Split Backplane Configurations

Setup Instructions for Sun Fire™ V880 Server

Note – This document is intended for use by authorized Sun service providers, and the procedures described in this document should be performed only by authorized Sun service providers.

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Split Backplane Configurations

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Two new backplane configurations are available for Sun Fire V880 servers that are equipped with both a base backplane and an expansion backplane:

- Split backplane single-loop configuration
- Split backplane dual-loop configuration

The new configurations provide customers with enhanced hardware redundancy and data availability. See "About the Split Backplane Configurations" on page 2 for a description of the new configurations.

This document includes the following sections, which provide the setup instructions for the new configurations and useful reference information:

Related Documentation

You will need the following documents to complete the setup procedures:

- *Sun Fire 880 Server Service Manual* (part number 806-6597)
- *Sun Fire 880 Server Owner's Guide* (part number 806-6592)

About the Split Backplane Configurations

The procedures in this document enable you to set up the new split backplane configurations for Sun Fire V880 servers that are equipped with both a base backplane and an expansion backplane. Before you perform the procedures:

- Verify that the prerequisite firmware patches have been installed. See "Firmware Patches Required" on page 3.
- Check that you have the correct network adapters and data cables. See "Hardware Parts Required" on page 3.

Following are brief descriptions of the new configurations:

- **Split backplane single-loop configuration.** In this configuration, one PCI Dual Fibre Channel Network Adapter+ connects to and controls Loop A of the expansion backplane while the on-board controller manages Loop A of the base backplane. This single-loop configuration forms two 6-disk arrays and enables each backplane to control and maintain the integrity of its own FC-AL loop configuration.

- **Split backplane dual-loop configuration.** In this configuration, three PCI Dual Fibre Channel Network Adapters+ provide an independent dual-loop capability for each backplane. The dual-loop configuration provides FC-AL controller redundancy for each backplane:

  - **Base backplane.** One PCI Dual Fibre Channel Network Adapter+ connects to and controls Loop B of the base backplane. With the on-board controller managing FC-AL operations on Loop A, the network adapter provides a dual-loop capability for the base backplane.

  - **Expansion backplane.** Two PCI Dual Fibre Channel Network Adapters+ connect to the expansion backplane. One network adapter connects to Loop A, and the second network adapter connects to Loop B, providing a dual-loop capability for the expansion backplane.

Firmware Patches Required

Before the Solaris operating environment can recognize the split backplane configurations, the following patches must be installed to upgrade the Sun Fire V880 server fibre channel backplane firmware:

- For systems running the Solaris 8 operating environment, install Patch 111474-07 or later.
- For systems running the Solaris 9 operating environment, install Patch 113312-02 or later.

The minimum OpenBoot[TM] firmware level is version 4.7.5. The recommended OpenBoot firmware level is version 4.10.8 (patch ID 112186-10) or later.

These patches are available on the SunSolve[SM] web site:
http://sunsolve.sun.com

Hardware Parts Required

To set up the split backplane configurations, you need PCI Dual Fibre Channel Network Adapters+ and fibre channel cables in the quantities shown in the following table.

Configuration	Part Name	Quantity	Part Number	
			Service	Marketing
Split backplane single-loop	PCI Dual Fibre Channel Network Adapter+	1	375-3030	X6727A
	FC-AL data cable	1	530-3056	X6755A
Split backplane dual-loop	PCI Dual Fibre Channel Network Adapter+	3	375-3030	X6727A
	FC-AL data cable	3	530-3056	X6755A

How to Set Up the Split Backplane Single-Loop Configuration

Before You Begin

Before you begin to set up the split backplane single-loop configuration, verify that the fibre channel backplane firmware has been upgraded with the appropriate software patch cited in "Firmware Patches Required" on page 3. If the firmware is not upgraded, install the appropriate patch as instructed in the README document for the patch. Both the patch and the README document are available on the SunSolve web site.

The following procedure is based on the assumption that the expansion backplane is already installed. If you need to install the expansion backplane, see the *Sun Fire 880 Server Service Manual* (part number 806-6597) for instructions.

What to Do

To set up the split backplane single-loop configuration, complete the following steps:

Caution – Printed circuit boards contain electronic components that are extremely sensitive to static electricity. Ordinary amounts of static from your clothes or the work environment can destroy components. Do not touch the components or any metal parts without taking proper antistatic precautions. When performing the setup instructions, place the network adapter board on an antistatic surface and use an antistatic wrist strap.

