

Upgrading to S76000 and S86000 PMF CRUs

This procedure upgrades both PMF CRUs in an enclosure to S76000 or S86000 PMF CRUs.


- S7400, S7600, S72000, S74000, and S76000 PMF CRUs can be upgraded online.
- S7000 and S70000 PMF CRUs must be upgraded offline.

See [Change History](#) for changes made to this topic.

See PMF CRUs That Can be Upgraded Online and Coexist Permanently in Mixed Systems for upgrade information and coexistence information.

Note:

- Do not attempt to upgrade to unsupported configurations.
- IOMF 2 CRUs are needed to take advantage of ServerNet II.
- IOMF and IOMF 2 CRUs can coexist briefly in an enclosure for online upgrade. For performance reasons, both IOMF CRUs in an enclosure must be IOMF or IOMF 2 CRUs.

 **Caution:** Ask your service provider to verify the daughter board connectors on the PMF CRU are fully seated before installing the CRU. Instructions are in Technical Bulletin TB20051B. This affects S7800, S76000, S86000, S78000, and S88000.

Preparing for the Upgrade

1. a. Determine whether the processor enclosures have SEBs or MSEBs in slot 51 (for the X fabric) and slot 52 (for the Y fabric). Check enclosures group 01, group 02, group 03, group 04, group 05, group 06, group 07, and group 08.

b. If MSEBs are installed, determine whether the interconnecting cables between the MSEBs in slot 51 and slot 52 of these enclosures are ECL, serial-copper, or fiber-optic cables.

See NonStop S-Series Topologies for cabling information.

The SEBs in slot 51 and slot 52 must be upgraded to MSEBs, and the interconnecting ECL cables must be upgraded to serial-copper or fiber-optic cables before you install S76000 or S86000 PMF CRUs.

Perform this upgrade offline or by replacing the SEBs online on one fabric at a time. Before attempting an online upgrade, check that the system is running G06.16 (OSM software or TSM server T7945ABB and TSM client 2002B T8154ABB) or later. These product versions bring down the selected

SEB or MSEB and all SEBs or MSEBs that are cabled to it. On earlier versions of TSM, you must perform separate operations to bring down both ends of a link before replacing a cable.

To replace the SEBs on one fabric at a time, run a separate replacement procedure for each SEB to be replaced (you can use OSM replace actions or Replace SEB or MSEB guided procedures):

1. Start the procedure to replace one of the SEBs.
2. Run the procedure until you are prompted to Replace the SEB. Then start a new copy of the procedure for another of the SEBs, continuing up to the manual replace prompt.
3. Repeat Steps 1 and 2 until the procedures for all the SEBs to be replaced in one fabric display the manual replace message.
4. Physically remove all of the selected SEBs and ECL links, and install the MSEBs and new links.
5. Complete one procedure. Allow this copy of the procedure to complete before repeating for each of the other replacements.

Replace the SEBs and cables in the other fabric, using this procedure, after verifying that the newly installed MSEBs and links work properly.

The SEBs in slot 53 and slot 54 of all processor enclosures, the IOMF CRUs in I/O enclosures, and the SEB-to-IOMF CRU cables can remain the same.

- 2 If S7000 PMF CRUs are being upgraded to S76000 or S86000 PMF CRUs, a power shelf and two power supplies must be installed in each processor enclosure by a trained service provider. Contact your service provider for more details.
- 3 If you are upgrading from S7000 (NSR-W), you must change the processor type entry in the CONFTEXT file ALLPROCESSORS statement before you replace the PMF CRUs. Enter NSR-X (for S76000) or NSR-H (for S78000). You can specify only one processor type. S7000 cannot be in a system with mixed processor types.

After changing the CONFTEXT file, you must perform all required DSM/SCM requests to create a new SYSnn. System load of the new SYSnn is required after the new hardware is installed. Failure to change the processor type causes an immediate %100441 halt when the new SYSnn is loaded. See the appropriate G06.24 or later Release Version Update Compendium for migration and fallback details.

Required Tools and Documentation

For this upgrade procedure, you need:

- G06.nn Software Installation and Upgrade Guide (G06.16 or a later version).

- The appropriate OSM action or guided procedure for replacing PMF CRUs. See Guided Procedures for more information.

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You must perform these steps in exactly the order listed here, even if you have successfully performed previous upgrades by doing these steps in a different order.

- 1 Install the G06.16 SUT. For further instructions, see the G06.16 Software Installation and Upgrade Guide (or a later version). For those migrating from pre-G06.16 release version updates (RVUs), the guide also describes a step needed after the SUT is installed.
- 2 Update service processor firmware.
- 3 Update processor boot code.
- 4 Run the ZPHIRNM program.
- 5 Load the G06.16 RVU.
- 6 Update the SCSI boot code and perform post-load steps as needed.
- 7 Use the OSM Service Connection or the TSM Service Application to check for alarms and verify that the system is operating properly. Resolve any problems before you install new hardware.
- 8 Replace one PMF CRU by using the OSM action or guided replacement procedure.

When the procedure prompts you to physically replace the PMF CRU, a help button appears that allows you to access detailed instructions.



Caution: Verify the Gemini daughter boards are fully seated before installing the PMF CRUs. See Tech Bulletin TB20051B.

- 9 Verify that the PMF CRU is operational, and then immediately replace the other PMF CRU in the same enclosure by using another OSM action or guided replacement session.

Change History for Upgrading to S76000 and S86000 PMF CRUs

January 31, 2005

- **Changed**
 - Added caution to ensure PMF CRU daughter board connectors are fully seated before installing the CRUs. Instructions for service providers are in Tech Bulletin TB20051B.
 - Added step 3 to Preparing for the Upgrade, to change the processor code in the CONFTEXT file if you are upgrading from S7000. Failure to change the processor type halts the system when the new SYSnn is loaded.

June 07, 2004

- **Changed** Restructured notes and moved upgrade and configuration rules to new topic. Added link to new topic: [PMF CRUs That Can Be Upgraded Online and Coexist Permanently in Mixed Systems](#).

September 24, 2003

- **Changed** Revised to indicate that OSM actions can be used for removing and installing PMF CRUs and that the OSM Service Connection can be used to check for alarms. See [How OSM Replaces TSM and the Guided Procedures](#) for more information.
- **Changed** Removed reference to TIM. See [NTL Replaces TIM](#) for more information.

July 27, 2002

- **Changed** Added Note about TSM ServerNet Path Down alarms that occur when upgrading from S72000.
- **Changed** Added procedure for replacing SEBs and ECL cables online on one fabric at a time - requires G06.16 (TSM server software version T7945ABB and TSM client software version 2002B T8154ABB) or later.

May 24, 2002

- **New!** Added topic: [Upgrading to S76000 and S86000 PMF CRUs](#).