1)
- I: HBA SCSI RAID (IOB 1, Module 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	F (port a, main cabinet)
2	SCSI-3 68-pin VHDCI to VHDCI cable	C (Extension port) (I/O cabinet)	G (port a, main cabinet)
3	SCSI-3 68-pin VHDCI to VHDCI cable	D (Extension port) (I/O cabinet)	H (port a, main cabinet)
4	SCSI-3 68-pin VHDCI to VHDCI cable	E (Extension port) (I/O cabinet)	I (port a, main cabinet)

Figure 64. IOB HBA – SR-0812 SCSI RAID disk rack inter-cabinet cabling diagram

Inter-Cabinet (IOB HBA – FDA 1x00 FC)

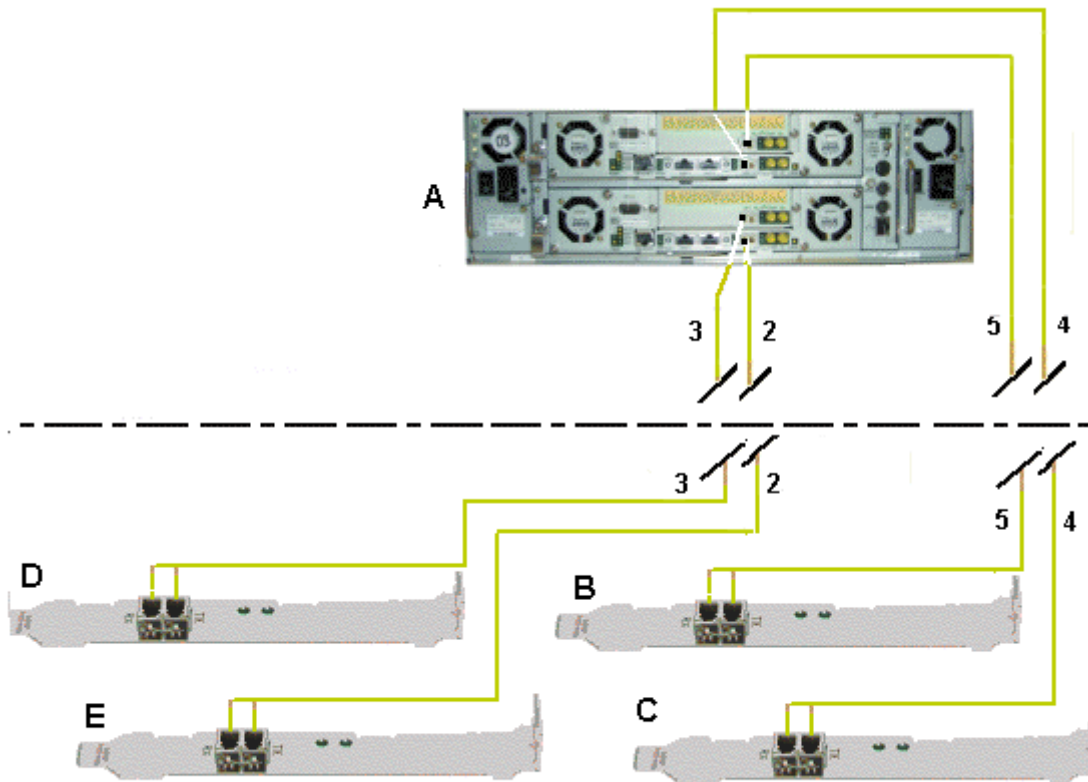


- A: S/S Disk 1 (extension cabinet)
- B: S/S Disk 2 (extension cabinet)
- C: FC Adapter (main cabinet)
- D: FC Adapter (main cabinet)
- E: FC Adapter (main cabinet)
- F: FC Adapter (main cabinet)

Mark	Cable Type	From	To
2	LC-LC cable	A (CTL 0)	D (IOB 0 module 0)
3	LC-LC cable	A (CTL 1)	E (IOB 1 module 0)
4	LC-LC cable	B (CTL 0)	F (IOB 0 module 1)
5	LC-LC cable	B (CTL 1)	G (IOB 1 module 1)

Figure 65. IOB HBA – FDA 1x00 FC disk rack inter-cabinet cabling diagram

Inter-Cabinet (IOB HBA – FDA 2x00 FC)



- A: S/S Disk (extension cabinet)
- B: FC Adapter (main cabinet)
- C: FC Adapter (main cabinet)
- D: FC Adapter (main cabinet)
- E: FC Adapter (main cabinet)

Mark	Cable Type	From	To
2	LC-LC cable	A (CTL0-HF0)	C (IOB 0 Module 0)
3	LC-LC cable	A (CTL0-HF1)	D (IOB 1 Module 0)
4	LC-LC cable	A (CTL1-HF0)	E (IOB 0 Module 1)
5	LC-LC cable	A (CTL1-HF1)	F (IOB 1 Module 1)

Figure 66. FDA 2x00 FC disk rack inter-cabinet data cabling diagram

Chapter 4. NovaScale 5xx5/6xx5 Servers Cabling Diagrams

NovaScale 5085 Server

- ▶ Internal disk configuration (PAP 2U), on page 4-3.
- ▶ Internal disk configuration (PAP 1U), on page 4-4.
- ▶ External Disk configuration, on page 4-5:
 - SJ-0812 SCSI JBOD disk configuration, on page 4-5.
 - SR-0812 SCSI RAID disk configuration, on page 4-5.
 - Extension disk rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID), on page 4-6.
 - FDA 1x00 FC disk configuration, on page 4-6.
 - Extension disk rack (FDA 1x00 FC – FDA 1x00 FC), on page 4-7.
- ▶ Power Cables, on page 4-13.

NovaScale 6085 Server

- ▶ Internal disk configuration (PAP 2U), on page 4-8.
- ▶ Internal disk configuration (PAP 1U), on page 4-9.
- ▶ External Disk configuration, on page 4-10:
 - SJ-0812 SCSI JBOD disk configuration, on page 4-10.
 - SR-0812 SCSI RAID disk configuration, on page 4-10.
 - Extension disk rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID), on page 4-11.
 - FC disk configuration, on page 4-11.
 - Extension disk rack (FDA 1x00 FC – FDA 1x00 FC), on page 4-12.
- ▶ Power Cables, on page 4-13.

NovaScale 5165 Server

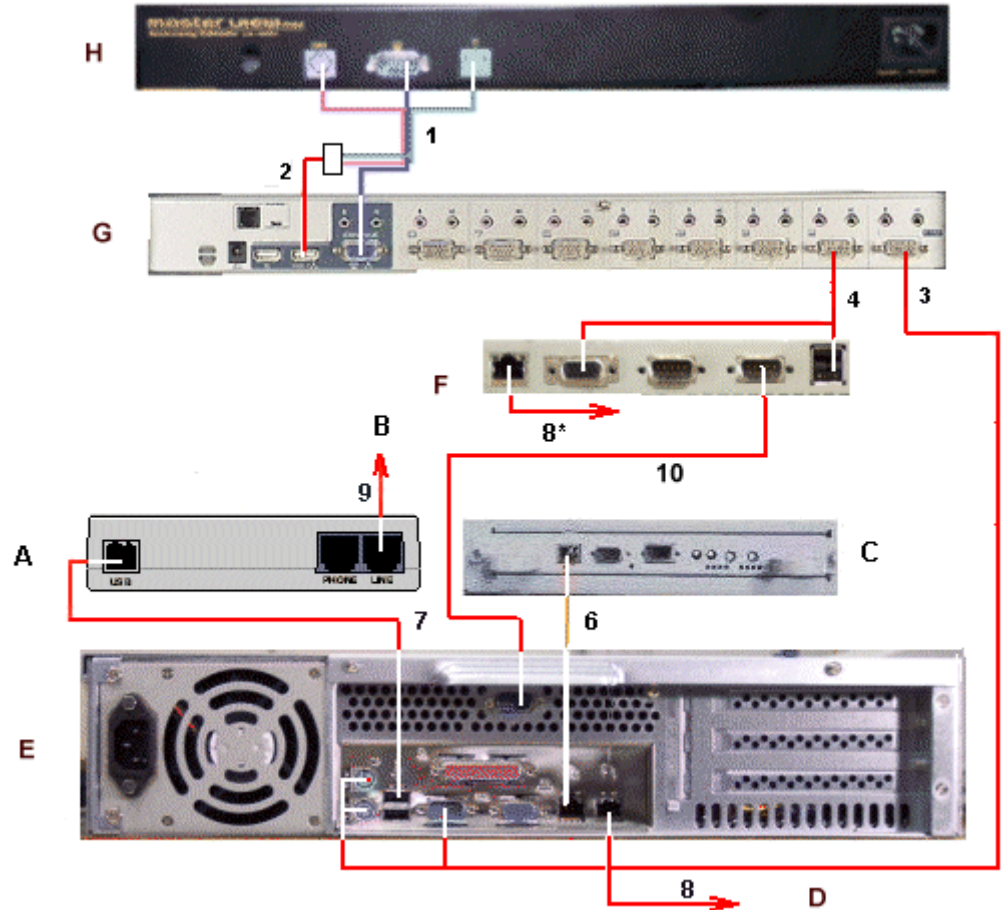
- ▶ Internal disk configuration (PAP 2U), on page 4-14.
- ▶ Internal disk configuration (PAP 1U), on page 4-16.
- ▶ External Disk configuration, on page 4-17:
 - SJ-0812 SCSI JBOD disk configuration, on page 4-17.
 - SR-0812 SCSI RAID disk configuration, on page 4-18.
 - Extension disk rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID), on page 4-18.
 - FDA 1x00 FC disk configuration, on page 4-19.
 - Extension disk rack (FDA 1x00 FC – FDA 1x00 FC), on page 4-19.
- ▶ Power Cables, on page 4-31.
- ▶ XSP Cables, on page 4-33.
- ▶ Module interconnection (XSP cables), on page 4-33

NovaScale 6165 Server

- ▶ Internal disk configuration (PAP 2U), on page 4-20.
- ▶ Internal disk configuration (PAP 1U), on page 4-22.
- ▶ External Disk configuration, on page 4-24:
 - SJ-0812 SCSI JBOD disk configuration, on page 4-24.
 - SR-0812 SCSI RAID disk configuration, on page 4-25.
 - Extension disk rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID), on page 4-26.
 - FDA 1x00 FC disk configuration, on page 4-27.
 - Extension disk rack (FDA 1x00 FC – FDA 1x00 FC), on page 4-28.
 - FDA 2x00 FC disk configuration, on page 4-29.
 - Extension disk rack (FDA 2x00 FC – FDA 1x00 FC), on page 4-30.
- ▶ Power Cables, on page 4-31.
- ▶ XSP Cables, on page 4-33.
- ▶ Module interconnection (XSP cables), on page 4-33

NovaScale 5085 Server Data Cabling Diagram

Internal Disk Configuration (PAP 2U)

