

# I/O Compatibility Guide For ESX Server 2.x

Last Updated: April 2, 2008

## What's New

Changes since the last edition of this guide include:

- Added a statement regarding VMware support for the I/O devices listed in this document. See “Introduction” on page 1.

## Introduction

VMware ESX Server delivers high performance I/O for PCI-based SCSI, RAID, Fibre Channel, and Ethernet controllers. To achieve high performance, these devices are accessed directly through device drivers in the ESX Server machine and not through a host operating system as with VMware Workstation and VMware Server products.

Support for I/O devices listed in this document is specific to device compatibility with the VMware ESX Server versions listed in the corresponding tables. This does not imply a statement of support for adding a device to any certified system. System vendors determine device compatibility with a given system. Please refer to the compatibility list provided by the system vendor before adding a certified device to a certified system.

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**NOTE** IDE RAID and SATA RAID are not supported for the VMFS file system.

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If you are having a technical issue with 3rd party HW/SW and it is not found on this list, please refer to our 3rd Party HW/SW support policy at <http://www.vmware.com/support/policies/ThirdParty.html>.

This chapter includes:

- “ESX Server 2.5.5” on page 2
- “ESX Server 2.5.4” on page 14
- “ESX Server 2.5.3” on page 27
- “ESX Server 2.5.2” on page 39
- “ESX Server 2.5.1” on page 50
- “ESX Server 2.5” on page 60
- “ESX Server 2.1.2” on page 71
- “ESX Server 2.1.1” on page 71
- “ESX Server 2.1” on page 80
- “ESX Server 2.0.1” on page 89
- “ESX Server 2.0” on page 99

## ESX Server 2.5.5

### Currently Supported Device Families

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

#### SCSI Controllers (Attached to Non-Removable SCSI Devices Only)

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**NOTE** CD-ROM devices are removable devices, whereas tape drives are considered to be non-removable devices.

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- Adaptec Ultra160 and Ultra 320 SCSI controllers.
- LSI Logic Symbios and NCR chip set-based SCSI controllers
- LSI Logic Fusion-MPT controllers

#### RAID Controllers

- Adaptec RAID
- Dell PercRAID controllers
- HP SmartArray controllers
- Intel RAID controller
- IBM ServeRAID controllers
- LSI MegaRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

#### Fibre Channel Adapters (SCSI Protocol Support Only)

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

#### Ethernet NICs

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- Broadcom NetXtreme II Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that do work with these device drivers.

Please contact VMware with any questions about current and planned device support.

### Linux Driver Compatibility

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide

range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## VMware Certification

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server. Details of the device models supported by each driver are listed in the following table.

**Table 1.** Driver Version Supported in ESX Server 2.5.5

Class	Vendor	Driver	Driver Version
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	Adaptec	adp94xx2	1.0.7 rel 11
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptscsi_2xx	2.06.48.01
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.64
	Adaptec/Dell/IBM	aacraid_esx	1.1-5 [2415]
	Dell	megaraid_sas	00.00.02.00
	IBM/Adaptec	ips	7.10.17
	Adaptec/Dell/IBM	aacraid-115	1.1-5
	Intel	gdth	2.04
	LSI	MegaRAID	2.10.7
	Mylex	DAC960	2.4.11
Fibre Channel	Emulex	lpfcdd_732	7.3.2_vmw4
	Qlogic	qla2200_707/ qla2300_707	7.07.04.1vmw
Network	Broadcom	bcm5700	7.3.5
	Intel	e100	2.3.40
	Intel	e1000	7.3.15
	Broadcom	tg3	3.43b
	Broadcom	bnx2	1.41.51b

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

**SCSI Adapters**

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

**RAID Adapters**

- 2200/S
- 2120/S

**Motherboard Chip Sets**

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899
- AIC7902
- AIC9410

## Adaptec Ultra320 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic79xx version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### Motherboard Chip Sets

- AIC7901 (A)
- AIC7902 (B)

## LSI Logic Symbios and NCR Based SCSI Adapters

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. ESX Server uses two different drivers to support the device family: one based on the Linux ncr53c8xx version 3.4.3b driver and the other on the sym53c8xx version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### Supported Symbios Chip Sets

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 2.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

## LSI Logic SCSI and SAS Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi\_2xx driver version 2.6.34.13 and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030
- LSI SAS1064E
- LSI SAS1068
- HP SG44Ge Host Bus Adapter

## LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 2.10.7 driver and supports the following SCSI controllers.

- 320-1
- 320-2
- 320-2E ROMB
- 320-2X

## Dell PowerEdge RAID Controllers (PERC)

VMware ESX Server supports two classes of PERC branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac6-T 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 2.10.7 driver. The following devices use that driver:

- PERC 2/DC
- PERC 3/DCL
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493
- Dell PERC 4e/Di internal RAID controllers, also listed as PERC RAID 4ei. (Firmware upgrade 522A is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 3/DC
- PERC 3/QC
- PERC 4/DC (Firmware upgrade 352B is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 4e/Si
- PERC 4e/DC
- PERC 4/im

The ESX Server driver for LSI Logic/AMI-based PercRAID SAS controllers is based on the Linux megaraid\_sas driver. The following devices use the megaraid\_sas driver:

- PERC 5/i

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.50 drivers.

### Cpqarray-based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)
- HP SA P600 SAS controller

### CCISS-based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 5312)
- SMART-6 (Smart Array 641, 6400, 6402, 6404)
- SMART-6i

## IBM ServeRAID RAID Controllers

The ESX Server drivers are based on the Linux ips version 7.10.17 driver and the aacraid\_esx30 version 1.1-5 [2415] driver.

The ips driver supports the following RAID controllers:

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*
- ServeRAID-6i+\*
- ServeRAID-7k

\*Firmware version 7.10.17 and greater.

The aacraid\_esx30 driver supports the following RAID controllers:

- ServeRAID-8i
- ServeRAID-8K

## Intel RAID Controllers

The ESX Server driver is based on the Intel gdth 2.04 driver.

- SRCU42L\*

\* The SRCU42L card is supported only in the Intel SRS4 and all OEM versions of that system.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.3.40 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 3.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565- xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC360T
- NC3120
- NC3121
- NC3123
- NC3131
- NC3132
- NC3133
- NC3134N

- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/1000 based Gigabit Ethernet cards is based on the Linux v 5.2.39 e1000 driver. Several HP and IBM Gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 4.**

Controller	Adapter Name	Board IDs
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter (LX)	A91624-xxx
82545GM	PRO/1000 F Server Adapter	
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	
82546EB	Dual Port Gigabit Ethernet Controller	
82546GB	PRO/1000 P Dual Port Server Adapter	
82571EB	Intel PRO/1000 PT Dual Port Server Adapter	
	Intel PRO/1000 PT Quad Port Ethernet Contoller	
82572EI	Intel PRO/1000 PT Server Adapter (single port)	
82546GB	Intel PRO/1000 GT Quad Port Server Adapter	

The specific HP OEM model numbers associated with this driver are:

- NC110T
- NC310F
- NC340T
- NC6134
- NC6136

- NC7131
- NC7170
- NC6170

VMware supports the following IBM OEM versions of the Intel adapters:

- 06P3601 - IBM 10/100 Ethernet Server Adapter
- 09N9901 - 10/100 Fast Etherlink PCI TX Server
- 22P4901 - IBM 10/100 Dual Port Server Adapter
- 22P680 - PRO/1000 XT (PCI-X) Server Adapter
- 31P9601 - PRO/1000 MT Server Ethernet Adapter
- 73P2701 - IBM PRO/1000 MT Dual Port Server Ethernet Adapter
- 73P5101 - PRO/1000 GT Dual Port Server Adapter
- IBM PRO/1000 GT Quad Port Server Adapter by Intel
- IBM PRO/1000 MT Server Ethernet Adapter by Intel
- IBM PRO/1000 MT Dual Port Server Adapter by Intel
- IBM PRO/1000 GT Server Adapter by Intel
- IBM PRO/1000 GT Dual Port Server Adapter by Intel
- IBM PRO/1000 PT Dual Port Server Adapter by Intel
- IBM PRO/1000 XT Server Adapter by Intel

The specific Sun OEM model numbers associated with this driver are:

- X7280A-2
- X7281A-2
- X7285A
- X7286A
- X7291A
- X9271A
- X9272A
- X9273A
- X9273A-Z

## **Broadcom Gigabit Ethernet NICs**

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 7.3.5 version driver.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX

- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuttle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX, T
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom BCM5721 Gigabit Ethernet
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC150T
- HP NC150T PCI four-port Gigabit Combo Switch Adapter
- HP NC320T PCI-X Gigabit Server Adapter
- HP NC325m Quad-Port Gigabit Server Adapter
- HP NC364m Dual-Port Multifunction Gigabit Server Adapter
- HP NC364T
- HP NC364T PCI Express Quad Port Gigabit Server
- HP NC370F
- HP NC370F PCI-X Multifunction 1000SX Gigabit Server Adapter
- HP NC370T PCI-X Multifunction Gigabit Server Adapter
- HP NC373F
- HP NC373F PCI Express Multifunction Gigabit Server Adapter
- HP NC373m Dual-Port Multifunction Gigabit Server Adapter
- HP NC373T PCI Express Multifunction Gigabit Server Adapter
- HP NC373T PCI-X Multifunction Gigabit Server Adapter

- HP NC374m PCI Express Multifunction Gigabit Server Adapter
- HP NC380T Gigabit Server Adapter
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter
- IBM NetXtreme II 1000 Express Ethernet Adapter
- IBM NetXtreme 1000 T Express Ethernet Adapter
- IBM NetXtreme 1000 T + Ethernet Adapter
- IBM NetXtreme 1000 T + Dual Port Ethernet Adapter
- IBM NetXtreme 1000 SX + Fiber Ethernet Adapter
- IBM NetXtreme 1000 Express G Ethernet Adapter
- 73P9030 - Gigabit Ethernet Expansion
- 90P3777 - Gigabit Ethernet Expansion
- 26K4842 - Gigabit Ethernet Expansion

ESX Server software uses the open source tg3 driver for the following Gigabit Ethernet cards:

- Broadcom BCM5715

ESX Server software uses the open source bnx2 driver for the following Gigabit Ethernet cards:

- Broadcom BCM5706
- Broadcom BCM5708
- Broadcom BCM5708C

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX,-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO

- 3C905B-T4 – EtherLink 10/100 PCI T4

### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

### **IBM BladeCenter NICs**

- 73P9030 - IBM BladeCenter GB Ethernet Expansion
- 90P3777 - Intel GB Ethernet Expansion
- 26K4842 - IBM BladeCenter SFF GB Ethernet Expansion

## **ESX Server 2.5.4**

### **Currently Supported Device Families**

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### **Fibre Channel Adapters (SCSI Protocol Support Only)**

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

### **Ethernet NICs**

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	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptscsi_2xx	2.6.34.13
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.54
	Adaptec/Dell/IBM	aacraid_esx	1.1-5 [2415]
	Dell	megaraid_sas	00.00.02.00
	IBM/Adaptec	ips	7.10.17
	Adaptec/Dell/IBM	aacraid-115	1.1-5
	Intel	gdth	2.04
	LSI	MegaRAID	2.10.7
Fibre Channel	Mylex	DAC960	2.4.11
	Emulex	lpfcdd_2xx	2.01g
Fibre Channel	Qlogic	qla2200_7xx / qla2300_7xx	7.04.00
	Network	Broadcom	bcm5700
Network	Intel	e100	2.3.40
	Intel	e1000	7.0.33
	Broadcom	tg3	3.43b
	Broadcom	bnx2	1.4.39b

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)

- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### **RAID Adapters**

- 2200/S
- 2120/S

### **Motherboard Chip Sets**

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899
- AIC7902
- AIC9410

## **Adaptec Ultra320 SCSI Adapters**

The ESX Server Adaptec driver is based on the Linux aic79xx version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### **SCSI Adapters**

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### **Motherboard Chip Sets**

- AIC7901 (A)
- AIC7902 (B)

## **LSI Logic Symbios and NCR Based SCSI Adapters**

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. ESX Server uses two different drivers to support the device family: one based on the Linux ncr53c8xx

version 3.4.3b driver and the other on the sym53c8xx version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### **Supported Symbios Chip Sets**

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 6.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

## LSI Logic SCSI and SAS Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi\_2xx driver version 2.6.34.13 and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030
- LSI SAS1064E
- LSI SAS1068

## LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 2.10.7 driver and supports the following SCSI controllers.

- 320-1
- 320-2
- 320-2E ROMB
- 320-2X

## Dell PowerEdge RAID Controllers (PERC)

VMware ESX Server supports two classes of PERC branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac6-T 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 2.10.7 driver. The following devices use that driver:

- PERC 2/DC
- PERC 3/DCL
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493
- Dell PERC 4e/Di internal RAID controllers, also listed as PERC RAID 4ei. (Firmware upgrade 522A is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 3/DC
- PERC 3/QC
- PERC 4/DC (Firmware upgrade 352B is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 4e/Si
- PERC 4e/DC
- PERC 4/im

The ESX Server driver for LSI Logic/AMI-based PercRAID SAS controllers is based on the Linux megaraid\_sas driver. The following devices use the megaraid\_sas driver:

- PERC 5/i

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.50 drivers.

### Cpqarray-based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)
- HP SA P600 SAS controller

### CCISS-based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 5312)
- SMART-6 (Smart Array 641, 6400, 6402, 6404)
- SMART-6i

## IBM ServeRAID RAID Controllers

The ESX Server drivers are based on the Linux ips version 7.10.17 driver and the aacraid\_esx30 version 1.1-5 [2415] driver.

The ips driver supports the following RAID controllers:

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*
- ServeRAID-6i+\*
- ServeRAID-7k

\*Firmware version 7.10.17 and greater.

The aacraid\_esx30 driver supports the following RAID controllers:

- ServeRAID-8i
- ServeRAID-8K

## Intel RAID Controllers

The ESX Server driver is based on the Intel gdth 2.04 driver.

- SRCU42L\*

\* The SRCU42L card is supported only in the Intel SRS4 and all OEM versions of that system.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.3.40 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 7.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565- xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC360T
- NC3120
- NC3121
- NC3123
- NC3131
- NC3132
- NC3133
- NC3134N

- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/1000 based Gigabit Ethernet cards is based on the Linux v 5.2.39 e1000 driver. Several HP and IBM Gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 8.**

Controller	Adapter Name	Board IDs
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter (LX)	A91624-xxx
82545GM	PRO/1000 F Server Adapter	
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	
82546EB	Dual Port Gigabit Ethernet Controller	
82546GB	PRO/1000 P Dual Port Server Adapter	
82571EB	Intel PRO/1000 PT Dual Port Server Adapter	
82572EI	Intel PRO/1000 PT Server Adapter (single port)	
82546GB	Intel PRO/1000 GT Quad Port Server Adapter	

The specific HP OEM model numbers associated with this driver are:

- NC110T
- NC310F
- NC340T
- NC6134
- NC6136
- NC7131

- NC7170
- NC6170

VMware supports the following IBM OEM versions of the Intel adapters:

- 06P3601 - IBM 10/100 Ethernet Server Adapter
- 09N9901 - 10/100 Fast Etherlink PCI TX Server
- 22P4901 - IBM 10/100 Dual Port Server Adapter
- 22P680 - PRO/1000 XT (PCI-X) Server Adapter
- 31P9601 - PRO/1000 MT Server Ethernet Adapter
- 73P2701 - IBM PRO/1000 MT Dual Port Server Ethernet Adapter
- 73P5101 - PRO/1000 GT Dual Port Server Adapter
- IBM PRO/1000 GT Quad Port Server Adapter by Intel
- IBM PRO/1000 MT Server Ethernet Adapter by Intel
- IBM PRO/1000 MT Dual Port Server Adapter by Intel
- IBM PRO/1000 GT Server Adapter by Intel
- IBM PRO/1000 GT Dual Port Server Adapter by Intel
- IBM PRO/1000 PT Dual Port Server Adapter by Intel
- IBM PRO/1000 XT Server Adapter by Intel

The specific Sun OEM model numbers associated with this driver are:

- X7280A-2
- X7281A-2
- X7285A
- X7286A
- X7291A
- X9271A
- X9272A
- X9273A
- X9273A-Z

## **Broadcom Gigabit Ethernet NICs**

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 7.3.5 version driver.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T

- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX, T
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom BCM5721 Gigabit Ethernet
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC150T
- HP NC150T PCI four-port Gigabit Combo Switch Adapter
- HP NC320T PCI-X Gigabit Server Adapter
- HP NC325m Quad-Port Gigabit Server Adapter
- HP NC364m Dual-Port Multifunction Gigabit Server Adapter
- HP NC364T
- HP NC364T PCI Express Quad Port Gigabit Server
- HP NC370F
- HP NC370F PCI-X Multifunction 1000SX Gigabit Server Adapter
- HP NC370T PCI-X Multifunction Gigabit Server Adapter
- HP NC373F
- HP NC373F PCI Express Multifunction Gigabit Server Adapter
- HP NC373m Dual-Port Multifunction Gigabit Server Adapter
- HP NC373T PCI Express Multifunction Gigabit Server Adapter
- HP NC373T PCI-X Multifunction Gigabit Server Adapter
- HP NC374m PCI Express Multifunction Gigabit Server Adapter

