Resource Guide

Network Management and Internetworking Products

July 1993

Novell offers a complete line of internetworking and network management products
with which to build global networks:

NetWare® MultiProtocol Router™ and NetWare MultiProtocol Router Plus™

NetWare Services Manager

NetWare Management Agents

Hub Services Manager

LANalyzer® for Windows

For more information, please call your local Novell Authorized Reseller or
dial 1-800-NETWARE or 1-801-429-5533.

NOTE: The information contained in this guide has been provided by the respective product vendors, and any claims made by those vendors relating to product features or functions has not been verified by Novell. Novell does not guarantee the completeness of this guide. No statement or claim made with respect to the products listed in this guide is intended, nor should it be construed to be an endorsement by Novell or any Novell affiliate. This guide is subject to change without notice.

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Welcome to the World of NetWare

Management and Internetworking

Novell offers a wide variety of software applications for your network computing environment—from the industry-leading NetWare operating system to internetworking software and management tools. This guide describes over 90 products that help you make the most of your network management and internetworking environments.

Comprehensive network management

Novell offers network management products that help you monitor, control, and troubleshoot your NetWare networks:

NetWare Services Manager enables systems administrators, network managers, and help desk personnel to monitor and control IPX servers, devices, nodes, and IP routers from a Windows-based PC. In addition to server management, customers can monitor other devices on the network using the Simple Network Management Protocol (SNMP).

NetWare Management Agents are installed on each NetWare server as a NetWare Loadable Module™. They allow a NetWare 3.11 or NetWare 4.0 server to send alarms and provide statistics to the NetWare Services Manager. A server can be managed by NetWare Services Manager only if it has an agent installed. Future releases of the NetWare Management Agent will allow any SNMP console to query a NetWare server as well.

Hub Services Manager facilitates the monitoring and management of network hubs that comply with the NetWare Hub Management Interface (HMI)specification.

LANalyzer for Windows is installed on a network workstation like any other Windows application. It is a basic management tool for Ethernet and token-ring networks. It allows a network manager to monitor and analyze the traffic across the network.

Cost-effective multiprotocol internetworking

Novell is dedicated to providing cost-effective solutions for extending computing resources beyond LAN boundaries. Because Novell's internetworking products are based on the NetWare operating system, they offer an alternative to traditional, proprietary bridge/router platforms. With NetWare MultiProtocol Router 2.1, you can build global networks using familiar NetWare and PC technology.

NetWare internetworking products include NetWare MultiProtocol Router 2.1 for local connections and NetWare MultiProtocol Router Plus 2.1 for both local and wide area connections. You can manage both products using any SNMP-based management station such as the NetWare Management System or standard NetWare management utilities such as RCONSOLE.

NetWare MultiProtocol Router 2.1 is PC-based software that provides concurrent routing of IPX, IP, AppleTalk, and OSI over a single interface. It also source-route bridges all protocols, including IBM SNA and IBM NetBIOS in token-ring networks. The router lets you build routers and source-route bridges that minimize cost, maximize performance, and optimize applications.

NetWare MultiProtocol Router Plus 2.1 provides all the functionality of the NetWare MultiProtocol Router. It also lets you interconnect geographically dispersed networks using leased lines (with the Point-to-Point Protocol) or X.25 private or public data networks.

Yes it runs with NetWare Program

With networks growing more complex, you have to be able to pick and choose the networking solutions you need and have the confidence that all the pieces will work together. You keep asking the question: "Does it work with NetWare?"

Novell's answer is the Yes program. The Yes program logo tells you at a glance what hardware and software products are compatible with NetWare. With the thousands of networking products available, the Yes logo is an easy way to tell which hardware and software will run with your network. Simply look for the Yes logo to select products that will build the network you need.

How to Use This Guide

The *NetWare Network Management and Internetworking Products Resource Guide* is divided into two main sections: Network Management Products and Internetworking Products. The products in this guide are designed to integrate or interoperate with Novell's NetWare Management System™ (NMS) or the NetWare MultiProtocol Router. This guide contains many of Novell's current Network Management and Internetworking partners. Through strategic partnerships, Novell and industry leaders will continue to bring comprehensive networking solutions to market. Each section contains several categories, as described below.

The products within each category are alphabetized by company name.

Network Management Products contain the following categories:

> *Device Management* includes applications to manage network devices, such as hubs, routers, and desktop PCs.

> *Network Performance Monitoring* includes applications to monitor LAN statistics.

> *NMS Enhancements* include applications that add value to the NetWare Management System, such as paging, help desk support, report writers, and alarm forwarding.

> *System Management* includes applications that augment the management of the network operating system, such as software metering and software distribution.

Internetworking Products contain the following categories:

> *Hubs* include structured-wiring concentrators in stand-alone chassis or hub cards that support the Hub Management Interface (HMI).

> *Internetworking Devices* include bridges, routers, and brouters.

> *Internetworking Platforms* include devices designed to operate Novell network management and internetworking software.

> *LAN Adapters* include LAN adapters tested by Novell Labs and ODI adapters enhanced for source route bridging.

> *Telecom/Carrier Services* include wide-area connectivity services such as leased lines, X.25, Frame Relay, and Integrated Services Digital Network (ISDN).

Appendix A is a glossary of terms commonly used in this guide. Appendix B resents a list of MIB compilers. The guide ends with two indices: a company name index and a product index.

Network Management Products

Device Management

PowerChute PLUS with SNMP Agent

Worldwide UPSand power management from a single console

The APC PowerChute PLUS with SNMP Agent is implemented as a Novell NetWare Loadable Module. The SNMP agent software provides UPS and line power status information to Novell's NetWare Management System (NMS) using SNMP. The agent supplies status information on any APC UPS system on the network, including Back-UPS, Smart-UPS, and Matrix-UPS. The agent is fully compatible with SNMP standards, enabling you to easily integrate power management into your overall network management plan.

The SNMP agent allows you to manage your electrical power and provides server shutdown notification from a single console. Currently, the SNMP agent reports UPS and power status information, in form of the traps, to a central NMS console. This alarm notification allows you to troubleshoot your power problems from a central console. Operators no longer have to detect and isolate power problems locally.

Available:	Now
Contact:	CompuServe: GO APCSUPPORT
Phone:	800-800-4APC
Internat'l phone:	+33-1-64-62-59-00
Fax:	401-789-3180

American Power Conversion   **Yes it runs with NetWare**
132 Fairgrounds Road
West Kingston, RI 02892

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Device Management

NetTOOLS Help+

Workstation configuration troubleshooting and management

NetTOOLS Help+ will be a snap-in module for Novell's NetWare Management System (NMS) platform, providing you with the information you need to manage and troubleshoot workstation configuration problems on your NetWare LAN—without leaving your office. It is a comprehensive node-management system that monitors over 1,100 hardware and software configuration events.

NetTOOLS Help+ scans each workstation at login and reports such information as hardware changes; configuration and software file changes; concentrator, cable, and connector problems; TCP/IP address conflicts; and UPS power levels to your management console. In addition, NetTOOLS Help+ alerts your console of critical hardware and software changes, keeping you aware of the most pertinent configuration issues.

Available:	Late 1993
Contact:	Ruth Rainey
Phone:	404-394-2552
Fax:	404-394-2191

Automated Design Systems, Inc.   **Yes it runs with NetWare**
375 Northridge Road, Suite 270
Atlanta, GA 30350

Device Management

LAN Automatic Inventory

Complete asset management system for NetWare LANs

LAN Automatic Inventory (LAI) will be a snap-in module for Novell's NetWare Management System (NMS) that is launched from the NMS Maps.

The current version of LAI can perform an inventory of PC hardware and software resources in seconds and automatically store and update the information in a database. The database contains comprehensive, detailed information about your LAN, including user names and configuration details, software versions, hardware equipment types (such as hard drive, floppy drive, monitor, keyboard, and processor types), details about memory, network information, file-server information, and much more. You can access this data at any time, right from your desktop.

In addition, LAI detects any network configuration changes. You will know immediately if someone has removed memory, loaded a new application, or attached a new workstation to the LAN, even if it occurred at a remote site. LAI gives you complete control of your LAN assets.

Available:	Summer of 1993
Contact:	Tracey Mustacchio (TECH_SUPPORT@BRIGHTWORK.COM)
Phone:	800-552-9876 or 908-530-0440
Fax:	908-530-0622

BrightworkDevelopment, Inc.   **Yes it runs with NetWare**
766 Shrewsbury Avenue, Jerral Center West
Tinton Falls, NJ 07724

Device Management

LAN Server Watch

Proactive disaster prevention for NetWareLANs

LAN Server Watch will provide proactive disaster prevention for your NetWare LANs. It will be a snap-in module for Novell's NetWare Management System.

The current version of the software monitors over 30 key system parameters related to performance, security, capacity, and configuration, and informs you if something is wrong with your LAN.

You don't have to be a networking expert to use LANServer Watch. It automatically determines normal performance for your LAN and only notifies you of abnormal behavior through console messages, electronic-mail notes, or a telephone pager.

In addition to detecting problems, LAN Server Watch provides a recommended solution using a checklist database that stores online LAN management procedures when alerts occur.

Available:	Summer of 1993
Contact:	Tracey Mustacchio (TECH_SUPPORT@BRIGHTWORK.COM)
Phone:	800-552-9876 or 908-530-0440
Fax:	908-530-0622

BrightworkDevelopment, Inc.   **Yes it runs with NetWare**
766 Shrewsbury Avenue, Jerral Center West
Tinton Falls, NJ 07724

Device Management

NETremote+

Real-time support for DOS and Windows on NetWare LANs

NETremote+ lets you provide real-time support for DOS and Windows users on your LAN or WAN without leaving your desk. It will be a snap-in module for Novell's NetWare Management System.

The current version of NETremote+ lets you view a user's screen on your screen as well as control his or her keyboard or mouse so you can demonstrate solutions. NETremote+ provides uncompromised security through multiple password levels, pop-up call acceptance menus, and NetWare group restrictions.

In addition, NETremote+ enables you to analyze network traffic to determine if a LAN problem is occurring by providing PC configuration details, network information, and LANstatistics. It even gives you limited diagnostic information about PCs that don't have NETremote+ loaded. You can also use NETremote+ to test network connections by sending packets to a remote DOS PC and reporting their success or failure.

Available:	Summer of 1993
Contact:	Tracey Mustacchio (TECH_SUPPORT@BRIGHTWORK.COM)
Phone:	800-552-9876 or 908-530-0440
Fax:	908-530-0622

BrightworkDevelopment, Inc.   **Yes it runs with NetWare**
766 Shrewsbury Avenue, Jerral Center West
Tinton Falls, NJ 07724

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Device Management

COMPAQ INSIGHT Manager

SNMP-based management of COMPAQ servers running NetWare

COMPAQ INSIGHT Manager is a snap-in module for Novell's NetWare Management System (NMS). It is an easy-to-use, graphical Windows 3.1 server hardware management application that provides SNMP-based management of Compaq servers running NetWare.

