Intel® Server Platform SR870BN4

Tested Hardware and Operating System List

Revision 2.1

November 2006

Enterprise Platforms and Services Marketing

Revision History

Date	Revision Number	Modifications
July 2003	1.0	Initial Release
October 2003	1.1	Added NTI KVMs
January 2004	1.2	Added BIOS PR3.0 and Red Hat* EL v.3 test
June 2004	1.3	Itanium® 2 processor with up to 9M L3 cache test and RedHat* EL v.3 Update2 test
November 2004	1.4	Itanium® 2 processor with up to 9M L3 cache regression
June 2005	1.5	Added BIOS PR2.0 (Build935), BMC30 base system and Red Hat* EL v.3 Update 4
February 2006	1.6	Added BIOS PR2.3 (Build942), BMC33 base system, Red Hat* EL v.3 Update 6, Red Hat* EL v.4 Update 2, SuSE Linux ES 9 SP3
July 2006	2.0	Added Dual-Core Itanium® 2 Processor 9000 Series test. Added RoHS compatible HDDs
November 2006	2.1	Added BIOS PR2.0 (Build1003) for Itanium® 2 Processor 9000 Series, BMC35 base system, Red Hat* EL v.3 Update 6, Red Hat* EL v.4 Update 3, SuSE Linux ES 9 SP3

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Table of Contents

1. Introduction

This document is intended to provide users of the Intel® Server Platform SR870BN4 with a guide to the different operating systems, adapter cards, and peripherals tested by Intel on this platform.

This document will continue to be updated as new add-in cards, peripherals, and operating systems are tested or until the Intel server platform SR870BN4 is no longer in production. Each new release of the document will present updated information as well as continue to provide the information from previous releases.

Intel will only provide support to those add-in cards and peripherals under the specified system configuration (System BIOS and firmware) and operating systems and versions to which they were tested.

1.1 Test Overview

Testing performed on the Intel Server Platform SR870BN4 is classified under two separate categories: Compatibility Testing and Stress Testing.

1.1.1 Compatibility Testing

Basic compatibility testing is performed with each supported operating system. Basic compatibility testing validates that the server can be used to install the operating system and the base hardware feature set is functional. A small set of peripherals is used for installation purposes only. No add-in cards are tested. Testing may include network connectivity and running of proprietary and industry standard test suites.

Extended compatibility testing will occur on only the latest versions of a supported operating system. Extended compatibility testing will test for functionality of a variety of add-in adapters and peripherals. Test applications used will consist of both proprietary as well as industry standard test suites.

The latest version of an operating system signifies the latest supported version at the time of the actual test run. Each new release of this document may have a newly supported release of a given operating system. Previous releases of a supported operating system may not be tested beyond the basic compatibility test process.

1.1.2 Stress Testing

Stress testing is performed only on the most current release of a supported operating system at the time of a given validation run. The stress test process consists of three areas: Base platform, Multiple Adapter, and Endurance.

Base Platform: Each base platform will successfully install a given operating system, successfully run a disk stress test, and successfully run a network stress test.

Multiple Adapters: Multiple adapter validation (MAV) testing uses configurations and test suites to gain an accurate view of how the server performs under varying complex configurations while interacting with network clients. Each configuration is tested for at least 12 hours.

Endurance Test: This test sequence uses configurations that include 8 add-in adapters for a minimum 100-hour test run without injecting errors. Three servers operating under Windows* Server 2003 Enterprise, Red Hat* AS2.1 and SuSE* LE are tested in parallel. Each configuration passes an installation test, a Network/Disk Stress test. Any fatal errors that occur will require a complete test restart.

1.2 Pass/Fail Test Criteria

For each operating system, adapter, and peripheral configuration, a test passes if specific criteria are met. Specific configurations may have had particular characteristics that were addressed on a case-by-case basis. In general, a configuration passes testing if the following conditions are met:

- The operating system installed without error.
  - Manufacturer's installation instructions or Intel's best-known methods were used for the operating system installation.
  - No extraordinary workarounds were required during the operating system installation.
  - The server system behaved as expected during and after the operating system installation.
  - Application software installed and executed normally.
- Hardware compatibility tests ran to completion without error.
- Test software suites executed successfully
  - Test and data files were created in the correct directories without error.
  - Files copied from client to server and back compare to the original with zero errors reported.
  - Clients remain connected to the server system.
  - Industry standard test suites run to completion with zero errors reported.

2. Intel® Server Platform SR870BN4 Base System Configurations

The following table lists the base configurations tested. Base configurations will change as new revisions of the Intel® Server Platform SR870BN4 are released and/or new system BIOS, BMC firmware are cut onto the board in the factory. Each base configuration is assigned an identifier number that is referenced in the tables throughout this document. New base configurations are added with each new release of this document.

Base System Identifier #	Board Type	Board Number (PBA)	BIOS/BMC/ FRUSDR /HSC	Processor	Notes
1	Front Panel	A24009-301	BIOS RC1.4 (897) BMC 20 HSC 1.03B SDR pkg 2.0.16	Itanium(r) 2 1.3GHz 3MB Cache, B1 Stepping Itanium(r) 2 1.4GHz 4MB Cache, B1 Stepping Itanium(r) 2 1.5GHz 6MB Cache, B1 Stepping	Itanium® 2 Processor with up to 6MB L3 cache
	Hot-Plug Indicator	A24011-404			
	Hotswap Backplane	C26202-302 (sample board, equivalent to A73789-310)			
	I/O Board	C26199-530 (sample board, equivalent to A52336-530 with C2 SIOH)			
	Legacy Riser	C26205-415 (sample board, equivalent to A72649-415 with B0 ICH4)			
	Memory Board	A14986-403			
	Mid-Plane	A28311-300			
	Power Distribution	A22017-301			
	Processor Board	C26196-306 (sample board, equivalent to A55955-310)			
2	Front Panel	A24009-301	BIOS RC1.4 (897) BMC 20 HSC 1.03B SDR pkg 2.0.16	Itanium(r) 2 1.3GHz 3MB Cache, B1 Stepping Itanium(r) 2 1.4GHz 4MB Cache, B1 Stepping Itanium(r) 2 1.5GHz 6MB Cache, B1 Stepping	Itanium® 2 Processor with up to 6MB L3 cache
	Hot-Plug Indicator	A24011-404			
	Hotswap Backplane	A73789-302			
	I/O Board	A52336-530			
	Legacy Riser	A72649-414			
	Memory Board	A14986-403			
	Mid-Plane	A28311-300			
	Power Distribution	A22017-301			
	Processor Board	A55955-305			