---

1. **Set the OpenBoot configuration variable** `auto-boot?` **to** `false`.

2. **Power off the server.**

3. **Remove the primary and secondary I/O fan tray assemblies.**

   See the *Sun Fire 880 Server Service Manual* for instructions.

4. **Disconnect the following cables (if installed) from the expansion backplane and the base backplane:**

   For cable connector locations, see "Reference for Connector Locations" on page 19.

a. Base/expansion cable from both base and expansion backplanes connectors J0801.

b. FC-AL data cable from base backplane connectors J01103 and J01102, and from expansion backplane connectors J01101 and J01100.

c. FC-AL data cable from expansion backplane connectors J0201 and J0200, and from base backplane connectors J0501 and J0500.

5. **Choose a slot for the PCI Dual Fibre Channel Network Adapter+.**

For higher throughput, select one of the 66-MHz slots (PCI slot 7 or 8). See .

6. **Install the PCI Dual Fibre Channel Network Adapter+.**

See the *Sun Fire 880 Server Service Manual* for PCI card installation instructions.

The network adapter contains two external optical transceiver connectors, located on the spine of the adapter. Pull the dust cover from each external connector before you install the adapter.

After you install the network adapter, replace the dust cover on the Port 1 connector. In this configuration, Port 1 of the network adapter cannot be used to connect to external devices. Use only Port 2 to connect to external devices.

7. **Connect the new FC-AL data cable (P3 and P4) to connectors J3 (P3) and J4 (P4) on the PCI Dual Fibre Channel Network Adapter+ and to expansion backplane connectors (C) J0200 and (D) J0201.**

Note – Route the FC-AL data cable under the I/O fan tray assembly brackets and along the floor of the I/O compartment. Use tie-wraps to secure the FC-AL data cable to the tie-wrap notches on the I/O compartment floor.

---

8. **Install the primary and secondary I/O fan tray assemblies and check that the FC-AL data cable does not interfere with the fans. If necessary, use tie-wraps to attach the cable to the internal wall near the backplanes.**

Caution – Be sure that the cable plug you removed from connector J0801 does not interfere with the fans. You can use the cable fasteners on the internal wall near the expansion backplane to bundle the cable plug with the cables routed along the internal wall.

Caution – Before you power on the system, be sure that the front and side doors and all plastic outer panels are properly installed.

---

9. **Power on the system and access the** `ok` **prompt.**

   See "How to Initiate a Reconfiguration Boot" in the *Sun Fire 880 Server Owner's Guide*.

10. **Verify that all disks and network adapters are recognized by the OpenBoot PROM. At the** `ok` **prompt, type the** `probe-scsi-all` **command.**

```
ok probe-scsi-all
/pci@9,600000/pci@1/SUNW,qlc@5


/pci@9,600000/pci@1/SUNW,qlc@4
LiD HA LUN  --- Port WWN ---  ----- Disk description -----
 2   2   0  21000004cfce7fa0  SEAGATE ST336752FSUN36G 0408
 6   6   0  5080020000197549  SUNW    SUNWGS INT FCBPL922A
 3   3   0  2100002037e758d3  SEAGATE ST336704FSUN36G 0726
 4   4   0  21000004cfce7fca  SEAGATE ST336752FSUN36G 0408
 5   5   0  21000004cfce7fc4  SEAGATE ST336752FSUN36G 0408
 0   0   0  21000004cfce7fc8  SEAGATE ST336752FSUN36G 0408
 1   1   0  21000004cfce7fd5  SEAGATE ST336752FSUN36G 0408


/pci@8,600000/SUNW,qlc@2
LiD HA LUN  --- Port WWN ---  ----- Disk description -----
 0   0   0  21000004cfce8257  SEAGATE ST336752FSUN36G 0408
 1   1   0  21000004cfce7fd3  SEAGATE ST336752FSUN36G 0408
 2   2   0  21000004cf837f8d  SEAGATE ST336605FSUN36G 0438
 6   6   0  5080020000197379  SUNW    SUNWGS INT FCBPL922A
 3   3   0  21000004cfce7fb7  SEAGATE ST336752FSUN36G 0408
 4   4   0  2100002037b3f76c  SEAGATE ST336704FSUN36G 0726
 5   5   0  2100002037e7efec  SEAGATE ST336704FSUN36G 0726


/pci@8,700000/scsi@1
Target 6
  Unit 0   Removable Read Only device    TOSHIBA DVD-ROM SD-
M14011009
```