COMPAQ INSIGHT Manager lets you monitor and analyze over 400 distinct attributes describing in-depth fault, performance, configuration, and security characteristics of the managed Compaq server. Managed servers are configured with the COMPAQ Management Agents for NetWare.

When a monitored attribute falls out of its valid range, COMPAQ Management Agents generate an SNMPtrap. COMPAQINSIGHT Manager can analyze, display, and log the trap. You can also collect specific data points over time to generate reports and graphs or to develop unique trend-analysis tools to proactively manage the fault and performance characteristics of Compaq servers.

Available: Now
Contact: COMPAQ Customer Service
Phone: 1-800-345-1518 or 713-370-0670

Compaq Computer Corporation
20555 S.H. 249
Houston, TX 77070

Device Management

D-View Applications for NMS

Comprehensive, powerful NetWare LAN management tools

The D-View Applications for the NetWare Management System (NMS) provide practical and powerful tools for you to monitor, evaluate, and plan your network activities and performance. These easy-to-use products not only help you manage your network but also improve your network's price/performance, reliability, and interoperability.

D-View provides several applications to help you manage your network. The D-Link 10Base-T Hub products (DE-809TP, DE-812TP+, DE-1000, DE-1500, and DE-2000) provide interoperability and expansion capabilities as well as improved price/performance. The D-Link Bridge products (DI-1100, DI-1120, and DI-1140) are Media Access Control (MAC)-layer bridges that improve network performance or link remote sites. And the D-Link NIC products (DE-220T, DE-220C, and DE-220CT) are high-performance, NE2000-compatible, software-configurable products that offer reliability and improved price/performance.

Available:	August 1993
Contact:	Steven H. Joe (SJOE@DLINK.COM)
Phone:	1-800-326-1688 or 714-455-1688
Fax:	714-455-2521

D-Link Systems, Inc.
5 Musick
Irvine, CA 92718

Device Management

NM Console

Easy-to-use, standards-based ICS management software

NM Console will manage an Eicon Technology Interconnect Server (ICS). NM Console will be a snap-in application to Novell's NetWare Management System (NMS) and will be started from the NMS Tools menu.

NMConsole will use SNMPand will handle the management of link protocols such as High-Level Data Link Control (HDLC), Synchronous Data Link Control (SDLC), X.25, and Frame Relay. It will also manage System Network Architecture (SNA) protocols and devices. Its easy-to-use graphical user interface and its use of the standard SNMP protocol will provide effective remote management of an Eicon Technology ICS.

Available:	Summer of 1993
Contact:	Cindy Warren
Phone:	514-631-2592
Internat'l phone:	44-81-941-7122
Fax:	514-631-3092

Eicon Technology
2196 32nd Avenue
Montreal, Quebec

Device Management

LAN Directory

Automatic NetWare LAN inventory

LAN Directory will be a snap-in module on Novell's NetWare Management System (NMS) platform that will automatically track workstations, file servers, printers, external disk drives, modems, software, and other resources running on your NetWare LAN.

The current version of LAN Directory monitors over 500 key hardware elements as well as an unlimited number of software listings.You can access a database that can be set for either automatic or manual operation. The database contains detailed information about LANconfigurations, DOS versions, system configurations, user names, and more. You can use LAN Directory's powerful custom report writer to generate detailed documentation of your hardware and software resources. In addition, LAN Directory lets you alter tracking to correct a change to a critical configuration file *before* a problem occurs.

Available: Summer of 1993
Contact: Frye Computer Systems Sales Office
Phone: 617-451-5400
Fax: 617-451-6711

Frye Computer Systems, Inc.   **Yes it runs with NetWare**
19 Temple Place
Boston, MA 02111

Device Management

NetWare Early Warning System

NetWare problem warning and response system

The NetWare Early Warning System will be a snap-in module for Novell's NetWare Management System (NMS) that offers monitoring, notification, and response functions for NetWare 2.x and 3.x LANs.

Awarded the top rating for the monitoring products tested by *Infoworld* and the highest rating by *PC Magazine*, NetWare Early Warning System automates the management of routine yet critical tasks that often slip through the cracks until a major failure occurs.

NetWare Early Warning System monitors over 50 NetWare critical statistics. It can notify you of problems in several ways, including voice notification, a pager and alphanumeric pager, electronic mail, and fax machine. In addition, you can program NetWare Early Warning System to respond to problems on the network automatically.

Available: Summer of 1993
Contact: Frye Computer Systems Sales Office
Phone: 617-451-5400
Fax: 617-451-6711

Frye Computer Systems, Inc.   **Yes it runs with NetWare**
19 Temple Place
Boston, MA 02111

Device Management

NetWare Management

NetWare real-time trouble shooting and management

NetWare Management software will be a snap-in module for Novell's NetWare Management System (NMS). It will enhance your ability to manage and troubleshoot problems on your network.

Awarded Product of the Year by *LAN Magazine* for two years in a row, NetWare Management offers extensive reporting functions as well as disaster-recovery, troubleshooting, and diagnostics support.

NetWare Management will help you document every event on your LAN, providing automatic one-step documentation of the LAN and reports on disaster-recovery, historical, security, accounting, diagnostic, and weekly maintenance.

With NetWare Management, you will get directly to the source of a problem by focusing on the specific users and their workstation information, making comparisons of user and node configurations, running diagnostic tests, and generating reports. The reports include detailed explanations of all errors and terms as well as expert recommendations to solve network problems.

Available: Summer of 1993
Contact: Frye Computer Systems Sales Office
Phone: 617-451-5400
Fax: 617-451-6711

Frye Computer Systems, Inc.   **Yes it runs with NetWare**
19 Temple Place
Boston, MA 02111

Device Management

LANauditor

Instant and continuous NetWare network resource tracking

LANauditor will be a snap-in module on Novell's NetWare Management System (NMS). It is a comprehensive device management tool that automates the task of tracking all the hardware configurations and software applications on your NetWare LAN. You can inventory and continually audit your network from either a DOS or Windows-based workstation.

      With the current version of LANauditor, you can gather hardware statistics, network information, and a detailed summary of the software on the network. It provides a continuously updated record of resource use for financial asset management, legal compliance, and software version control. It also detects unauthorized changes to software and hardware.

      The information gathered by LANauditor is presented in a logical, easy-to-read manner. And LANauditor's powerful and flexible custom reporting feature uses a friendly, point-and-click interface to generate reports tailored to your specifications.

Available:	Spring of 1994
Contact:	Brian Ferrario
Phone:	619-292-8320
Fax:	619-565-1175

Horizons Technology   **Yes it runs with NetWare**
3990 Ruffin Road
San Diego, CA 92123

Device Management

LANtrack

Real-time NetWare server performance monitoring

LANtrack will be a snap-in module on Novell's NetWare Management System (NMS) that will make unpredictable network events things of the past. LANtrack will function as a real-time file-server performance monitor for NetWare 2.x LANs. It will let you optimize your network for better performance and alert you of problems on the way—before users are even aware of them and before they create time-consuming bottlenecks or costly downtime.

The current version of LANtrack lets you send messages to designated users or groups of users that explain any abnormal system status. LANtrack also allows you to designate both warning and critical threshold levels for various criteria relating to overall file-server performance.

With a list of over 27 trackable items, including cache, disk, network, and system items, LANtrack can watch virtually everything closely.

Available: Summer of 1993
Contact: Brian Ferrario
Phone: 619-292-8230
Fax: 619-565-1175

Horizons Technology   **Yes it runs with NetWare**
3990 Ruffin Road
San Diego, CA 92123

Device Management

X-Server for NMS

Network Resource Server control from any location

X-Server for NMS software will be a snap-in module for the NetWare Management System (NMS) that will let you monitor, control, and log the events of a J&L Information Systems Network Resource Server (NRS). It will let you monitor the activities on the processors in the NRS, including activities such as who accessed which server when, and for how long. It will also let you control any of these processors from any location. For example, it will enable you to issue a hardware reset command to an individual NRS processor from anywhere in the world.

X-Server for NMS will use SNMP to communicate with J&L's X-Server NetWare Loadable Module.

Available: Summer of 1993
Contact: Rex Jackson
Phone: 818-709-1778
Fax: 818-882-9134

J&L Information Systems
9238 Deering Avenue
Chatsworth, CA 91311

Device Management

Lancert Facilities Manager

Integration of facilities management with NMS

Lancert Technologies Pty Ltd is currently developing Lancert Facilities Manager (LFM) products. LFM is a set of custom facility management products that will be snap-in applications for Novell's NetWare Management System (NMS). Each of these products will be loaded as a NetWare Loadable Module and include the following:

> LFM Aircon will interface with most air conditioning systems, allowing NMS to set alarm levels and send SNMP traps to NMS.

> LFM Secure will track which riser doors or computer cabinets that have been opened. LFM Secure will also be interfaced to most access security systems to track personnel access.

> LFM Control will be able to be custom built to monitor and control most physical and electrical operations. This will allow you to manage new and existing equipment.

> LFM PABX will be a generic integrator of PABX alarms into SNMP traps.

> LFM Paging will automatically forward to a pager any alarms logged by NMS, including alarms from LFM Aircon, LFM Secure, LFM Control, and LFM PABX.

Available: Summer of 1993
Contact: Mark Hankin
Phone: 61-2-299-5182
Fax: 61-2-299-5184

Lancert Technologies
Level 6, 35 Clarence Street
Sydney, 2000
NSW Australia

Device Management

LANlord

Central control and management of remote PC resources

LANlord will be a snap-in module on Novell's NetWare Management System (NMS) that you can access from the NMS Maps or Tools menu. An integrated desktop device management tool, LANlord lets you monitor, control, and configure remote PC hardware and software resources in real time, all from a single console. With such capabilities as automatic inventory, network and PC monitoring, remote control, software metering, virus detection and repair, and reporting and data export, you can support end users effectively and manage networked DOSand Windows-based PCs.

In addition, alarms and alerts generated by LANlord—based on user-definable thresholds—can be redirected and handled via NMS Alarm Manager and Alarm Monitor facilities. These powerful features enable LANlord to reduce your support costs and increase resource utilization while improving your end-users' work environment.

Available: Fall 1993
Contact: Microcom Sales Office
Phone: 914-968-2300
Fax: 914-968-7100

Microcom   **Yes it runs with NetWare**
1 Executive Boulevard
Yonkers, NY 10701

Device Management

Saber LAN Workstation

Integrated network administration solution for NetWare LANs

The Saber LAN Workstation is the industry's only integrated network solution. It includes tools for DOSand Windows menuing, application metering, hardware and software inventory, and printer management, and it will support NetWare bindery viewing.

