

Release Notes

CCPUIIe SPARCblade Solaris Driver Package for Iie-500 and Iii-650

Revision v1.2.3

Release Date: 2004 January 16

Note: While the package name CCPUIIe has been maintained for consistency with previous releases, this single package now supports the SPARCblade Iie-500 and Iii-650 CPU blades.

Features Added

Release v1.2.3r00

- Sample driver configuration files are now included for the fxp and gxp drivers (/kernel/drv/fxp.conf and /kernel/drv/gxp.conf). These can be used to change driver property values globally or for specific interfaces, affecting things such as disabling auto-negotiation and forcing speed/duplex settings.

Release v1.2.1r00

- The OBP firmware can now be upgraded via a Solaris utility in addition to the other upgrade method using a TFTP server. See the section OBP Upgrades below.
- The gxp driver is now supported, including VLAN support. See section Using Virtual LANs (VLANs) in the SPARCblade Iie-500/Iii-650 User's Guide.
- Solaris 9 support is introduced with this version of the driver package. Several CPCI I/O cards have been tested with this release on Solaris 9. Contact CCPUI for inquiries regarding specific cards.

Features Changed

Release v1.2.2r00

- Details of the CCPUIIe package installation are now logged to /var/sadm/pkg/CCPUIIe/log. Extraneous console output has been cleaned up.

Hardware/Software Dependencies

- Use of both gxp devices on the Iii-650 requires OBP version 4.6.2 or later.
- On the SPARCblade Iii-650, the OBP upgrade capability can be used to upgrade from any prior OBP versions including 3.10.X and 4.6.X. On the SPARCblade Iie-500, the OBP upgrade capability can only be used to upgrade from versions 3.10.X or 4.6.2 (or later); the flashprom driver will be unavailable if running with other OBP versions.
- We strongly recommend using Solaris 8 02/02 or later with the latest patch set. In particular, proper hot swap operation is dependent on having the following patches applied: Patch 108528-13 (or later) and Patch 112334-01 (or later).

Fixed Issues

Release v1.2.3r00

- Issues with the kernel threads created by the fxp and todmostek drivers have been corrected. Problems with these threads led to random system crashes.
- Incorrect STREAMS configurations associated with /dev/console on the SPARCblade Iii-650 are now detected and fixed. These could disrupt keyboard input on console when booting into single-user mode.
- The flashprom driver correctly restores PCI parity checking after failing to write to a hardware-protected flashprom device on the SPARCblade Iie-500.

Release v1.2.2r00

- Removal of the CCPUIIe package now cleans up “forceload” entries in /etc/system for the ccputrl and pci21554 drivers.
- Issue with gxp driver support for ndd requests has been resolved.

Release v1.2.1r00

- Issues between the CCPU Hotswap framework and CPCI cards which incorrectly leave the ENUM signal asserted have been resolved. Hotswap functionality will not work, but the cards will now be usable.
- Previous issues with the gxp driver have been resolved.
- Issues with multicast functionality for the fxp and gxp drivers have been resolved.
- The adm1024mon utility will now return valid temperature values on Iie-500 blades.

Release v1.2.0r00

- The fxp driver’s transmit/receive performance has been improved in scenarios when fragmentation of large packets occurs.

Known Issues

- The CCPU Hotswap framework is not supported on Solaris 9.
- When forcing gxp interface speeds via ‘ndd’, the corresponding switch port should be configured with the same speed and duplex.

OBP Upgrades

There is now a utility called ‘flashprom’ installed in /opt/CCPUIIe/bin. Command usage is:

```
flashprom [-b|-r <device>|-w <device>|-c <bank>][[-f <file>]]
-r <device> - dump specified flash device to file
-w <device> - load specified flash device from file
-c <device> - copy to specified flash device from other device
-b          - display flash jumper setting (JP2)
-y          - confirm "dangerous" operations
-f <file>   - specify filename for read/write/copy
<device> == 0 | 1 (0 == boot flash, 1 == user flash)
```

Like the “flash0” and “flash1” aliases within OBP, bank 0 refers to the Boot flash device and bank 1 refers to the other (User) flash device. The mapping from these logical devices to the physical flash devices on the SPARCblade is dependent on whether jumper JP2 is installed or not. The current jumper setting can be retrieved via ‘flashprom -b’.

The flashprom utility allows you to do a number of things with the contents of the two flash banks:

1. Retrieve flash contents and store in a file
Contents of Boot flash:
flashprom -r 0 -f /tmp/flash0.rom

Contents of User flash:
flashprom -r 1 -f /tmp/flash1.rom
2. Load flash contents from a file
Update User flash contents:
flashprom -w 1 -f /tmp/CCPUobp-v4.6.1r07.rom

Update Boot flash contents
flashprom -w 0 -y -f /tmp/CCPUobp-v4.6.1r07.rom
NOTE: Since this is loading the contents of the boot flash device, confirmation via the “-y” option is required.
3. Copy contents of one flash device to another
Copy Boot flash contents to User flash:
flashprom -c 1

Copy User flash contents to Boot flash:
flashprom -c 0 -y
NOTE: Since this is copying into the boot flash device, confirmation via the “-y” option is required.

NOTES:

1. On the SPARCblade Iie-500, writing to the Boot flash device also requires that jumper JP3 is installed.
2. On either SPARCblade, writing to flash devices will fail if the device or individual sectors are write-protected.

Safe Upgrade Procedure

1. Load the new OBP image into the user flash device:
flashprom -w 1 -f /tmp/CCPUobp-v4_6_2r00.rom
2. Shut down Solaris.
3. Adjust any NVRAM settings as desired. (see below)
4. Remove the SPARCblade and change the setting of jumper JP2 (remove it if previously installed, install it if previously removed).
5. Reinstall the SPARCblade. It should now boot with the new OBP version.
6. Boot Solaris and reconfigure devices:
ok boot -r

Live Upgrade Procedure

Use this procedure when you want to update OBP on a SPARCblade IiE-500 or Iii-650 from Solaris with only a reboot, not using a TFTP server.

1. Be sure you have installed the new CCPUIE driver package (v1.2.1 or later) and rebooted.
2. Load the new OBP image into the boot flash device:
flashprom -w 0 -y -f /tmp/CCPUobp-v4_6_2r00.rom
3. Shut down Solaris.
4. Reset the SPARCblade from the ok prompt:
ok reset-all
5. Adjust any NVRAM settings as desired. (see below)
6. The SPARCblade should reset and be running the new OBP version.
7. Boot Solaris and reconfigure devices:
ok boot -r

Adjusting NVRAM settings

There have been some changes in the need to adjust NVRAM settings. It is no longer necessary to set `pcid-probe-list` and `nvalias` depending on which transition card you are using. However, you might still wish to customize the settings of `boot-device` and `auto-boot?`. If you customized these settings previously, you should probably make the same changes when you upgrade.