Base System Identifier #	Board Type	Board Number (PBA)	BIOS/BMC/ FRUSDR /HSC	Processor	Notes
3	Front Panel	A24009-301	BIOS PR3.0 (907) BMC 22 HSC 11 * SDR pkg 2.0.17	Itanium(r) 2 1.3GHz 3MB Cache, B1 Stepping Itanium(r) 2 1.4GHz 4MB Cache, B1 Stepping Itanium(r) 2 1.5GHz 6MB Cache, B1 Stepping	Itanium® 2 Processor with up to 6MB L3 cache
	Hot-Plug Indicator	A24011-404			
	Hotswap Backplane	C26202-302 (sample board, equivalent to A73789-310)			
	I/O Board	C26199-530 (sample board, equivalent to A52336-530 with C2 SIOH)			
	Legacy Riser	A72649-500			
	Memory Board	A14986-403			
	Mid-Plane	A28311-300			
	Power Distribution	A22017-301			
	Processor Board	C26196-306 (sample board, equivalent to A55955-310)			
4	Front Panel	A24009-301	BIOS PR1.1 (926) BMC29 HSC 12**	Itanium(r) 2 1.5GHz 4MB Cache Itanium(r) 2 1.6GHz 6MB Cache Itanium(r) 2 1.7GHz 9MB Cache	Itanium® 2 Processor with up to 9MB L3 cache
	Hot-Plug Indicator	A24011-404			
	Hotswap Backplane	C26202-302 (sample board, equivalent to A73789-310)			
	I/O Board	C59754-560			
	Legacy Riser	A72649-501			
	Memory Board	C59537-500			
	Mid-Plane	A28675-004			
	Power Distribution	A22017-301			
	Front Panel	A24009-301			
5	Front Panel	A24009-301	BIOS PR1.2 (928) BMC30 HSC 12** SDR pkg 2.0.19	Itanium(r) 2 1.5GHz 4MB Cache Itanium(r) 2 1.6GHz 6MB Cache Itanium(r) 2 1.7GHz 9MB Cache	Itanium® 2 Processor with up to 9MB L3 cache
	Hot-Plug Indicator	A24011-404			
	Hotswap Backplane	C26202-302 (sample board, equivalent to A73789-310)			
	I/O Board	C59754-560			
	Legacy Riser	A72649-501			
	Memory Board	C59537-500			
	Mid-Plane	A28675-004			
	Power Distribution	A22017-301			

Base System Identifier #	Board Type	Board Number (PBA)	BIOS/BMC/ FRUSDR /HSC	Processor	Notes
	Processor Board	C26196-306 (sample board, equivalent to A55955-310)			
6	Front Panel	A24009-301	BIOS PR2.0 (935) BMC30 HSC 13 SDR pkg 2.0.19	Itanium(r) 2 1.5GHz 4MB Cache Itanium(r) 2 1.6GHz 6MB Cache Itanium(r) 2 1.6GHz 9MB Cache	Itanium® 2 Processor with up to 9MB L3 cache
	Hot-Plug Indicator	A24011-404			
	Hotswap Backplane	C26202-302 (sample board, equivalent to A73789-310)			
	I/O Board	C59754-560			
	Legacy Riser	A72649-501			
	Memory Board	C59537-500			
	Mid-Plane	A28311-300			
	Power Distribution	A22017-301			
	Processor Board	A55955-321)			
7	Front Panel	A24009-301	BIOS PR2.3 (942) BMC33 HSC 15 SDR pkg 2.0.19	Itanium(r) 2 1.5GHz 4MB L3 Cache (QEHL) Itanium(r) 2 1.6GHz 6MB L3 Cache (QEHK) Itanium(r) 2 1.6GHz 9MB L3 Cache (QEHJ)	Itanium® 2 Processor with up to 9MB L3 cache
	Hot-Plug Indicator	A24011-404,402			
	Hotswap Backplane	A73789-311			
	I/O Board	C59754-560			
	Legacy Riser	A72649-502,501			
	Memory Board	C59537-500			
	Mid-Plane	A28311-300			
	Power Distribution	A22017-301,302			
	Processor Board	A55955-321			
8	Front Panel	A24009-301, A23490-004	BIOS PR1.4 (997) BMC35 HSC 15 SDR pkg 2.1.21	C2 Stepping Itanium® 2 9000 sequense: 1.6GHz 24MB Cache, (QPAH) 1.6GHz 18MB Cache, (QPAI) 1.6GHz 8MB Cache, (QPAL) 1.6GHz 6MB Cache, (QPAK) 1.4GHz 12MB Cache, (QPAM)	Itanium® 2 Processor 9000 Series APAH/QPAI/QPAM are DC with MT QPAL is DC without MT QPAK is SC without MT
	Hot-Plug Indicator	A24011-404,402			
	Hotswap Backplane	A73789-311, C59739-400, C26202-302			
	I/O Board	C59754-560, A52336-552			
	Legacy Riser	A72649-502,501			
	Memory Board	C59537-500, A14986-500			
	Mid-Plane	A28311-300, A28675-004			
	Power Distribution	A22017-301,302			
	Processor Board	A55955-321,C26196-306			

Base System Identifier #	Board Type	Board Number (PBA)	BIOS/BMC/ FRUSDR /HSC	Processor	Notes
9	Front Panel	A24009-301, A23490-004	BIOS PR2.0 (1003) BMC35 HSC 15 SDR pkg 2.1.21	C3 Stepping Itanium® 2 9000 Series: 1.6GHz 24MB Cache, (QRFJ) 1.6GHz 18MB Cache, (QRFL) 1.6GHz 8MB Cache, (QRFO) 1.6GHz 6MB Cache, (QRFN) 1.4GHz 12MB Cache, (QRFM)	Itanium® 2 Processor 9000 Series QRFJ/QRFL/ QRFM DC & HT QRFO DC & N-HT QRFN SC & N-HT
	Hot-Plug Indicator	A24011-404,402			
	Hotswap Backplane	A73789-311, C59739-400, C26202-302			
	I/O Board	C59754-560, A52336-552			
	Legacy Riser	A72649-502,501			
	Memory Board	C59537-500, A14986-500			
	Mid-Plane	A28311-300, A28675-004			
	Power Distribution	A22017-301,302			
	Processor Board	A55955-321,C26196-306			

*HSC updates operational code to 11, boot code to 1.03. **HSC updates operational code to 12, boot code to 1.03

3. Supported Operating Systems

The following table provides a list of supported operating systems for the Intel® Server Platform SR870BN4. Each of the listed operating systems was tested for compatibility with a base Intel server platform SR870BN4 configuration. Operating system compatibility testing verifies that the operating system will install and function with all on-board devices.

Any variations to the standard operating system installation process are documented in the Installation Guidelines section of this document. If there is no installation guidelines noted in the following table, then the operating system installed as expected using manufacturer's installation instructions or Intel's best-known methods.

Operating System	Base Configuration Tested
Microsoft* Windows* Server2003 Enterprise for Itanium® 2, Build 3790	1,2,3,4,5,6
Microsoft* Windows* Server2003 Enterprise for Itanium® 2, SP1	7, 8(M), 9
Red Hat* Enterprise Linux v.4 Update2 for Itanium® 2, Kernel 2.6.9-22EL	7, 8
Red Hat* Enterprise Linux v.4 Update3 for Itanium® 2, Kernel 2.6.9-34EL	9
Red Hat* Enterprise Linux v.3 Update6 for Itanium® 2, Kernel 2.4.21-37EL	7, 8, 9
Red Hat* Enterprise Linux v.3 Update4 for Itanium® 2, Kernel 2.4.21-27EL	6
Red Hat* Enterprise Linux v.3 Update2 for Itanium® 2, Kernel 2.4.21-15EL	4,5
Red Hat* Enterprise Linux v.3 for Itanium® 2, Kernel 2.4.21-4.0.1.EL with SALINFO 04 patch	3 See IG#6.11
Red Hat* Enterprise Linux* AS2.1 for Itanium® 2, Kernel 2.4.18-e25	1,2
SuSE* Linux Enterprise Server* 9 SP3 for Itanium® 2, Kernel 2.6.5-7.244-default	7, 8, 9
SuSE* Linux Enterprise Server* 8 for Itanium® 2, Kernel 2.4.19 smp	1,2

*NOTE:
M – For running Microsoft* Windows* Server2003 Enterprise SP1 with Dual-Core Itanium® 2 Processor 9000 Sequence, a software update must be installed. For more details and information on how to obtain the update, please visit http://support.microsoft.com and see Knowledge Base article #916467.