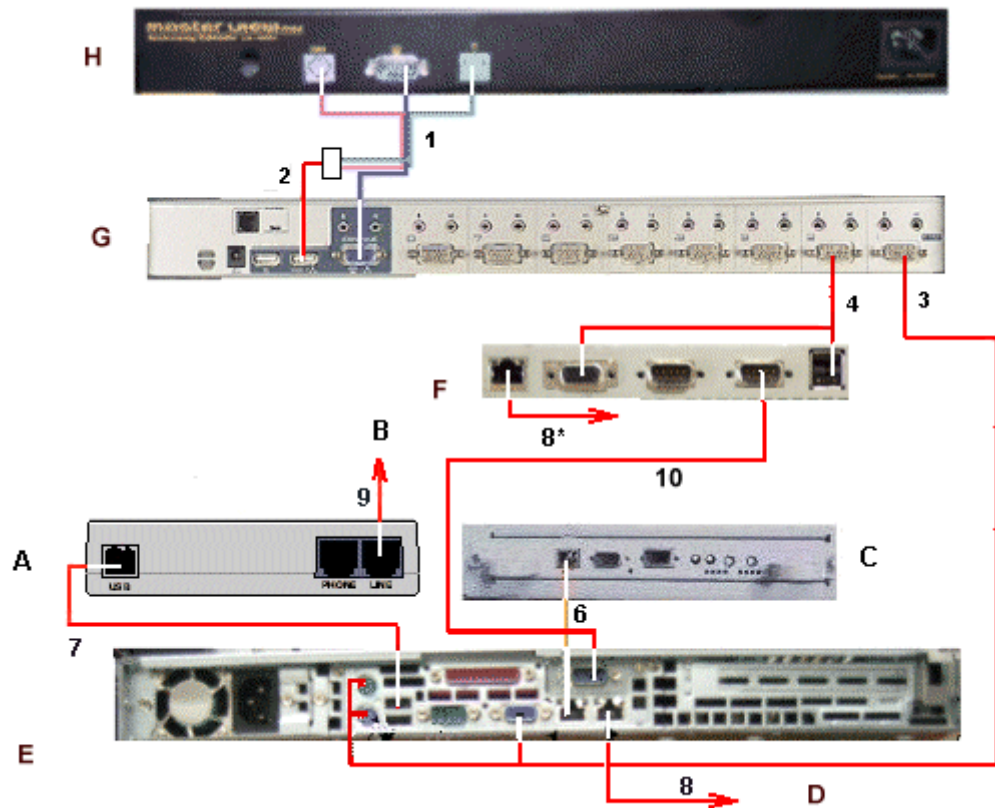


- A: Modem USB
- C: PMB
- E: PAP unit
- G: KVM Switch
- B: Telephone network socket
- D: Enterprise LAN
- F: IOL (IOC0)
- H: Console

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (Ethernet)
7	USB cable	A (USB)	E (USB)
8	RJ45 – RJ45 Ethernet (optional) RJ45 – RJ45 Ethernet (optional)	E (Ethernet) F (Ethernet)	D (Enterprise LAN) D (Enterprise LAN)
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable	E (COM 2)	F (COM2)

Figure 67. NovaScale 5085 Server data cabling diagram (PAP 2U)

Internal Disk Configuration (PAP 1U)



A: Modem USB
 C: PMB
 E: PAP unit
 G: KVM Switch

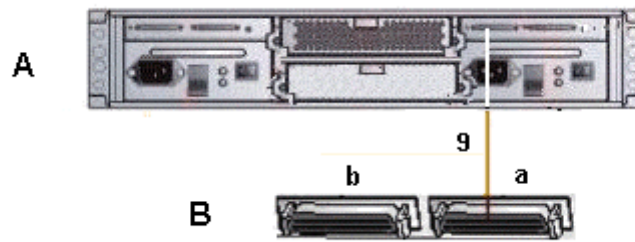
B: Telephone network socket
 D: Enterprise LAN
 F: IOL (IOC0)
 H: Console

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (Ethernet)
7	USB cable	A (USB)	E (USB)
8	RJ45 – RJ45 Ethernet (optional) RJ45 – RJ45 Ethernet (optional)	E (Ethernet) F (Ethernet)	D (Enterprise LAN) D (Enterprise LAN)
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable	E (COM 2)	F (COM2)

Figure 68. NovaScale 5085 Server data cabling diagram (PAP 1U)

External Disk Configuration

SJ-0812 SCSI JBOD Disk Rack

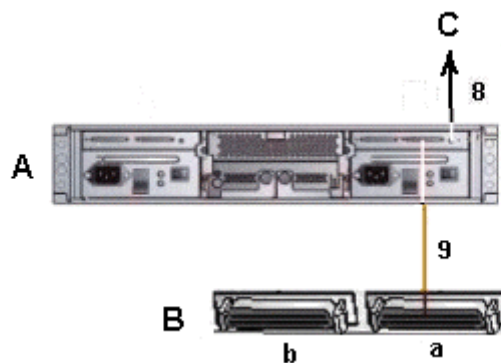


A: S/S Disk
B: HBA SCSI RAID

Mark	Cable Type	From	To
9	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port)	B (IOC0)

Figure 69. SJ-0812 SCSI JBOD disk rack data cabling diagram

SR-0812 SCSI RAID Disk Rack



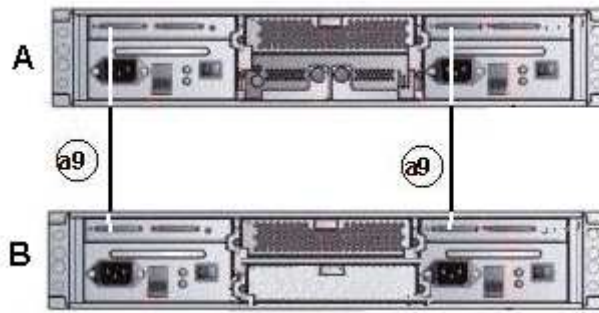
A: S/S Disk
B: HBA SCSI
C: PAP

Mark	Cable Type	From	To
8*	DB9 to Jack cable	A (RS232)	C (COM 1)
9	SCSI-3 68-pin VHDCI to VHDCI cable	A (Host port)	B (IOC0)

* cable used to configure the disk S/S.

Figure 70. SR-0812 SCSI RAID disk rack data cabling diagram

Extension Disk Rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID)

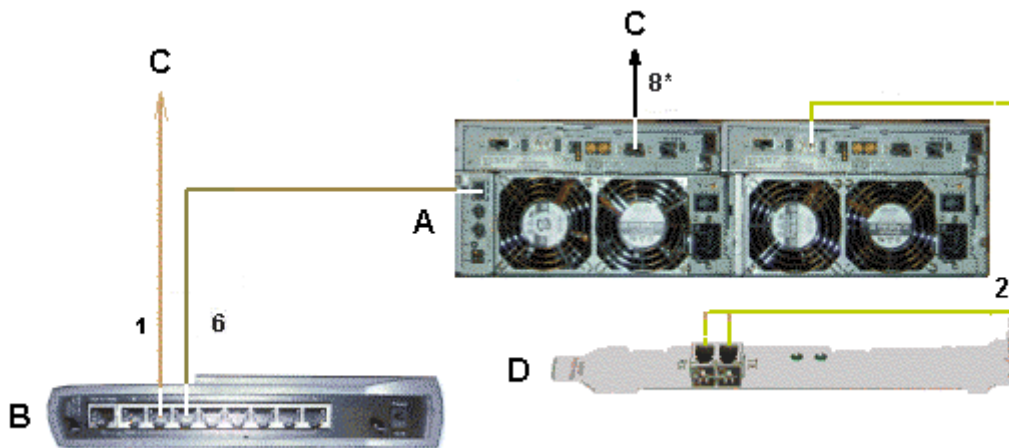


A: SR-0812 SCSI RAID
B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 71. SJ-0812 SCSI JBOD extension disk rack data cabling diagram

Disk Rack (FDA 1x00 FC)



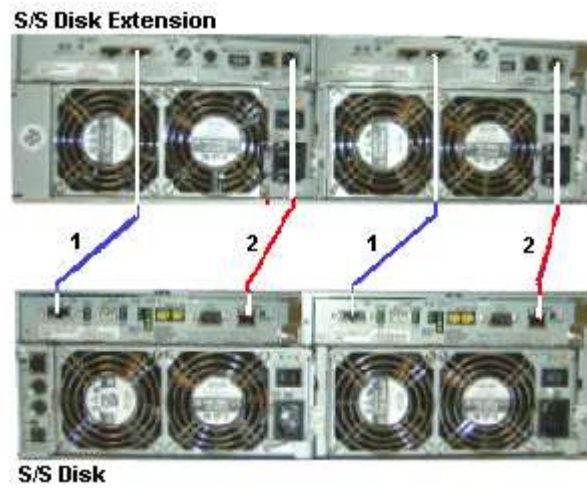
A: S/S Disk
B: Hub
C: PAP unit
D: FC Adapter

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	B (port 7)	C
2	LC–LC cable	A (CTL 0)	D (IOC 0)
6	RJ45 – RJ45 Ethernet cable	A	B (port 6)
8*	DB9 to DB9 serial cable *	C (COM 1)	A (RS232)

* optional cable used to configure the S/S disk.

Figure 72. FDA 1x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC)



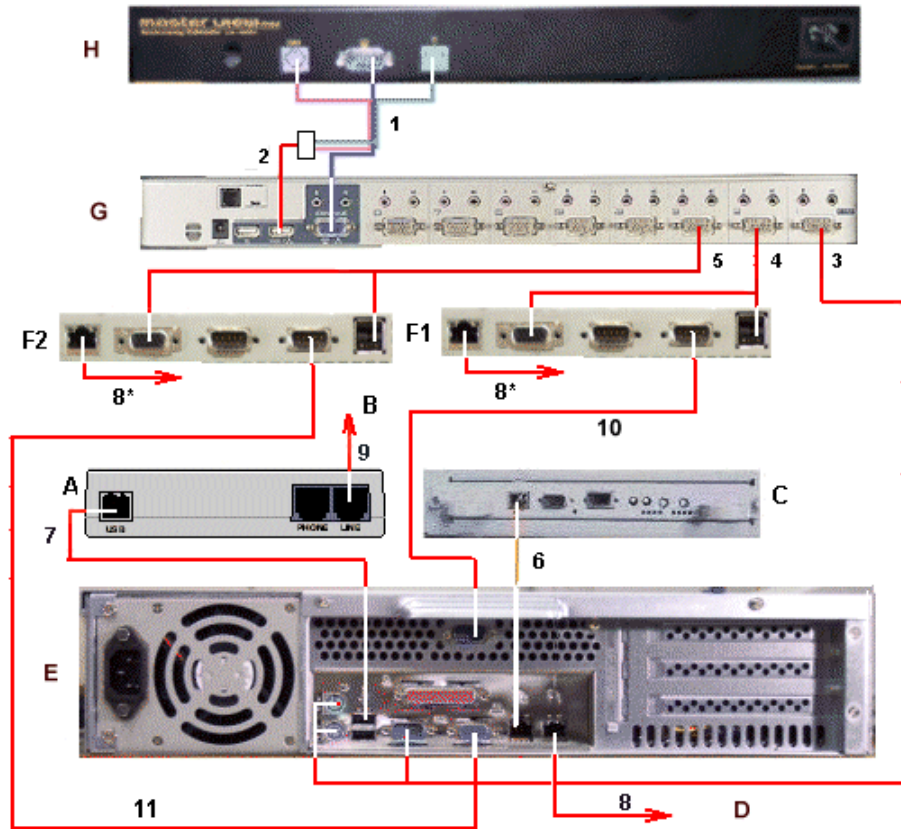
A: S/S Disk
 B: S/S Disk Extension

Mark	Cable Type	From	To
1	HSSDC–HSSDC cable	A	B
2	DE diagnosis cable	A	B

Figure 73. FDA 1x00 FC – FDA 1x00 FC extension disk rack data cabling diagram

NovaScale 6085 Server Data Cabling Diagram

Internal Disk Configuration (PAP 2U)