11. **Perform a reconfiguration boot of the Solaris software. At the** ok **prompt, type the** boot -r **command.**

```
ok boot -r
```

12. **Verify that Solaris recognizes both the base and expansion backplanes. At the Solaris prompt, type the** luxadm probe **command.**

```
# luxadm probe

Found Enclosure(s):

SUNWGS INT FCBPL   Name:FCloop   Node WWN:508002000017c4d8
Logical Path:/dev/es/ses0

SUNWGS INT FCBPL   Name:FCloop   Node WWN:50800200001cb798
Logical Path:/dev/es/ses2
```

The luxadm probe command displays the enclosure name, World Wide Number, and logical path name for each FC-AL backplane. Notice that the display shows the same enclosure name (FCloop in the example) for both backplanes. Also note the logical path name of each device. You need this information to perform Step 13.

13. **Change the enclosure name of one of the FC-AL backplanes. Type the** luxadm enclosure_name **command.**

Each backplane must have a unique enclosure name. Use the luxadm enclosure_name command to assign a unique name by changing one of the enclosure names as shown in the following example.

To change the enclosure name, assign the new name (FCloop2 in the example) and enter the path name (/dev/es/ses2 in the example) of the appropriate backplane. You obtained the path name from the luxadm probe command output shown in Step 12.

```
# luxadm enclosure_name FCloop2 /dev/es/ses2
```

Note – There is no output from the luxadm enclosure_name command.

---

14. **Verify that the Solaris software recognizes the correct enclosure name for each backplane. Type the** `luxadm probe` **command.**

    Notice that the output example now shows a unique name (`FCloop` and `FCloop2` in the example) for each backplane.

    ```
    # luxadm probe

    Found Enclosure(s):

    SUNWGS INT FCBPL    Name:FCloop    Node WWN:508002000017c4d8
    Logical Path:/dev/es/ses0

    SUNWGS INT FCBPL    Name:FCloop2    Node WWN:50800200001cb798
    Logical Path:/dev/es/ses2
    ```

15. **Verify that the Solaris software recognizes all disks attached to each backplane. Type the** `luxadm display` **command and specify the enclosure name for each backplane.**

    In the following example, the base backplane (`FCloop` in the example) has six attached disks in slots 0 - 5.

    ```
    # luxadm display FCloop

    SUNWGS INT FCBPL

    DISK STATUS

    SLOT   DISKS             (Node WWN)

    0       On (O.K.)          20000004cf627ba1

    1       On (O.K.)          20000004cf620dc0

    2       On (O.K.)          20000020372aef55

    3       On (O.K.)          20000004cf620a05

    4       On (O.K.)          20000020372af169

    5       On (O.K.)          20000004cf620c63

    6       On (Login failed)

    7       On (Login failed)

    8       On (Login failed)

    9       On (Login failed)

    10      On (Login failed)

    11      On (Login failed)

    SUBSYSTEM STATUS

    FW Revision:922A    Box ID:0
    ```

```
Node WWN:508002000017c4d8   Enclosure Name:FCloop
SSC100's - 0=Base Bkpln, 1=Base LoopB, 2=Exp Bkpln, 3=Exp LoopB
    SSC100 #0:    O.K.(922A/ 8D3C)
    SSC100 #1:    O.K.(922A/ 8D3C)
    SSC100 #2:    Not Installed
    SSC100 #3:    Not Installed
          Temperature Sensors - 0 Base, 1 Expansion
          0:22ºC
              1Not Installed
Backplanes - A=Base, B=Expansion
        A: O.K.
        B: Not Installed
Default Language is USA English, ASCII
```