- HP NC380T Gigabit Server Adapter
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter
- IBM NetXtreme II 1000 Express Ethernet Adapter
- IBM NetXtreme 1000 T Express Ethernet Adapter
- IBM NetXtreme 1000 T + Ethernet Adapter
- IBM NetXtreme 1000 T + Dual Port Ethernet Adapter
- IBM NetXtreme 1000 SX + Fiber Ethernet Adapter
- IBM NetXtreme 1000 Express G Ethernet Adapter
- 73P9030 - Gigabit Ethernet Expansion
- 90P3777 - Gigabit Ethernet Expansion
- 26K4842 - Gigabit Ethernet Expansion

ESX Server software uses the open source tg3 driver for the following Gigabit Ethernet cards:

- Broadcom BCM5715

ESX Server software uses the open source bnx2 driver for the following Gigabit Ethernet cards:

- Broadcom BCM5706
- Broadcom BCM5708

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX,-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

### **IBM BladeCenter NICs**

- 73P9030 - IBM BladeCenter GB Ethernet Expansion
- 90P3777 - Intel GB Ethernet Expansion
- 26K4842 - IBM BladeCenter SFF GB Ethernet Expansion

## **ESX Server 2.5.3**

### **Currently Supported Device Families**

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

#### **SCSI Controllers (Attached to Non-Removable SCSI Devices Only)**

**Note:** CD-ROM devices are removable devices, whereas tape drives are considered to be non-removable devices.

- Adaptec Ultra160 and Ultra 320 SCSI controllers
- LSI Logic Symbios and NCR chip set-based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

#### **RAID Controllers**

- Adaptec RAID
- Dell PercRAID controllers
- HP SmartArray controllers
- Intel RAID controller
- IBM ServeRAID controllers
- LSI MegaRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

### **Fibre Channel Adapters (SCSI Protocol Support Only)**

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

### **Ethernet NICs**

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that do work with these device drivers.

Please contact VMware with any questions about current and planned device support.

## **Linux Driver Compatibility**

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## **VMware Certification**

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server. Details of the device models supported by each driver are listed in the following table.

**Table 9.** Driver Version Supported in ESX Server 2.5.3

Class	Vendor	Driver	Driver Version
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	Adaptec	adp94xx	0.0.5-7
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptscsi	2.05.16
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.54
	Dell	aacraid	0.9.9ac6-T
	Dell	megaraid	2.10.7
	IBM/Adaptec	ips	7.10.17
	IBM/Adaptec	aacraid-115	1.1-5
	Intel	gdth	2.04
	LSI	MegaRAID	2.10.7
Fibre Channel	Mylex	DAC960	2.4.11
	Emulex	lpfcdd_2xx	2.01g
Fibre Channel	Qlogic	qla2200_7xx / qla2300_7xx	7.04.00
	Qlogic	qla2200_7xx / qla2300_7xx	7.04.00
Network	Broadcom	bcm5700	7.3.5
	Intel	e100	2.3.40
	Intel	e1000	6.0.60

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)

- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### **RAID Adapters**

- 2200/S
- 2120/S

### **Motherboard Chip Sets**

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899
- AIC7902
- AIC9410

### **Adaptec Ultra320 SCSI Adapters**

The ESX Server Adaptec driver is based on the Linux aic79xx version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### **SCSI Adapters**

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### **Motherboard Chip Sets**

- AIC7901 (A)
- AIC7902 (B)

### **LSI Logic Symbios and NCR Based SCSI Adapters**

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. ESX Server uses two different drivers to support the device family: one based on the Linux ncr53c8xx version 3.4.3b driver and the other on the sym53c8xx version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part

number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### **Supported Symbios Chip Sets**

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 10.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

### LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.05.16 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030

### LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 2.10.7 driver and supports the following SCSI controllers.

- 320-1
- 320-2
- 320-2E ROMB
- 320-2X

### Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac6-T 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 2.10.7 driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/eDi
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493
- Dell PERC 4e/Di internal RAID controllers, also listed as PERC RAID 4ei. (Firmware upgrade 522A is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 3/DC
- PERC 3/QC
- PERC 4/DC (Firmware upgrade 352B is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 4e/Si
- PERC 4/IM

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.50 drivers.

### Cpqarray-based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)
- HP SA P600 SAS controller

### CCISS-based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 5312)
- SMART-6 (Smart Array 641, 6400, 6402, 6404)
- SMART-6i

## IBM ServeRAID RAID Controllers

The ESX Server drivers are based on the Linux ips version 7.10.17 driver and the aacraid-115 version 1.1-5 driver.

The ips driver supports the following RAID controllers:

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H

- ServeRAID-5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*
- ServeRAID-6i+\*
- ServeRAID-7k

\*Firmware version 7.10.17 and greater.

The aacraid-115 driver supports the following RAID controllers:

- ServeRAID-8i

## Intel RAID Controllers

The ESX Server driver is based on the Intel gdth 2.04 driver.

- SRCU42L\*

\* The SRCU42L card is supported only in the Intel SRS4 and all OEM versions of that system.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.3.40 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 11.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx

**Table 11.**

Controller	Adapter Name	Board ID
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565- xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131
- NC3132
- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/1000 based Gigabit Ethernet cards is based on the Linux v 5.2.39 e1000 driver. Several HP and IBM Gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 12.**

Controller	Adapter Name	Board IDs
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter (LX)	A91624-xxx
82545GM	PRO/1000 F Server Adapter	
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	
82546EB	Dual Port Gigabit Ethernet Controller	
82546GB	PRO/1000 P Dual Port Server Adapter	

The specific HP OEM model numbers associated with this driver are:

- NC310F
- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

VMware supports the following IBM OEM versions of the Intel adapters:

- 06P3601 - IBM 10/100 Ethernet Server Adapter
- 09N9901 - 10/100 Fast Etherlink PCI TX Server
- 22P4901 - IBM 10/100 Dual Port Server Adapter
- 22P680 - PRO/1000 XT (PCI-X) Server Adapter
- 31P9601 - PRO/1000 MT Server Ethernet Adapter
- 73P2701 - IBM PRO/1000 MT Dual Port Server Ethernet Adapter
- 73P5101 - PRO/1000 GT Dual Port Server Adapter
- IBM PRO/1000 MT Server Ethernet Adapter by Intel

- IBM PRO/1000 MT Dual Port Server Adapter by Intel
- IBM PRO/1000 GT Server Adapter by Intel
- IBM PRO/1000 GT Dual Port Server Adapter by Intel
- IBM PRO/1000 PT Dual Port Server Adapter by Intel
- IBM PRO/1000 XT Server Adapter by Intel

The specific Sun OEM model numbers associated with this driver are:

- X7285A
- X7286A
- X7291A
- X9271A
- X9272A
- X9273A

## **Broadcom Gigabit Ethernet NICs**

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 7.3.5 version driver.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX, T
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom BCM5721 Gigabit Ethernet
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC

- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter
- IBM NetXtreme 1000 T Express Ethernet Adapter
- IBM NetXtreme 1000 T + Ethernet Adapter
- IBM NetXtreme 1000 T + Dual Port Ethernet Adapter
- IBM NetXtreme 1000 SX + Fiber Ethernet Adapter
- IBM NetXtreme 1000 Express G Ethernet Adapter
- 73P9030 - Gigabit Ethernet Expansion
- 90P3777 - Gigabit Ethernet Expansion
- 26K4842 - Gigabit Ethernet Expansion

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX,-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

#### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI

- 3C980-TX – EtherLink Server 10/100 PCI

### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

### **IBM BladeCenter NICS**

- 73P9030 - IBM BladeCenter GB Ethernet Expansion
- 90P3777 - Intel GB Ethernet Expansion
- 26K4842 - IBM BladeCenter SFF GB Ethernet Expansion

## **ESX Server 2.5.2**

### **Currently Supported Device Families**

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

#### **SCSI Controllers (Attached to Non-Removable SCSI Devices Only)**

**Note:** CD-ROM devices are removable devices, whereas tape drives are considered to be non-removable devices.

- Adaptec Ultra160 and Ultra 320 SCSI controllers
- LSI Logic Symbios and NCR chip set-based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

#### **RAID Controllers**

- Adaptec RAID
- Dell PercRAID controllers
- HP SmartArray controllers
- Intel RAID controller
- IBM ServeRAID controllers
- LSI MegaRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

#### **Fibre Channel Adapters (SCSI Protocol Support Only)**

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

## Ethernet NICs

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that do work with these device drivers.

Please contact VMware with any questions about current and planned device support.

## Linux Driver Compatibility

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## VMware Certification

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server. Details of the device models supported by each driver are listed in the following table.