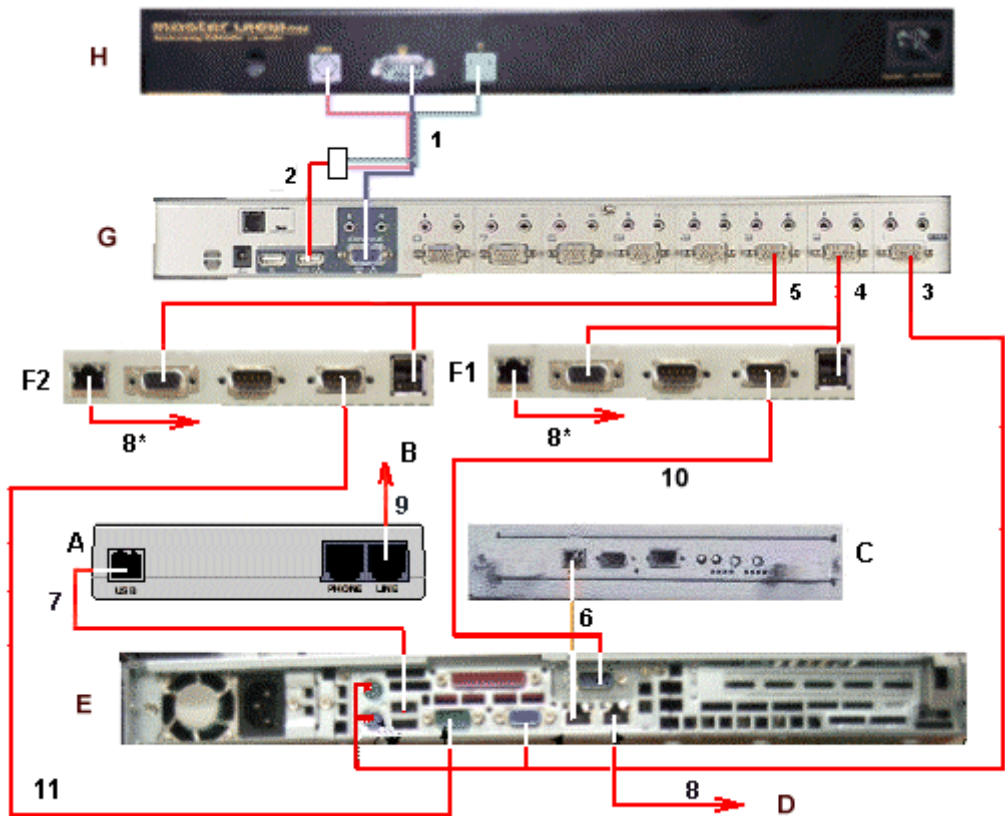


- A: Modem USB
- C: PMB
- E: PAP unit
- F2: IOL (IOC1)
- H: Console
- B: Telephone network socket
- D: Enterprise LAN
- F1: IOL (IOC0)
- G: KVM Switch

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F1 (Video/USB)
5	Combined USB/VGA cable	G (Port 3)	F2 (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (LAN Maint)
7	USB cable	A (USB)	E (USB)
8	RJ45 – RJ45 Ethernet	E (Ethernet)	D (Enterprise LAN)
8	RJ45 – RJ45 Ethernet (optional)	F1 (Ethernet)	D (Enterprise LAN)
8	RJ45 – RJ45 Ethernet (optional)	F2 (Ethernet)	D (Enterprise LAN)
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable	E (COM 2)	F1 (COM2)
11	DB9 to DB9 cross cable	E (COM 1)	F2 (COM2)

Figure 74. NovaScale 6085 Server data cabling diagram (PAP 2U)

Internal Disk Configuration (PAP 1U)



A: Modem USB
 C: PMB
 E: PAP unit
 F2: IOL (IOC1)
 H: Console

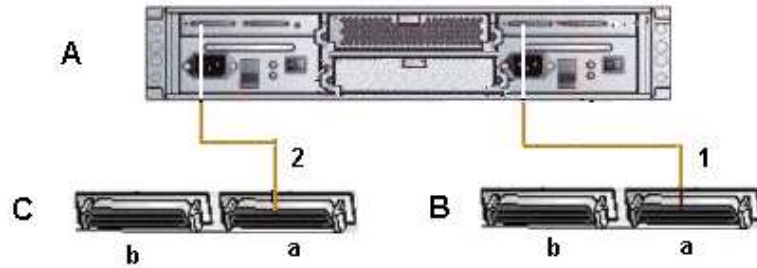
B: Telephone network socket
 D: Enterprise LAN
 F1: IOL (IOC0)
 G: KVM Switch

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F1 (Video/USB)
5	Combined USB/VGA cable	G (Port 3)	F2 (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (LAN Maint)
7	USB cable	A (USB)	E (USB)
8	RJ45 – RJ45 Ethernet	E (Ethernet)	D (Enterprise LAN)
8	RJ45 – RJ45 Ethernet (optional)	F1 (Ethernet)	D (Enterprise LAN)
8	RJ45 – RJ45 Ethernet (optional)	F2 (Ethernet)	D (Enterprise LAN)
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable	E (COM 2)	F1 (COM2)
11	DB9 to DB9 cross cable	E (COM 1)	F2 (COM2)

Figure 75. NovaScale 6085 Server data cabling diagram (PAP 1U)

External Disk Configuration

SJ-0812 SCSI JBOD Disk Rack



A: S/S Disk

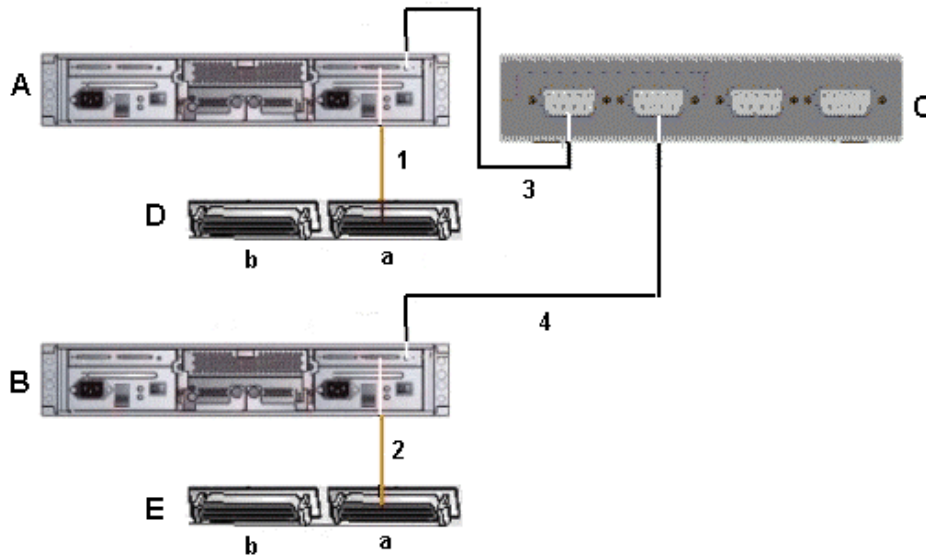
B: HBA SCSI RAID (IOC 0)

C: HBA SCSI RAID (IOC 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port)	B (IOC0)
2	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port)	C (IOC1)

Figure 76. SJ-0812 SCSI JBOD disk rack data cabling diagram

SR-0812 SCSI RAID Disk Rack



A: S/S Disk 1

B: S/S Disk 2

C: Nport server

D: HBA SCSI (IOC 0)

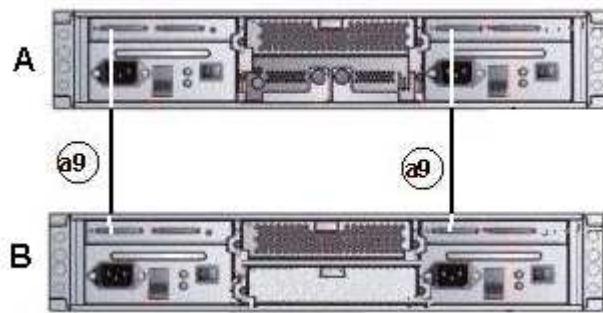
E: HBA SCSI (IOC 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	D (a)	A (Host port)
2	SCSI-3 68-pin VHDCI to VHDCI cable	E (a)	B (Host port)
3*	DB9 to Jack cable	C	A (RS232)
4*	DB9 to Jack cable	C	B (RS232)

* cable used to configure the disk S/S.

Figure 77. SR-0812 SCSI RAID disk rack data cabling diagram

Extension Disk Rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID)

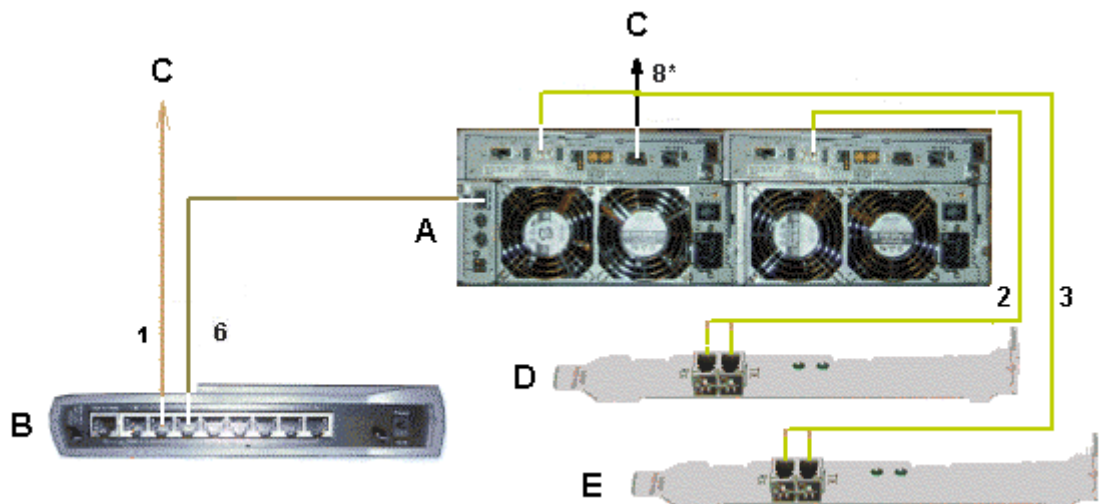


A: SR-0812 SCSI RAID
B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 78. SJ-0812 SCSI JBOD extension disk rack data cabling diagram

Disk Rack (FDA 1x00 FC)



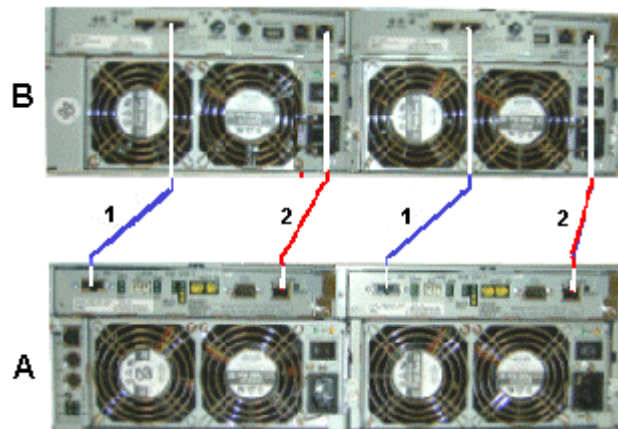
A: S/S Disk
B: Hub
C: PAP unit
D: FC Adapter
E: FC Adapter

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	B (port 7)	C
2	LC–LC cable	A (CTL 0)	D (IOC 0)
3	LC–LC cable	A (CTL 1)	E (IOC 1)
6	RJ45 – RJ45 Ethernet cable	A	B (port 6)
8*	DB9 to DB9 serial cable *	C (COM 1)	A (RS232)

* optional cable used to configure the S/S disk.