The following example shows the luxadm display output for the expansion
backplane (FCloop2 in the example).

```
# luxadm display FCloop2
SUNWGS INT FCBPL
DISK STATUS
SLOT   DISKS             (Node WWN)
0      Not Installed
1      Not Installed
2      Not Installed
3      Not Installed
4      Not Installed
5      Not Installed
6      On (O.K.)         20000004cf4cfd9b
7      On (O.K.)         200000203790f8d0
8      On (O.K.)         200000203790f8bb
9      On (O.K.)         20000004cf6206a8
10     On (O.K.)         2000002037e34cd1
11     On (O.K.)         20000004cf620859
```

```
SUBSYSTEM STATUS

FW Revision:922A    Box ID:0

Node WWN:50800200001cb798   Enclosure Name:FCloop2

SSC100's - 0=Base Bkpln, 1=Base LoopB, 2=Exp Bkpln, 3=Exp LoopB

    SSC100 #0:    Not Installed

    SSC100 #1:    Not Installed

    SSC100 #2:    O.K.(922A/ 8D3C)

    SSC100 #3:    O.K.(922A/ 8D3C)

          Temperature Sensors - 0 Base, 1 Expansion

          0:23ºC

               1Not Installed

Backplanes - A=Base, B=Expansion

        A: Not Installed

        B: O.K.

Default Language is USA English, ASCII
```

How to Set Up the Split Backplane Dual-Loop Configuration

Before You Begin

Before you begin to set up the split backplane dual-loop configuration, verify that the fibre channel backplane firmware has been upgraded with the appropriate software patch cited in "Firmware Patches Required" on page 3. If the firmware is not upgraded, install the appropriate patch as instructed in the README document for the patch. Both the patch and the README document are available on the SunSolve web site.

The following procedure is based on the assumption that the expansion backplane is already installed. If you need to install the expansion backplane, see the *Sun Fire 880 Server Service Manual* (part number 806-6597) for instructions.

What to Do

To set up the split backplane dual-loop configuration, complete the following steps:

⚠️ **Caution –** Printed circuit boards contain electronic components that are extremely sensitive to static electricity. Ordinary amounts of static from your clothes or the work environment can destroy components. Do not touch the components or any metal parts without taking proper antistatic precautions. When performing the setup instructions, place the network adapter boards on an antistatic surface and use an antistatic wrist strap.

1. **Set the OpenBoot configuration variable** `auto-boot?` **to** `false`**.**

2. **Power off the server.**

3. **Remove the primary and secondary I/O fan tray assemblies.**

   See the *Sun Fire 880 Server Service Manual* for instructions.

4. **Disconnect the following cables (if installed) from the expansion backplane and the base backplane:**

   For cable connector locations, see "Reference for Connector Locations" on page 19.

   a. **Base/expansion cable from base and expansion backplane connector J0801.**

   b. **FC-AL data cable (Loop B) from base backplane connectors J01103 and J01102 and from expansion backplane connectors J01101 and J01100.**

   c. **FC-AL data cable (Loop A) from expansion backplane connectors J0201 and J0200 and from base backplane connectors J0501 and J0500.**

5. **Choose the slots for the PCI Dual Fibre Channel Network Adapters+.**

   For easy cable routing, plan to install two of the PCI Dual Fibre Channel Network Adapters+ in any two of PCI slots 0 - 6 and the other network adapter in PCI slot 7 or 8. Installing the network adapters in these slots enables you to route all three cables along the floor of the I/O compartment. See "Reference for PCI Slot Locations" on page 21.

6. **Install the three PCI Dual Fibre Channel Network Adapters+.**

   See the *Sun Fire 880 Server Service Manual* for PCI card installation instructions.

   The network adapter contains two external optical transceiver connectors, located on the spine of the adapter. Pull the dust cover from each external connector before you install the adapters.

   After you install the network adapters, replace the dust covers on the Port 1 connectors. In this configuration, Port 1 of the network adapters cannot be used to connect to external devices. Use only Port 2 to connect to external devices.

7. **Connect the three new FC-AL data cables as follows:**

   a. **For one of the PCI Dual Fibre Channel Network Adapters+ in one of the slots 0 to 6, connect a new FC-AL data cable (P3 and P4) from network adapter connectors J3 (P3) and J4 (P4) to expansion backplane connectors (C) J0200 and (D) J0201.**

   b. **For the other PCI Dual Fibre Channel Network Adapter+ in one of the slots 0 to 6, connect a new FC-AL data cable (P3 and P4) from network adapter connectors J3 (P3) and J4 (P4) to expansion backplane connectors (C) J01100 and (D) J01101.**

   c. **For the PCI Dual Fibre Channel Network Adapter+ in slot 7 or 8, connect a new FC-AL data cable (P3 and P4) from network adapter connectors J3 (P3) and J4 (P4) to base backplane connectors (C) J01100 and (D) J01101.**

Note – Route the FC-AL data cables under the I/O fan tray assembly brackets and along the floor of the I/O compartment. Use tie-wraps to secure the FC-AL cables to the tie-wrap notches on the I/O compartment floor.