3.1 Operating System Certifications

Listed below are the operating systems that Intel will certify the Intel Server Platform SR870BN4. However, the customer is responsible for their own certification from the individual operating system vendors. In many cases, the customer may leverage their operating system certifications from Intel's testing. See the "Comments" section next to each operating system in the table below for additional information. Intel's certifications, pre-certification, and operating system testing may help reduce some of the risk in achieving customer certifications with the operating system vendors.

Operating System	Certification Listing	Comments
Microsoft* Windows* Server 2003 Enterprise	Intel® Server Platform SR870BN4 SID# 690054	Intel has achieved certification on a base configuration. OEMs must obtain certification for their specific product. http://www.microsoft.com/windows/catalog/server/ (Search on SR870BN4)
Red Hat* Enterprise Linux AS2.1 Kernel 2.4.18.e25/e31	Intel® Server Platform SR870BN4	Intel has achieved certification on a base configuration. OEMs must obtain certification for their specific product. http://hardware.redhat.com/hcl/?pagename=details&hid=5306
SuSE* Linux Enterprise Server* 8 RC5 Kernel 2.4.19 smp	Intel® Server Platform SR870BN4	Intel has achieved certification on a base configuration. OEMs must obtain certification for their specific product. http://www.suse.com/de/business/certifications/certified_hardware/intel/SR870BN4/index.html
SUSE® LINUX Enterprise Server 9 Service Pack 3	Intel® Server Platform SR870BN4	Intel has achieved certification on a base configuration. OEMs must obtain certification for their specific product http://developer.novell.com/yes/84075.htm
Red Hat* Enteprise Linux v.3 Kernel 2.4.21-4.0.1.EL	Intel® Server Platform SR870BN4	All Red Hat* EL v.3 cetification tests have passed.
Red Hat* Enterprise Linux v.3 Kernel 2.4.21-15.EL	Intel® Server Platform SR870BN4	All Red Hat* EL v.3 cetification tests have passed. See IG#6.22
Red Hat* Enterprise Linux v.4 Update2 for Itanium® 2, Kernel 2.6.9-22EL	Intel® Server Platform SR870BN4	Certification avialable: https://bugzilla.redhat.com/hwcert/show.cgi?id=175590

4. Adapters and Peripherals

Add-in adapter card and peripheral compatibility and stress testing was performed with the latest available version of an operating system and card software (driver, BIOS, firmware, etc.) at the time the validation testing occurred. Please contact the card vendor for current available software.

The adapters are divided into categories based on their functionality. All integrated on-board devices are tested by default and are therefore not included in the following tables.

Note that not all adapter cards were tested under all operating systems. The following notation is used in the tested adapters and peripherals table below to indicate the support level that Intel provides for a particular adapter under a particular operating system:

Number (i.e. 1)	This adapter or peripheral has been tested and is supported under the specific configuration identified in the Base System Configurations Table in Section 2 of this document.
Number in brackets (i.e. [1])	This adapter or peripheral has been tested, but is NOT supported under the specific configuration identified in the Base System Configurations Table in Section 2 of this document.
NT	This adapter or peripheral has not been tested under this operating system and is not supported under this operating system.
ND	This adapter or peripheral has not been tested under this operating system due to limitations in IHV driver availability, and is not suported under this operating system.

Any variations to the standard adapter installation process or to expected adapter functionality are documented in the Installation Guidelines section of this document. If there are installation guidelines affecting a particular adapter and operating system combination, these are referenced in the following table. If there are no installation guidelines noted in the following table, then the adapter installed and functioned as expected using manufacturer's installation instructions or Intel's best-known methods.

Testing of adapters cards normally is performed with unused add-in adapters and onboard controller expansion ROMs disabled in BIOS Setup. Intel recommends that customers disable the option ROM for add-in controllers and/or the on-board controllers when not booting from the controller or needing to use its built in utilities.

Note: PCI hot-add is currently supported only with the Microsoft* Windows* Server 2003 operating system.