Figure 79. FDA 1x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC)



A: S/S Disk
B: S/S Disk Extension

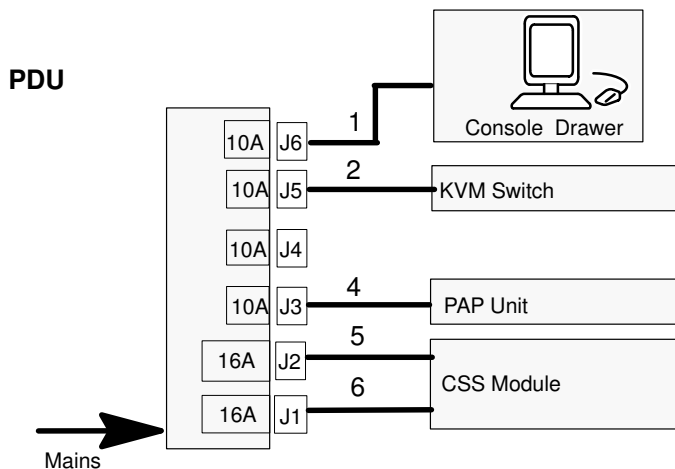
Mark	Cable Type	From	To
1	HSSDC–HSSDC cable	A	B
2	DE diagnosis cable	A	B

Figure 80. FDA 1x00 FC – FDA 1x00 FC extension disk rack data cabling diagram

Power Cabling Diagram

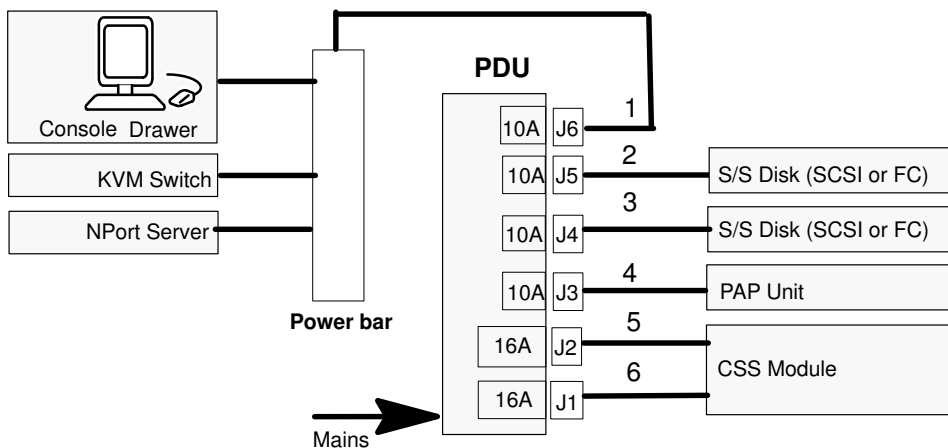
All power supply cables are connected to the internal PDU(s), as shown below:

Internal Disk configuration



Mark	Cable Type	From	To
1	Power cable	Console	PDU J6
2	Power cable	KVM switch	PDU J5
4	Power cable	PAP Pwr	PDU J3
5 – 6	Power cable	CSS Module	PDU J1, J2

SCSI or FC Disk configuration

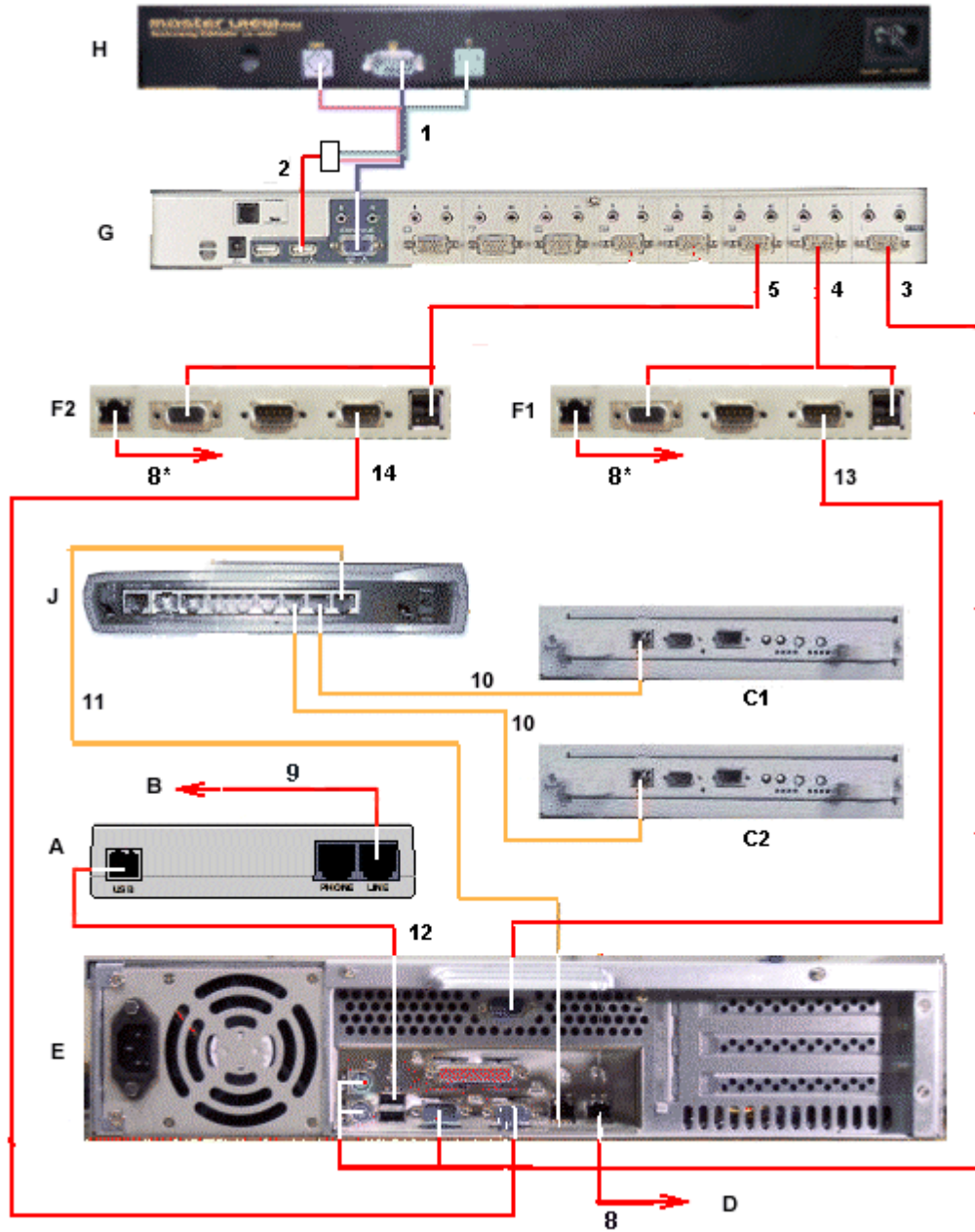


Mark	Cable Type	From	To
1	Power cable	Power bar (console, KVM switch, NPort server)	PDU J6
2 – 3	Power cable	S/S disk (SCSI or FC)	PDU J5, J4
4	Power cable	PAP Pwr	PDU J3
5 – 6	Power cable	CSS Module	PDU J1, J2

Figure 81. NovaScale 5085 Server / NovaScale 6085 Server power cabling diagram

NovaScale 5165 Server Data Cabling Diagrams

Internal Disk Configuration (PAP 2U)

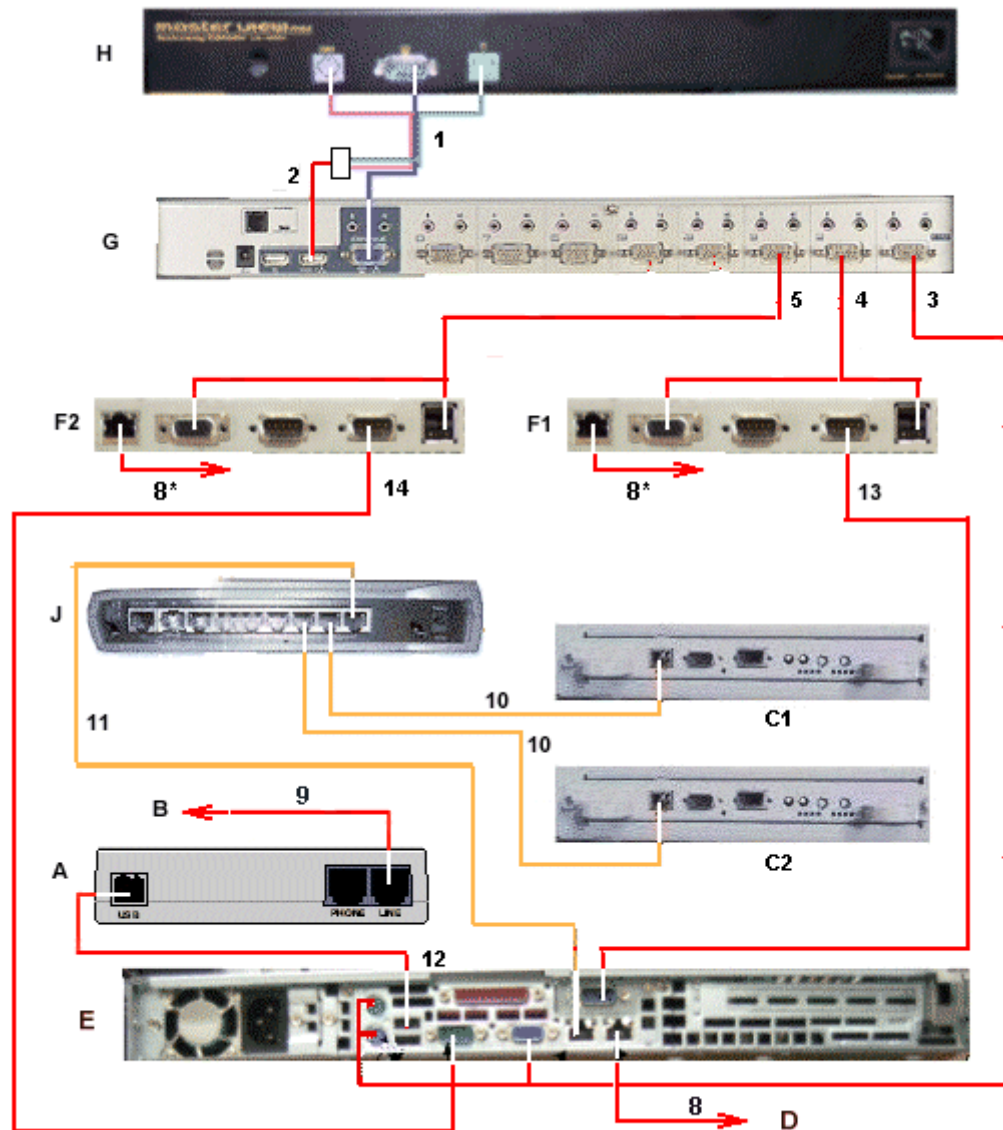


- | | |
|--------------------------|-----------------------------|
| A: Modem USB | B: Telephone network socket |
| C1: PMB (module 0) | C2: PMB (module 1) |
| D: Enterprise LAN | E: PAP unit |
| F1: IOL (IOC0, module 0) | F2: IOL (IOC1, module 0) |
| G: KVM Switch | H: Console |
| J: Hub | |

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F1 (Video/USB)
5	Combined USB/VGA cable	G (Port 3)	F2 (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (LAN Maint)
8	RJ45 – RJ45 Ethernet	E (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F1 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F2 (Ethernet)	Enterprise LAN
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable	C1	J
	DB9 to DB9 cross cable	C2	J
11	DB9 to DB9 cross cable	E (COM 1)	J
12	USB cable	A	E (USB)
13	DB9 to DB9 cross cable	E (COM 2)	F1 (COM2)
14	DB9 to DB9 cross cable	E (COM 1)	F2 (COM2)