**Table 13.** Driver Version Supported in ESX Server 2.5.2

Class	Vendor	Driver	Driver Version
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	Adaptec	adp94xx	0.0.5-7
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptscsi	2.05.16

**Table 13.** Driver Version Supported in ESX Server 2.5.2

Class	Vendor	Driver	Driver Version
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.54
	Dell	aacraid	0.9.9ac6-T
	Dell	megaraid	2.10.7
	IBM/Adaptec	ips	7.10.17
	IBM/Adaptec	aacraid-115	1.1-5
	Intel	gdth	2.04
	LSI	MegaRAID	2.10.7
	Mylex	DAC960	2.4.11
Fibre Channel	Emulex	lpfcdd_2xx	2.01g
	Qlogic	qla2200_7xx / qla2300_7xx	7.04.00
Network	Broadcom	bcm5700	7.3.5
	Intel	e100	2.3.40
	Intel	e1000 <sup>1</sup>	6.0.15

1. ESX Server 2.5.2 Upgrade Patch 4 supports e1000 version 6.0.60.

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### RAID Adapters

- 2200/S
- 2120/S

## Motherboard Chip Sets

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899
- AIC7902
- AIC9410

## Adaptec Ultra320 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux `aic79xx` version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### Motherboard Chip Sets

- AIC7901 (A)
- AIC7902 (B)

## LSI Logic Symbios and NCR Based SCSI Adapters

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. ESX Server uses two different drivers to support the device family: one based on the Linux `ncr53c8xx` version 3.4.3b driver and the other on the `sym53c8xx` version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### Supported Symbios Chip Sets

- SYM53C810
- SYM53C810A

- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 14.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

### LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.05.16 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020

- 53C1030

## LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 2.10.7 driver and supports the following SCSI controllers.

- 320-1
- 320-2
- 320-2E ROMB
- 320-2X

## Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac6-T 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 2.10.7 driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/eDi
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493
- Dell PERC 4e/Di internal RAID controllers, also listed as PERC RAID 4ei. (Firmware upgrade 522A is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 3/DC
- PERC 3/QC
- PERC 4/DC (Firmware upgrade 352B is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 4e/Si
- PERC 4/IM

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.50 drivers.

### Cpqarray-based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)

- HP SA P600 SAS controller

### **CCISS-based Controllers**

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 5312)
- SMART-6 (Smart Array 641, 6400, 6402, 6404)
- SMART-6i

### **IBM ServeRAID RAID Controllers**

The ESX Server drivers are based on the Linux ips version 7.10.17 driver and the aacraid-115 version 1.1-5 driver.

The ips driver supports the following RAID controllers:

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*
- ServeRAID-6i+\*
- ServeRAID-7k

\*Firmware version 7.10.17 and greater.

The aacraid-115 driver supports the following RAID controllers:

- ServeRAID-8i

### **Intel RAID Controllers**

The ESX Server driver is based on the Intel gdth 2.04 driver.

- SRCU42L\*

\* The SRCU42L card is supported only in the Intel SRS4 and all OEM versions of that system.

### **Mylex AcceleRAID/eXtremeRAID Controllers**

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.3.40 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 15.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565- xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131
- NC3132

- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/1000 based Gigabit Ethernet cards is based on the Linux v 5.2.39 e1000 driver. Several HP and IBM Gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 16.**

Controller	Adapter Name	Board IDs
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter (LX)	A91624-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	
82546EB	Dual Port Gigabit Ethernet Controller	
82546GB	PRO/1000 P Dual Port Server Adapter <sup>1</sup>	

1. Enabled with [ESX Server 2.5.2 Upgrade Patch 4](#) only.

The specific HP OEM model numbers associated with this driver are:

- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

VMware supports the following IBM OEM versions of the Intel adapters:

- 06P3601 - IBM 10/100 Ethernet Server Adapter

- 09N9901 - 10/100 Fast Etherlink PCI TX Server
- 22P4901 - IBM 10/100 Dual Port Server Adapter
- 22P680 - PRO/1000 XT (PCI-X) Server Adapter
- 31P9601 - PRO/1000 MT Server Ethernet Adapter
- 73P2701 - IBM PRO/1000 MT Dual Port Server Ethernet Adapter
- 73P5101 - PRO/1000 GT Dual Port Server Adapter

The specific Sun OEM model numbers associated with this driver are:

- X7285A
- X7286A
- X7291A
- X9271A
- X9272A
- X9273A

## **Broadcom Gigabit Ethernet NICs**

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 7.3.5 version driver.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX, T
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom BCM5721 Gigabit Ethernet
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC

- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter
- 73P9030 - Gigabit Ethernet Expansion
- 90P3777 - Gigabit Ethernet Expansion
- 26K4842 - Gigabit Ethernet Expansion

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX,-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

#### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

#### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

### **IBM BladeCenter NICS**

- 73P9030 - IBM BladeCenter GB Ethernet Expansion
- 90P3777 - Intel GB Ethernet Expansion
- 26K4842 - IBM BladeCenter SFF GB Ethernet Expansion

## **ESX Server 2.5.1**

### **Currently Supported Device Families**

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

#### **SCSI Controllers (Attached to Non-Removable SCSI Devices Only)**

- Adaptec Ultra160 and Ultra 320 SCSI controllers
- LSI Logic Symbios and NCR chip set-based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

#### **RAID Controllers**

- Adaptec RAID
- Dell PercRAID controllers
- HP SmartArray controllers
- Intel RAID controller
- IBM ServeRAID controllers
- LSI MegaRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

#### **Fibre Channel Adapters (SCSI Protocol Support Only)**

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

#### **Ethernet NICs**

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that do work with these device drivers.

Please contact VMware with any questions about current and planned device support.

## Linux Driver Compatibility

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## VMware Certification

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server. Details of the device models supported by each driver are listed in the following table.

**Table 17.** Driver Version Supported in ESX Server 2.5.1

Class	Vendor	Driver	Driver Version
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	Adaptec	adp94xx	0.0.5-7
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptscsi	2.05.16
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.50
	Dell	aacraid	0.9.9ac6-T
	Dell	megaraid	2.10.7
	IBM/Adaptec	ips	7.10.17
	IBM/Adaptec	aacraid-115	1.1-5
	Intel	gdth	2.04
	LSI	MegaRAID	2.10.7
	Mylex	DAC960	2.4.11
Fibre Channel	Emulex	lpfcdd_2xx	2.01g
	Qlogic	qla2200_7xx / qla2300_7xx	7.04.00

**Table 17.** Driver Version Supported in ESX Server 2.5.1

Class	Vendor	Driver	Driver Version
Network	Broadcom	bcm5700	7.3.5
	Intel	e100	2.3.40
	Intel	e1000	5.2.39

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### RAID Adapters

- 2200/S
- 2120/S

### Motherboard Chip Sets

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C

- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899
- AIC7902
- AIC9410

## Adaptec Ultra320 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic79xx version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### Motherboard Chip Sets

- AIC7901 (A)
- AIC7902 (B)

## LSI Logic Symbios and NCR Based SCSI Adapters

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. ESX Server uses two different drivers to support the device family: one based on the Linux ncr53c8xx version 3.4.3b driver and the other on the sym53c8xx version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### Supported Symbios Chip Sets

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897

- SYM53C1510D

**Table 18.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

### LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.05.16 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030

### LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 2.10.7 driver and supports the following SCSI controllers.

- 320-1
- 320-2
- 320-2E ROMB
- 320-2X

### Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac6-T 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 2.10.7 driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/eDi
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493
- Dell PERC 4e/Di internal RAID controllers, also listed as PERC RAID 4ei. (Firmware upgrade 522A is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 3/DC
- PERC 3/QC
- PERC 4/DC (Firmware upgrade 352B is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 4e/Si
- PERC 4/IM

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.50 drivers.

### Cpqarray-based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)

### CCISS-based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 5312)
- SMART-6 (Smart Array 641, 6400, 6402, 6404)
- SMART-6i

## IBM ServeRAID RAID Controllers

The ESX Server drivers are based on the Linux ips version 7.10.17 driver and the aacraid-115 version 1.1-5 driver.

The ips driver supports the following RAID controllers:

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx

- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*
- ServeRAID-6i+\*
- ServeRAID-7k

\*Firmware version 7.10.17 and greater.

The aacraid-115 driver supports the following RAID controllers:

- ServeRAID-8i

## Intel RAID Controllers

The ESX Server driver is based on the Intel gdth 2.04 driver.

