

November 7, 2001

Fibre Channel Update: Fibre Channel Boot supported in many pSeries/RS/6000 environments.

We are pleased to communicate today that Fibre Channel boot capability is available for selected pSeries and RS/6000 systems. The following Q&A describes this capability in more detail.

Q: What are the prerequisites for this capability?

A: The following are the prerequisites for enabling Fibre Channel Boot:

- A supported pSeries or RS/6000 system with the correct firmware level
- FC 6227 or FC 6228 at the correct microcode level (note: FC 6227 was announced as withdrawn September 4, effective December 3)
- AIX 4.3.3 or AIX 5.1 at September 2001 maintenance level or above
- For the SP, PSSP must be at 3.2 with APAR IY22732 (included in PSSP 3.2 PTF 14). Targeted availability: November 30
- A tested disk subsystem

There is no additional charge for this function.

Q: Which RS/6000 or pSeries systems are supported?

A: The following systems are supported for Fibre Channel boot with the appropriate firmware:

- RS/6000 models 170, 270, H70, F80, H80, M80, S80
- RS/6000 SP PCI nodes FC #2050, #2051, #2052, #2053, #2054 with #2055, #2056, #2057, #2058 with #2055
- pSeries 610 models 6C1, 6E1
- pSeries 620 models 6F1, 6F0
- pSeries 640
- pSeries 660 models 6H1, 6H0, 6M1
- pSeries 680
- pSeries 690 (see following Q&A)

Q: What is the target date for availability?

A: Fibre Channel boot will be supported for a given customer installation at the time the prerequisites listed above are in place for that installation. An exception to this statement is the pSeries 690. The target for completion of testing on the pSeries 690 is 1Q02.

Q: When will the proper firmware levels for the supported systems be available?

Fibre Channel Update Market Bulletin: November 7, 2001

A: New systems shipping after November 30, 2001 will ship with the required level of firmware installed.

Customers with systems that shipped prior to that date should download the required level of firmware from the following site:

<http://www.rs6000.ibm.com/support/micro/download.html>

After November 30, the latest level of firmware at this site should support boot for all systems that support boot.

Q: What are the required levels of adapter microcode to enable Fibre Channel boot?

A: For FC 6227, the required level is 3.22A1 or later.

For FC 6228, the required level is 3.82A1 or later.

Adapters shipping in new systems after November 30, 2001 will have these levels of firmware. MES orders should continue to be checked to verify that they have the right level of microcode.

Customers with existing adapters can download the required level of microcode from the following site.

<http://www.rs6000.ibm.com/support/micro/download.html#adapter>

The microcode is targeted to be available at this site by November 30, 2001. These levels of microcode should be installed by all customers, not just those requiring Fibre Channel boot.

Q: What are the installation mechanisms PSSP supports for Boot-install from Fibre Channel Storage Area Networks (SAN) DASD?

A: PSSP can be directed to Boot-install RS/6000 SP PCI nodes from:

- SAN_DISKID which is derived from the WWPN and LUN id (Preferred mechanism)
- PVID
- HDISK

Q: What are the disk configurations RS/6000 SP supports for Boot-install from Fibre Channel Storage Area Networks (SAN) DASD?

A: The SAN DASD LUN's can be configured for RS/6000 SP PCI nodes to be:

- Mirrored Volume

- Alternate Volume
- Individual Volume

Fibre Channel LUN's, SSA LUN's and SCSI LUN's can coexist.

Q: Which disk subsystems are tested?

A: 2105-E/F10/20, Enterprise Storage Server (ESS), at microcode level SINT0831a (1.3.3.41) or later, is supported for Fibre Channel boot. SDD (Subsystem Device Driver) is not currently supported in conjunction with boot. The Fibre Channel connection to ESS must utilize native Fibre Channel attachment features (3021, 3022, or 3023); attachment via feature 3020 or the SAN Data Gateway (2108-G07) is not supported for boot.

The FAStT500 Storage Server, announced on October 30 and available on November 30, is currently not supported for boot when attached to RS/6000 or pSeries. This capability is targeted for 2H02.

The Customer Service Agreement (CSA) with EMC applies to Fibre Channel boot with all 3000, 5000, and 8000 model Symmetrix systems when the CSA applies to the attachment to the pSeries or RS/6000 in question, and when the system supports boot. PowerPath cannot currently be used in conjunction with boot.

It should be noted that the CSA with EMC does NOT apply to boot via Fibre Channel Interface for AIX, EMC's adapter and driver.

Q: Can Fibre Channel Boot be implemented if the disk subsystem is Fibre Channel switch attached?

A: Yes. All switches and/or Fibre Channel Directors to which the ESS systems can be attached are supported for Fibre Channel boot. These switches are:

2109-S08/16
2109-F16
2031-016
2031-032
2032-001
2032-064
2042-001
2042-128

The CSA with EMC will apply to Fibre Channel boot with all 3000, 5000, and 8000 Series models when they are attached via the following switches (to a system which supports boot and to which the CSA with EMC otherwise applies to Symmetrix attachment):

2109-S08/16
2109-F16
2031-016
2031-032
2032-001
2032-064

In addition, the CSA with EMC will apply to Fibre Channel boot with all 3000, 5000, and 8000 Series models when they are attached via the Connectrix models analogous to these switches.

It should be noted that currently the CSA with EMC does NOT apply to Symmetrix attachment to the 2042-001 or 2042-128 switches. This statement applies to attachment itself, not just Fibre Channel boot.

Q: Is a longwave connection supported?

A: Yes. However, recall that only one longwave link is allowable in any path (independent of boot).

Q: Can the path to the boot device go through cascaded switches?

A: Yes. Previous communications about interswitch links also continue to obtain; namely, no more than three interswitch links per path.

Q: Can the path to the boot device contain links running at 2 Gbps?

A: Yes. Fibre Channel boot does not impose any 2 Gbps configuration restrictions.

Q: Can paging space be located in the above tested disk subsystems?

A: Yes.

Q: Can HACMP, RVSD, GPFS be implemented with Fibre Channel boot?

A: Yes. Fibre Channel boot is transparent to HACMP, RVSD, and GPFS.

Q: Will additional RS/6000 and pSeries systems be enabled to support Fibre Channel boot?

A: Over time, it is the target to provide this capability on all new systems going forward where Fibre Channel is supported. It is possible that the capability may not be available at system GA.

There should not be an expectation that any withdrawn systems will be added to the list of systems that support Fibre Channel boot.

Any questions about this notice should be directed to Tim Miller, eServer SAN Program Manager (512-838-3242, T/L 678, mtim@us.ibm.com), or Ray Hebert, pSeries I/O Product Marketing Manager (512-838-2008, T/L 678, prh@us.ibm.com).

All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.