Figure 82. NovaScale 5165 Server data cabling diagram (PAP 2U)

Internal Disk Configuration (PAP 1U)



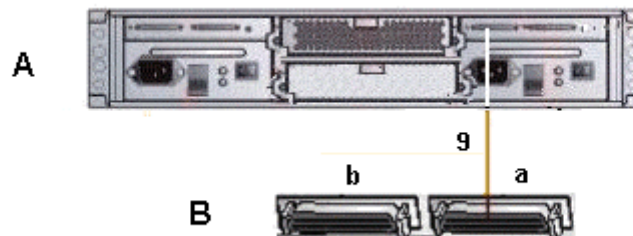
- | | |
|--------------------------|-----------------------------|
| A: Modem USB | B: Telephone network socket |
| C1: PMB (module 0) | C2: PMB (module 1) |
| D: Enterprise LAN | E: PAP unit |
| F1: IOL (IOC0, module 0) | F2: IOL (IOC1, module 0) |
| G: KVM Switch | H: Console |
| J: Hub | |

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F1 (Video/USB)
5	Combined USB/VGA cable	G (Port 3)	F2 (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (LAN Maint)
8	RJ45 – RJ45 Ethernet	E (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F1 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F2 (Ethernet)	Enterprise LAN
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable DB9 to DB9 cross cable	C1 C2	J J
11	DB9 to DB9 cross cable	E (COM 1)	J
12	USB cable	A	E (USB)
13	DB9 to DB9 cross cable	E (COM 2)	F1 (COM2)
14	DB9 to DB9 cross cable	E (COM 1)	F2 (COM2)

Figure 83. NovaScale 5165 Server data cabling diagram (PAP 1U)

External Disk Configuration

SJ-0812 SCSI JBOD Disk Rack

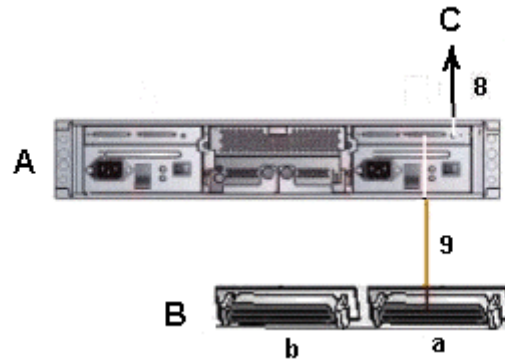


A: S/S Disk
B: HBA SCSI RAID

Mark	Cable Type	From	To
9	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port)	B (IOC0)

Figure 84. SJ-0812 SCSI JBOD disk rack data cabling diagram

SR-0812 SCSI RAID Disk Rack



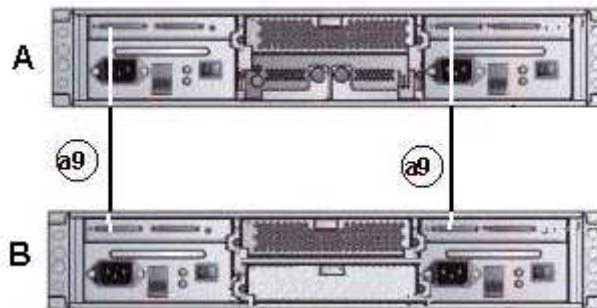
A: S/S Disk
 B: HBA SCSI
 C: PAP

Mark	Cable Type	From	To
8*	DB9 to Jack cable	A (RS232)	C (COM 1)
9	SCSI-3 68-pin VHDCI to VHDCI cable	A (Host port)	B (IOC0)

* cable used to configure the disk S/S.

Figure 85. SR-0812 SCSI RAID disk rack data cabling diagram

Extension Disk Rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID)

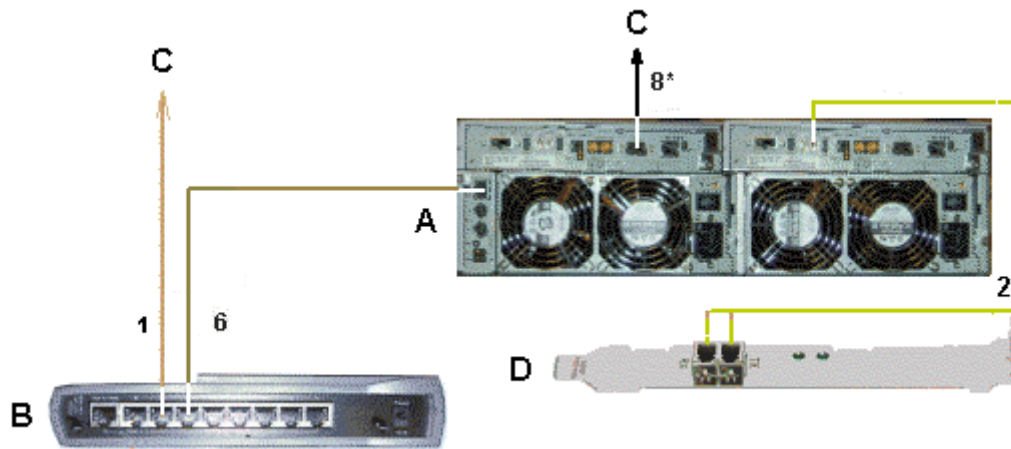


A: SR-0812 SCSI RAID
 B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 86. SJ-0812 SCSI JBOD extension disk rack data cabling diagram

Disk Rack (FDA 1x00 FC)



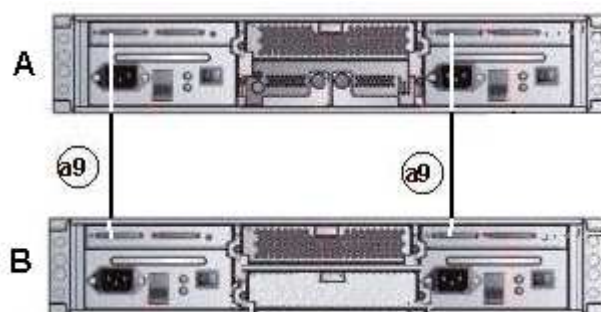
- A: S/S Disk
- B: Hub
- C: PAP unit
- D: FC Adapter

Mark	Cable Type	From	To
1	RJ45 – RJ45 Ethernet cable	B (port 7)	C
2	LC–LC cable	A (CTL 0)	D (IOC 0)
6	RJ45 – RJ45 Ethernet cable	A	B (port 6)
8*	DB9 to DB9 serial cable *	C (COM 1)	A (RS232)

* optional cable used to configure the S/S disk.

Figure 87. FDA 1x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC)



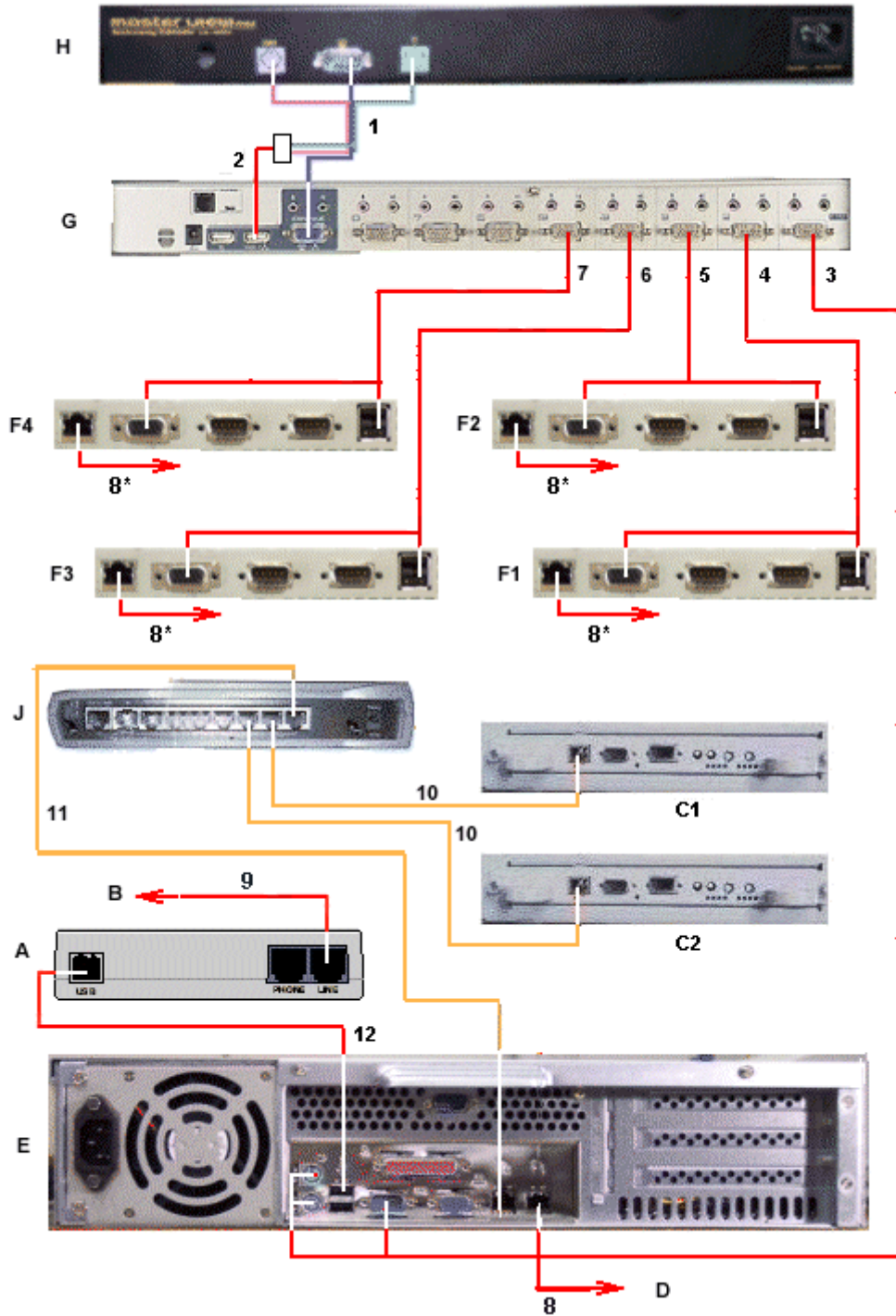
- A: SR-0812 SCSI RAID
- B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 88. FDA 1x00 FC – FDA 1x00 FC extension disk rack data cabling diagram

NovaScale 6165 Server Data Cabling Diagrams

Internal Disk Configuration (PAP 2U)