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 2003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments
4.1 PCI-X/PCI RAID										
Adaptec*	2200S	PCI-64/66 (128M)	EFI B-6003 SU-2.11	1,2 (4.0.0.5637)	NT	1,2 (1.0)		1,2 (1.13)		
LSI*	MegaRAID U320-2	PCI-64/66 (64M)	EFI B-G108 FW-TEFI SU-6.08	1,2 (6.31.2.64)	[2]	1,2 (1.18f)		1,2 (1.18f)		
LSI*	MegaRAID U320-2	PCI-64/66 (64M)	EFI B-G108 FW-TEFI SU-6.08	3 (6.31.2.64)	NT	3 (1.18j)		NT		
LSI*	MegaRAID U320-2	PCI-64/66 (64M)	EFI B-G12 FW-TEFT2 SU-6.08	4 (6.31.2.64)	NT	4 (1.18j)		NT		
LSI*	MegaRAID U320-2	PCI-64/66 (64M)	EFI B-G112 FW-TEF2 SU-6.08	5 (6.32.2.64)	NT	5 (1.18j)		NT		
LSI*	MegaRAID U320-2x	PCIX-64/133 (128M)	6 (1L33/G118) 7,8,9 (H429/414C)	6 (6.32.2.64) 7,8,9 (6.41.2.64)	[6]	6,7 (1.18k) 8,9 (2.10-8.2-RH1)	7,8,9 (2.20.4.6)	NT	7 (2.20.2.6) 8,9 (2.20.4.2)	
LSI*	MegaRAID U320-4x	PCIX-64/133 (128M)	6 (H424/413Z) 7,8,9 (H429/414C)	6 (6.32.2.64) 7,8,9 (6.41.2.64)	[6]	6,7 (1.18k) 8,9 (2.10-8.2-RH1)	7,8,9 (2.20.4.6)	NT	7 (2.20.2.6) 8,9 (2.20.4.2)	
LSI*	Enterprise 1600	PCI-64/66 (64M)	EFI B-3.14 FW-C180 SU-6.08	1,2 (6.21.8.64)	NT	1,2 (1.18f)		1,2 (1.18f) See IG#6.7&6.9		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments
Intel	Intel RAID SRCU42X	PCIX-64/133 (64M)	EFI B-H406 FW-412N SU-6.08	3 (6.36.2.64)	[3] IG#6.12	3 (1.18j)		NT		
Intel	Intel RAID SRCU42X	PCIX-64/133 (64M)	EFI B-H412 FW-413D Webbios v1.80	4 (6.41.2.64)	NT	4 (1.18j)		NT		
Intel	Intel RAID SRCU42X	PCIX-64/133 (64M)	EFI B-H412 FW-413D Webbios v1.80	5 (6.41.2.64)	NT	5 (1.18j)		NT		
Intel	Intel RAID SRCU42X	PCIX-64/133 (128M)	6 (H424/413Z) 7,8,9 (H429/414C)	6 (6.32.2.64) 7,8,9 (6.43.2.64)	[6]	6,7 (1.18k) 8,9 (2.10-8.2-RH1)	7,8,9 (2.20.4.6)	NT	7 (2.20.2.6) 8,9 (2.20.4.2)	
LSI*	MegaRAID U320-4	PCIX-64/133 (64M)	No EFI See IG#6.13 B-H102 FW-4.01	3 (6.32.2.64)	[3] IG#6.14	3 (1.18j)		NT		
LSI*	MegaRAID U320-4	PCIX-64/133 (64M)	B-413G FW-H414	4 (6.32.2.64)	NT	4 (1.18j)		NT		
LSI*	MegaRAID U320-4	PCIX-64/133 (64M)	B-413G FW-H414	5 (6.32.2.64)	NT	5 (1.18j)		NT		
4.2 PCI-X/PCI SCSI										
Adaptec*	ASC-29160	PCI-64/66	1,2 (EFI Alpha 10) 7,8,9 (3.10.0)	1,2,8,9 (5.2.3790)	1,2	1,2 (6.2.28) 7,8,9 (6.2.36)	7,8 (6.2.36) 9 (6.3.11)	1,2 (6.2.28)	7 (6.2.36) 8,9 (6.3.11)	
LSI*	LSI22320-R	PCIX-64/133	EFI SU-1.03.06	1,2 (1.09.06.00)	1,2 See IG#6.8	1,2 (2.03)		NT		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments
LSI*	LSI22320-R	PCIX-64/133	EFI SU-1.03.06	3 (1.09.06.00)	3 See IG#6.8	3 (2.05.05)		NT		
LSI*	LSI22320-R	PCIX-64/133	EFI FW-5.11.00 SU-1.03.06	4 (1.09.11.00)	NT	4 (2.05.11.03)		NT		
LSI*	LSI22320-R	PCIX-64/133	EFI FW-5.11.00 SU-1.03.06	5 (1.09.15.00)	NT	5 (2.05.11.03)		NT		
LSI*	LSI22320-R	PCIX-64/133	6(1.03.00.39)/ 7(1.03.07.00)/ 8(1.03.10.00)	6,7(1.09.11.0)/ 8,9(1.20.18.0)	6,7,8,9	6/7,8,9 (2.05.16.02)/ (2.06.16.01	7,8,9 (3.02.18)	NT	7,8,9 (3.02.62)	
Adaptec	ASC-39320A	PCIX-64/133	EFI B-Alpha 10 See IG#6.10	1,2 (2.0.000.000)	1,2	1,2 (1.3.0)		NT		Support only for cards w/ B0 controller
Adaptec	ASC-39320A	PCIX-64/133	EFI B-Alpha 10 See IG#6.10	3 (2.0.000.000) See IG#6.16	3	3 (1.3.10)		NT		Support only for cards w/ B0 controller
Adaptec	ASC-39320A	PCIX-64/133	Legacy B-4.30.0	4 (2.0.000.000) See IG#6.16	NT	4 (1.3.10)		NT		Support only for cards w/ B0 controller
Adaptec	ASC-39320A	PCIX-64/133	4.25.0/4.30.0	6,7,8,9 (3.0.0.0)	6,7,8,9	6,7,8,9 (1.3.10-RH1)	7(1.3.11)/ 8(2.0.14)/ 9(2.0.15)	NT	7(1.3.11)/ 8,9(2.0.15)	
Adaptec	ASC-29320A	PCIX-64/133	EFI B-Apha 10	3 (3.0.0.0) See IG#6.16	NT	3 (1.3.10) See IG#6.16		NT		
Adaptec	ASC-29320A	PCIX-64/133	Legacy B-4.30	4 (3.0.0.0) See IG#6.16	NT	4 (1.3.10) See IG#6.16		NT		
Adaptec	ASC-29320A	PCIX-64/133	Legacy B-4.30	5 (3.0.0.0) See IG#6.16	NT	5 (1.3.10) See IG#6.16		NT		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)		SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments
Adaptec*	ASC-29320A	PCIX-64/133	4.30.0/4.30.0	6, 7,8,9 (3.0.0.0)	6	6,7,8,9 (1.3.10-RH1)	7(1.3.11)/ 8(2.0.14) 9(2.0.15)		NT	7(1.3.11)/ 8,9(2.0.15)	
Adaptec	ASC-39160	PCI-64/66	EFI B-Alpha 10	1,2 (5.2.3790)	1,2	1,2 (6.2.28)			NT		
Adaptec	ASC-39160	PCI-64/66	EFI B-Alpha 10	3 (5.2.3790)	3	3 (6.2.28)			NT		
Adaptec	ASC-39160	PCI-64/66	4 (Legacy B-3.22) 7,8,9 (3.10.0)	4, 7,8,9 (5.2.3790)	NT	4 (5.2.4/5.2.0) 7,8,9 (6.2.36)	7,8 (6.2.36) 9(6.3.11)		NT	7 (6.2.36) 8,9 (6.3.11)	
4.3 PCI-X/PCI Fiber Channel											
Agilent*	5221A	PCI-64/66	NA	1,2 (4.0.8.11)	1,2 See IG#6.2	1,2 (L_0.7.1)			NT		
Aglient	5420	PCIX-64/133	NA	1,2 (4.0.8.11)	1,2 See IG#6.3	1,2 (L_0.7.1)			NT		
Aglient	5420	PCIX-64/133	NA	3, (4.0.8.11)	3, See IG#6.3	3 (L_0.7.1)			NT		
Aglient	5420	PCIX-64/133	NA	4, (4.0.8.11)	NT	4 (L_0.7.1)			NT		
Aglient	5420	PCIX-64/133	NA	6 (4.0.8.11)	6	6 (L_0.7.1)			NT		
Emulex*	LP9402	PCIX-64/133	NA	1,2 (5.2.3790)	[1,2]	1,2 (4.21d)			NT		
Emulex	LP9802DC	PCIX-64/133	NA	1,2 (6-4.82a8)	[1,2]	1,2 (4.21d)			NT		
Emulex	LP9802DC	PCIX-64/133	NA	3 (6.5.0.10)	3 See IG#6.17	3 (4.30i)			NT		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments
Emulex	LP9802DC	PCIX-64/133	Legacy B-1.81A1	4 (6.2.22.8)	NT	4 (4.30i)		NT		
Emulex	LP9802DC	PCIX-64/133	Legacy B-1.81A1 Fw-1.70A1	5 (6.2.22.8)	NT	5 (4.30l)		NT		
Emulex	LP9802DC	PCIX-64/133	6(1.90a4/1.63a2)/ 7(1.91a1/1.70a3)/ 8,9(1.91a3/3.11a4)	6 (6.5.10.10) 7,8,9 (6.1.11.0)	[6]	6/7,8,9 (7.1.14)/(7.3.2)	7,8,9 (8.0.16.17)	NT	7,8,9 (8.0.16.17)	
Emulex	LP9802	PCIX-64/133	NA	NT	NT	NT		1,2 (4.21d)		
QLogic*	QLA2200/66	PCI-64/66	Legacy B-1.69	1,2 (5.2.3790)	1,2 See IG#6.5	1,2 (6.04)		NT		
QLogic	QLA2342	PCIX-64/133	Legacy B-1.34 SU-1.22	1,2 (8.1.5.12)	1,2	1,2 (6.04)		NT		
QLogic	QLA2342	PCIX-64/133	Legacy B1.34 SU-1.22	3 (8.2.3.11)	3 See IG#6.18	3 (6.06.00b11)		NT		
QLogic	QLA2342	PCIX-64/133	Legacy B1.34 SU-1.22	4 (8.2.1.0)	NT	4 (6.06.00b11)		NT		
QLogic	QLA2342	PCIX-64/133	Legacy B1.34 SU-1.22	5 (8.2.1.0)	NT	5 (6.07.02-RH2)		NT		
QLogic	QLA2342	PCIX-64/133	6 (3.02.28/1.43) 7,8 (3.03.08/1.47)	6 (9.0.1.10) 7,8,9 (9.0.2.16)	6,7,8,9	6,8,9 (7.01.01) 7 (7.05.00-RH1)	7,8,9 (8.01.00b7)	NT	7,8,9 (8.01.02-sles)	
Emulex	LP10000DC-M2	PCIX-64/133	Legacy B3.20 FW 1.80a2	3 (6.5.0.10)	3 See IG#6.19	3 (4.30i)		NT		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments
Emulex	LP10000DC-M2	PCIX-64/133	Legacy B3.20 FW 1.80a2	4 (6.5.11)	NT	4 (4.30i)		NT		
Emulex	LP10000DC-M2	PCIX-64/133	Legacy B3.20 FW 1.80a2	5 (6.5.10.10)	NT	5 (4.30l)		NT		
Emulex	LP10000DC-M2	PCIX-64/133	6(1.90a4/1.62a1)/ 7(1.91a1/1.70a1)/ 8,9(1.91a3/3.11a4)	6 (6.5.10.10) 7,8,9 (6.2.30.2)	6,7,8,9	6 (7.1.14) 8,9 (7.3.2)	7,8,9 (8.0.16.17)	NT	7,8,9 (8.0.16.17)	
LSI	LSI7402XP-LC	PCIX-64/133	Legacy B-2.00.03 FW 1.01.00	3 (1.9.6.0) See IG#6.20	3 See IG#6.21	3 (2.05.05)		NT		
LSI	LSI7402XP-LC	PCIX-64/133	Legacy B-2.00.03 FW 1.01.00	4 (1.9.15.0)	NT	4 (2.05.05)		NT		
LSI	LSI7402XP-LC	PCIX-64/133	Legacy B-2.00.03 FW 1.01.00	5 (1.9.15.0)	NT	5 (2.05.11.03)		NT		
LSI	LSI7402XP-LC	PCIX-64/133	6,7 (2.01.02.00) 8,9 (1.02.11/2.02.01)	6(1.9.11.0)/ 7(1.20.2.0)/ 8,9(5.2.3790.0)	[6]	6,8,9 (2.05.16.02) 7 (2.06.16.01)	7,8,9 (3.02.18))	NT	7,8,9 (3.02.62)	
4.4 PCI-X/PCI Network Interface Card										
Intel	PRO/1000MT Dual Port PWLA8492MT	PCIX-64/133	NA	1,2 (6.3.6.31)	1,2	1,2 (5.0.43)		NT		Support only for 6-layer cards
Intel	PRO/1000MT Dual Port PWLA8492MT	PCIX-64/133	NA	3 (6.3.6.31)	3	1,2 (5.2.20)		NT		Support only for 6-layer cards