Note – If you install Loop B, you must also install Loop A or the backplanes will not initialize.

8. **Install the primary and secondary I/O fan tray assemblies and check that the FC-AL cables do not interfere with the fan. If necessary, use tie-wraps to attach the cables to the internal wall near the FC-AL backplanes.**

Caution – Be sure that the cable plug you removed from connector J0801 does not interfere with the fans. You can use the cable fasteners on the internal wall near the expansion backplane to bundle the cable plug with the cables routed along the internal wall.

Caution – Before you power on the system, be sure that the front and side doors and all plastic outer panels are properly installed.

9. **Power on the system and access the** `ok` **prompt.**

   See "How to Initiate a Reconfiguration Boot" in the *Sun Fire 880 Server Owner's Guide*.

10. **Verify that all disks and network adapters are recognized by the OpenBoot PROM. At the** `ok` **prompt, type the** `probe-scsi-all` **command.**

```
ok probe-scsi-all
/pci@9,600000/pci@1/SUNW,qlc@5


/pci@9,600000/pci@1/SUNW,qlc@4

LiD HA LUN   --- Port WWN ---   ----- Disk description -----
 2   2   0   21000004cfce7fa0   SEAGATE ST336752FSUN36G 0408
 6   6   0   5080020000197549   SUNW    SUNWGS INT FCBPL922A
 3   3   0   2100002037e758d3   SEAGATE ST336704FSUN36G 0726
 4   4   0   21000004cfce7fca   SEAGATE ST336752FSUN36G 0408
 5   5   0   21000004cfce7fc4   SEAGATE ST336752FSUN36G 0408
 0   0   0   21000004cfce7fc8   SEAGATE ST336752FSUN36G 0408
 1   1   0   21000004cfce7fd5   SEAGATE ST336752FSUN36G 0408


/pci@8,600000/SUNW,qlc@2

LiD HA LUN   --- Port WWN ---   ----- Disk description -----
 0   0   0   21000004cfce8257   SEAGATE ST336752FSUN36G 0408
 1   1   0   21000004cfce7fd3   SEAGATE ST336752FSUN36G 0408
 2   2   0   21000004cf837f8d   SEAGATE ST336605FSUN36G 0438
 6   6   0   5080020000197379   SUNW    SUNWGS INT FCBPL922A
 3   3   0   21000004cfce7fb7   SEAGATE ST336752FSUN36G 0408
 4   4   0   2100002037b3f76c   SEAGATE ST336704FSUN36G 0726
 5   5   0   2100002037e7efec   SEAGATE ST336704FSUN36G 0726


/pci@8,700000/scsi@1

Target 6

  Unit 0   Removable Read Only device   TOSHIBA DVD-ROM SD-
M14011009


/pci@8,700000/pci@5/SUNW,qlc@5
```

```
/pci@8,700000/pci@5/SUNW,qlc@4

LiD HA LUN  --- Port WWN ---  ----- Disk description -----
 1  1  0   22000004cfce7fd5  SEAGATE ST336752FSUN36G 0408
 0  0  0   22000004cfce7fc8  SEAGATE ST336752FSUN36G 0408
 2  2  0   22000004cfce7fa0  SEAGATE ST336752FSUN36G 0408
 6  6  0   508002000019754a  SUNW    SUNWGS INT FCBPL922A
 3  3  0   2200002037e758d3  SEAGATE ST336704FSUN36G 0726
 4  4  0   22000004cfce7fca  SEAGATE ST336752FSUN36G 0408
 5  5  0   22000004cfce7fc4  SEAGATE ST336752FSUN36G 0408


/pci@8,700000/pci@4/SUNW,qlc@5


/pci@8,700000/pci@4/SUNW,qlc@4

LiD HA LUN  --- Port WWN ---  ----- Disk description -----
 1  1  0   22000004cfce7fd3  SEAGATE ST336752FSUN36G 0408
 0  0  0   22000004cfce8257  SEAGATE ST336752FSUN36G 0408
 2  2  0   22000004cf837f8d  SEAGATE ST336605FSUN36G 0438
 6  6  0   508002000019737a  SUNW    SUNWGS INT FCBPL922A
 3  3  0   22000004cfce7fb7  SEAGATE ST336752FSUN36G 0408
 4  4  0   2200002037b3f76c  SEAGATE ST336704FSUN36G 0726
 5  5  0   2200002037e7efec  SEAGATE ST336704FSUN36G 0726
```