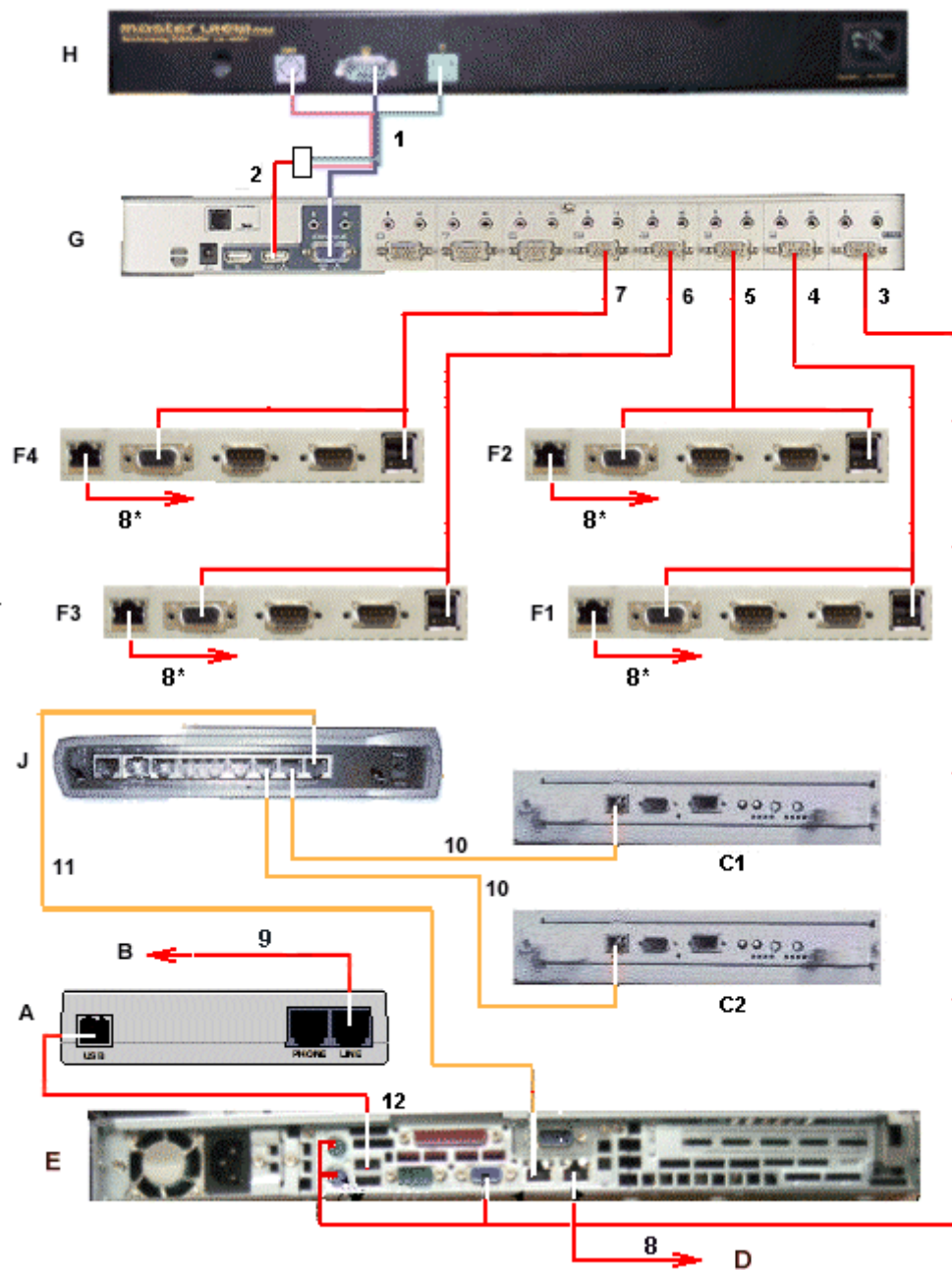


- | | |
|--------------------------|-----------------------------|
| A: Modem USB | B: Telephone network socket |
| C1: PMB (module 0) | C2: PMB (module 1) |
| D: Enterprise LAN | E: PAP unit |
| F1: IOL (IOC0, module 0) | F2: IOL (IOC1, module 0) |
| F3: IOL (IOC0, module 1) | F4: IOL (IOC1, module 1) |
| G: KVM Switch | H: Console |
| J: Hub | |

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F1 (Video/USB)
5	Combined USB/VGA cable	G (Port 3)	F2 (Video/USB)
6	Combined USB/VGA cable	G (Port 4)	F3 (Video/USB)
7	Combined USB/VGA cable	G (Port 5)	F4 (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (LAN Maint)
8	RJ45 – RJ45 Ethernet	E (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F1 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F2 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F3 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F4 (Ethernet)	Enterprise LAN
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable	C1	J
	DB9 to DB9 cross cable	C2	J
11	DB9 to DB9 cross cable	E (COM 1)	J
12	USB cable	A	E (USB)

Figure 89. NovaScale 6165 Server data cabling diagram PAP 2U)

Internal Disk Configuration (PAP 1U)



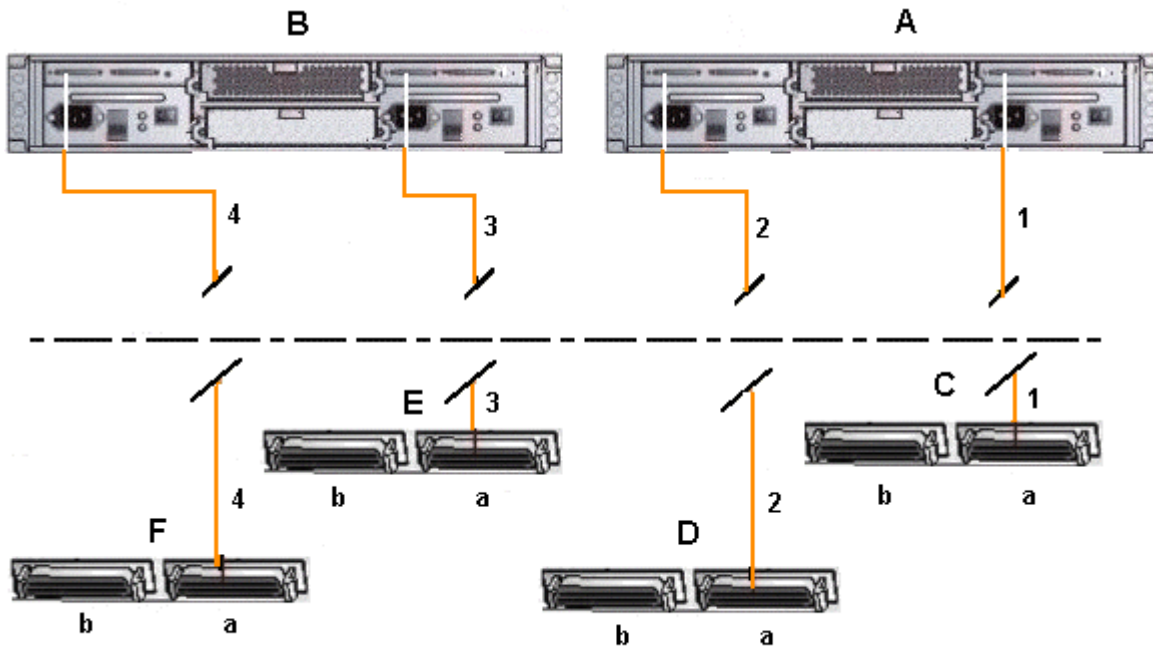
- | | |
|--------------------------|-----------------------------|
| A: Modem USB | B: Telephone network socket |
| C1: PMB (module 0) | C2: PMB (module 1) |
| D: Enterprise LAN | E: PAP unit |
| F1: IOL (IOC0, module 0) | F2: IOL (IOC1, module 0) |
| F3: IOL (IOC0, module 1) | F4: IOL (IOC1, module 1) |
| G: KVM Switch | H: Console |
| J: Hub | |

Mark	Cable Type	From	To
1	Video/PS2/PS2 cable	G (video)	H (video)
2	PS2/USB converter	G (USB)	H (PS2/PS2)
3	Combined PS2/VGA cable	G (Port 1)	E (VGA/PS2)
4	Combined USB/VGA cable	G (Port 2)	F1 (Video/USB)
5	Combined USB/VGA cable	G (Port 3)	F2 (Video/USB)
6	Combined USB/VGA cable	G (Port 4)	F3 (Video/USB)
7	Combined USB/VGA cable	G (Port 5)	F4 (Video/USB)
6	RJ45 – RJ45 Ethernet cross cable	C (Ethernet)	E (LAN Maint)
8	RJ45 – RJ45 Ethernet	E (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F1 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F2 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F3 (Ethernet)	Enterprise LAN
8	RJ45 – RJ45 Ethernet (optional)	F4 (Ethernet)	Enterprise LAN
9	RJ11 – RJ11 cable	A (Line)	B
10	DB9 to DB9 cross cable	C1	J
	DB9 to DB9 cross cable	C2	J
11	DB9 to DB9 cross cable	E (COM 1)	J
12	USB cable	A	E (USB)

Figure 90. NovaScale 6165 Server data cabling diagram PAP 1U)

External Disk Configuration

SJ-0812 SCSI JBOD Disk Rack

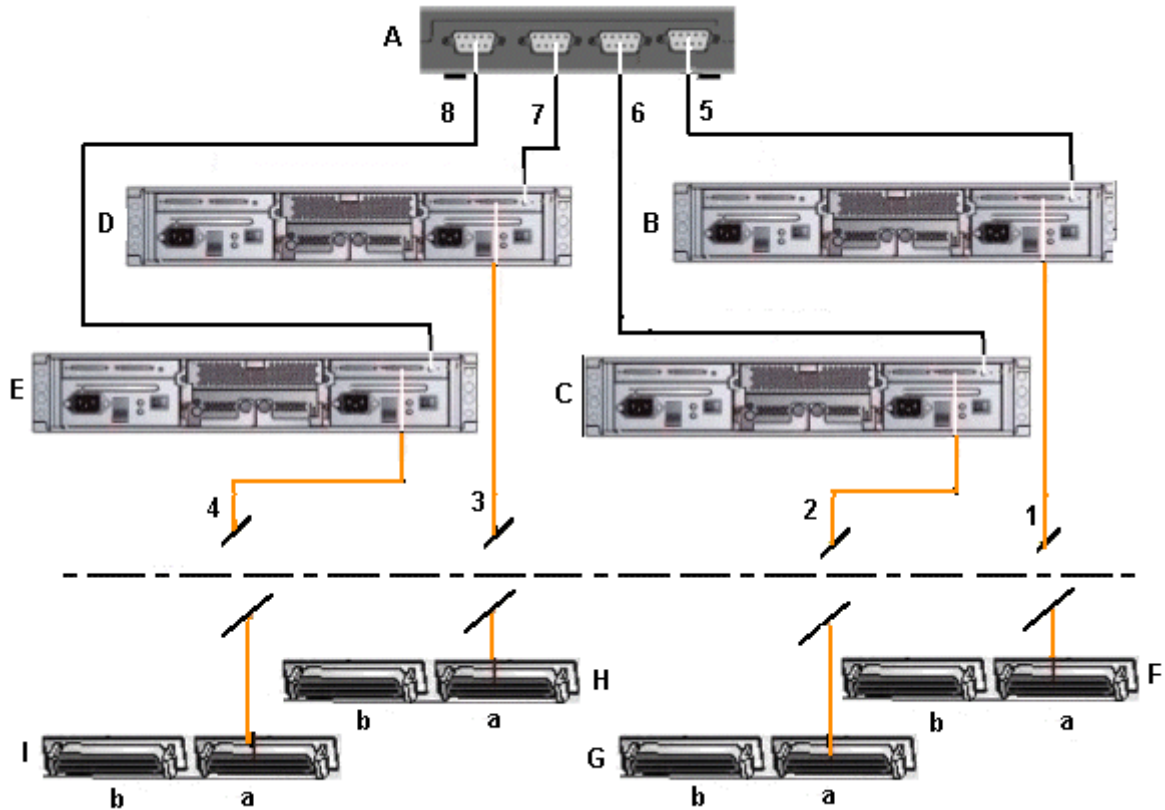


- A: S/S Disk 1
- B: S/S Disk 2
- C: HBA SCSI RAID (IOC 0, Module 0)
- D: HBA SCSI RAID (IOC 1, Module 0)
- E: HBA SCSI RAID (IOC 0, Module 1)
- F: HBA SCSI RAID (IOC 1, Module 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port) (I/O cabinet)	C (port a, main cabinet)
2	SCSI-3 68-pin VHDCI to VHDCI cable	A (Extension port) (I/O cabinet)	D (port a, main cabinet)
3	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	E (port a, main cabinet)
4	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	F (port a, main cabinet)