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments
Intel	PRO/1000MT Dual Port PWLA8492MT	PCIX-64/133	NA	4 (7.4.19.0)	NT	4 (dist.)		NT		Support only for 6-layer cards
Intel	PRO/1000MT Dual Port PWLA8492MT	PCIX-64/133	NA	5 (8.0.57)	NT	5 (5.2.30.1-k1)		NT		Support only for 6-layer cards
Intel	PRO/1000MT Dual Port PWLA8492MT	PCIX-64/133	NA	6(8.4.21.0)/ 7(8.6.11.0)/ 8,9(8.6.17.0)	6,7,8, 9	6(5.3.19-k2)/ 7(6.2.15-NAPI)/ 8,9(7.0.33-NAPI)	7 (6.1.16-NAPI) 8,9 (7.0.33-NAPI)	NT	7 (6.2.15-NAPI) 8,9 (7.0.33-NAPI)	
Intel	PRO/1000 T PWLA8490T	PCI-64/66	NA	1,2(6.3.6.31)/ 7(8.6.11.0)/ 8,9(8.6.17.0)	1,2	1,2(5.0.43)/ 7(6.2.15-NAPI)/ 8,9(7.0.33-NAPI)	7 (6.1.16-NAPI) 8,9 (7.0.33-NAPI)	NT	7 (6.2.15-NAPI) 8,9 (7.0.33-NAPI)	
Intel	PRO/1000MF Dual Port PWLA8492MF	PCIX-64/133	NA	NT	NT	NT		1,2 (5.0.43)		Support only for 6-layer cards
Syskonnect*	SK9843	PCI-64/66	NA	7 (Failed)/ 8,9(8.55.2.2)	ND	1,2/7 (2.0.7)/(8.28.1.3) 8,9(8.31.2.3)	7,8 (8.28.1.3) 9(8.31.2.3)	NT	7,8,9 (8.31.2.3)	
Intel	PRO/100 S Dual Port PWLA8472D3G1P	PCI-64/33	NA	1,2 (6.6.8.1)	NT	1,2 (2.1.29)		NT		
Intel	PRO/100 S Dual Port PWLA8472D3G1P	PCI-64/33	NA	3 (6.3.6.31	NT	3 (5.2.20)		NT		
Intel	PRO/100 S Dual Port PWLA8472D3G1P	PCI-64/33	NA	4 (7.1.12)	NT	4 (dist.)		NT		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments	
4.5 PCI Cluster Interconnect Adapter											
Myricom*	M3F-PCI64C-2	PCI-64/66	NA	NT	NT	1,2,3 (1.6.3)		NT			
4.6 PCI Video card											
ATI*	Radeon 7000	PCI-64/66	NA	1,2,3 (6.3.6)	ND	1,2,3 (6.4.8)		NT			
ATI*	Radeon 7000	PCI-64/66	NA	4 (6.13.10.6513)	ND	4 (6.4.8)		NT			
ATI*	Radeon 7000	PCI-64/66	NA	5 (6.13.10.6513)	ND	5 (6.4.8)		NT			
4.7 USB Keyboard											
A4Tech*	KBS-3	USB	NA	7,8,9		7,8,9	7,8,9		7,8,9		
Belkin*	F8E208	USB	NA	7,8,9		7,8,9	7,8,9		7,8,9		
Belkin*	F8E885	USB	NA	6	NA	6		NT			
Benq*	A122	USB	NA	6	NA	6		NT			
Logitech*	Internet Navigator	USB	NA	1,2,3,4,5	NA	1,2,3,4,5		NT			
Logitech	Cordless Freedom	USB	NA	[1,2,3] See IG#6.6	NA	[1,2,3] See IG#6.6		NT			
Logitech*	LTCF-100306	USB	NA	6	NA	6		NT			
Logitech*	Y-BF37	USB	NA	7,8,9		7,8,9	7,8,9		7,8,9		
Microsoft	Internet Keyboard Pro	USB	NA	1,2,3,4,5	NA	1,2,3,4,5		NT			
Microsoft	Natural Keyboard	USB	NA	1,2,3,4,5	NA	1,2,3,4,5		NT			
Microsoft	Natural Multimedia Keyboard	USB	NA	6	NA	6		NT			
Microsoft	Internet Media Pro	USB	NA	7,8,9		7,8,9	7,8,9		7,8,9		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments	
4.8 USB Mouse											
Logitech	Wheel Mouse Cordless Optical	USB	NA	[1,2,3] See IG#6.6	NA	[1,2,3] See IG#6.6		NT			
Logitech	Wheel Mouse	USB	NA	1,2,3,4,5	NA	1,2,3,4,5		NT			
Logitech	Wheel Mouse (930495-0144)	USB	NA	6	NA	6		NT			
Logitech	Wheel Mouse M-BB48	USB	NA	6	NA	6		NT			
Logitech	Mini Wheel Mouse	USB	NA	7,8,9		7,8,9	7,8,9		7,8,9		
Microsoft	Wheel Mouse Optical	USB	NA	1,2,3,4,5,6	NA	1,2,3,4,5,6		NT			
Microsoft	Intellimouse* Optical	USB	NA	1,2,3,4,5,6,7,8,9	NA	1,2,3,4,5,6,7,8,9	7,8,9	NT	7,8,9		
4.9 Slim DVD-ROM Drive											
Matsushita*	SR-8176-B	ATA33	NA	1,2,3,4	NA	1,2,3,4		1,2			
Teac	DW-224E	ATA33	NA	4,5,6,7,8,9	NA	4,5,6,7,8,9	7,8,9	NA	7,8,9		
4.10 LS120/240 Drive											
Matsushita	LKM-FH34-5	ATA33	NA	1,2,3,4,5	NA	1,2,3,4,5		1,2			
4.11 USB Key Fob Memory Device											
Iomega*	64mb Mini Drive USB Flash32547	USB	NA	1, 2	NA	1,2		NT			
Lexar*	JumpDrive 64MB PD064-231	USB	NA	[1,2,3]	NA	[1,2,3]		NT			
Lexar*	JumpDrive 256MB (USB2.0)	USB	NA	6 ,7,8,9	NA	6,7,8,9	7,8,9	NT	7,8,9		
Lexar*	JumpDrive 1GB (USB2.0)	USB	NA	7,8,9		8,9	7,8,9		7,8,9		