- SRCU42L\*

\* The SRCU42L card is supported only in the Intel SRS4 and all OEM versions of that system.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.3.40 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 19.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565- xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131
- NC3132
- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162

- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/1000 based Gigabit Ethernet cards is based on the Linux v 5.2.39 e1000 driver. Several HP and IBM Gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 20.**

Controller	Adapter Name	Board IDs
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter (LX)	A91624-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	
82546EB	Dual Port Gigabit Ethernet Controller	

The specific HP OEM model numbers associated with this driver are:

- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

VMware supports the following IBM OEM versions of the Intel adapters:

- 06P3601 - IBM 10/100 Ethernet Server Adapter
- 09N9901 - 10/100 Fast Etherlink PCI TX Server
- 22P4901 - IBM 10/100 Dual Port Server Adapter
- 22P680 - PRO/1000 XT (PCI-X) Server Adapter
- 31P9601 - PRO/1000 MT Server Ethernet Adapter

## Broadcom Gigabit Ethernet NICs

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 7.3.5 version driver.

- Broadcom Vigil B5700 1000Base-T

- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuttle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX, T
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom BCM5721 Gigabit Ethernet
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter

- 73P9030 - Gigabit Ethernet Expansion
- 90P3777 - Gigabit Ethernet Expansion
- 26K4842 - Gigabit Ethernet Expansion

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX,-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

#### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

#### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

#### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

#### **IBM BladeCenter NICS**

- 73P9030 - IBM BladeCenter GB Ethernet Expansion
- 90P3777 - Intel GB Ethernet Expansion
- 26K4842 - IBM BladeCenter SFF GB Ethernet Expansion

## **ESX Server 2.5**

### **Currently Supported Device Families**

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

#### **SCSI ControllerRs (Attached to Non-removable SCSI Devices Only)**

- Adaptec Ultra160 and Ultra 320 SCSI controllers

- LSI Logic Symbios and NCR chip set based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

### **RAID Controllers**

- Adaptec RAID
- Dell PercRAID controllers
- HP SmartArray controllers
- Intel RAID controller
- IBM ServeRAID controllers
- LSI MegaRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

### **Fibre Channel Adapters (SCSI Protocol Support Only)**

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

### **Ethernet NICs**

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware can add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that will work with these device drivers.

Please contact VMware with any questions about current and planned device support.

## **Linux Driver Compatibility**

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## **VMware Certification**

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their

current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server. Details of the device models supported by each driver can be found below.

**Table 21.** Driver Version Supported in ESX Server 2.5

Class	Vendor	Driver	Driver Version
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptscsi	2.05.16
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.50
	Dell	aacraid	0.9.9ac6-T
	Dell	megaraid	2.10.7
	IBM/Adaptec	ips	7.10.17
	Intel	gdth	2.04
	LSI	MegaRAID	2.10.7
	Mylex	DAC960	2.4.11
Fibre Channel	Emulex	lpfcdd_2xx	2.01g
	Qlogic	qla2x00	6.07.02
Network	Broadcom	bcm5700	7.3.5
	Intel	e100	2.3.40
	Intel	e1000	5.2.39
	3Com	3c90x	1.0.2
	3Com	3c990-c	1.0.0b

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)

- AHA\_19160B

### **RAID Adapters**

- 2200/S
- 2120/S

### **Motherboard Chip Sets**

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899
- AIC7902

### **Adaptec Ultra320 SCSI Adapters**

The ESX Server Adaptec driver is based on the Linux aic79xx version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### **SCSI Adapters**

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### **Motherboard Chip Sets**

- AIC7901 (A)
- AIC7902 (B)

### **LSI Logic Symbios and NCR-Based SCSI Adapters**

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. The ESX Server uses two different drivers to support the device family, one based on the Linux ncr53c8xx version 3.4.3b driver and the other on the sym53c8xx version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

## Supported Symbios Chip Sets

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 22.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PC-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

## LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.05.16 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030

## LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 2.10.7 driver and supports the following SCSI controllers.

- 320-1
- 320-2
- 320-2E ROMB

## Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac6-T 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux MegaRAID version 2.10.7 driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/eDi
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493
- Dell PERC 4e/Di internal RAID controllers, also listed as PERC RAID 4ei. (Firmware upgrade 522A is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 3/DC
- PERC 3/QC
- PERC 4/DC (Firmware upgrade 352B is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)
- PERC 4e/Si
- PERC 4/IM

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.50 drivers.

### Cpqarray-Based Controllers

- IDA, IDA-2, IAES
- SMART

- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)

### **CCISS-Based Controllers**

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 5312)
- SMART-6 (Smart Array 641, 6400, 6402, 6404)
- SMART-6i

### **IBM ServeRAID RAID Controllers**

The ESX Server driver is based on the Linux ips v 7.10.17 driver.

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*
- ServeRAID-6i+\*
- ServeRAID-7k

\*Firmware version 7.10.17 and greater.

### **Intel RAID Controllers**

The ESX Server driver is based on the Intel gdth 2.04 driver.

- SRCU42L\*

\* The SRCU42L card is supported only in the Intel SRS4 and all OEM versions of that system.

### **Mylex AcceleRAID/eXtremeRAID Controllers**

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.3.40 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 23.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565-xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131
- NC3132

- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/ro 1000-based Gigabit Ethernet cards is based on the Linux v 5.2.39 e1000 driver. Several HP and IBM gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 24.**

Controller	Adapter Name	Board IDs
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter(LX)	A91624-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	

The specific HP OEM model numbers associated with this driver are:

- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

VMware supports the following IBM OEM versions of the Intel adapters:

- 06P3601 - IBM 10/100 Ethernet Server Adapter
- 09N9901 - 10/100 Fast Etherlink PCI TX Server
- 22P4901 - IBM 10/100 Dual Port Server Adapter
- 22P680 - PRO/1000 XT (PCI-X) Server Adapter

- 31P9601 - PRO/1000 MT Server Ethernet Adapter

## **Broadcom Gigabit Ethernet NICs**

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v2.0.28v7.3.5 version driver. Due to complexities in the Broadcom implementation, we advise customers to consider either Alteon AceNIC or Intel Pro1000-based gigabit Ethernet cards for deployment with ESX Server.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX, T
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5721
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter

- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter
- 22P7801- NetXtreme 1000 SX Fiber Ethernet Adapter
- 31P6301 - NetXtreme 1000 T Ethernet Adapter
- 31P6401 - NetXtreme Dual Port Gigabit Ethernet Adapter
- 73P3501 - NetXtreme 1000 T Express Ethernet Adapter
- 73P4001 - NetXtreme 1000 + SX Fiber Ethernet Adapter
- 73P4101 - NetXtreme 1000 + Ethernet Adapter
- 73P4201 - NetXtreme 1000 + Dual port Ethernet Adapter

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

#### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

#### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

#### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

## IBM BladeCenter NICS

- 73P9030 - IBM BladeCenter GB Ethernet Expansion
- 90P3777 - Intel GB Ethernet Expansion
- 26K4842 - IBM BladeCenter SFF GB Ethernet Expansion

## ESX Server 2.1.2

### Currently Supported Device Families

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

ESX Server 2.1.2 is a minor maintenance release that augments ESX Server 2.1.1 with the following updated versions of device drivers and RAID controller. For all other supported device families, please refer to the “[Currently Supported Device Families](#)” on page 71.

**Table 25.**

Class	Vendor	Driver	2.1.2
RAID	Dell	aacraid	0.9.9ac6
	Dell	megaraid	2.10.7

### Dell PercRAID Controllers

- Dell PERC 4e/Di internal RAID controllers, also listed as PERC RAID 4ei. (Firmware upgrade 522A is not supported. For further details, refer to KB 5966817 at <http://kb.vmware.com/kb/5966817>)

## ESX Server 2.1.1

### Currently Supported Device Families

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

### SCSI Controllers (Attached to Non-Removable SCSI Devices Only)

- Adaptec Ultra160 and Ultra 320 SCSI controllers
- LSI Logic Symbios and NCR chip set based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

### RAID Controllers

- Dell PercRAID controllers
- HP SmartArray controllers
- IBM ServeRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

### Fibre Channel Adapters (SCSI Protocol Support Only)

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

## Ethernet NICs

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that work with these device drivers.

Please contact VMware with any questions about current and planned device support.

## Linux Driver Compatibility

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## VMware Certification

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server compared with previous releases. Details of the device models supported by each driver can be found below.