Figure 91. SJ-0812 SCSI JBOD disk rack data cabling diagram

SR-0812 SCSI RAID Disk Rack



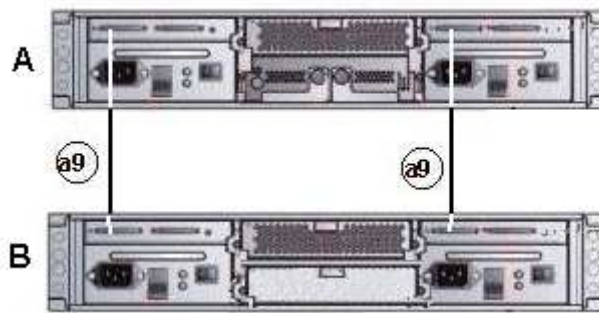
- A: NPort server
- B: S/S Disk 1 (module 0)
- C: S/S Disk 2 (module 0)
- D: S/S Disk 3 (module 1)
- E: S/S Disk 4 (module 1)
- F: HBA SCSI RAID (IOC 0, Module 0)
- G: HBA SCSI RAID (IOC 1, Module 0)
- H: HBA SCSI RAID (IOC 0, Module 1)
- I: HBA SCSI RAID (IOC 1, Module 1)

Mark	Cable Type	From	To
1	SCSI-3 68-pin VHDCI to VHDCI cable	B (Extension port) (I/O cabinet)	F (port a, main cabinet)
2	SCSI-3 68-pin VHDCI to VHDCI cable	C (Extension port) (I/O cabinet)	G (port a, main cabinet)
3	SCSI-3 68-pin VHDCI to VHDCI cable	D (Extension port) (I/O cabinet)	H (port a, main cabinet)
4	SCSI-3 68-pin VHDCI to VHDCI cable	E (Extension port) (I/O cabinet)	I (port a, main cabinet)
5*	DB9 to Jack cable	A	B (RS232)
6*	DB9 to Jack cable	A	C (RS232)
7*	DB9 to Jack cable	A	D (RS232)
8*	DB9 to Jack cable	A	E (RS232)

*cable used to configure the disk S/S.

Figure 92. SR-0812 SCSI RAID disk rack data cabling diagram

Extension Disk Rack (SJ-0812 SCSI JBOD – SR-0812 SCSI RAID)

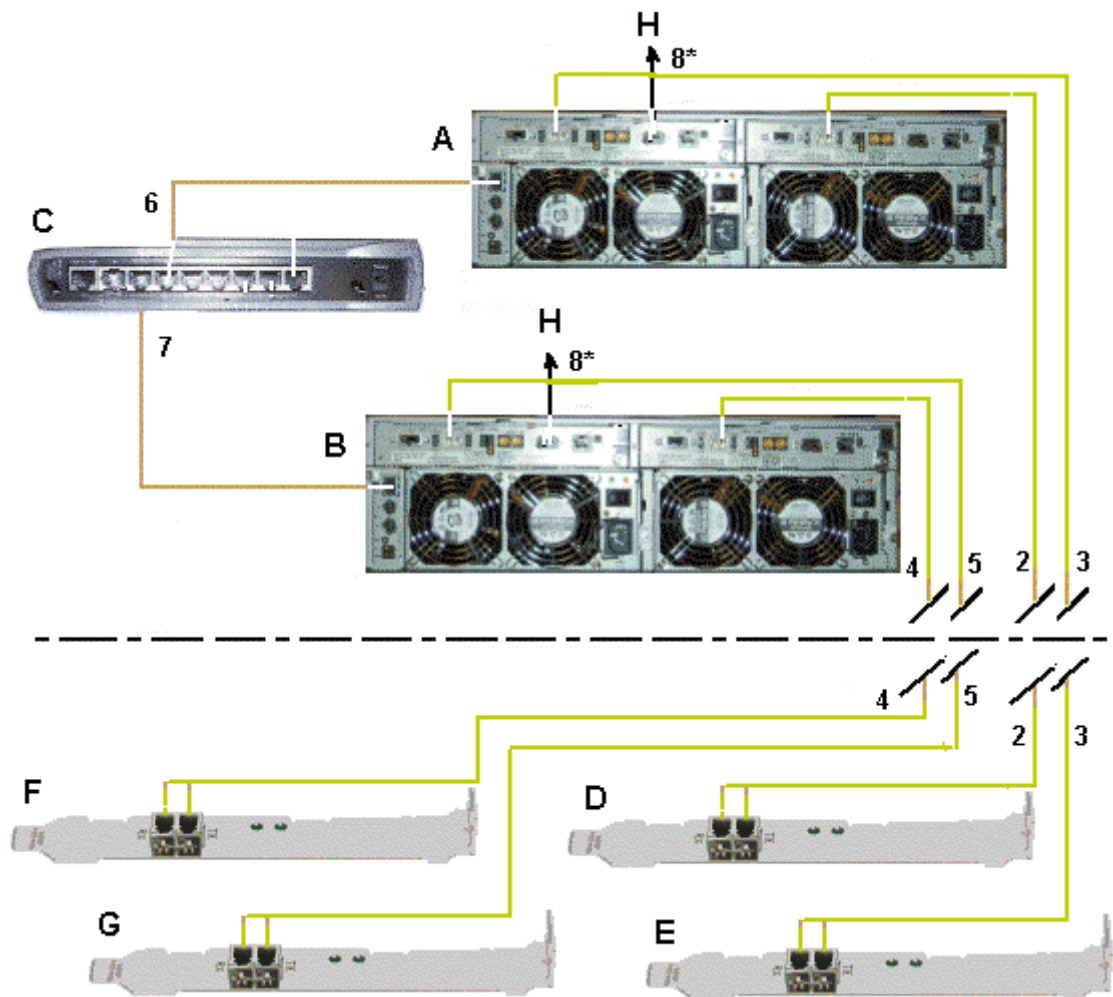


A: SR-0812 SCSI RAID
 B: SJ-0812 SCSI JBOD

Mark	Cable Type	From	To
a9	SCSI-3 68-pin VHDCI to VHDCI cable	A (extension port)	B (extension port)

Figure 93. SJ-0812 SCSI JBOD extension disk rack data cabling diagram

Disk Rack (FDA 1x00 FC)



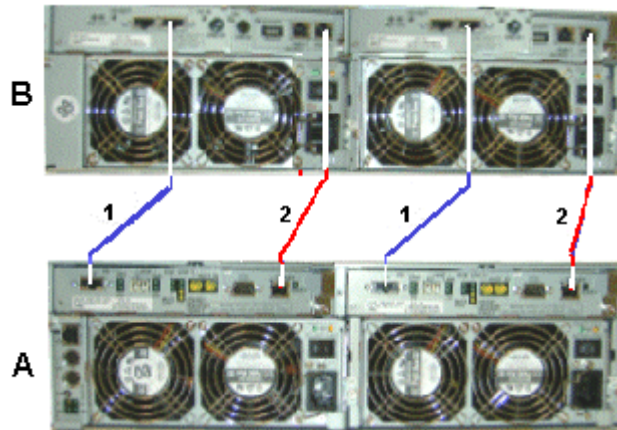
- A: S/S Disk 1 (extension cabinet)
- B: S/S Disk 2 (extension cabinet)
- C: Hub (extension cabinet)
- D: FC Adapter (main cabinet)
- E: FC Adapter (main cabinet)
- F: FC Adapter (main cabinet)
- G: FC Adapter (main cabinet)
- H: PAP unit (extension cabinet)

Mark	Cable Type	From	To
2	LC-LC cable	A (CTL 0)	D (IOC 0 module 0)
3	LC-LC cable	A (CTL 1)	E (IOC 1 module 0)
4	LC-LC cable	B (CTL 0)	F (IOC 0 module 1)
5	LC-LC cable	B (CTL 1)	G (IOC 1 module 1)
6	RJ45 – RJ45 Ethernet cable	A	C (port 6)
7	RJ45 – RJ45 Ethernet cable	B	C (port 7)
8*	DB9 to DB9 serial cable *	H (COM 1)	A or B (RS232)

* optional cable used to configure the S/S disk.

Figure 94. FDA 1x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 1x00 FC – FDA 1x00 FC)

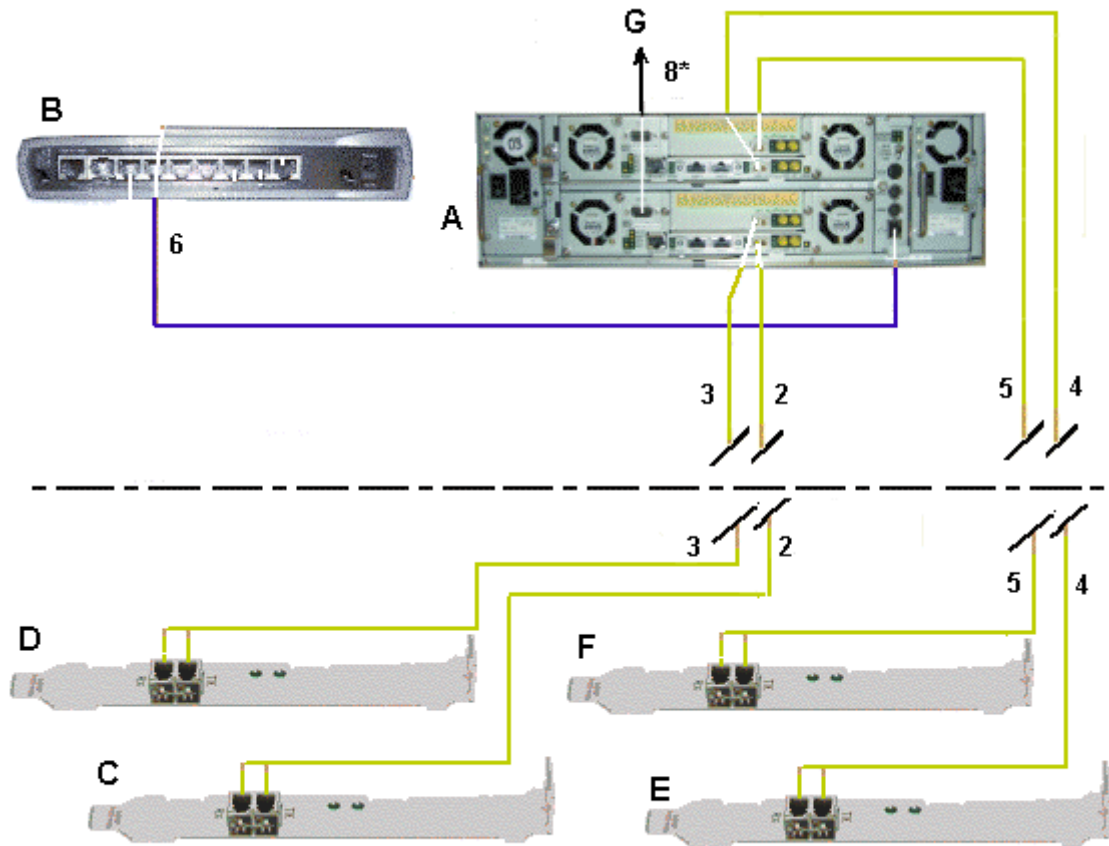


A: S/S Disk
 B: S/S Disk Extension

Mark	Cable Type	From	To
1	HSSDC–HSSDC cable	A	B
2	DE diagnosis cable	A	B

Figure 95. FDA 1x00 FC – FDA 1x00 FC extension disk rack data cabling diagram

Disk Rack (FDA 2x00 FC)