     The LANAdministration Architecture (LAA) Console included with Saber LAN Workstation will run as a snap-in application for the Novell NetWare Management System (NMS). This will enable you to view the management data collected by Novell as well as the network data not collected by Novell, such as application metering and inventories. Alarms concerning network events will be interoperable between the LAAConsole and NMS.

     Saber LANWorkstation is an integrated, time-saving solution for network administration that meets the needs of both LAN administrators and end users.

Available:	Summer of 1993
Contact:	Customer Service
Phone:	214-361-8086
Internat'l phone:	44-753-811-962
Fax:	214-361-1882

Saber Software Corporation   **Yes it runs with NetWare**
5944 Luther Lane, Suite 1007
Dallas, TX 75225

Device Management

Router Manager for Cisco

Management of Cisco routers with NMS

Router Manager for Cisco is a Windows-based snap-in application for Novell's NetWare Management System (NMS). It extends the reach of NMS by enabling you to automate the monitoring of Cisco router activity at local and remote sites.

Router Manager for Cisco is fully integrated with NMS. Cisco routers are automatically discovered by the NetWare Management Map, and by double-clicking on the Cisco icon, you can launch the Router Manager for Cisco. It provides the fault, alarm, threshold, and configuration management essential to keep your network up and running. It also provides performance and utilization statistics to plan your network growth.

Router Manager for Cisco offers proactive management, detailed alarm and performance reporting, configuration management (uploading and downloading) by an individual router or a group of routers, as well as data exporting features for your Cisco router backbone.

Available: Now
Contact: Ken Packert (CompuServe 76376,1510)
Phone: 516-567-6060
Fax: 516-567-6648

StonyBrook Services, Inc.
630-4 Johnson Avenue
Bohemia, NY 11716

Device Management

Router Manager for Wellfleet

Management of Wellfleet routers with NMS

Router Manager for Wellfleet is a Windows-based snap-in application for the Novell NetWare Management System (NMS) software bus. It extends the reach of NMS by enabling network managers to automate the monitoring of Wellfleet router activity at local and remote sites.

Router Manager for Wellfleet is fully integrated with NMS. Wellfleet routers are automatically discovered by the NetWare Management Map, and by double-clicking on the Wellfleet icon, you can launch the Router Manager for Wellfleet. It provides the fault, alarm, threshold, and configuration management essential to keeping your network up and running. It also provides performance and utilization statistics to plan your network growth.

Router Manager for Wellfleet offers proactive management, detailed alarm and performance reporting, configuration management (uploading and downloading) by an individual router or a group of routers, as well as data exporting features for your Wellfleet router backbone.

Available: Now
Contact: Ken Packert (CompuServe 76376,1510)
Phone: 516-567-6060
Fax: 516-567-6648

StonyBrook Services, Inc.

630-4 Johnson Avenue
Bohemia, NY 11716

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Device Management

Optivity for NMS

Single-station solution for managing NetWare systems and SynOptics Network Fabric

Optivity for NMS represents the industry's most advanced Network Fabric management solution for Novell network environments. Featuring SynOptics' leading hub-management technology, the application works with Novell's NetWare Management System (NMS) to create an integrated solution for managing both the NetWare systems environment and the Network Fabric—the LAN's flexible, underlying physical structure—from a single management station.

Optivity for NMS resides on the NMS platform, delivering a host of features for managing SynOptics products using SNMP over IP and IPX. Working together, NMSand Optivity for NMSenable you to manage the network as a single, cohesive entity rather than a collection of individual elements. Seamlessly integrated with Novell's NMS and working with other snap-in applications.

Optivity for NMS contributes key Network Fabric management capabilities to the overall Novell system. The application, bundled with the core NMS platform, can also serve as a stand-alone hub-management solution for NetWare environments.

Available: Now
Contact: SynOptics Sales Office
Phone: 800-PRO-NTWK or 410-224-8042

SynOptics Communications   **Yes it runs with NetWare**
4401 Great AmericaParkway
Santa Clara, CA 95054

Device Management

NetCensus

Hardware and software inventory for NetWareLANs

NetCensus will be a snap-in module for the NetWare Management System (NMS) designed to automate your hardware and software inventory process. NetCensus automatically tracks software brand names along with the version and serial number. It also tracks hardware brand and model names.

NetCensus lets you perform inventories either on a scheduled or on an as-needed basis. It gives you the information you need to manage the desktop configurations on your network, track potential software piracy problems, and avoid repeat or incompatible purchases.

Available:	Summer of 1993
Contact:	Tom Cecere (TCECERE@TALLY1)
MCI mail:	531-5738
Phone:	603-643-1300
Fax:	603-643-9366

Tally Systems Corporation   **Yes it runs with NetWare**

P.O. Box 70
Hanover, NH 03755

Device Management

Wiz-Kit

Complete control of Victron UPSs on NetWare LANs

VisiSoft is committed to supporting Novell's NetWare Management System (NMS) platform through VisiNet, a management tool for the NetWare environment. The non-NMS version of VisiNet, VisiNet Enterprise 2.0, supports NetWare 2.x and 3.x through a NetWare Loadable Module, with over 400 status and alarm conditions. It is a user-definable scripting language that lets you define alarm conditions and then keep tabs on the network via faxes, electronic mail, and pagers.

   VisiNet allows you to establish real-time visual and audible monitoring of a LAN, WAN, or multiple LANs from a single workstation. You need no special hardware to take advantage of VisiNet's network management facilities. It runs under Windows 3.1 and supports most communication devices.

Available: Now
Contact: Laura Cieraad
Phone: 31-50-446-222 ext. 284
Fax: 31-50-424-107

Victron BV   **Yes it runs with NetWare**
Koningsweg 27
9731 AP Groningen
The Netherlands

Device Management

VisiNet

NetWare 2.x and 3.x server management

Wiz-Kit is a snap-in application for the Novell NetWare Management System (NMS). It is designed to provide you complete control of all Victron UPSs on your network through SNMP.

Wiz-Kit is a Windows application that interfaces with the NMS SNMP data services to provide seamless access to Victron UPSs. All alarms generated by the Victron UPSs are received by the NMSAlarm Manager. Wiz-Kit offers you sophisticated power diagnostics tools such as reading of line, battery, and output voltages; control of shutting down and rebooting the server and the UPS; warning in case of an empty UPS battery; and UPS battery failure.

Available:	Late 1993
Contact:	Ken Davis
Phone:	800-VISINET
Internat'l phone:	404-320-0077
Fax:	404-320-0450

VisiSoft   **Yes it runs with NetWare**
2700 N.E. Expressway, Suite B-700
Atlanta, GA 30345

Network Performance Monitoring

Network Performance Monitoring

Vital Signs for LANs

NetWare and SNA performance analysis from a host system

Vital Signs for LANs management software runs from any PC on a NetWare LAN and gathers NetWare Management System (NMS) alarms and LAN performance statistics. Through a 3270 connection, the statistics are transported to Vital Signs for VTAM, a host-based system for integrated analysis of NetWare and SNA networks.

The software provides an early warning system for problems that occur on your LAN. It allows you to set thresholds for each site and notifies you when a threshold is exceeded. Vital Signs uses standard IPX/SPX application program interfaces to collect file-server, workstation, and LANperformance statistics as well as response time data.

Through this information, organizations can better control and manage key network resources and serve user needs most appropriately.

Available: July 1993
Contact: Mark Caprio
Phone: 800-826-0313
Internat'l phone: 612-542-1072
Fax: 612-542-9566

BlueLine Software
5775 Wayzata Boulevard, Suite 690
Minneapolis, MN 55416

Network Performance Monitoring

LAN Command Advanced (LCA)

Proactive monitoring and diagnostics for NetWare LANs

LAN Command Advanced (LCA) will feature an expert system specifically designed to proactively monitor and diagnose problems on a NetWare LAN. LCA will monitor NetWare 2.x, 3.x, and 4.0 LANs. It will run under NetWare Management System (NMS) as a character-based application.

LCA is client-based software that will monitor both servers and clients without any TSRs, VAPs, or NLMs. It will provide network-performance benchmarking and systemwide monitoring from a central site. This expert system will be the key to proactive diagnostics.

Available:	Fall of 1993
Contact:	Philip Kim
Phone:	404-279-7050
Fax:	404-279-1615

Dolphin Networks   **Yes it runs with NetWare**
4405 International Boulevard, Suite B-108
Norcross, GA 30093

Network Performance Monitoring

LC Distributed

Network diagnostic system for Novell LANs and WANs

LC Distributed will be a network diagnostic system for Novell LANs and WANs running as a snap-in application for the NetWare Management System (NMS). It will incorporate advanced technology such as expert systems; hundreds of user-set thresholds; client, server, and network benchmarking; and more.

LC Distributed will use probes to gather information and will forward expert alarms to the application running under NMS. It will detect such problems as failing network cards, bad cables, and overloaded servers. In addition, it will help you troubleshoot distributed systems with expert-system diagnostics.

LC Distributed will be a key component to maintaining and troubleshooting your distributed Novell LAN.

Available: Late 1993
Contact: Philip Kim
Phone: 404-279-7050
Fax: 404-279-1615

Dolphin Networks   **Yes it runs with NetWare**
4405 International Boulevard, Suite B-108
Norcross, GA 30093

NMS Enhancements

NMS Enhancements

Crystal Reports

Custom reports from the NMSdatabase

Crystal Reports is an easy-to-use, Windows-based report generator that lets you produce high-quality reports simply by pointing and clicking. Running as an application with the NetWare Management System (NMS), Crystal Reports will allow you to access the NMS database files kept under Btrieve®.

Using Crystal Reports, you will be able to create detailed NMS reports, such as a list of all devices located on a network, while also showing a total count of the devices at the bottom of the report.

Beyond its use with NMS, Crystal Reports can also access information in dBase, Paradox, and Btrieve databases. In fact, data from different databases can be mixed on a single report. Its easy report layout with a WYSIWYG editor makes report design a snap, and it contains a powerful formula language enabling complex calculations.

In order for Crystal Reports to read NMS database files, you must have the required NMS data dictionary files. These files are currently available on NetWire.

Available:	Now
Contact:	Crystal Services Sales Office
Phone:	604-681-3435 (CompuServe 71035, 2430)
MCI:	516-7489
Fax:	604-681-2934

Crystal Services
1050 West Pender St., Suite 220
Vancouver, BC V6E 3S7
Canada

NMS Enhancements

Alert Page

Wireless notification of network alarms

Denmac Systems' Alert Page is a snap-in extension for Novell's NetWare Management System (NMS). It allows you to forward network alarms to individual alphanumeric pagers based on alarm severity and device status. Fully integrated into the NMS platform, it shares the system's common Window's graphical user interface and works with TCP/IP and IPX traps as well as other third-party applications.

