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## PCnet™ Software Version 4.51

### What's New In This Release

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# What's New In PCnet™ Software Release 4.51, April 6, 1999

PCnet™ Driver Release 4.51 is a minor release that is intended to fulfill the following marketing and support requirements:

- Add support for AMD PCnet-FAST III device in the drivers
- Enhance existing PermaNet Server Link Fault Tolerant (LFT) drivers to support multiple switches.
- Add support for PermaNet Server Port Aggregation and Dynamic Load Balancing (PAg & DLB).
- Provide latest drivers that resolve some issues that have been found through internal testing and by external customers
- Synchronize all OEM/LT customers with the latest drivers and utilities

The elements of this release are the following. Drivers or utilities that have been enhanced or are new are indicated so in parenthesis:

- CHSM Driver for NetWare 4.1x and NetWare 5.0 **(enhanced)**
- AHSM Driver for NetWare 4.1x and NetWare 5.0 **(enhanced)**
- NDIS 2.0.1 Drivers (DOS version 6.x, OS/2 version 3.x and 4.x) **(OS/2 driver enhanced)**
- NDIS 3.x MAC Drivers (for WFW 3.11; NT versions 3.5, 3.51, 4.0; Win95)
- NDIS 3.x Miniport Drivers (for Windows 95 and Windows NT 3.51) **(enhanced)**
- NDIS 4.x Driver (for Windows NT 4.0 and Windows 95 OSR 2) **(enhanced)**
- NDIS 4 driver for Windows CE 2.x (for ISANet devices only)
- NDIS 4 driver for Windows NT 4.0 (for ISANet devices only)
- NDIS 4 driver for Windows CE 2.1 (for PCnet PCI devices only)
- NDIS 5 driver for Windows 98 and Windows 2000 Beta **(enhanced)**
- SCO UnixWare 7.0 **(enhanced)**
- SCO UNIX Drivers (SCO ODT 3.0, SCO Open Server 5.0) **(Open Server driver enhanced)**
- WindRiver x86 VxWorks driver
- Diagnostics Utility for PCnet PCI devices
- Sun Solaris Driver (for v2.4)
- Novell UnixWare Drivers (for v1.1 and 2.0)
- Packet Driver
- Generic BootROM
- AMInstall (Generic Installation utility)
- DMI 2.0 Instrumentation
- PCnet™ Magic Packet™ Utility

# 1 New Features and Enhancements

New features and enhancements have been added to numerous drivers. The following is a brief description of those features.

## 1.1 Support for PermaNet Server Link Fault Tolerance (LFT), Dynamic Load Balancing & Port Aggregation (DLB/PAg) and Fast EtherChannel (FEC).

AMD's PermaNet Server technology has been greatly enhanced in release 4.51.

**PermaNet Server Link Fault Tolerance (LFT) Technology** provides cost effective and reliable solution for a redundant network connection to enhance server availability. AMD's AODI for Novell, CODI for Novell, OS2 NDIS2 and NDIS4 for Windows NT are now enhanced to support LFT in single switch and multiple switch configurations.

**PermaNet Server Port Aggregation and Dynamic Load Balancing** is an enhanced feature of AMD drivers that balances and aggregates outgoing traffic from the server using multiple adapter links. It Provides scalable server bandwidth in 100 Mbps increments up to 400 Mbps of outgoing traffic. This feature is supported on CODI for Novell, Unixware 7 and NDIS4 (Beta) driver for Windows NT 4.0.

**Fast EtherChannel** is the name of a feature implementation and standard defined by Cisco. This feature aggregates multiple full-duplex Fast EtherChannel links into a single logical channel between two devices (LAN switches, routers or servers). In combining multiple links, the connection can carry greater amounts of data and provide protection against link failures. Fast EtherChannel provides a scalable connection (used typically in a building "riser" or a backbone) comprised of two or more physical links. With two or more links, the AMD Fast EtherChannel implementation can:

- transfer more data by balancing the load across the links
- achieve link redundancy by re-balancing the load around failed links
- provide fast convergence around failed or reconnected links, and

FEC is supported on the CODI driver for Novell 4.11/4.2 and 5.0, MDI driver for SCO Unixware 7.0 and NDIS4 (Beta) driver for Windows NT 4.0 and Windows 2000.

## 1.2 NDIS 4 Miniport Driver for Windows NT 4.0, Win 95 OSR2 and Win 98

- Support for Unattended Windows NT install has been added to the default OEMSETUP.INF file .

- OEMSETUP.INF file has been modified to fix a bug that appeared during fresh install of Windows NT and gave an error that pcnet.exe file was missing.
- RC file changed so that the driver reports correct version information under both 95 and NT.

### 1.3 NDIS 4 Miniport PermaNet Driver for Windows NT 4.0

- Support for Unattended Windows NT install has been added to the default OEMSETUP.INF file.
- OEMSETUP.INF file has been modified to fix a bug that appeared during fresh install of Windows NT and gave an error that pcnet.exe file was missing.
- Support for multiple switches for PermaNet Link Fault Tolerance added.
- RC file changed so that the driver reports correct version information.

### 1.4 NDIS 5 Miniport Driver for Windows 2000 (Beta)

- The NETAMD.INF file for the NDIS5 driver has been modified to include FDUP, MP, and TP keywords in addition to the EXTPHY keyword which was already available.
- The properties dialog box displayed the EXTPHY keyword in the middle of the box rather than at the top. We modified the NETAMD.INF file so that the EXTPHY keyword is displayed at the top.
- Memory tag no. added to comply with HCT certifications.

### 1.5 NDIS2 Driver for IBM OS/2

- Support for PCnet-FAST III device added.
- Driver modified to report correct link speed using "netstat".
- Support for multiple switches for PermaNet Link Fault Tolerance added.

### 1.6 CODI Driver for Novell

- Support for multiple switches for PermaNet Link Fault Tolerance added.

### 1.7 AODI Driver for Novell

- Support for multiple switches for PermaNet Link Fault Tolerance added.
- Support for PCnet-FAST III device added.

## 1.8 MDI Driver for Unixware 7

- Support for PCnet-FAST III device added.

## 1.9 NDIS 3 Miniport Driver for Windows NT 3.51

- The INF file has been updated to include support for EXTPHY keyword.
- Support for the PCnet-FAST III device has been added.