



This Action Alert describes an issue which affects product functionality, reliability or safety

Intel Action Alert

AA-803-2

5200 NE Elam Young Parkway
Hillsboro, OR 97124

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Unexpected interaction between Intel® Server Manager software and memory interrogation software may cause loss of memory DIMM operation

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Products Affected

Product Code
All SKUs of Intel server boards and systems that use a mini-Baseboard Management Controller (mBMC)
Intel® Server Manager v5.x and v8.x and Intel® System Management Software v1.0

Description

Intel® server management software is bundled with Intel® server system and board products. This management software provides information to the user about the operational condition of the operating system and system hardware. The hardware monitoring includes such areas as voltage, temperature, fan rotational speed, and memory errors. Intel servers use an onboard device to provide hardware monitoring information. On some Intel server boards the device is a Winbond* (formerly manufactured by National Semiconductor*) PC87431 mini-Baseboard Management Controller (mBMC). Intel server boards that do not have a mBMC or server boards that have an Intel® Management Module installed are not subject to this Action Alert.

A variety of computer interrogation software utilities are available. They include freeware, shareware and purchased programs. The computer interrogation software is used to scan a computer and report on software and installed hardware configurations which may include memory discovery information.

Both Intel Server Manager v5.x and v8.x and Intel System Management Software v1.0 and the computer interrogation software utilities are accessing information about system hardware. Intel's management software is always available and runs under the operating system to regularly poll and monitor server health. When Intel management software is installed and when computer interrogation software is run on the same server system, a conflict occurs. In some cases, memory DIMMs have been damaged and no longer function properly. When the DIMM has failed, the server will not boot and a memory failure beep code is heard. No server board damage, attributed to this issue, has been seen to date.

Root Cause

Investigation has determined that the inoperable condition is caused by the DIMM Serial Presence Detect (SPD) information being corrupted. The SPD contains vital information about the DIMM such as size, data width and speed. The BIOS needs this information to correctly configure the server during Power On Self Test (POST). When the SPD information is no longer readable, the BIOS will stop the boot process and indicate a fatal system memory error.

Investigation has shown that, under some circumstances, the mBMC may incorrectly respond when another device such as a DIMM SPD is being addressed. In the case of the computer interrogation software initiating memory discovery, the mBMC incorrectly responds to that software and writes unintelligible information to the SPD. The condition is not limited to an interaction with other software such as Intel's management software but is exacerbated when other software is running.

Recommended Customer Action

Do not run, in concurrence, any system interrogation software which does memory discovery and Intel system manager software on a mBMC based Intel server system or board.

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

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