Alert Page constantly tracks activity from the NMSAlarm Manager. When an alarm is received, Alert Page automatically routes the message to an alphanumeric pager or pagers based on your predefined notification hierarchy. In short, it functions as a emergency dispatcher for the NMS Alarm Manager, immediately and automatically paging the individual(s) you've designated for any level of alarm, at any time of the day or night.Alert Page also lets you build a duty roster for each notification group.

The roster can be scheduled in 30-minute increments for up to a year in advance. Unassigned time slots are automatically routed to a master default pager.

Available:	Now
Contact:	Andy Denenberg (CompuServe: 71521, 3074)
Phone:	708-291-7760
Fax:	708-291-7763

Denmac Systems, Inc.   **Yes it runs with NetWare**
1945 Techny Road
Northbrook, IL 60062

NMS Enhancements

Node Tracker

Real-time troubleshooting for packet errors and node configurations

Node Tracker will be a snap-in module for Novell's NetWare Management System platform. In its current version, Node Tracker software from the Frye Utilities for Networks line of products gives you the information you need to create and maintain consistent, standard NetWare LAN configurations. It provides detailed, real-time information for troubleshooting packet errors and node configurations, including shell and driver information.

Automatic node mapping allows you to map all or part of your network. You can perform point-to-point tests between any two network nodes to determine the quality of the connection.

You can easily view extensive network statistics for the IPX or SPX components of a workstation, file server, or bridge as well as the statistics for a workstation shell. Acomprehensive, easy-to-use set of reports lets you quickly document your Novell network.

Available:	Summer of 1993
Contact:	Frye Computer Systems Sales Office
Phone:	617-451-5400
Fax:	617-451-6711

Frye Computer Systems, Inc.   **Yes it runs with NetWare**
19 Temple Place
Boston, MA 02111

COMMUNIQUE Application Server

High-performance, multiple-server platform for NetWare LANs

The COMMUNIQUE Application Server is a high-performance coprocessor for NetWare file servers that can run either network management NLMs or network management applications such as the NetWare Management System and LANalyzer for Windows. Adding COMMUNIQUE Application Server coprocessors to your file server creates a high-performance multiple-server platform without all the space and cabling required by stand-alone PCs.

The COMMUNIQUE Application Server retains all the advantages of the NetWare nonprotected mode while providing the full security and reliability of the new protected mode. It improves reliability by eliminating NLM memory conflicts that cause file-server crashes. It also protects your file server from NLM software crashes by having a separate processor for NLM applications.

COMMUNIQUE Application Servers are compatible with NetWare 2.x, 3.x, and 4.0 LANs.

Available:	Now
Contact:	Curtis Johnson
	(CompuServe: 70670,524 or Novell MHS: SALES@IWI via NHUB)
Phone:	408-923-0301
Fax:	408-923-0427

IWI   **Yes it runs with NetWare**
1648 Mabury Road
San Jose, CA 95133

NMS Enhancements

LANAlert Management System

Putting knowledge and control in the hands of network managers

Network Computing Incorporated's (NCI) LANAlert Management System is a Windows-based, modular, distributed management system that will run under the NetWare Management System. LANAlert combines a powerful and integrated suite of applications designed to maximize network availability, resolve problems quickly, and reduce your cost to manage.

LANAlert consists of four modules: management server, consoles, agents, and gateways. The screen shot above depicts an add-on package to the base LANAlert product, the LANPage Gateway. A server-based product, LANPage sends a complete message to a pager so network managers can be notified instantly about network conditions, even when off-site.

Available:	Spring of 1994
Contact:	Local Network Computing Sales Office
Phone:	408-296-8080
Internat'l phone:	714-367-0793
Fax:	408-296-8329

Network Computing Incorporated
3031 Tisch Way, Suite 910
San Jose, CA95128

NMS Enhancements

NetWare for SAA Services Manager

Management of NetWare for SAA™ services

Novell's NetWare for SAA Services Manager is a Windows-based software application integrated with the NetWare Management System that provides extensive network management capabilities for configuring, monitoring, and maintaining multiple NetWare for SAA communication services anywhere on a network. It manages Netware for SAA 1.2 by providing a comprehensive set of network management tools for fault, performance, and configuration management.

The NetWare for SAA Services Manager helps minimize service downtime through real-time fault management, immediately notifying network supervisors of NetWare for SAAevents through audible and visual alerts. In addition, you can collect and view statistical information over time for critical resources such as synchronous and SNA host data links, LAN connections, and communications services.

The real-time control provided by the NetWare for SAA Services Manager allows you to be more responsive to situations that require intervention. You can view configuration information, see communication services on the network, and dynamically control the services down to the session level.

Available: Summer of 1993
Contact: Authorized reseller
Phone: 800-NETWARE
Internat'l phone: 801-429-5533

Novell, Inc.   **Yes it runs with NetWare**
Corporate Headquarters
122 East 1700 South
Provo, UT 84606

NMS Enhancements

SERVICEPoint

The right solution for corporate help desk users

SERVICEPoint will be a snap-in application for Novell's NetWare Management System (NMS). Launching from the NMSTools menu, it will integrate with the NMSAlarm Manager and forward all the alarms from the NMSdatabase to a SERVICEPoint NLM. Users can then open calls, issue dispatches, or process other sequences based on a script language.

SERVICEPoint, today in its non-NMS version, automates call logging, call queuing (both individual and group call queues), escalation, and problem tracing. It also provides contract management, service call dispatching, work order, RMA tracking, audit trails, history files, configuration and warranty tracking, order entry, asset management, invoicing, and other service and support functions.

Available: Summer of 1993
Contact: Danny Brand
Phone: 801-373-3859
Fax: 801-377-8982

SERVICEPoint
441 East Bay Boulevard
Provo, UT 84606

NMS Enhancements

AlertVIEW

Troubleshooting system for applications on NetWare LANs

AlertVIEW v2.1 is a snap-in application for Novell's NetWare Management System (NMS). Launching from an AlertVIEW icon on the NMS Maps, this product is designed to automate and facilitate your LAN support responsibilities, giving you a complete and unrestricted view of all facets of network application activities and failures. It detects and reports problems on your LAN applications and can automatically correct up to 40 percent of your LAN application problems.

AlertVIEW is integrated with the NMSAlarm database. Any NMS Alarms (NetWare servers or any third-party SNMP traps) can be forwarded to IBM NetView. It can convert AlertVIEW NMVT alerts to NMS SNMP traps and vice versa.

AlertVIEW provides fast, high-quality support for LANusers by pinpointing the source of problems in real time and correcting them before they occur, giving you more time to deal with complex LAN management tasks.

Available:	Now
Contact:	Tania Solé
Phone:	415-694-7410
Fax:	415-694-4728

Shany Incorporated   **Yes**
it runs with NetWare
2680 Bayshore Parkway
Mountain View, CA 94043

System Management

System Management

NetTOOLS Menu

Central network management of Windows menus

NetTOOLS Menu will be a snap-in module for Novell's NetWare Management System (NMS) platform to help you manage the day-to-day tasks required by Windows menus.

To start with, NetTOOLS Menu uses the rights and privileges already created in the network operating system to customize each user's desktop, so each desktop menu displays only the resources needed by its user. Next, a simple NetTOOLS script can update Windows.INI files and software files for every user quickly and accurately, saving you from running from workstation to workstation yourself.

In addition, NetTOOLS Menu reduces the time you spend providing technical support through context-sensitive help that provides immediate assistance to users. Finally, NetTOOLS Menu can require that all network users' workstations are secured after a period of inactivity and can mandate network password use.

With these capabilities, NetTOOLS can efficiently manage the Windows workstations on your network, freeing you for other important network management tasks.

Available:	Late 1993
Contact:	Ruth Rainey
Phone:	404-394-2552
Fax:	404-394-2191

Automated Design Systems, Inc.   **Yes it runs with NetWare**
375 Northridge Road, Suite 270
Atlanta, GA 30350

System Management

NetTOOLS Meter

Monitoring concurrent software use across a NetWare LAN

NetTOOLs Meter will be a snap-in module for Novell's NetWare Management System (NMS) platform that allows you to monitor concurrent software use against a baseline of licensed copies. It tracks software use on both network and local drives, as well as across multiple file servers, no matter where the application is launched—from the network or the local hard drive.

With NetTOOLS Meter, you can document and print trends of software use in your company in graphs and reports. You can also import metered information into Windows applications, such as Microsoft Excel, via DDE for further analysis and report writing.

Using these graphs and reports, you can determine exactly how many people are using specific software packages and eliminate excessive purchases. In addition, by tracking which software is used by which people, NetTOOLS Meter can help your company comply with software licensing agreements, protecting and preserving your software investment.

Available:	Late 1993
Contact:	Ruth Rainey
Phone:	404-394-2552
Fax:	404-394-2191

Automated Design Systems, Inc.   **Yes it runs with NetWare**
375 Northridge Road, Suite 270
Atlanta, GA 30350

System Management

NetTOOLS Print

Central control of network printer configuration

NetTOOLs Print will be a snap-in module for Novell's NetWare Management System (NMS) platform that allows you to configure and control all printers on your NetWare LAN from a single console. You can create and maintain one printer database that is shared by all network users, and any change you make is immediately available to all users on the network.

NetTOOLS Print can update a printer driver and automatically add the associated changes in the WIN.INI file, saving you the task of visiting individual workstations. It also automatically manages printer redirection and writes printer entries to the WIN.INI file, so users no longer need to hassle with the Windows Control Panel.

In addition, NetTOOLS Queue Manager lets users view and control their print jobs. This intuitive interface displays a separate print queue for each connected printer along with information on each job in the queue. If one queue is full, users can easily send their jobs to another printer.

Available:	Late 1993
Contact:	Ruth Rainey
Phone:	404-394-2552
Fax:	404-394-2191

Automated Design Systems, Inc.   **Yes it runs with NetWare**
375 Northridge Road, Suite 270
Atlanta, GA 30350

System Management

LT Auditor 4.0+

Transparent NetWare activity tracking

LT Auditor will be a snap-in module for Novell's NetWare Management System (NMS) platform, allowing you to monitor activities on your NetWare LAN. Through a system of user-definable filters, LTAuditor transparently tracks and logs LAN accesses, bindery accesses and modifications, and file accesses and changes, telling you who is accessing the LAN and exactly what they are doing. These activities are tracked—along with when and where they were performed—whether or not the activities were successfully completed.

LT Auditor software also includes software metering, hardware inventory, and remote real-time monitoring modules.

Blue Lance plans to support NetWare SFT III™ and the 1000 user-version NetWare products in future versions of LT Auditor software.

Available:	August 1993
Contact:	Mike Patterson (Blue Lance @71333, 1526 [CompuServe])
Phone:	713-680-1187 ext. 248
Fax:	713-622-1370

Blue Lance, Inc.   **Yes it runs with NetWare**
1700 West Loop South, Suite 1100
Houston, TX 77027

System Management

SiteLock

Software metering and virus protection

SiteLock provides complete software metering and virus protection in one package. It will be a snap-in module on Novell's NetWare Management System (NMS).

