CUSTOMER ADVISORY

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EL040429_CW02   REVISION: 1
SYSTEM ROM UPDATE REQUIRED: Some ProLiant Servers With The HP
Advanced Memory Protection Feature May Intermittently Stop Responding And
Generate A Microsoft Blue Screen Exception Or Linux Kernel Panic

RELEASE DATE: 14 May 2004

DESCRIPTION
HP Engineering has discovered a timing issue between some higher speed processors and the system management ASIC on the system board. This timing issue could cause some multiprocessor ProLiant servers with HP Advanced Memory Protection feature support to intermittently stop responding and possibly generate a Microsoft blue screen exception with one of the following bug check STOP codes. The server must then be rebooted to recover.

- 0x000000d1 (0x0, 0x2, 0x0, 0x0) DRIVER_IRQL_NOT_LESS_OR_EQUAL

  Note: Although the bug check STOP code may vary, the above STOP code has been observed more frequently with this issue than the STOP codes below.

- 0x0000001e KMODE_EXCEPTION_NOT_HANDLED
- 0x0000000a IRQL_NOT_LESS_OR_EQUAL
- 0x0000001a MEMORY_MANAGEMENT
- 0x000000c2 BAD_POOL_CALLER
- 0x0000007e SYSTEM_THREAD_EXCEPTION_NOT_HANDLED

> **IMPORTANT:** This timing condition could also potentially cause a kernel panic on ProLiant servers with HP Advanced Memory Protection feature support running in a Linux environment; however, as of the release of this communication, HP has received no Linux customer reports concerning this condition.

This issue could occur regardless of whether the server is idle or under high utilization; however, it occurs more frequently under any of the following conditions:

- The server is running the HP ProLiant Advanced System Management Controller Driver (Health Driver).
- The server is running the HP ProLiant Integrated Lights-Out (iLO) Advanced and Enhanced System Management Controller Driver (Health Driver).
- The HP Insight Management Server Agents for Windows are running.
- The server is receiving or has received an installation of the HP ProLiant Support Pack (PSP).
- The server is configured with multiple higher speed processors and/or is utilizing the Intel hyper-threading feature.

  Note: This issue does not affect single processor servers if hyper-threading has been disabled in the ROM BIOS.

SCOPE
Any of the following ProLiant servers with the HP Advanced Memory Protection feature support:
- ProLiant BL20p G2
- ProLiant BL40p
- ProLiant DL360 G3
- ProLiant DL380 G3
- ProLiant DL560 server
- ProLiant DL580 G2 server
- ProLiant ML370 G3 server
- ProLiant ML530 G2 server
- ProLiant ML570 G2 server

RESOLUTION
HP is providing the following System ROM upgrades for affected ProLiant servers. Upgrade to the following System ROM version (or later) to prevent this intermittent timing condition. If the System ROM on an affected server is not upgraded, the server could continue to generate blue screen exceptions (or kernel panic conditions) and stop responding.

Server	ROM Family	ROM Date	Downloadable
ProLiant BL20p G2	I04	May 1, 2004	SP27839
ProLiant BL40p	I02	May 1, 2004	SP27851
ProLiant DL360 G3	P31	May 1, 2004	SP27794
ProLiant DL380 G3	P29	May 1, 2004	SP27772
ProLiant DL560	P30	May 1, 2004	SP27859
ProLiant DL580 G2	P27	May 2, 2004	SP27771
ProLiant ML370 G3	P28	May 1, 2004	SP27781
ProLiant ML530 G2	P22	May 1, 2004	SP27874
ProLiant ML570 G2	P32	May 1, 2004	SP27840

> **Note:** All the downloadables above are available at the following URL:

> ftp://ftp.compaq.com/pub/softpaq/

If an affected ProLiant server running in a Microsoft Windows operating environment cannot be upgraded immediately, HP recommends disabling the System Information sub-agent for the HP Insight Management Server Agents for Windows until the System ROM upgrade can be performed.

To disable the System Information sub-agent in the HP Insight Management Server Agent applet, perform the following steps:

1. From the Control Panel, open the HP Insight Management Agent applet.
2. On the Services Tab in the Manage Agents section, remove the System Information agent from the Active agents.
3. Restart the HP Insight Management Agents.

HARDWARE PLATFORMS AFFECTED: ProLiant BL p-Class (BL20p G2 Server Blade, BL40p Server Blade), ProLiant DL360 G3, ProLiant DL380 G3, ProLiant DL380 G3 Packaged Cluster, ProLiant DL560, ProLiant DL580 G2, ProLiant ML370 G3, ProLiant ML530 G2, ProLiant ML570 G2

COMPONENTS AFFECTED: Non-hardware specific

OPERATING SYSTEMS AFFECTED: Microsoft (Windows 2000, Windows NT 4.0, Windows Server 2003 Standard Edition), Red Hat (Enterprise Linux 2.X, Enterprise Linux 3.x, Linux 7.x 7.2, Linux 7.x 7.3, Linux 8.x 8.0), SuSE (Enterprise Server 8), UnitedLinux (1.0)

SOFTWARE AFFECTED: Non-software specific

THIRD PARTY PRODUCTS AFFECTED: None

DOWNLOADABLE FILES: None

NOTICE: The information in this document, including products and software versions, is current as of the Release Date. This document is subject to change without notice.