**Table 26.**

Class	Vendor	Driver	2.1
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptlinuxmptscsi	2.05
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.45
	Dell	aacraid	0.9.9ac2
	Dell	megaraid	1.18j
	IBM/Adaptec	ips	6.10.24
	LSI	megaraid	1.18j
	Mylex	DAC960	2.4.11

**Table 26.**

Class	Vendor	Driver	2.1
Fibre Channel	Emulex	lpfcdd	4.20q, 1.22e
	Qlogic	qla2x00	6.04.02
Network	Broadcom	bcm5700	7.1.9
	Intel	e100	2.3.18
	Intel	e1000	5.2.16
	3Com	3c90x	1.0.2
	3Com	3C990-x	1.0.0b

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux `aic7xxx` version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### Motherboard Chip Sets

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91

- AIC7892
- AIC7895
- AIC7896/97
- AIC7899

## Adaptec Ultra320 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux `aic79xx` version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### Motherboard Chip Sets

- AIC7901 (A)
- AIC7902 (B)

## LSI Logic Symbios and NCR-Based SCSI Adapters

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. ESX Server uses two different drivers to support the device family: one based on the Linux `ncr53c8xx` version 3.4.3b driver and the other on the `sym53c8xx` version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### Supported Symbios Chip Sets

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- YM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 27.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A

**Table 27.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

### LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.05 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030

### LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 1.18j driver and supports the following SCSI controllers.

- 320-1
- 320-2

### Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac2 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 1.18h driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/Di
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.45 drivers.

### cpqarray-Based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)

### cciss-Based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 532, 5312)
- SMART-6 (Smart Array 641, 642, 6400, 6402, 6404)

## IBM ServeRAID RAID Controllers

The ESX Server driver is based on the Linux ips v 6.10.24 driver.

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*

\*Firmware version 6.10.70 and greater.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P

- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.3.18 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 28.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565-xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, x, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131

- NC3132
- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

### Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/ro 1000 -based Gigabit Ethernet cards is based on the Linux v 5.2.16 e1000 driver. Several HP and IBM gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 29.**

Controller	Adapter Name	Board IDs
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter(LX)	A91624-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	

The specific HP OEM model numbers associated with this driver are:

- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

### Broadcom Gigabit Ethernet NICs

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 7.1.9. Due to complexities in the Broadcom implementation, we advise customers to consider either Alteon AceNIC or Intel Pro1000-based gigabit ethernet cards for deployment with ESX Server.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter

## 3Com EtherLink PCI III/XL Series Ethernet NICs

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver, and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

### EtherLink 10/100 PCI NICs

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

### EtherLink Server 10/100 PCI NICs

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

### EtherLink 100 PCI NIC

- 3C905B-FX – EtherLink 100 PCI Fiber

### EtherLink 10 PCI NICs

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

## ESX Server 2.1

### Currently Supported Device Families

VMware currently has ESX Server device drivers available that support specific devices within the following families of I/O controllers. Please examine the detailed list of device models below to make sure your specific device is supported.

#### SCSI Controllers (Attached to Non-Removable SCSI Devices Only)

- Adaptec Ultra160 and Ultra 320 SCSI controllers
- LSI Logic Symbios and NCR chip set based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

#### RAID Controllers

- Dell PercRAID controllers
- HP SmartArray controllers
- IBM ServeRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

## Fibre Channel Adapters (SCSI Protocol Support Only)

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

## Ethernet NICs

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that work with these device drivers.

Please contact VMware with any questions about current and planned device support.

## Linux Driver Compatibility

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## VMware Certification

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server compared with previous releases. Details of the device models supported by each driver can be found below.

**Table 30.**

Class	Vendor	Driver	2.1
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptlinuxmptscsi	2.05

**Table 30.**

Class	Vendor	Driver	2.1
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.45
	Dell	aacraid	0.9.9ac2
	Dell	megaraid	1.18j
	IBM/Adaptec	ips	6.10.24
	Mylex	DAC960	2.4.11
Fibre Channel	Emulex	lpfcdd	4.20q, 1.22e
	Qlogic	qla2x00	6.04.02
Network	Broadcom	bcm5700	7.1.9
	Intel	e100	2.3.18
	Intel	e1000	5.2.16
	3Com	3c90x	1.0.2
	3Com	3C990-x	1.0.0b

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux `aic7xxx` version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### Motherboard Chip Sets

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870

- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899

### **Adaptec Ultra320 SCSI Adapters**

The ESX Server Adaptec driver is based on the Linux aic79xx version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

#### **SCSI Adapters**

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

#### **Motherboard Chip Sets**

- AIC7901 (A)
- AIC7902 (B)

### **LSI Logic Symbios and NCR-Based SCSI Adapters**

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. ESX Server uses two different drivers to support the device family: one based on the Linux ncr53c8xx version 3.4.3b driver and the other on the sym53c8xx version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

#### **Supported Symbios Chip Sets**

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A

- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 31.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

### LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.05 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030

### LSI Logic MegaRAID Adapters

The ESX Server driver is based on the LSI MegaRAID 2.10.7 driver and supports the following SCSI controllers.

- 320-1
- 320-2
- 320-2E ROMB

## Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac2 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 1.18h driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/Di
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.45 drivers.

### cpqarray-Based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)

### cciss-Based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 532, 5312)
- SMART-6 (Smart Array 641, 642, 6400, 6402, 6404)

## IBM ServeRAID RAID Controllers

The ESX Server driver is based on the Linux ips v 6.10.24 driver.

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*

\*Firmware version 6.10.70 and greater.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* chapter for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.3.18 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 32.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565-xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, x, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx

**Table 32.**

Controller	Adapter Name	Board ID
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131
- NC3132
- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/ro 1000 -based Gigabit Ethernet cards is based the Linux v 5.2.16 e1000 driver. Several HP and IBM gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

**Table 33.**

Controller	Adapter Name	Board IDs
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter(LX)	A91624-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx
82546EB	PRO/1000 MT Quad Port Server Adapter	

The specific HP OEM model numbers associated with this driver are:

- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

## **Broadcom Gigabit Ethernet NICs**

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 7.1.9.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter

- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver, and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

#### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

#### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

#### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

## **ESX Server 2.0.1**

### **Currently Supported Device Families**

VMware currently has ESX Server device drivers available that support the following families of I/O controllers.

#### **SCSI Controllers**

- Adaptec Ultra160 and Ultra 320 SCSI controllers

- LSI Logic Symbios and NCR chip set based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

### **RAID Controllers**

- Dell PercRAID controllers
- HP SmartArray controllers
- IBM ServeRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

### **Fibre Channel Adapters (SCSI Protocol Support Only)**

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

### **Ethernet NICs**

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that work with these device drivers.

Please contact VMware with any questions about current and planned device support.

## **Linux Driver Compatibility**

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## **VMware Certification**

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver

versions shipped with the current release of ESX Server compared with previous releases. Details of the device models supported by each driver can be found below.

**Table 34.**

Class	Vendor	Driver	2.0.1
SCSI	Adaptec	aic7xxx	6.2.35
	Adaptec	aic79xx	1.3.7
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptlinuxmptscsi	2.03
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.45
	Dell	aacraid	0.9.9ac2
	Dell	megaraid	1.18h
	IBM/Adaptec	ips	6.10.24
	Mylex	DAC960	2.4.11
Fibre Channel	Emulex	lpfcdd	4.20q
	Qlogic	qla2x00	6.04.02
Network	Broadcom	bcm5700	6.2.4
	Intel	e100	2.0.30
	Intel	e1000	5.0.42
	3Com	3c90x	1.0.2
	3Com	3C990-x	1.0.0b

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.35 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)
- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### **Motherboard Chip Sets**

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899

### **Adaptec Ultra320 SCSI Adapters**

The ESX Server Adaptec driver is based on the Linux aic79xx version 1.3.7 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### **SCSI Adapters**

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### **Motherboard Chip Sets**

- AIC7901 (A)
- AIC7902 (B)

### **LSI Logic Symbios and NCR-Based SCSI Adapters**

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. The ESX Server uses two different drivers to support the device family: one based on the Linux ncr53c8xx version 3.4.3b driver and the other on the sym53c8xx version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### **Supported Symbios Chip Sets**

- SYM53C810
- SYM53C810A
- SYM53C815
- SYM53C820
- SYM53C825

- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 35.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

### LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.03 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030

## Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac2 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 1.18h driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/Di
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.45 drivers.

### cpqarray-Based Controllers

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)

### cciss-Based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 532, 5312)
- SMART-6 (Smart Array 641, 642, 6400, 6402, 6404)

## IBM ServeRAID RAID Controllers

The ESX Server driver is based on the Linux ips v 6.10.24 driver.

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i
- ServeRAID-5M
- ServeRAID-6M\*
- ServeRAID-6i\*

\*Firmware version 6.10.70 and greater.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.302.0.30 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

**Table 36.**

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565-xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, x, 748569-xxx (82559)(82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx

**Table 36.**

Controller	Adapter Name	Board ID
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131
- NC3132
- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/ro 1000 based Gigabit Ethernet cards is based the Linux v 5.0.42 e1000 driver. Several HP and IBM Gigabit Ethernet cards are based on this controller, but you will need to check the OEM model number to ascertain this.