The current version of SiteLock meters and monitors software use to ensure that you are not breaking software license agreements. It lets you define the maximum number of simultaneous users for each metered software program. It monitors the number of active users and locks out excess users when all copies of licensed soft-ware are in use. "Locked out" users can be placed in a queue and are notified when a copy becomes available. SiteLock also helps you determine when to buy additional copies of software.

In addition, SiteLock will protect your NetWare LAN against viruses. It lets you create a unique blueprint for each protected executable file on the LAN. It verifies the file against the blueprint as frequently as you specify. If a possible virus is detected, users won't be able to run the file and the event will be recorded in a log file.

Available: Summer of 1993
Contact: Tracey Mustacchio (TECH_SUPPORT@BRIGHTWORK.COM)
Phone: 800-552-9876 or 908-530-0440
Fax: 908-530-0622

Brightwork Development, Inc.   **Yes it runs with NetWare**
766 Shrewsbury Avenue, Jerral Center West
Tinton Falls, NJ 07724

System Management

NetWare Console Commander

Automatically schedules NetWare console commands

The NetWare Console Commander (NCC) will be a snap-in module on Novell's NetWare Management System (NMS) that will allow you to schedule any NetWare 3.11 or later console command to occur automatically at the time you specify.

The current version of NCC features a simple calendar interface that displays four consecutive months per screen. To schedule an event, you simply cursor to the appropriate date and specify the command(s) you want to execute on which server. NCC will handle the rest.

Using NCC, you will be able to schedule such events as clearing connections that interfere with backups, sending messages, loading and unloading a NetWare Loadable Module (NLM), running NCF files, setting NetWare parameters, and running server-based programs. You will be able to increase security on a server by clearing open connections that are open after hours. You will also be able to conserve valuable server cache memory and optimize the server configuration by loading NLMs only when necessary.

Available: Summer of 1993
Contact: Frye Computer Systems Sales Office
Phone: 617-451-5400
Fax: 617-451-6711

Frye Computer Systems, Inc.   **Yes it runs with NetWare**
19 Temple Place
Boston, MA 02111

System Management

Software Update and Distribution System (SUDS)

Automated software distribution and file management

The Software Update and Distribution System (SUDS) from the Frye Utilities for Networks line of products enables your NetWare LAN to manage itself. It also supports all versions of NetWare and will be a snap-in module on Novell's NetWare Management System (NMS) platform. By automating tasks that were previously performed manually, it can cut the costs, increase the productivity, and improve the quality of your computing environment.

Awarded *LAN Magazine* Product of the Year 1993, this versatile program automates the distribution, upgrading, installation, and removal of software. It provides intelligent file management, a schedule of updates and installs, an undo feature, user notification options, and a powerful and flexible PC selection capability. It can even select, delete, and replace any file, as well as automatically edit any text file.

SUDS also lets you create a standard model for software and files on a particular workstation and ensures that the configuration doesn't change.

SUDS runs on DOSand Windows, supports multiple-server WANs, and works with all major PCnetworks.

Available: Summer of 1993
Contact: Frye Computer Systems Sales Office
Phone: 617-451-5400
Fax: 617-451-6711

Frye Computer Systems, Inc.   **Yes it runs with NetWare**
19 Temple Place
Boston, MA 02111

System Management

HTI:Origen

Automated NetWare server management

HTI:Origen will be a snap-in module for Novell's NetWare Management System (NMS). It is a comprehensive tool that will enable you to automate your NetWare LAN management tasks, including starting up, configuring, documenting, or upgrading NetWare file servers. Since the process will occur offline, you will never have to take your network down.

The current version of HTI:Origen eliminates errors in user names, IDs, passwords, group names, and directory names. It also eliminates errors that can result from the thousands of keystrokes in manual upgrades or first-time configurations. HTI:Origen's server-auditing and documentation capabilities provide a complete picture of what the server looks like, including users, groups, applications, and configurations. It lets you create report templates from pull-down menus and simple "pick lists" to automatically audit file-server information.

In addition, HTI:Origen will read an existing server to be used as a template for a new server. Its .EXE file will work with all versions of NetWare and will automatically convert access rights between environments.

Available:	Spring of 1994
Contact:	Brian Ferrario
Phone:	619-292-8320
Fax:	619-565-1175

Horizons Technology   **Yes it runs with NetWare**
3990 Ruffin Road
San Diego, CA 92123

System Management

LANshadow

Fast, flexible NetWare server backup and disk mirroring

LANshadow will be a snap-in module on Novell's NetWare Management System (NMS) designed to enhance your device management capabilities by protecting your NetWare LAN against network downtime. It will provide the quickest, most flexible NetWare server backup and disk mirroring strategy available in a software package—no extra hardware purchases will be necessary.

The current version of LANshadow can be used for simple server mirroring where the destination server is dedicated to the task of backup, but is flexible enough to let you mirror just the most critical files or paths on one or many servers. It supports simple file-server mirroring, mutual file-server mirroring, multiple file-server mirroring, automatic software distribution and upgrading, WAN mirroring to mirror files at another physical site, and virus protection.

LANshadow offers you a new philosophy of enterprise-wide backup that's not just an unrecoverable insurance policy, but a powerful, user-friendly system that can be customized to your specific needs.

Available:	Spring of 1994 (Internationally only)
Contact:	Brian Ferrario
Phone:	619-292-8320
Fax:	619-565-1175

Horizons Technology　　　　　　　　　　　　　　　　　**Yes it runs with NetWare**
3990 Ruffin Road
San Diego, CA 92123

System Management

LANtrail

Network activity tracking

LANtrail will be a snap-in module on Novell's NetWare Management System (NMS) designed to let you keep an eye on who is doing what on your NetWare LAN and when it happened.

The current version of LANtrail traces what program users executed and what files they opened, read, wrote to, closed, created, deleted, and renamed. You can even see when users are added or deleted or when security system changes are made, including attempted accesses.

A complete transaction-monitoring tool, LANtrail can be used to monitor workstation and LANtransactions as an audit of network security, view patterns of use and collect accurate information for capacity planning, and analyze network events relating to troubleshooting.

LANtrail's most commonly used tool is the File/Dir report, which can be used to troubleshoot service issues with Windows and other applications, or as a monitor to ensure that network policies are being followed.

Available:	Spring of 1994
Contact:	Brian Ferrario
Phone:	619-292-8320
Fax:	619-565-1175

Horizons Technology   **Yes it runs with NetWare**
3990 Ruffin Road
San Diego, CA 92123

Internetworking Products

Hubs

CN6010HMI/CN6000HMI

Intelligent hub adapters supporting up to 96 connections

The CN6010HMI and CN6000HMI adapters are intelligent hub adapters that support up to 96 network connections in one NetWare file-server environment. CN6010HMI is a hub adapter for IBM PC ATs and compatibles with a 50-pin female telecommunications connector and a harmonica with 12 RJ-45 connections. CN6000HMI is an expansion hub; one 6010HMI and seven 6000HMI adapters can be added to a system. When integrated with standard PCs and the NetWare MultiProtocol Router, CNETHub Cards provide an excellent price/ performing router/hub.

Through Novell's HUBCON management software, you can access the CN6010HMI/CN6000HMI to monitor and control hub functions locally from the server console via the familiar NetWare utility user interface. The hub card automatically shuts down or partitions ports when a node isn't working properly. They also recognize the node and reestablish the connection.

Both products support Novell's Hub Management Interface (HMI) and ODI specifications as well as the IEEE 802.3 10Base-T standard. They are also NE2000-compatible.

Available: Now
Contact: Henry Wong
Phone: 408-954-8000
Fax: 408-954-8866

CNet Technology Incorporated   **Yes it runs with NetWare**
2199 Zanker Road
San Jose, CA 95131

Hubs

NE32HUB

Intelligent, 32-bit router/hub for NetWare 3.11 networks

The NE32HUB family adds a fully managed hub to any NetWare 3.11 or later server. It integrates a 32-bit Ethernet adapter and a 12-port hub on one PC add-on card, providing a managed hub at the cost of an unmanaged hub. The NE32HUB ships with NetWare Hub Services and can be combined with the NetWare MultiProtocol Router to provide an intelligent hub/router that is managed through HUBCON or Novell's Hub Services Manager.

The NE32HUB family of products makes expansion simple and scalable so that the hardware you purchase to support your capacity needs today can be expanded to support 120 nodes.

The NE32HUB-Base card provides a managed hub at an affordable price by integrating a full-managed 10Base-T hub with a 32-bit EISA adapter card. The NE32HUB complies with the IEEE 802.3 10Base-T standard, enabling it to work with any twisted-pair Ethernet adapter adhering to this standard.

Available: Now
Contact: Eagle Sales Office
Phone: 800-524-EAGL
Internat'l phone: 011-49-211-593-340
Fax: 408-436-0348

Eagle Technology
2865 Zanker Road
SanJose, CA 95134

Hubs

EtherExpress TPE Hubs

Affordable, Novell HMI–compliant hubs

EtherExpress TPE Hubs comply with Novell's Hub Management Interface (HMI) specifications and interoperate with the NetWare Management System (NMS) and NetWare Hub Services. When integrated with standard PChardware and the NetWare MultiProtocol Router, Intel hub cards provide an excellent price/performing router/hub.

EtherExpress TPE Hubs combine a 12-port 10Base-T hub and a high-performance Ethernet adapter on a single personal computer add-in card. You can add ports in 12-port increments using EtherExpress expansion hubs.

These hubs offer an excellent price per managed port, and you can expand them up to 96 ports per hub cluster. You can install them in a server or, using Intel's Remote Hub Agent, in client PCs on NetWare 3.11 networks.

Available:	Now
Contact:	PCED Product Information
Phone:	800-538-3373
Internat'l phone:	503-629-7354

Intel Corporation   **Yes it runs with NetWare**
PCED-Networking
5200 NE Elam Young Parkway
Hillsboro, OR 97124

Hubs

NetWare Application Engine

486-based module for NetWorth Series 4000 hubs

NetWorth's NetWare Application Engine (NAE) is a 486-based module that plugs directly into a NetWorth Series 4000 hub. The NAE uses NetWare Runtime™ as its base operating system allowing any application based on a NetWare Loadable Module to run from the hub. It is ideally suited for the NetWare MultiProtocol Router, NetWare for SAA Gateway, network management, hub management, and general network services.

NAE is preinstalled on Novell Labs certified hardware to provide a ready-to-use applications platform. By integrating the NetWare operating system into the hub, the NetWorth hub provides excellent router/hub functionality and manageability.