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments	
Sony*	MicroVault* USM64U2	USB	NA	1,2	NA	1,2		NT			
4.12 Storage Enclosure											
Intel	5 Bay HSBP AXX2HSDRVUG	U320/SCA	NA	6,8,9	NA	6,8,9	8,9	NT	8,9		
Intel	SC5200	U320/SCA	NA	6,7,8,9	NA	6,7,8,9	7,8,9	NT	7,8,9		
Xyratex*	RS-0800-LVD	U320/SCA	NA	1,2,3,4	NA	1,2,3,4		NT			
Xyratex	RS-1600-FC	2 Gb/s FC-AL	NA	1,2,3,4,6,7,8,9	NA	1,2,3,4,6,7,8,9	7,8,9	NT	7,8,9		
EuroLogic	SANBloc FC21010DR2-AC	2GB/s FC-AL	NA	6,7,8,9	NA	6,7,8,9	7,8,9	NT	7,8,9		
EuroLogic	UltraBloc 320	U320/SCA	NA	4,5	NA	4,5		NT			
Agjile*	Jaguar JGL-33H421C	U160/SCA	NA	1,2,3	NA	1,2,3		NT			
Clariion*	Clariion Power C5051R-A	1 Gb/s FC-AL	NA	1,2	NA	1,2		NT			
4.13 Keyboard/Video/Mouse (KVM) Switch											
Avocent*	Auto View 2000	Universal	NA	1,2	NA	1,2		1,2			
Avocent	Outlook 2160ES	PS/2	NA	1,2	NA	1,2		1,2			
Avocent	Outlook 180ES	PS/2	NA	1,2	NA	1,2		1,2			
Avocent	Auto View 424	USB	NA	1,2	NA	1,2		1,2			
Avocent	Auto View 416	USB	NA	1,2	NA	1,2		1,2			
Avocent	DSR 2161	IP	NA	1,2	NA	1,2		1,2			
Network Technologies Inc.*	UNIMUX-nXm-U	USB	NA	1,2	NA	1,2		1,2			

Manufacturer	Model	Interface	Firmware BIOS, Setup Utility	Microsoft* Windows* Server 20003 Enterprise /SP1 (Driver Version)	Windows PCI Hot Plug Test	Red Hat* AS2.1 /EL3 (Driver Version)	RedHat* EL4 U2/U3 kernel 2.6.9-22/-34.EL (Driver Version)	SuSE* Linux ES 8 RC5 (Driver Version)	SuSE* Linux ES 9 SP3 (Driver Version)	Comments	
Network Technologies Inc.	UNIMUX-USBV-xU	USB	NA	1,2	NA	1,2		1,2			
Network Technologies Inc.	KEEMUX-Px	PS/2	NA	1,2	NA	1,2		1,2		Tested with NTI USB-PS2 Adapter	
4.14 Tape Drive											
Certance*	DDS4	SCSI	NA	6	NA	NA		NA			
HP	StorageWorks DAT40	SCSI	NA	4 (dist.)	NA	4 (dist.)		NA			
HP	StorageWorks DLT VS80	SCSI	NA	4 (hpdltw64.sys v2.4.00)	NA	4 (dist.)		NA			
HP	StorageWorks DLT VS160	SCSI	NA	NA	NA	6		NA			
Sony	SDT-11000 DDS4	SCSI	NA	4 (dist.)	NA	4 (dist.)		NA			

The following devices have also been tested and are supported on the SR870BN4 platform:

Vendor / Model	Supported Operating System(s)
Infinicon* Infiniserv7000 Infiniband HCA	Red Hat Advanced Server 2.1
Quadrics* QM500 PCI-X Network Adapter	Red Hat Advanced Server 2.1

5. Hard Disk Drives

The hard drives listed in the following table have been tested on the Intel® Server Platform SR870BN4 by Intel, in Intel validation labs, and/or by individual drive vendors. The following operating system identifiers are used in the table to specify which OS each drive was tested under.

Identifier number	Operating System
1	Microsoft* Windows* Server2003 Enterprise for Itanium® 2, Build 3790
2	Red Hat* Enterprise Linux* AS2.1 for Itanium® 2, Kernel 2.4.18-e25
3	SuSE* Linux Enterprise* Server 8 for Itanium® 2, RC5 Kernel 2.4.19 smp
4	Red Hat* Enterprise Linux* v.3 for Itanium® 2, Kernel 2.4.21-4.0.1.EL with SALINFO 04 patch
5	Red Hat* Enterprise Linux* v.3 Update2 for Itanium® 2, Kernel 2.4.21-15
6	Red Hat* Enterprise Linux* v.3 Update4 for Itanium® 2, Kernel 2.4.21-27
7	Red Hat* Enterprise Linux* v.3 Update6 for Itanium® 2, Kernel 2.4.21-37
8	Red Hat* Enterprise Linux* v.4 Update2/3 for Itanium® 2, Kernel 2.6.9-22 /-34
9	SuSE* Linux Enterprise* Server 9 for Itanium® 2, SP3 Kernel 2.6.5-7.244

Note that not all hard drives were tested under all operating systems. The following notation is used in the tested hard drives table below to indicate the support level that Intel provides for a particular hard drive with a particular operating system:

Number (i.e. 1)	This hard drive has been tested and is supported under the operating system identified by the operating system identification number.
Number in brackets (i.e. [1])	This hard drive has been tested, but is NOT supported under the operating system identified by the operating system identification number.

Manufacturer	Product Family	Model Number	Interface	RPM	Drive size (GB)	Tested Operating Systems	Comments
Fujitsu*	MAP3735NC	MAP3735NC	U320/SCA	10K RPM	36GB	6	
Fujitsu*	MAP3735NC	MAP3735NC	U320/SCA	10K RPM	73GB	6	
Hitachi*	10K EJ	IC35L73UCD Y10	U320/SCA	10K RPM	73GB	6	
Quantum*	Atlas IV	KN09J011	U160/SCA	7200 RPM	9.1GB	[1],[2]	
Maxtor*	Atlas 10K III-U320	KU18J017	U320/SCA	10K RPM	18.4GB	1,2,3,4,5	
Maxtor	Atlas 10K IV	NGBXX	U320/SCA		36.7GB	1,2,3,4,5	
Maxtor	Atlas 10K IV	8B036J00215 11	U320/SCA	10K RPM	36GB	6	