**Table 37.**

Controller	Adapter Name	Board IDs
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter (LX)	A91624-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx

**Table 37.**

Controller	Adapter Name	Board IDs
82546EB	PRO/1000 MT Quad Port Server Adapter	

The specific HP OEM model numbers associated with this driver are:

- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

### Broadcom Gigabit Ethernet NICs

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 6.2.4 version driver.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom NetXtreme Gigabit Ethernet for HP
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC

- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter
- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver, and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

#### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

#### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

#### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

## ESX Server 2.0

### Currently Supported Device Families

VMware currently has ESX Server device drivers available that support the following families of I/O controllers.

#### SCSI Controllers

- Adaptec Ultra160 and Ultra 320 SCSI controllers
- LSI Logic Symbios and NCR chip set based SCSI controllers
- LSI Logic Fusion-MPT SCSI controllers

#### RAID Controllers

- Dell PercRAID controllers
- HP SmartArray controllers
- IBM ServeRAID controllers
- Mylex AcceleRAID and ExtremeRAID controllers

#### Fibre Channel Adapters (SCSI Protocol Support Only)

- Emulex Host Bus Adapters
- QLogic Host Bus Adapters

#### Ethernet NICs

- Intel PRO/100 Ethernet NICs
- Intel PRO/1000 Gigabit Ethernet NICs
- Broadcom NetXtreme 570x series Gigabit NICs
- 3Com Fast Ethernet NICs

VMware may add support for drivers and devices between releases of the product; check the VMware Web site for current information at <http://www.vmware.com/support/pubs/>.

The detailed list below shows actual vendor chip sets and adapters that VMware believes are compatible with the currently supported drivers. Although we have been careful in compiling the list, we have not tested all of these devices and cannot warrant that they all work. There may also be devices that are not listed but that work with these device drivers.

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### Linux Driver Compatibility

While ESX Server itself is not derived from Linux, it includes a Linux compatibility module to allow Linux storage and networking drivers to be adapted and recompiled for ESX Server. This enables VMware to more easily support a wide range of high performance devices and eases the driver porting effort on the storage and networking device vendors. VMware typically modifies these drivers for one or more of the following reasons:

- To make the driver compatible with the ESX Server
- To tune the driver for performance
- To add I/O resource governing or QoS support to the driver
- To fix generic bugs in the driver

It is not possible to directly load existing, precompiled, Linux device driver binaries into ESX Server.

## VMware Certification

VMware certifies that specific systems and components are compatible with ESX Server. Through its Preferred Hardware Partner Program, it works with leading server vendors to ensure that appropriate configurations of their current and future server products are certified with ESX Server products. The following table summarizes the driver versions shipped with the current release of ESX Server compared with previous releases. The following table provides details of the device models supported by each driver.

**Table 38.**

Class	Vendor	Driver	ESX Server 2
SCSI	Adaptec	aic7xxx	6.2.1
	Adaptec	aic79xx	1.3.0
	LSI Logic	ncr53c8xx	3.4.3b
	LSI Logic	sym53c8xx	1.7.3c
	LSI Logic	mptlinuxmptscsi	2.03
RAID	HP	cpqarray	2.4.21
	HP	cciss	2.4.45
	Dell	aacraid	0.9.9ac2
	Dell	megaraid	1.18f
	IBM/Adaptec	ips	6.00.31
	Mylex	DAC960	2.4.11
Fibre Channel	Emulex	lpfcdd	4.20q
	Qlogic	qla2x00	6.04.02
Network	Broadcom	bcm5700	6.2.4
	Intel	e100	2.0.30
	Intel	e1000	5.0.42
	3Com	3c90x	1.0.2
	3Com	3C990-x	1.0.0b

## Adaptec Ultra160 SCSI Adapters

The ESX Server Adaptec driver is based on the Linux aic7xxx version 6.2.1 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### SCSI Adapters

- AHA\_1480A
- AHA\_2902/04/10/15/20/30C
- AHA\_2930 (C/CU U/U2)
- AHA\_2940 AU\_(0/1/CN)
- AHA\_2940 (U/UB/U Pro/U CN/U Dual/U2/U2B/U2B/U2 OEM)
- AHA\_2944 (U)
- AHA\_3940 (U/AU)
- AHA\_3944 (U/AU)
- AHA\_3950 (U2B\_0/U2B\_1/U2D\_0/U2D\_1)
- AHA\_3960 (D/D CPQ)
- AHA\_398X (U)
- AHA\_4944 (U)

- AHA\_29160 (CPQ/N/C/B)
- AHA\_19160B

### **Motherboard Chip Sets**

- AIC7850
- AIC7855
- AIC7859
- AIC7860
- AIC7870
- AIC7880
- AIC7892
- AIC7895
- AIC7895C
- AIC7890/91
- AIC7892
- AIC7895
- AIC7896/97
- AIC7899

### **Adaptec Ultra320 SCSI Adapters**

The ESX Server Adaptec driver is based on the Linux `aic79xx` version 1.3.0 driver. The following PCI Adaptec SCSI adapters and motherboard chip set devices should work as ESX Server adapters.

### **SCSI Adapters**

- AHA29320 (A)
- AHA29320 (LP)
- AHA39320 (A/D/DB)

### **Motherboard Chip Sets**

- AIC7901 (A)
- AIC7902 (B)

### **LSI Logic Symbios and NCR-Based SCSI Adapters**

Most SCSI adapters based on the LSI Logic Symbios (formerly NCR) 53c8xx family of chip sets are supported as ESX Server devices. The ESX Server uses two different drivers to support the device family: one based on the Linux `ncr53c8xx` version 3.4.3b driver and the other on the `sym53c8xx` version 1.7.3c driver. LSI Logic's Symbios product division was formerly NCR Microelectronics Products Division. Older products may have either NCR or Symbios (SYM) part number prefixes; otherwise the part numbers are interchangeable. The following chip sets and adapters are supported as ESX Server devices.

### **Supported Symbios Chip Sets**

- SYM53C810
- SYM53C810A

- SYM53C815
- SYM53C820
- SYM53C825
- SYM53C860
- SYM53C875
- SYM53C876
- SYM53C895
- SYM53C895A
- SYM53C896
- SYM53C897
- SYM53C1510D

**Table 39.** SYM53C1010 Supported Symbios-Based SCSI Adapters

Model/Type	Chip Set
SYM20810 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20811 32 bit PCI-to-Fast SCSI	SYM53C810A
SYM20860 32 bit PCI-to-Ultra SCSI	SYM53C860
SYM21002 32 bit PCI-to-Ultra2 SCSI	SYM53C896
SYM22801 PCI-to-Dual Ultra SCSI	SYM53C876
SYM22802 PCI-to-Ultra SCSI	SYM53C876
SYM22902 Ultra2 MiniHAB	SYM53C895A/ SYM53C895
SYM22910 PCI-to-Dual Ultra2 SCSI	SYM53C896
815XS	SYM53C815
8100S	SYM53C810
SYM8150	SYM53C815
SYM8251	SYM53C825
SYM8600SP	SYM53C860
SYM8750SP	SYM53C875
SYM8751D	SYM53C875
SYM8751SPE	SYM53C875
SYM8951U	SYM53C895
SYM8952U	SYM53C895A/ SYM53C895
SYM8953U	SYM53C895A
SYM53C1010	Ultra160
SYM53C1010_66	Ultra160

Third-party SCSI adapters from Compaq/DEC, Gigabyte, Promise Technology, and Tyan should also work with the ESX Server NCR driver.

### LSI Logic MPT-Fusion SCSI Adapters

The ESX Server driver is based on the LSI Logic mptlinux mptscsi v 2.03 driver and supports the following SCSI controllers. These controllers are also supported in a RAID-1 configuration.

- 53C1020
- 53C1030

## Dell PercRAID Controllers

VMware ESX Server supports two classes of Perc branded controllers. Some are based on Adaptec RAID chip sets, and some on LSI Logic (formerly American Megatrends, Inc.) MegaRAID chip sets.

The ESX Server driver for Adaptec-based PercRAID controllers is based on the Linux aacraid version 0.9.9ac2 2.1.5 driver.

- PERC 2/QC
- PERC 3/Si (PowerEdge 2450 onboard RAID)
- PERC 3/Di (PowerEdge 2550, 2650, and 4400 onboard RAID)

The ESX Server driver for LSI Logic/AMI-based PercRAID controllers is based on the Linux megaraid version 1.18f driver.

- PERC 2/DC
- PERC 3/DCL
- PERC 4/Di
- MegaRAID 418, 428, 438, 466, 762, 467, 471, 490, 493

## HP SmartArray RAID Controllers

The ESX Server driver is based on the HP cpqarray v 2.4.21 and cciss v 2.4.45 drivers.