Available:	Now
Contact:	NetWorth Products Group
Phone:	800-544-5255 or 214-929-1700
Fax:	214-929-1720

NetWorth, Incorporated   **Yes it runs with NetWare**
8404 Esters Boulevard
Irving, TX 75063

Hubs

Series 3000 Intelligent Concentrator Hubs

Multiple backplane capability for Ethernet, token-ring, and FDDI connectivity

The NetWorth Series 3000 TriSegment Stackable Hub is ideal for networks with 10 to 120 nodes. It uses SNMP and the Hub Management Interface (HMI) Specification and is fully manageable from the Novell NetWare Management System (NMS), NetWare Hub Services Manager, or NetWorth's HubView Management software.

The NetWorth Series 3000 hub has 24 ports and is fully compliant with the IEEE 10Base-T standard. You can stack up to five hubs together to function as one logical repeater. By including one 24-port TriSegment Management Hub in the stack, you can manage the entire hub stack.

Available: Now
Contact: NetWorth Products Group
Phone: 800-544-5255 or 214-929-1700
Fax: 214-929-1720

NetWorth, Incorporated   **Yes it runs with NetWare**
8404 Esters Boulevard
Irving, TX 75063

Series 4000 Intelligent Concentrators

Multiple backplane capability for Ethernet, token-ring, and FDDI connectivity

The NetWorth Series 4000 TriSegment Stackable Hub is ideal for networks with 30 to 240 nodes. It uses SNMP and the Hub Management Interface (HMI) Specification and is fully manageable from the Novell NetWare Management System (NMS), NetWare Hub Services Manager, or NetWorth's HubView Management software. NetWorth also integrates routing and SAA services into the concentrator using NetWare MultiProtocol Router and NetWare for SAA running on the NetWorth NetWare Application Engine.

The NetWorth Series 4000 concentrators provide a multiple backplane capability that is optimized for the NetWare environment. It comes in 3, 6, and 10 versions, providing a scalable network solution. It supports Ethernet, token ring, and FDDI backbone connections.

Available: Now
Contact: NetWorth Products Group
Phone: 800-544-5255 or 214-929-1700
Fax: 214-929-1720

NetWorth, Incorporated   **Yes it runs with NetWare**
8404 Esters Boulevard
Irving, TX 75063

Hubs

Elite Series 4000 MAUs

Token-ring MAUs and Hub Cards with full-function hub and port control

The Standard Microsystems (SMC) Elite Series 4400E Hub Cards are 10- or 12-port MAUs integrated with an SMC token-ring adapter on an ISA card. The Hub Card is ideally suited to be integrated into a remote branch office or departmental LAN. These Hub Cards are easy to install, configure, manage, and provide an excellent price per managed token ring port.

In addition, SMC's Elite Series 4400N Elite MAUs and 4000C Intelligent MAUs provide low-cost, SNMP-manageable, external token-ring connectivity.

The SMC Elite Series 4000C and 4400E are fully manageable when integrated into a NetWare environment. Novell's HUBCONutility provides full-function hub and port control from the server console or via RCONSOLE from any workstation on the network.

Available:	Now
Contact:	Ellen Roeckl
Phone:	1-800-992-4762 or 516-435-6340

Standard Microsystems Corp.   **Yes it runs with NetWare**

80 Arkay Drive
Hauppauge, NY 11788

Hubs

XNET 24-Port Managed Hub Card

Managed 24-port 10Base-T hub card for
NetWare networks of upto 192 nodes

The XNET 24-Port Managed Hub is a second-generation 10Base-T hub card with 24 ports per card and a built-in network management processor. It provides full multiport repeater functions and network management functions per the IEEE 802.3 standards and Novell's Hub Management Interface (HMI) specification. When integrated with standard PCs and the NetWare MultiProtocol Router, the XNET hub card provides an excellent price/performing router/hub that can be managed using SNMP or Novell's HUBCON hub management utility.

    After you configure and install the XNET hub card, the installation software automatically discovers all hub cards and determines their I/O addresses and whether or not they are daisy chained. You can easily expand the configuration from 24 ports (one hub card) to up to 192 ports (eight cards) depending on the number of available slots on your system. In addition, you can install the XNET 24-port card in a client workstation to eliminate a single point of failure without affecting network management functions.

Available:	Now
Contact:	Howard Chan
Phone:	800-788-0148
Internat'l phone:	408-988-5921
Fax:	408-988-8848

XNET Technology Incorporated   **Yes it runs with NetWare**
3350 Scott Boulevard, #6488
Santa Clara, CA 95054

Internetworking Devices

NetWare MPR for ISDN

*Integrated, high-performance ISDN solution
for NetWare MultiProtocol Router*

The NetWare MultiProtocol Router (MPR) for ISDN connects geographically scattered LANs over Intergrated Services Digital Network (ISDN), allowing high-performance, wide area networking with transparent access to WAN resources. It is a NetWare Loadable Module–based solution and works with all LANtopologies (Ethernet, ARCnet, token ring, and FDDI), routing IPX/SPX, IP, AppleTalk, and OSI over ISDN. The NetWare MPR for ISDN comes as a red box together with NetWare Runtime 3.11 and up to four of AVM's ISDN controllers.

NetWare MPRfor ISDN brings all the features of ISDN into the LAN environment, including data compression, bandwidth on demand, and bundling. It provides reliable, digital, public network communications and supports up to 30 data channels at 64 kilobits per second.

NetWare MPR for ISDN was designed by both AVM and Novell; thus it fits perfectly into the NetWare environment, with the same installation, configuration, and management features you receive with NetWare products. The multiprotocol router for NetWare works with NetWare for SAA, NetWare WAN Links, and NetWare for NFS.

Available:	Now
Contact:	Dorothe Faxel
Phone:	+49-(0)30-467-070
Fax:	+49-(0)30-467-299

Audiovisuelles Marketing und Computersysteme GmbH
Voltastrasse 5
1000Berlin 65
Germany

Yes it runs with NetWare

Internetworking Devices

Backbone Concentrator Node

High-end, multiprotocol router/bridge for modern internetworks

The Backbone Concentrator Node is a high-end, next-generation multiprotocol router/bridge. It supports 52 LAN and WAN interfaces (up to 13 FDDI) and system-forwarding performance that scales up to an industry-leading 480,000 packets per second. Wellfleet's IPXimplementation complies with all Novell standards for routing and is interoperable in a NetWare environment (NetWare 2.15 and later).

The Backbone Concentrator Node features a distributed, fault-resistant software architecture that has no single point of failure, giving you maximum availability. It features a symmetric multiprocessor architecture and 1-gigabyte-per-second parallel packet express.

The Backbone Concentrator Node also offers extensive fault-management capabilities, online dynamic reconfiguration, and hot swap, guaranteeing network availability.

Novell and Wellfleet have announced a commitment to interoperability. As a result of this relationship, you will be able to build modern internetworks that meet your performance, cost, and reliability requirements.

Available:	Now
Contact:	Local Wellfleet Sales Office
Phone:	508-670-8888
Fax:	508-436-3658

Wellfleet Communications, Inc.
8 Federal Street
Billerica, MA 01821

Backbone Link Node

Multiprotocol router/bridge for modern internetworks

Novell and Wellfleet have announced a commitment to interoperability. As a result of this relationship, you will be able to build modern internetworks that meet your performance, cost, and reliability requirements.

The Backbone Link Node is a high-end, next-generation multiprotocol router/bridge. It supports 16 LAN and WAN interfaces (up to 4 FDDI) and system-forwarding performance to 150,000 packets per second. Wellfleet's IPXimplementation complies with all Novell standards for routing and is interoperable in a NetWare environment (NetWare 2.15 and later).

The Backbone Link Node features a distributed, fault-resistant software architecture that has no single point of failure, giving you maximum availability. It features a symmetric multiprocessor architecture and 1-gigabyte-per-second parallel packet express.

The Backbone Link Node also offers extensive fault-management capabilities, online dynamic reconfiguration, and hot swap, guaranteeing network availability.

Available:	Now
Contact:	Local Wellfleet Sales Office
Phone:	508-670-8888
Fax:	508-436-3658

Wellfleet Communications, Inc.
8 Federal Street
Billerica, MA 01821

Concentrator Node

Internetwork connectivity for large NetWare LANs

Designed for large network sites, the Concentrator Node supports 52 LAN and WAN interfaces and provides system-forwarding performance to 188,500 packets per second. Wellfleet's IPX implementation complies with all Novell standards for routing and is interoperable in a NetWare environment (NetWare 2.15 and later).

By supporting all major LAN and WAN protocols, the Concentrator Node provides interoperability and full connectivity in multivendor environments. It ensures availability with its symmetric multiprocess or architecture, hardware and software redundancy, and highly resilient distributed system software. In addition, the Concentrator Node's symmetric multiprocessor architecture delivers maximum system performance and allows aggregate system performance to increase as you add interfaces.

Novell and Wellfleet have announced a commitment to interoperability. As a result of this relationship, you will be able to build modern internetworks that meet your performance, cost, and reliability requirements.

Available:	Now
Contact:	Local Wellfleet Sales Office
Phone:	508-670-8888
Fax:	508-436-3658

Wellfleet Communications, Inc.

8 Federal Street
Billerica, MA 01821

Internetworking Devices

Link Node

Expandable internetwork connectivity for midsize NetWare LANs

The Link Node is an expandable platform for medium-size network sites, supporting 16 LAN and WAN interfaces and providing system-forwarding performance to 58,000 packets per second. Wellfleet's IPX implementation complies with all Novell standards for routing and is interoperable in a NetWare environment (NetWare 2.15 or later).

By supporting all major LAN and WAN protocols, the Link Node provides interoperability and full connectivity in multivendor environments. It ensures availability with its symmetric multiprocessor architecture, hardware and software redundancy, and highly resilient distributed system software. In addition, the Link Node's symmetric multiprocessor architecture delivers maximum system performance and allows aggregate system performance to increase as you add interfaces.

Novell and Wellfleet have announced a commitment to interoperability. As a result of this relationship, you will be able to build modern internetworks that meet your performance, cost, and reliability requirements.

Available:	Now
Contact:	Local Wellfleet Sales Office
Phone:	508-670-8888
Fax:	508-436-3658

Wellfleet Communications, Inc.
8 Federal Street
Billerica, MA 01821

Internetworking Platforms

COMMUNIQUE Server

Enhanced file-server and NLM application performance

The COMMUNIQUE NLM Communication Server is the industry's first NLMcoprocessor for NetWare file servers that dramatically improves file-server and NLM application performance. It includes the COMMUNIQUE 486 Server-on-a-Card, NetWare Runtime, IWI LAN drivers, floppy and IDE drives, and up to 16 megabytes of RAM. It is fully compatible with Novell's internetworking NLMs.

By adding a COMMUNIQUE NLM Server coprocessor to an existing ISA/EISA–based NetWare file server, you can dedicate the NLM server to run Novell's NetWare MultiProtocol Router (MPR) v2.1 and NetWare MPR v2.1. By off-loading the file server, the NLM server enables the file-server processor to manage your network's file storage instead of multitasking between NetWare and the internetworking NLM applications.