11. **Perform a reconfiguration boot of the Solaris software. At the** ok **prompt, type the**
    boot -r **command.**

```
ok boot -r
```

12. **Verify that the Solaris software recognizes both the base and expansion backplanes. At the Solaris prompt, type the** `luxadm probe` **command.**

```
# luxadm probe

Found Enclosure(s):

SUNWGS INT FCBPL   Name:FCloop        Node WWN:5080020000197378

  Logical Path:/dev/es/ses0

  Logical Path:/dev/es/ses1

SUNWGS INT FCBPL   Name:FCloop        Node WWN:5080020000197548

  Logical Path:/dev/es/ses2

  Logical Path:/dev/es/ses3
```

The `luxadm probe` command displays the enclosure name, World Wide Number, and logical path name for each FC-AL backplane. Notice that the display shows the same enclosure name (`FCloop` in the example) for both backplanes. Also note the logical path name of each device. You need this information to perform Step 13.

13. **Change the enclosure name of one of the FC-AL backplanes. Type the** `luxadm enclosure_name` **command.**

Each backplane must have a unique enclosure name. Use the `luxadm enclosure_name` command to assign a unique name by changing one of the enclosure names as shown in the following example.

To change the enclosure name, assign the new name (`FCloop2` in the example) and enter the path name (`/dev/es/ses2` in the example) of the appropriate backplane. You obtained the path name from the output from the `luxadm probe` command shown in Step 12. You can enter either of the path names (`/dev/es/ses2` or `/dev/es/ses3`) shown in Step 12.

```
# luxadm enclosure_name FCloop2 /dev/es/ses2
```

Note – There is no output from the `luxadm enclosure_name` command.

14. **Verify that the Solaris software recognizes the correct enclosure name for each backplane. Type the** `luxadm probe` **command.**

    Notice that the output example now shows a unique name (`FCloop` and `FCloop2` in the example) for each backplane.

```
# luxadm probe

Found Enclosure(s):

SUNWGS INT FCBPL    Name:FCloop         Node WWN:5080020000197378

  Logical Path:/dev/es/ses0

  Logical Path:/dev/es/ses1

SUNWGS INT FCBPL    Name:FCloop2        Node WWN:5080020000197548

  Logical Path:/dev/es/ses2

  Logical Path:/dev/es/ses3
```

15. **Verify that the Solaris software recognizes all disks attached to each backplane. Type the** `luxadm display` **command and specify the enclosure name for each backplane.**

    In the following example, the base backplane (`FCloop` in the example) has six attached disks in slots 0 - 5.

```
# luxadm display FCloop

SUNWGS INT FCBPL

DISK STATUS

SLOT    DISKS               (Node WWN)

0       On (O.K.)           20000004cfce8257

1       On (O.K.)           20000004cfce7fd3

2       On (O.K.)           20000004cf837f8d

3       On (O.K.)           20000004cfce7fb7

4       On (O.K.)           2000002037b3f76c

5       On (O.K.)           2000002037e7efec

6       On (Login failed)

7       On (Login failed)

8       On (Login failed)

9       On (Login failed)

10      On (Login failed)
```

```
11      On (Login failed)
SUBSYSTEM STATUS
FW Revision:922A   Box ID:0
Node WWN:5080020000197378   Enclosure Name:FCloop
SSC100's - 0=Base Bkpln, 1=Base LoopB, 2=Exp Bkpln, 3=Exp LoopB
    SSC100 #0:    O.K.(922A/ 8D3C)
    SSC100 #1:    O.K.(922A/ 8D3C)
    SSC100 #2:    Not Installed
    SSC100 #3:    Not Installed
        Temperature Sensors - 0 Base, 1 Expansion
          0:22°C
                1Not Installed
Backplanes - A=Base, B=Expansion
        A: O.K.
        B: Not Installed
Default Language is USA English, ASCII
```

