Device Driver Developers' Guide

NetWare Operating System
DDFS Interface
Versions 3.1x - 4.xx

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Preface

The NetWare v4.xx and v3.1x Operating Systems offer a dynamic environment to device driver developers. The NetWare v4.xx & v3.1x driver environment allows a file server administrator to load and unload device drivers while the file server is running and fully functioning. This document provides a reference for creating device drivers, as well as additional tutorial information helpful in converting drivers written for previous versions of NetWare.

This document corresponds to NetWare Operating System versions 3.1x, and 4.xx and is intended for device driver developers.

Chapter 1 reviews some **programming guidelines** device drivers must observe when interfacing with NetWare.

Chapter 2 describes basic **NetWare v3.1x - v4.xx device driver design,** including the standard structures and routines a device driver must provide.

Chapter 3 describes the routines a device driver needs to provide that will interface with the **NetWare Loadable Module (NLM)** design.

Chapter 4 discusses the routines required to interface to the **Mass Storage Control Interface**.

Chapter 5 discusses **IOCTL (I/O Control) routines** for NetWare v3.1x & v4.xx device drivers.

Chapter 6 discusses **I/O routines** for NetWare v3.1x & v4.xx device drivers.

Chapter 7 lists and discusses each **NetWare support routine** available to device driver developers.

Appendix A provides a brief tutorial on **creating NetWare Loadable Modules (NLMs)** and lists the keywords that can appear in the definition file required by the NetWare v3.1x and v4.xx Loadable Module Linker NLMLINKP(R) (device drivers are NLMs).

Appendix B describes the built-in **debugger** of the NetWare Operating System.

Appendix C provides details of **C subroutine calling conventions** used by the OS when calling the driver- provided entry points. The conventions also apply to drivers when calling the support routines listed in Chapter 7.

Appendix D is a list of **development tools** currently available for driver developers.

Appendix E details the differences between NetWare versions 3.1x and 4.xx.

Appendix F provides details necessary for development of drivers for EISA machines.

Appendix G details the implementation of drivers supporting **16-bit host adapters using DMA/Bus Mastering** in systems with more than 16 megabytes of memory.

Appendix H provides **NetWare Ready** information.

Appendix I provides information on support for **PCI** and **PCMCIA**.

Appendix J summarizes implementation details for **CD-ROM drivers**.

Appendix K summarizes implementation details for **sequential access device drivers**.

Appendix L summarizes implementation details for the **Installation Information file**.

Appendix M provides information on **OS/2 Support**.

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