The COMMUNIQUENLM server retains all the advantages of NetWare nonprotected mode while providing the full security and reliability of the new protected mode. It improves reliability and protects your file server from NLM software crashes.

Available:	Now
Contact:	Curtis Johnson
	(CompuServe 70670,524 or Novell MHS: SALES@IWI via NHUB)
Phone:	408-923-0301
Fax:	408-923-0427

IWI   **Yes it runs with NetWare**
1648 Maybury Road
San Jose, CA 95133

Internetworking Platforms

NetGENESIS 410 FT

Flexible, 486-based platform for Novell internetworking software

The NetGENESIS 410 FT Internetwork Server is the most flexible 486-based platform available for NetWare MultiProtocol Router v2.1, MultiProtocol Router Plus v2.1, SAA, NACS/NAS, and NetWare 3.11 software. The 410 FT offers the ideal platform for internetworking departmental or remote-office LANs without the added cost and training requirements of proprietary systems.

The 410 FT server has a passive backplane design and is compatible with industry-standard option cards. You can expand the 410 FT to up to 10 slots in a single rack-mountable system. And by integrating any of several available hub cards with the 410 FT server, you can build industrial-strength hub routers as a low-cost alternative to proprietary internetworking systems.

Using Texas Microsystem's patented FTSA architecture, the 410 FT server offers hardware fault tolerance through disk redundancy, hot swap power supplies, and subsystem monitoring. These capabilities complement the fault-tolerant services of NetWare, assuring that even a failure on the system volume will not disrupt network operations.

Available:	Now
Contact:	Richard Spangler
Phone:	713-541-8200
Internat'l phone:	31-3653-65595
Fax:	713-541-8226

Texas Microsystems, Inc.

P.O. Box 42963
5959 Corporate Drive
Houston, TX 77036

LAN Adapters

LAN Adapters

EtherLink III Parallel Tasking Ethernet Adapters

*High-speed Ethernet connectivity for NetWare MultiProtocol Router
and LANalyzer for Windows*

EtherLink III Parallel Tasking Ethernet adapters are 3Com's new third-generation Ethernet adapters for 32-bit EISA, 16-bit ISA, or 16- or 32-bit Micro Channel bus PCs. EtherLink III adapters work with all versions of NetWare client and server software, including ODI promiscuous mode support, providing high-speed network connections and application flexibility.

EtherLink III adapters are available in RJ45/AUI and BNC/AUI configurations. They use a custom ASIC and an innovative technology called parallel tasking that provides exceptionally high performance and increased throughput.

EtherLink III adapters are specially designed for auto configuration and bus sensing, making installation and configuration simple. In addition, they provide SNMP manageability and come with a lifetime warranty.

Available: Now
Contact: 3COM Sales
Phone: 800-NET-3COM
Fax: 408-764-5001

3COM Corporation   **Yes it runs with NetWare**
5400 Bayfront Plaza
P.O. Box 58145
Santa Clara, CA 95052-8145

LAN Adapters

TokenLink III Adapters

Dependable, high-speed token-ring connectivity for NetWare MultiProtocol Router

The TokenLink III Series Network Adapters are token-ring adapters for EISA, ISA, and MCA bus PCs. These adapters support both unshielded and shielded twisted-pair cabling, without an external media filter, at both 16- and 4-megabit-per-second ring speed.

TokenLink III Series adapters work with all versions of NetWare client and server software, providing high-speed network connections. When integrated with standard PC hardware and the NetWare MultiProtocol Router, the 3Com TokenLink III adapters provide an excellent price/performance router platform. The 3Com adapters also support the ODI bridge enhancement, providing support for source-route bridging.

TokenLink III adapters are fully IBM compatible—and have a money-back guarantee. They enable you to support mission-critical applications with reliability and high quality. 3Com also provides a lifetime warranty. In addition, TokenLink III adapters offer you SNMP manageability without changing hardware.

Available: Now
Contact: 3Com Sales
Phone: 800-NET-3COM
Fax: 408-764-5001

3Com Corporation   **Yes it runs with NetWare**
5400 Bayfront Plaza
P.O. Box 58145
Santa Clara, CA 95052-8145

LAN Adapters

FDDI/CDDI Adapter

FDDI/CDDI 100 Mbps solutions for NetWare LANs

The FDDI/CDDI EISA Adapter cards provide high-performance, cost-effective, 100-megabit-per-second network interface solutions for fiber or twisted-pair copper-wired networks. When integrated with standard PChardware and the NetWare MultiProtocol Router, the FDDI/CDDI EISA Adapter provides an excellent price/performance solution for routing in an FDDI environment.

These adapters provide 100-megabit-per-second speed over UTP, STP, and fiber networks. They provide reliable functionality in a NetWare environment through support of certified drivers.

Available: Now
Contact   Laura Fay
Phone: 408-732-4400
Fax: 408-732-4604

Crescendo Communications
710 Lakeway Drive
Sunnyvale, CA 94086

LAN Adapters

Eagle Ethernet Adapters

Cost-effective adapters for multimedia and multiprotocol support

Eagle offers a complete line of industry-standard Ethernet LANadapters including the NE2000 16-bit ISA, NE3200 32-bit bus-master EISA, NE/2 16-bit MCA, and the NE/2-32 32-bit MCA. Each of the Eagle adapters has drivers written by Novell that support all versions of NetWare. Using industry-standard PCs, the Eagle adapters, combined with the NetWare MultiProtocol Router, provide a cost-effective solution for a wide range of media and protocol support. The Eagle adapters also support the ODI promiscuous mode, providing support for LANalyzer for Windows.

The NE2000 supports the IEEE 802.3 standard and ensures total compatibility with a wide range of third-party products. The NE3200 provides the high level of performance necessary for driving large, enterprise-wide networks. The NE/2 is an ideal choice for mixed topology file servers and routers and is recommended for IBM PS/2 computers or compatibles. The NE/2-32 offers the extra throughput required in larger networks where heavy network traffic can create performance bottlenecks.

Available:	Now
Contact:	Eagle Sales Office
Phone:	800-524-EAGL
Internat'l phone:	011-49-211-593-340
Fax:	408-436-0348

Eagle Technology
2865 Zanker Road
SanJose, CA 95134

LAN Adapters

NE2000*plus* Family

Cost-effective 16-bit ISA adapters for multimedia and multiprotocol support

The NE2000*plus* adapters are the next generation of the industry-standard NE2000. They use drivers written by Novell. Using industry-standard PCs, the NE2000*plus* adapters combined with the NetWare MultiProtocol Router provide a cost-effective routing solution.

The NE2000*plus* products are 16-bit ISAadapters that provide fast data transfers for workstations or servers in networks using coaxial or 10Base-T Ethernet. Compliance with IEEE 802.3 Ethernet standards ensures compatibility with many third-party network products. A higher level of silicon integration increases reliability while retaining compatibility with existing NE2000 drivers.

NE2000*plus* adapters offer three cabling options (thick, thin, and UTP) for maximum flexibility. Jumperless configuration makes installation and setup easy. In addition, these adapters support higher interrupts, enabling them to perform well in robust networking environments where up to seven boards can operate in one server to handle heavy throughput and unusual network configurations. A shared memory option provides increased performance when required.

Available: Now
Contact: Eagle Sales Office
Phone: 800-524-EAGL
Internat'l phone: 011-49-211-593-340
Fax: 408-436-0348

Eagle Technology
2865 Zanker Road
SanJose, CA 95134

LAN Adapters

NTR2000

High-performance ISA adapters for token-ring LANs

The NTR2000 is a 16/4 ISAadapter that provides 8- and 16-bit token-ring connectivity. It uses drivers written by Novell that support all versions of NetWare. Using industry-standard PCs, the NTR2000, combined with the NetWare MultiProtocol Router, provides a cost-effective solution for a wide range of media and multiprotocol support, including source-route bridging. It is the ideal solution for expanding existing NetWare based token-ring networks.

The NTR2000 supports ISA bus computers and provides high performance and 100 percent IBM compatibility, which is ensured through the use of the TROPIC chipset. Microcode on the NTR2000 is the same microcode used on IBM adapters. The NTR2000 is fully interoperable with IBM adapters on the same LAN.

The NTR2000 is easy to install since it uses an installation and configuration scheme similar to IBM's current adapters. In addition, it ships with diagnostic software to facilitate correct installation and to assist you in troubleshooting.

Available:	Now
Contact:	Eagle Sales Office
Phone:	800-524-EAGL
Internat'l phone:	011-49-211-593-340
Fax:	408-436-0348

Eagle Technology
2865 Zanker Road
SanJose, CA 95134

LAN Adapters

EtherExpress Adapters

Cost-effective, high-performance Ethernet LAN adapters

EtherExpress Adapters are a complete family of high-performance Ethernet LAN adapters for ISA, MCA, and EISA personal computers. They include IMSP certified drivers for NetWare Lite™, and NetWare 2.2, 3.11, and 4.0 LANs and support Novell's multiprotocol routing and ODI promiscuous mode for LANalyzer for Windows.

 EtherExpress Adapters are easy to install, configure, and manage, providing you efficient and cost-effective Ethernet connectivity.

 EtherExpress Adapters are available with AUI/BNC, AUI/10Base-T, and AUI/BNC/10Base-T media connections. When integrated with standard PC hardware and the NetWare MultiProtocol Router, Intel EtherExpress Adapters provide an excellent price/performance router platform.

Available: Now
Contact   PCEDProduct Information
Phone: 800-538-3373
Internat'l phone: 503-629-7354

Intel Corporation   **Yes it runs with NetWare**
PCED-Networking
5200 NE Elam Young Parkway
Hillsboro, OR 97124

LAN Adapters

TokenExpress Adapters

Cost-effective, high-performance token-ring adapters
for NetWare MultiProtocol Routers

TokenExpress Adapters are a family of token-ring LAN adapters for ISA, MCA, and EISA personal computers. They include IMSP-certified drivers for NetWare and support source-route bridging. When integrated with standard PC hardware and the NetWare MultiProtocol Router, Intel TokenExpress adapters provide an excellent price/performing bridge/router platform. In addition, the TokenExpress adapters support ODI promiscuous mode for LANalyzer for Windows.

TokenExpress Adapters operate at 4 and 16 megabits per second over shielded or unshielded twisted-pair media.

Available:	Now
Contact	PCED Product Information
Phone:	800-538-3373
Internat'l phone:	503-629-7354

Intel Corporation   **Yes it runs with NetWare**
PCED-Networking
5200 NE Elam Young Parkway
Hillsboro, OR 97124

LAN Adapters

Smart 16/4 Ringnodes

*Adapters fully supporting Novell NetWare MultiProtocol Router
and LANalyzer for Windows*

Smart 16/4 Ringnodes are Madge's family of intelligent token-ring adapters delivering high performance in multivendor networks. Smart Ringnodes come equipped with ODI drivers, including promiscuous mode support. These adapters support Novell LANalyzer for Windows, NetWare Management System, NetWare MultiProtocol Routers, and NetWare 3.11 and 4.0.