Manufacturer	Product Family	Model Number	Interface	RPM	Drive size (GB)	Tested Operating Systems	Comments
Maxtor	Atlas 10K IV	8B073J0040501	U320/SCA	10K RPM	73GB	6	
Maxtor	Atlas 10K IV	8C036J0040111	U320/SCA	10K RPM	36GB	6	
Seagate*	Barracuda 9	ST19171FC	FC-AL	7200 RPM	9.1GB	[1],[2],[3]	
Seagate	Cheetah 10K.6	ST336607LC	U320/SCA	10K RPM	36.7GB	1,2,4,5,6	
Seagate	Cheetah 9LP	ST34502LC	Ultra2/SCA	10K RPM	4.5GB	[1],[2],[3]	
Seagate	Cheetah 18LP	ST39103LC	Ultra2/SCA	10K RPM	9.1GB	[1],[2]	
Seagate	Barracuda 18XL	ST39236LC	U160/SCA	7200 RPM	9.2GB	[1],[2]	
Seagate	Cheetah 10K.6	ST336753LC	U320/SCA	15K RPM	36.7GB	6,7,8,9	
Seagate	Cheetah 15K.3	ST318453LC	U320/SCA	15K RPM	18GB	6,7,8,9	
Seagate	Cheetah X15 36LP	ST318453FC	2GB/S FC-AL	15K RPM	18GB	6,7,8,9	
Seagate	Cheetah X15 38LP	ST336753FC	2GB/S FC-AL	15K RPM	36GB	6,7,8,9	
Quantum	Atlas V	XC09J011	U160/SCA	7200 RPM	9.1GB	[1],[2]	
Quantum	Atlas V	XC18J011	U160/SCA	7200 RPM	18.3GB	[1],[2]	

The following hard drives have also been tested and are supported on the SR870BN4 platform. (Bold items are ROHS compatible models.)

Supplier	Model	Part Number	Spindle Speed	Interface	Capacity	Firmware Version
Fujitsu	AL9-LE	MAT3735NC	10K RPM	U320	73GB	0105
Fujitsu	AL9-LE	MAT3147NC	10K RPM	U320	147GB	0105
Fujitsu	AL9-LE	MAT3300NC	10K RPM	U320	300GB	0105
Fujitsu	AL9-LX	MAU3367NC	15K RPM	U320	36GB	0105
Fujitsu	AL9-LX	MAU3735NC	15K RPM	U320	73GB	0105
Fujitsu	AL9-LX	MAU3147NC	15K RPM	U320	147GB	0105
Fujitsu		MAJ3182MC	10K RPM	U160	18GB	
Fujitsu		MAP3147NC	10K RPM	U320	146GB	5605
Fujitsu		MAS3735NC	15K RPM	U320	73GB	5B06
Hitachi	Python-A	HUS103073FL3800	10K RPM	U320	73GB	SA14
Hitachi	Python-A	HUS103014FL3800	10K RPM	U320	146GB	SA14
Hitachi	Python-A	HUS103030FL3800	10K RPM	U320	300GB	SA14
Hitachi	Viper-A	HUS151436VL3800	15K RPM	U320	36GB	SA14
Hitachi	Viper-A	HUS151473VL3800	15K RPM	U320	73GB	SA14
Hitachi	Viper-A	HUS151414VL3800	15K RPM	U320	146GB	SA14
IBM	Daytona			U320		S23C
IBM	Ultrastar 36LZX	DDYS-T18350	10K RPM	U160	18GB	
Maxtor	Atlas 10K-V	8D073J0	10K RPM	U320	73GB	JNX0
Maxtor	Atlas 10K-V	8D147J0	10K RPM	U320	147GB	JNX0
Maxtor	Atlas 10K-V	8D300J0	10K RPM	U320	300GB	JNX0
Maxtor	**Atlas 10K-V**	**8J073J0**	**10K RPM**	**U320**	**73GB**	
Maxtor	**Atlas 10K-V**	**8J147J0**	**10K RPM**	**U320**	**147GB**	
Maxtor	**Atlas 10K-V**	**8J300J0**	**10K RPM**	**U320**	**300GB**	
Maxtor	Atlas 15K-II	8E036J0	15K RPM	U320	36GB	JNZH
Maxtor	Atlas 15K-II	8E073J0	15K RPM	U320	73GB	JNZH
Maxtor	Atlas 15K-II	8E147J0	15K RPM	U320	147GB	JNZH
Maxtor	**Atlas 15K-II**	**8K036J0**	**15K RPM**	**U320**	**36GB**	
Maxtor	**Atlas 15K-II**	**8K073J0**	**15K RPM**	**U320**	**73GB**	
Maxtor	**Atlas 15K-II**	**8K147J0**	**15K RPM**	**U320**	**147GB**	
Maxtor	Quantum Atlas V			U160		
Maxtor	Atlas 10K-IV	8B0146JO	10K RPM	U320	146GB	DFV0
Maxtor	Atlas 10K-IV	8B036JO	10K RPM	U320	36GB	DFV0
Maxtor	Atlas 10K-IV	8B073JO	10K RPM	U320	73GB	DFV0
Maxtor	Atlas 15K	8C036JO	15K RPM	U320	36GB	DT60
Maxtor	Atlas 15K	8C073JO	15K RPM	U320	73GB	DT60
Maxtor		KU18J017	10K RPM	U320	18GB	B810
Maxtor		KU73J017	10K RPM	U320	73GB	B810
Seagate	Cheetah 10K-7	ST373207LC	10K RPM	U320	73GB	0002
Seagate	Cheetah 10K-7	ST3146807LC	10K RPM	U320	146GB	0002
Seagate	Cheetah 10K-7	ST3300007LC	10K RPM	U320	300GB	0002
Seagate	Cheetah 15K-4	ST336754LC	15K RPM	U320	36GB	0001

Seagate	Cheetah 15K-4	ST373454LC	15K RPM	U320	73GB	0001
Seagate	Cheetah 15K-4	ST3146854LC	15K RPM	U320	146GB	0001
Seagate	Cheetah X15	ST318451LC	15K RPM	U160	18GB	
Seagate	Cheetah 15K-3	ST373453LC	15K RPM	U320	73GB	0005

6. Installation Guidelines

6.1 Cannot hot add/replace a card with Red Hat AS 2.1 if another instance of the same card is already present in the system

Issue: If a card is already installed in the system, the user can not hot add or replace another instance of the same without reloading the driver, which would stop activity on the first card.

Guideline: The user has to stop the activities of all cards (of the same type) sharing the same driver to do hot-add or hot-replace. This is true for storage devices like SCSI & Fiber Channel. This is due to the fact that the device drivers for the storage devices are not hot-plug aware. Based on the way how the Linux PCI hot-replace of SCSI/FC card works - the user needs to stop the activity of the device, uninstall the driver, power-off the slot through CLI (invokes the use of PHP driver), unplug the card, put in a new card, power-on the slot through CLI (invokes the use of PHP driver), install the device driver for the card, and resume normal activity of all cards. In hot-add case, the device driver, which is already up and used by another card of the same type, is not aware of the newly added card. It is only when the device driver is uninstalled and re-installed that it will discover the existence of the new card.

Status: This issue is expected to be fixed in the next major distribution release of Red Hat AS

6.2 Aglient 5221 requires a driver install during Windows PHP test

Issue: During PHP testing the Agilent 5221 is used in each slot progressively from PCI 1 down to PCI 8. During the test the operating system requests a driver be loaded as the card moves from slot to slot. The first install of the driver should be sufficient for the card to function in any slot.

Guideline: If the driver request is refused the card will function and drives will be seen but in "Device Manager" only "Fiber Channel Controller" is displayed instead of the normal "Agilent HHBA-522x PCI Fiber Channel Controller". The issue doesn't block PHP functionality and does allow access to FC drives. This issue is not fatal, causes no data to be lost, and is only apparent in slots where the 5221 have never been run.

Status: This issue will not be fixed.

6.3 Aglient 5420 driver requires system reset after hot-add

Issue: The Agilent 5420 using driver afcw64.sys v4.0.8.11 wants to restart the system when the card is moved from slot 2 to slot 3.

Guideline: The drives are functioning normally without restarting the system. This issue is not fatal, causes no data to be lost.

Status: This issue is under investigation.