The following example shows the luxadm display output for the expansion backplane (FCloop2 in the example).

```
# luxadm display FCloop2
SUNWGS INT FCBPL
DISK STATUS
SLOT   DISKS             (Node WWN)
0      Not Installed
1      Not Installed
2      Not Installed
3      Not Installed
4      Not Installed
5      Not Installed
6      On (O.K.)         20000004cfce7fc8
7      On (O.K.)         20000004cfce7fd5
8      On (O.K.)         20000004cfce7fa0
```

```
9      On (O.K.)          2000002037e758d3

10     On (O.K.)          20000004cfce7fca

11     On (O.K.)          20000004cfce7fc4

SUBSYSTEM STATUS

FW Revision:922A   Box ID:0

Node WWN:5080020000197548   Enclosure Name:FCloop2

SSC100's - 0=Base Bkpln, 1=Base LoopB, 2=Exp Bkpln, 3=Exp LoopB

    SSC100 #0:    Not Installed

    SSC100 #1:    Not Installed

    SSC100 #2:    O.K.(922A/ 8D3C)

    SSC100 #3:    O.K.(922A/ 8D3C)

        Temperature Sensors - 0 Base, 1 Expansion

          0:24°C

                1Not Installed

Backplanes - A=Base, B=Expansion

        A: Not Installed

        B: O.K.

Default Language is USA English, ASCII
```
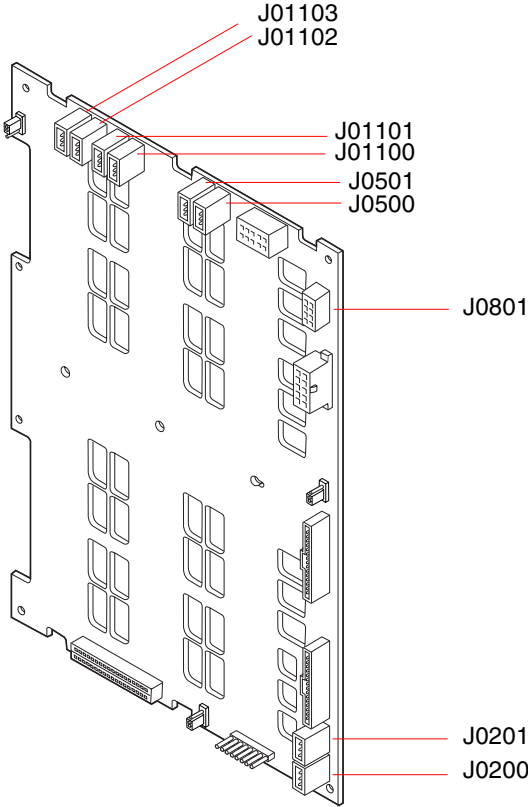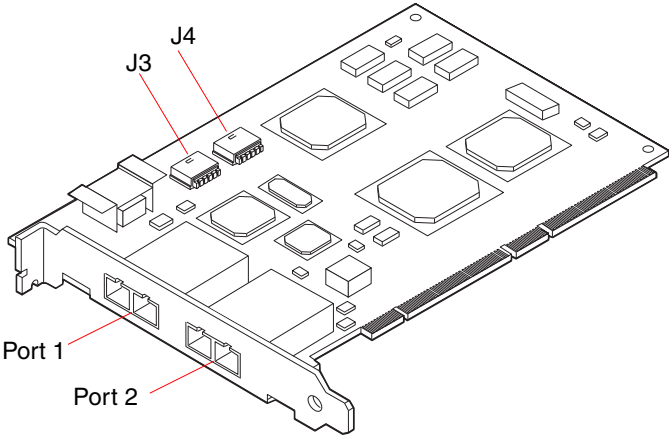
Reference for Connector Locations

The locations of the connectors on the base and expansion backplanes are shown in the following figure.

J01103
J01102

J01101
J01100
J0501
J0500

J0801

J0201
J0200

The locations of the connectors on the PCI Dual Fibre Channel Network Adapter+ are shown in the following figure.

Reference for PCI Slot Locations

The locations and characteristics of the PCI slots are shown in the following figure.

Slot 8 – 33/66MHz, 3.3V
Slot 7 – 33/66MHz, 3.3V
Slot 6 – 33MHz, 5V
Slot 5 – 33MHz, 5V
Slot 4 – 33MHz, 5V
Slot 3 – 33MHz, 5V
Slot 2 – 33MHz, 5V
Slot 1 – 33MHz, 5V
Slot 0 – 33MHz, 5V