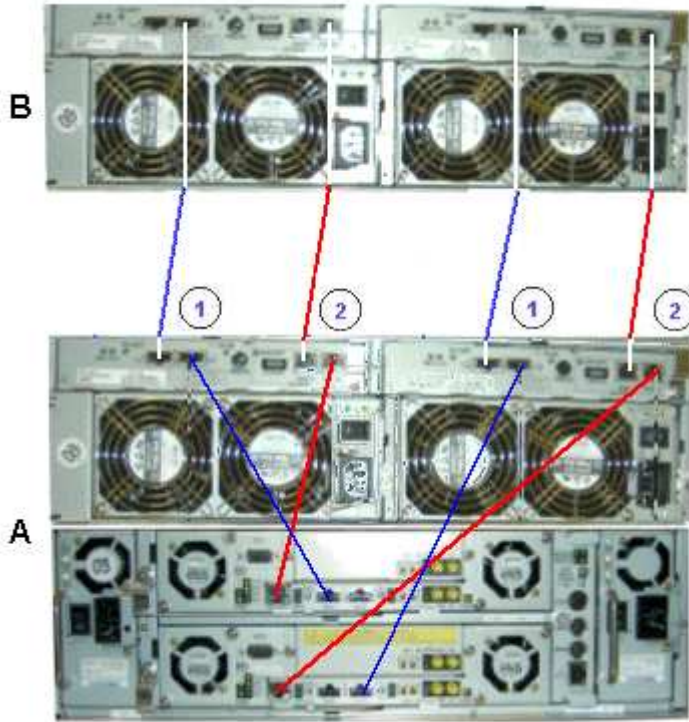
- A: S/S Disk (extension cabinet)
- B: Hub (extension cabinet)
- C: FC Adapter (main cabinet)
- D: FC Adapter (main cabinet)
- E: FC Adapter (main cabinet)
- F: FC Adapter (main cabinet)
- G: PAP unit (extension cabinet)

Mark	Cable Type	From	To
2	LC-LC cable	A (CTL0-HF0)	C (IOC 0 Module 0)
3	LC-LC cable	A (CTL0-HF1)	D (IOC 1 Module 0)
4	LC-LC cable	A (CTL1-HF0)	E (IOC 0 Module 1)
5	LC-LC cable	A (CTL1-HF1)	F (IOC 1 Module 1)
6	RJ45 - RJ45 Ethernet cable	A	B (port 6)
8 *	DB9 to DB9 serial cable	A (RS232)	G (COM 1)

* optional cable used to configure the S/S disk.

Figure 96. FDA 2x00 FC disk rack data cabling diagram

Extension Disk Rack (FDA 2x00 FC – FDA 1x00 FC)



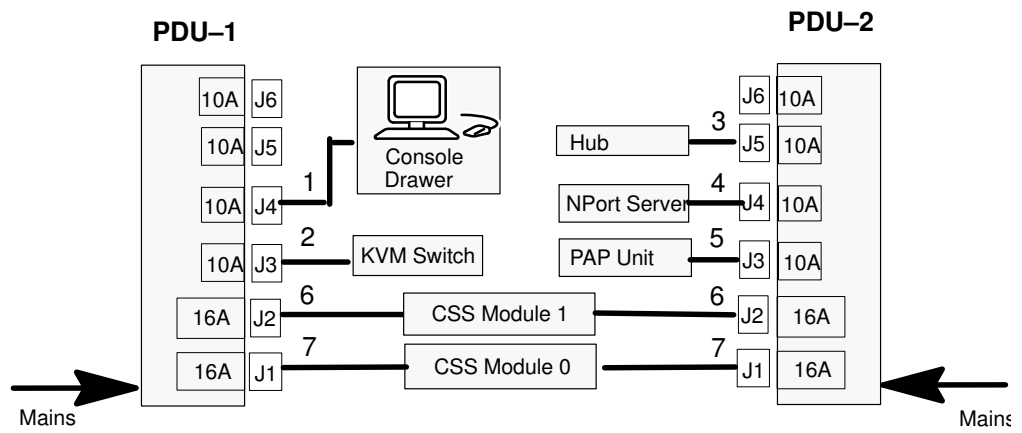
A: S/S Disk FDA 2x00 FC
 B: S/S Disk FDA 1x00 FC (extension)

Mark	Cable Type	From	To
1	HSSDC-HSSDC cable	A	B
2	DE diagnosis cable	A	B

Figure 97. FDA 2x00 FC – FDA 1x00 FC extension data cabling diagram

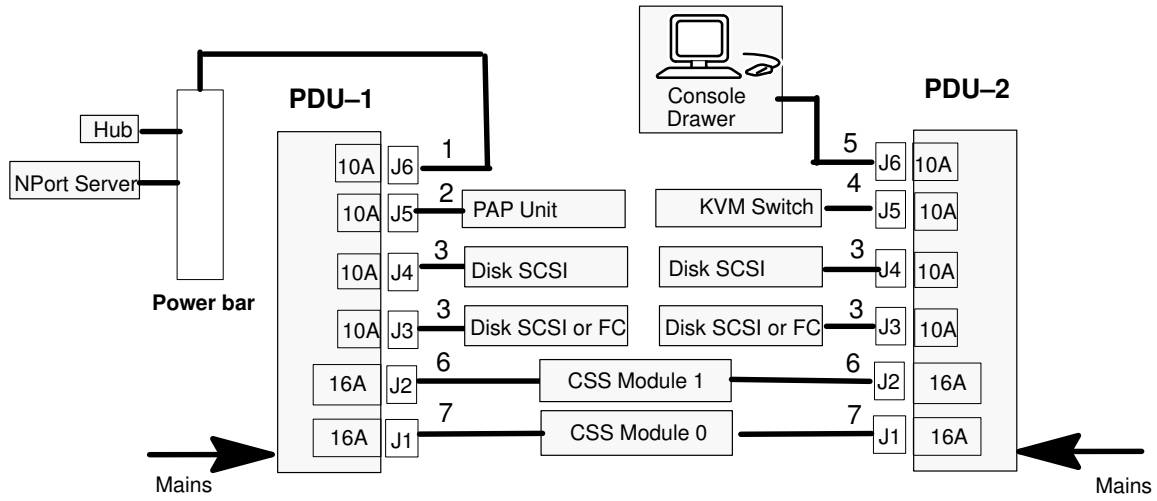
Power Cabling Diagram

Internal Disk configuration



Mark	Cable Type	From	To
1	Power cable	Console	PDU-1 J4
2	Power cable	KVM switch	PDU-1 J3
3	Power cable	Hub	PDU-2 J5
4	Power cable	NPort server	PDU-2 J4
5	Power cable	PAP Pwr	PDU-2 J3
6	Power cable	CSS Module 1	PDU-1 & 2 J2
7	Power cable	CSS Module 0	PDU-1 & 2 J1

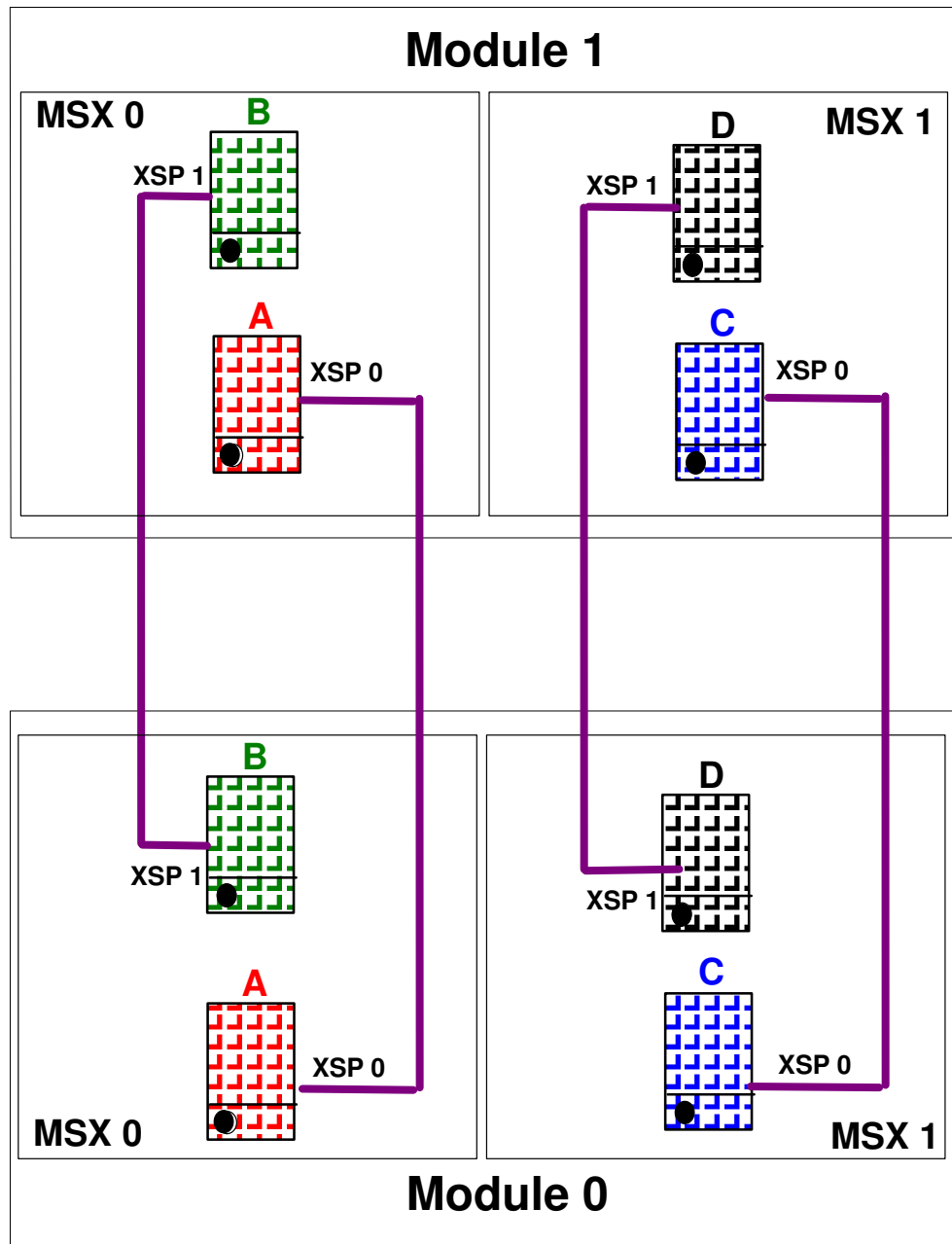
SCSI or FC Disk configuration



Mark	Cable Type	From	To
1	Power cable	Power bar (Hub, NPort server)	PDU-1 J6
2	Power cable	PAP Pwr	PDU-1 J5
3	Power cable	S/S disk (SCSI or FC)	PDU-1 & 2 J3, J4
4	Power cable	KVM switch	PDU J5
5	Power cable	Console drawer	PDU-2 J6
6	Power cable	CSS Module 1	PDU-1 & 2 J2
7	Power cable	CSS Module 0	PDU-1 & 2 J1

Figure 98. NovaScale 5165 Server / NovaScale 6165 Server power cabling diagram

XSP Cables



Mark	Cable Type	From	To
A	XSP cable	Module 0 (MSX 0 XSP 0)	Module 1 (MSX 0 XSP 0)
B	XSP cable	Module 0 (MSX 0 XSP 1)	Module 1 (MSX 0 XSP 0)
C	XSP cable	Module 0 (MSX 1 XSP 0)	Module 1 (MSX 1 XSP 0)
D	XSP cable	Module 0 (MSX 1 XSP 1)	Module 1 (MSX 1 XSP 1)

Figure 99. XSP data cabling diagram (module interconnection)

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