6.4 Agilent 5420 resets system when driver loads after hot add or replace in Slot 1 with Red Hat AS2.1

Issue: When the Agilent 5420A is hot added or replaced SLOT1, the system resets when the agfcl (version L_0.71) driver is loaded. At the time the driver loads it hangs for about 20-30 seconds and then spontaneously resets. The sel, mca and OS logs report no errors of any kind at the time of failure.

Guideline: Do not hot add or replace in the Agilent 5420 into slot 1.

Status: This issue is under investigation.

6.5 Qlogic 2200 driver requires system reset after hot add

Issue: During PHP testing of the Qlogic 2200, the card was hot-removed and hot-added to another slot. The operating system detected the card, loaded the driver, and then reports that the system needs to be shut down and restarted. This issue was seen intermittently.

Guideline: If the shut down was refused, the device still appears to function normally. Disk testing completed with no errors.

Status: This issue is under investigation.

6.6 Unable to boot system with Cordless reciever attached

Issue: When a Logitech receiver for a cordless keyboard or mouse was attached to the system, the system would not boot. The system would hang at the "searching for EFI 1.1 Scsi Driver" message.

Guideline: Do not add cordless keyboard/mouse in system during boot.

Status: This issue has been fixed in BIOS PR3.0

6.7 Rmmod and insmod of AMI 1600 megaraid driver generates errors in SuSE message log

Issue: After installation of SuSE SLES8 RC5 was complete, attempts to rmmod the distribution driver and insmod the newer megaraid 1.18f driver, SCSI bus error messages were observed.

Guideline: If the distribution driver is not loaded and the new driver is loaded without needing the rmmod the old driver, the issue did not occur.

Status: This issue is expected to be fixed in a future release of the LSI driver.

6.8 LSI 22320 driver requires system reset after hot add in Slot 4

Issue: After hot-adding the LSI22320 in slot 4, the driver returns with "Windows Settings Change" "Windows has finished installing new devices. The software that supports your device requires that you restart your computer. You must restart your computer before the new settings will take effect."

Guideline: The device still functions normally without restarting the system

Status: This issue is under investigation.

6.9 The system resets on boot with AMI 1600 Enterprise in PCI slot 5 with SuSE LE

Issue: The system resets while booting SuSE Linux Enterprise Server 8 (SLES8), RC5, with AMI Megaraid 1600 Enterprise (AMI 471) installed in PCI slot #5. The system reaches the point where it appears to be probing the IDE, then resets.

Guideline: Issue appears to be due to a conflict with the CMD640 IDE device driver, which loads with the kernel by default. Compiling a kernel w/o CMD640 support allows SuSE to boot properly.

Status: This issue is expected to be fixed in the next kernel release of SuSE.

6.10 Adaptec 39320 with EFI BIOS has No RAID functionality

Issue: After flashing the card with EFI BIOS there is no longer any RAID support. Using the utility "esu116_64.efi," the card is updated with EFI BIOS. With this utility various controller settings can be adjusted, but nowhere is support for any level of RAID found.

Guideline: Legacy BIOS has a RAID support.

Status: This issue is under investigation.

6.11 Red Hat Enterprise Linux 3.0 continuously reports CPE

Issue: The 2.4.21+ kernel in Red Hat Enterprise Linux 3.0 release does not include the user level daemon used in clearing the SAL error records.

Guideline: Installing this user level daemon corrects the continuous CPE condition. This user level is maintained at:
http://www.kernel.org/pub/linux/kernel/people/helgaas/

Status: The issue has been fixed in Update 2.

6.12 SRCU42X requires a driver install during Windows PHP test

Issue: The system is started with Windows 2003 Adv Server and the SRCU42X in slot 1 not powered up with the slot switch rocker open. After the OS loads, the rocker is closed. The driver mraid35x.sys v6.36.2.24 loads and reports that the system must be shutdown for changes to take affect. The card is not useable at this point and is not getting any system resources.

Guideline: Do not hot add this card.

Status: This issue is under investigation.

6.13 LSI320-4X does not have an EFI driver

Issue: LSI320-4X does not have an EFI driver

Guideline: Use Legacy BIOS.

Status: Fixed

6.14 LSI320-4X cannot hot add & replace in Windows PHP test

Issue: LSI320-4X PHP function is broken.

Guideline: Do not hot add & replace this card.

Status: This issue is under investigation.

6.15 Windows 2003 cannot start with Adaptec 39320A in the system

Issue: The operating system is installed to the backplane via the onboard LSI SCSI controller and the Adaptec 39320A can be in any system slot. The Adaptec 39320 has EBC 1.0 Alpha 10 driver installed in the card and the operating system has "adpu320.sys v 2.0.0.0 installed. As the operating system begins to load it will go to a black screen with a flashing cursor in the upper-left hand corner of the screen. This problem does not occur when there are no drives attached to the controller.

Guideline: Use legacy BIOS on Adaptec SCSI cards.

Status: Fixed.

6.16 Cannot install Windows or Red Hat Linux to the Adaptec 29320A.

Issue: When installing Windows 2003 Advanced Server to a Adaptec 29320A with EBC 1.0 Alpha 10, the initial install goes normally untill after the first reboot of the system where the OS locks up just after the progress bar begins to show progress.. Similar lock ups occur during installation of Red Hat Enterprise Linux 3.0.

Guideline: Use legacy BIOS on Adaptec SCSI cards.

Status: Fixed.

6.17 Emulex LP9802 fails hot add PHP test in Windows

Issue: The card fails a hot add function but will do a hot replace. In the hot add exercise the driver requires the system be shutdown and restarted. No drives are available on the controller untill after a restart is performed.

Guideline: Do not do hot add this card.

Status: This issue is under investigation.

6.18 QL2342 Windows driver wants to restart OS during driver install

Issue: In slot 4 to slot 8 the OS reported that the new hardware may not work properly untill the system is restarted. The shutdown and restart window pops up and prompts you to shutdown and restart. It did this on all slots after slot three.

Guideline:

Status: This issue is under investigation.

6.19 The emulex LP10000DC's updated driver fails hot add(PHP).

Issue: After the update the system reported that it must shutdown and restart which disqualifies a hot add procedure.

Guideline:

Status: This issue is under investigation.

6.20 Errors reported by LSI LSI7402XP-LC FC 4 Port 2 Gb/s controller.

Issue: Patin & system event errors with LSI LSI7402XP-LC FC 4 Port 2 Gb/s controller.

Guideline:

Status: This issue is under investigation.

6.21 The LSI 7402XP will not hot add and driver requires restart.

Issue: In Windows Server 2003 ,the card is hot added to PCI slot 1. The operating system requests the driver symmpi.sys from LSI which is not logo'd and is installed for each of the four ports. After the driver is installed, the operating system reports that the system must shutdown for the new driver to take affect. All four channels of the controller are banged out and unuseable without a system restart..

Guideline:

Status: This issue is under investigation.

6.22 Red Hat Certification Test fails Video under RHEL3 Update 2

Issue: Red Hat Ready Certification Video test fails under Red Hat Enterprise Linux 3.0 Update 2. This test previously passed under Red Hat EL 3.0 Update 1. It appears that these failures are related to changes in the XFree86 version between Update 1 and Update 2. The test (Video test under RHR2-0.9-14.2) logs errors from making legacy ioctl calls to set the keyboard repeat rate. Previously, these errors were not logged to the test results logs, but with the version of XFree86 in Update 2 (4.3.0-62.EL), the error return from these calls is logged as an error in the XFree86 logs and results in the RHR Video test reporting a failure.

Guideline:

Status: Red Hat will be addressing this and has confirmed that this test failure will not prevent certification.