

intel® Technical Advisory

TA-0351-5

5200 NE Elam Young Parkway
Hillsboro, OR 97124

March 13, 2001

Intel® SC5000/SR2050 Server Platforms and Hard Drives Marked Off-Line.

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Products Affected

Product Combination	Product Code
SBT2 Server Board with SC5000 Chassis	SBT2, BBTBB, KHDHSRPU
STL2 Server Board with SC5000 Chassis	STL2, BTLBB, KHDHSU, KHDHSRPU
STL2 Server Board with SR2050 Chassis	STL2, BTLBB, KB2HST, KB2HSU

Note: The SR2100 chassis is not affected by this issue. It was included on previous revisions of this technical advisory due to the product launch delay. Production HSC v0.05 is present on all shipping SR2100 chassis.

Description

Intel has found that RAID controllers may simultaneously mark multiple drives as failed on the above listed platforms. Drives will not operate when marked as failed. This issue has been seen while running a disk stress test with various RAID controllers and Ultra 160 drives. The problem is potentially present in all HSC RAID configured applications, but it is believed that higher SCSI bus speeds aggravate the problem, i.e. Ultra 160 is at higher risk than Ultra 2.

Root Cause

The root of the problem is that the Hot Swap Controller (HSC) and Hot Swap Back Plane (HSBP) do not correctly capture and handle SCSI resets under intense SCSI bus activity.

Corrective Action

The STL2 and SBT2 server boards do not support the ability to do HSC firmware updates via downloads. Therefore, it is necessary to either obtain a replacement SC5000 SAF-TE card or a SR2050 HSBP with updated firmware, or to utilize a L440GX+ server board to perform the HSC firmware update to the SC5000 SAF-TE board or to the SR2050 HSBP. HSC update instructions are listed below.

Hot Swap Back Planes and SAF-TE cards will be flashed with the latest Hot Swap Controller firmware when production firmware is available. If this issue affects you, you may obtain a replacement SC5000 chassis SAF-TE card or a replacement SR2050 chassis Hot Swap Back Plane by contacting Intel using your normal warranty process. Please indicate that you are calling regarding TA# 0351-5, and have the following information when you call: the part number requested (new SAF-TE card for SC5000 will be A29101-402, new HSBP for SR2050 will be 750615-404).

Planned availability for SC5000 SAF-TE cards and SR2050 Hot Swap Back Planes through the warranty process is due to begin the week of April 2, 2001. You may obtain replacement hardware for 90 days from this date. Please do not call to obtain replacement hardware before this date.

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SC5000 / SR2050 Chassis STL2/SBT2 server board HSC firmware update instructions.

To perform the HSC firmware update using the L440GX+ server board:

1. Set up the L440GX+ server board for the HSC update by connecting the chassis front panel cable to the L440GX+ server board and the chassis front panel board. Connect the SCSI cable to the L440GX+ server board and the chassis hot swap back plane board. Connect the I2C cable to the front panel board and the chassis hot swap back plane board.

Note: The HSC firmware update will not complete if the I2C cable is not connected!

2. Extract the HSC firmware .zip file to a floppy diskette. Check to make sure that the floppy diskette contains the firmware update utility (fwupdate.exe) and the HSC firmware .hex file (filename.hex).
3. Make the floppy diskette bootable to DOS, or plan to boot to DOS from a hard drive.
4. Power on the L440GX+ server board and boot to DOS from the floppy diskette or a hard drive.
5. Change to the A: floppy drive. (type A: <Enter>)
6. At the A:\> DOS prompt, type the following: fwupdate filename.hex /upload <Enter>, where filename.hex is the name of the particular .hex file you are updating. The HSC firmware update will begin.
7. When the HSC firmware update is complete, press any key to continue. The HSC firmware update is now complete.

A timeline is included below for the availability production candidate firmware for each affected platform. The dates below are subject to change if unexpected issues are found during evaluation and stress testing.

<u>Platform</u>	<u>Production Candidate Available on support.intel.com</u>
STL2/SR2100	Production HSC v0.05 available now for download.
STL2/SR2050	Production HSC v0.05 available now for download.
SBT2/SC5000	On or before March 21, 2001 (PST)
STL2/SC5000	On or before March 21, 2001 (PST)

Please contact your Intel Sales Representative if you require more specific information about this issue.

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