### cpqarray-Based

- IDA, IDA-2, IAES
- SMART
- SMART-2/E
- SMART-2 (SMART-2/P, SMART-2SL, Smart Array 3200, Smart Array 3100ES, Smart Array 221)
- SMART-4 (Integrated Array, LC2, Smart Array 4200, Smart Array 4250ES, Smart Array 431)

### cciss-Based Controllers

- SMART-5 (Smart Array 5300 series, Smart Array 5i, Smart Array 532, 5312)
- SMART-6 (Smart Array 641, 642, 6400)

## IBM ServeRAID RAID Controllers

The ESX Server driver is based on the Linux ips v 6.00 driver.

- ServeRAID-3H
- ServeRAID-/4L, 4LX
- ServeRAID-4M, 4Mx
- ServeRAID-4H
- ServeRAID-/5i

Support for the 6i/6M controllers is forthcoming in a future edition of ESX Server.

## Mylex AcceleRAID/eXtremeRAID Controllers

The ESX Server driver is based on the Linux DAC960 version 2.4.11 driver. Specific AcceleRAID and eXtremeRAID controllers are also based on DAC960-compatible controllers.

- DAC960 (E, M, PD, PL, PU, PE, PG, Pj, PTL0, PR, PRL, PTL1)
- DDAC960 (S, SU, SX, SF, SS, FL, LL, FF, HP)
- DAC1164P
- EXR2000P
- EXR3000P
- AcceleRAID 160, 170, 352
- eXtremeRAID 1100

## Emulex Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## QLogic Fibre Channel Adapters

Please see the *SAN Compatibility Guide for ESX Server 2.x* for more information on the specific drivers, configurations, models, and firmware supported.

## Intel PRO/100 Ethernet NICs

The default ESX Server driver for PRO/100 NICs is based on the Intel-supplied e100 Intel(R) PRO/100 Fast Ethernet Adapter version 2.0.30 driver. This is a comprehensive listing of Intel and OEM models that have been based on these chip sets. You should check the specific chip set used in your card for compatibility.

Controller	Adapter Name	Board ID
82558	PRO/100+ PCI Adapter	668081-xxx, 689661-xxx
82558	PRO/100+ Management Adapter	691334-xxx, 701738-xxx, 721383-xxx
82558	PRO/100+ Dual Port Server Adapter	714303-xxx, 711269-xxx, A28276-xxx
82558	PRO/100+ PCI Server Adapter	710550-xxx
82550	PRO/100 S Server Adapter	752438-xxx (82550)
82559	PRO/100 S Server Adapter	A56831-xxx, A10563-xxx, A12171-xxx, A12321-xxx, A12320-xxx, A12170-xxx, 748568-xxx (82559), 748565-xxx (82559)
82550	PRO/100 S Desktop Adapter	751767-xxx (82550)
82559	PRO/100 S Desktop Adapter	748592-xxx, A12167-xxx, A12318-xxx, A12317-xxx, A12165-xxx, x, 748569-xxx (82559)
82559	PRO/100+ Server Adapter	729757-xxx
82559	PRO/100 S Management Adapter	748566-xxx, 748564-xxx
82550	PRO/100 S Dual Port Server Adapter	A56831-xxx
82551	PRO/100 M Desktop Adapter	A80897-xxx
82551	PRO/100 S Advanced Management Adapter	747842-xxx, 745171-xxx

Controller	Adapter Name	Board ID
CNR	PRO/100 VE Desktop Adapter	A10386-xxx, A10725-xxx, A23801-xxx, A19716-xxx
CNR	PRO/100 VM Desktop Adapter	A14323-xxx, A19725-xxx, A23801-xxx, A22220-xxx, A23796-xxx

The specific HP OEM model numbers associated with this driver are:

- NC3120
- NC3121
- NC3123
- NC3131
- NC3132
- NC3133
- NC3134N
- NC3135
- NC3160
- NC3161
- NC3162
- NC3163
- NC3122

## Intel PRO/1000 Gigabit Ethernet NICs

The ESX Server driver for Intel PRO/ro 1000 based Gigabit Ethernet cards is based on the Linux v 5.0.42 e1000 driver. Several HP and IBM Gigabit Ethernet cards are based on this controller, but you need to check the OEM model number to ascertain this.

Controller	Adapter Name	Board IDs
82542	PRO/1000 Gigabit Server Adapter	700262-xxx, 717037-xxx
82543	PRO/1000 F Server Adapter	738640-xxx, A38888-xxx
82543	PRO/1000 T Server Adapter	A19845-xxx, A33948-xxx
82544	PRO/1000 XT Server Adapter	A51580-xxx
82544	PRO/1000 XF Server Adapter	A50484-xxx
82544	PRO/1000 T Desktop Adapter	A62947-xxx
82540	PRO/1000 MT Desktop Adapter	A78408-xxx
82545	PRO/1000 MT Server Adapter	A92165-xxx
82546	PRO/1000 MT Dual Port Server Adapter	A92111-xxx
82545	PRO/1000 MF Server Adapter	A91622-xxx
82545	PRO/1000 MF Server Adapter (LX)	A91624-xxx
82546	PRO/1000 MF Dual Port Server Adapter	A91620-xxx

The specific HP OEM model numbers associated with this driver are:

- NC6134
- NC6136
- NC7131
- NC7170
- NC6170

## **Broadcom Gigabit Ethernet NICs**

The ESX Server driver for Broadcom Gigabit Ethernet cards is based on the Broadcom 5700 driver for Linux v 6.2.4 version driver.

- Broadcom Vigil B5700 1000Base-T
- Broadcom BCM5700 1000Base-T
- Broadcom BCM5700 1000Base-SX
- Broadcom BCM5700
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701 1000Base-SX
- Broadcom BCM5701 1000Base-T
- Broadcom BCM5701
- Broadcom BCM5702 1000Base-T
- Broadcom BCM5703 1000Base-T
- Broadcom BCM5703 1000Base-SX
- Broadcom Arbuckle B5703 1000Base-SX
- Broadcom BCM5704 CIOB-E 1000Base-T
- Broadcom BCM5704 1000Base-T
- Broadcom BCM5704 1000Base-SX
- Broadcom BCM5705 1000Base-T
- Broadcom BCM5705M 1000Base-T
- Broadcom NetXtreme Gigabit Ethernet for HPhp
- Broadcom BCM5788 1000Base-T
- 3Com 3C996 10/100/1000 Server NIC
- 3Com 3C996 Gigabit Fiber-SX Server NIC
- 3Com 3C996B Gigabit Server NIC
- 3Com 3C997 Gigabit Server NIC
- 3Com 3C997 Gigabit Fiber-SX Server NIC
- 3Com 3C1000 Gigabit NIC
- 3Com 3C940 Gigabit LOM (21X21)
- 3Com 3C942 Gigabit LOM (31X31)
- HP NC6770 Gigabit Server Adapter
- HP NC7760 Gigabit Server Adapter

- HP NC7761 Gigabit Server Adapter
- HP NC7770 Gigabit Server Adapter
- HP NC7771 Gigabit Server Adapter
- HP NC7772 Gigabit Server Adapter
- HP NC7780 Gigabit Server Adapter
- HP NC7781 Gigabit Server Adapter
- HP NC7782 Gigabit Server Adapter
- HP NC7783 Gigabit Server Adapter

### **3Com EtherLink PCI III/XL Series Ethernet NICs**

ESX Server supports many 3Com Ethernet NICs. The ESX Server driver includes two drivers: one based on the Linux 3c90x version 1.0.2 driver, and the other based on the Linux 3C990-x version 1.0.0b. The following 3Com NICs are supported as ESX Server devices.

#### **EtherLink 10/100 PCI NICs**

- 3C905C Family and 3C920 ASICs – EtherLink 10/100 PCI including the -TX and -TX-M
- 3C905B Family and 3C918 ASICs – EtherLink 10/100 PCI including the -TX, -TX-M, and -TX-NM
- 3C905B-COMBO – EtherLink 10/100 PCI COMBO
- 3C905B-T4 – EtherLink 10/100 PCI T4

#### **EtherLink Server 10/100 PCI NICs**

- 3C980C-TX – EtherLink Server 10/100 PCI
- 3C980B-TX – EtherLink Server 10/100 PCI
- 3C980-TX – EtherLink Server 10/100 PCI

#### **EtherLink 100 PCI NIC**

- 3C905B-FX – EtherLink 100 PCI Fiber

#### **EtherLink 10 PCI NICs**

- 3C900B-TPO – EtherLink 10 PCI TPO
- 3C900B-TPC – EtherLink 10 PCI TPC
- 3C900B-COMBO – EtherLink 10 PCI COMBO
- 3C900B-FL – EtherLink 10 PCI Fiber

In addition, all cards based on the 3c990-x card should be compatible with ESX Server.

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