Based on the Texas Instruments chipset and augmented with Madge Smart Software and Fastmac technology, Smart 16/4 Ringnodes offer unrivaled ease of installation, flexibility, multiprotocol support, memory savings, and performance. Smart 16/4 Ringnode adapters are interoperable with IBM token-ring adapters, and provide on-board connections for both UTP and STP cabling, and offer optional SmartROM for remote booting. Smart LAN Support software and Workstation Management software are supplied free with every Smart Ringnode.

Available:	Now
Contact:	Local Madge Sales Office
Phone:	800-876-2343
Internat'l phone:	408-955-0700
Fax:	408-955-0970

Madge Networks   **Yes it runs with NetWare**

2310 North First Street
San Jose, CA 95131-1011

Smart 16/4 Bridgenodes

*High-performance bridge, router, and network analysis
in a single solution for Novell networks*

Smart 16/4 Bridgenodes bring you the same benefits as Smart Ringnodes with the added capability to support both source-route bridging and routing. Smart Bridgenodes can be integrated with Novell's MultiProtocol Router v2.1 software to deliver high-performance bridging and routing in a single, affordable solution. In addition, the Madge Smart 16/4 Bridgenodes can support the ODI promiscuous mode requirements of Novell's LANalyzer for Windows.

Madge has developed an optimal solution for token-ring bridging and routing in a single package. In the Smart Bridgenode, Madge added a chip to its Smart Ringnodes and Fastmac Plus technology to ensure the highest-performance bridge/router at a significantly lower cost than dedicated hardware solutions. Madge's token-ring solutions offer the price/performance value and flexibility to meet even your most demanding requirements.

Available:	Now
Contact:	Local Madge Sales Office
Phone:	800-876-2343
Internat'l phone:	408-955-0700
Fax:	408-955-0970

Madge Networks   **Yes it runs with NetWare**
2310 North First Street
San Jose, CA 95131-1011

LAN Adapters

NP-EISA FDDI Adapters

Reliable, high-speed FDDI connectivity for NetWare MPR

NP-EISA series FDDI adapters are 32-bit EISA bus cards with Novell certified drivers. They can be integrated with all versions of NetWare server and client software to provide a reliable, high-speed network interface. By integrating multiple adapters on standard PC hardware with NetWare MultiProtocol Router software, FDDI adapters offer you an excellent price/performance routing platform.

FDDI adapters provide a high-bandwidth, reliable server backbone network. The 100-megabits-per-second data rate allows you to transfer files quickly without impacting other users. Clustering servers in this way improves network reliability by isolating server-to-server traffic. In addition, FDDI adapters support up to 500 stations and up to 2 kilometers per segment—more than other network media such as Ethernet and token ring.

FDDI adapters are available as a dual attached station (DAS) or single attached station (SAS) using multimode fiber media. They are also available for ISAand MCA bus computers.

Available:	Now
Contact:	Tom Keenan (TKEENAN@FASTNET.COM)
Phone:	408-321-7300
Fax:	408-321-9218

Network Peripherals   **Yes it runs with NetWare**
1371 McCarthy Boulevard
Milpitas, CA 95035

LAN Adapters

LAN2LAN/Mega

Fully integrated PC-based WAN interface

LAN2LAN/Mega is the first fully integrated NetWare T1 WAN adapter with data compression, offering you high performance at a reasonable cost.

LAN2LAN/Mega combines a high-speed synchronous adapter with a NetWare Loadable Module that loads into a NetWare 3.x or 4.0 environment as well as into the NetWare MultiProtocol Router. In addition, it supports NetWare 2.2 and 2.15 LANs (both file-server and stand-alone versions).

You can use lower-speed and therefore lower-cost lines to satisfy your response-time requirements through LAN2LAN/Mega's data-compression capabilities. LAN2LAN/Mega also works with several platforms and applications by supporting Novell's MultiProtocol Router, the NetWare operating system, multiple routing protocols (IPX/SPX, IP, and AppleTalk), ports, WAN protocols (HDLC, X.25, and PPP), ISA and Micro Channel PCs, and speeds up to T1/E1.

Available:	Now
Contact:	Technical Sales
Phone:	800-368-6533
Internat'l phone:	714-752-1511
Fax:	714-752-8389

Newport Systems Solutions   **Yes it runs with NetWare**
4019 Westerly Place
Newport Beach, CA 92660

LAN2PC/Mega

Remote, PC-based, NetWare ODI–compliant shell

LAN2PC/Mega is an ODI-compliant shell that enables remote personal computers to connect to a NetWare LAN at speeds up to full T1/E1, providing high-performance WANinterconnectivity at a reasonable cost. It can interoperate in wide area networks with NetWare Link/64, NetWare Link/T1, and NetWare WANLinks.

LAN2PC/Mega supports multiple routing protocols (IPX/SPX and IP), multiple WAN protocols (HDLC, X.25 and PPP), and ISA and Micro Channel PCs. In addition, its data-compression capability lets you use lower-speed—and therefore less expensive—dial-up lines to interconnect to the central LAN.

You can upgrade LAN2PC/Mega to a full LAN2LAN/Mega or LAN2LAN/MPR as your needs require.

Available:	Now
Contact:	Technical Sales
Phone:	800-368-6533
Internat'l phone:	714-752-1511
Fax:	714-752-8389

Newport Systems Solutions   **Yes it runs with NetWare**
4019 Westerly Place
Newport Beach, CA 92660

Olicom Token Ring

High-performance token-ring connectivity
for NetWare MultiProtocol Routers

Olicom markets high-performance token-ring adapters for EISA, ISA, and MCA bus computers. The combination of potent i486-based PCs with Novell's router software and Olicom's Server Adapters provide a cost-effective yet powerful alternative to established, dedicated router products on the market. This combined solution is giving more and more users access to global internetworking because of its low-cost, off-the-shelf components, as well as its ease of installation and support. The Olicom drivers support the ODI extensions required to support source-route bridging and ODI promiscuous mode to support LANalyzer for Windows.

The adapters feature Olicom's PowerMAC and are designed to increase performance of servers and high-end workstations. The PowerMAC increases throughput without sacrificing CPU utilization.

Available:	Now
Contact:	Bjarne Lauritzen (BKI@OLICOM.DK)
Phone:	+45-45-27-00-00
Fax:	+45-45-27-01-01

Olicom A/S   **Yes it runs with NetWare**
Nybrovej 114
DK-2800 Lyngby
Denmark

LAN Adapters

ProNet 4/16

High-performance token-ring adapters
for EISA, ISA, and MCA bus computers

ProNet 4/16 token-ring adapter cards deliver reliable IBM and IEEE 802.5 interoperability. They can be integrated with all versions of NetWare server and client software to provide a reliable, high-speed network interface. By integrating multiple adapters on standard PC hardware with NetWare MultiProtocol Router software, ProNet adapters offer you excellent price/performance. They support NetWare 2.x, 3.x, 4.0, MPR, NDIS, and ODI.

ProNet 4/16 adapters offer you high-quality, high-performance token-ring interoperability at 4 or 16 megabits per second. You can chose from ISA, EISA, and Micro Channel adapters as well as STP/UTP cabling. Pronet 4/16 adapters come with a lifetime warranty.

Available:	Now
Contact:	LAN Products Division Sales
Phone:	508-898-2800 or 1-800-545-RING
Fax:	508-366-8901

Proteon, Inc.   **Yes it runs with NetWare**
9 Technology Drive
Westborough, MA 01581

LAN Adapters

EtherCard Plus Adapters

High-performance Ethernet adapters for EISA, ISA, MCA, and 10Base-T

Standard Microsystems Corporation (SMC) offers a wide range of high-performance Ethernet adapter cards supporting many bus and LAN interface configurations, including EISA, ISA, MCA, 10Base-T, and thin coax Ethernet. Many of the adapters have integrated diagnostic LEDs.

The SMC series of Ethernet adapters provide excellent price performance and reliability when integrated in the NetWare environment. The adapters ship with certified ODI drivers for all versions of the NetWare operating system and support the ODI promiscuous mode extensions. When integrated with standard PC hardware and the NetWare MultiProtocol Router, SMCrouters provide an excellent price/performance platform and are easy to install, configure, and manage.

Available: Now
Contact: Ellen Roeckl
Phone: 1-800-992-4762 or 516-435-6340

Standard Microsystems Corp.   **Yes it runs with NetWare**
80 Arkay Drive
Hauppauge, NY 11788

LAN Adapters

SMC ARCnet Adapters

ARCnet adapters for ISAand MCA bus interfaces

Standard Microsystems Corporation (SMC) offers a wide range of ARCnet adapter cards supporting ISAand MCA bus interfaces. Many of the adapters have integrated diagnostic LEDs and node ID switches as well as a discrete transceiver for improved reliability.

The SMCseries of ARCnet adapters provides excellent price/performance and high reliability when integrated in the NetWare environment. The adapters ship with certified ODI drivers for all versions of the NetWare operating system. When integrated with standard PChardware and the NetWare MultiProtocol Router, SMC's ARCnet adapters pride an excellent price/performance routing platform for routing into an ARCnet LAN. In addition, SMC ARCnet adapters are easy to install, configure, and manage.

Available: Now
Contact: Ellen Roeckl
Phone: 1-800-992-4762 or 516-435-6340

Standard Microsystems Corp.   **Yes it runs with NetWare**
80 Arkay Drive
Hauppauge, NY 11788

LAN Adapters

SMC Token-Ring Adapters

High-performance token-ring adapters for ISA and MCA bus interfaces

Standard Microsystems Corporation (SMC) offers high-performance token-ring adapters configured with ISA and MCA bus interfaces and supporting 4/16 megabits per second over shielded twisted pair (STP) or unshielded twisted pair (UTP) media.

SMC's token-ring adapter series provides excellent price/performance and high reliability when integrated in the NetWare environment. The adapters ship with certified ODI drivers for all versions of the NetWare operating system. When integrated with standard PC hardware and the NetWare MultiProtocol Router, SMC's token-ring adapters provide an excellent price/performance router platform. In addition, they are easy to install, configure, and manage.

Available: Now
Contact: Ellen Roeckl
Phone: 1-800-992-4762 or 516-435-6340

Standard Microsystems Corp.   **Yes it runs with NetWare**
80 Arkay Drive
Hauppauge, NY 11788

LAN Adapters

SK-NET FDDI Series

Reliable, high-perfomance FDDI connectivity
for NetWare MultiProtocol Router

The SK-NET FDDI Series of network interface cards are the high performance FDDI cards. You can install SK-NET FDDI cards in Novell servers, multiprotocol routers, and clients to bring the high-performance and reliability of FDDI to a networked environment.

SysKonnect's SK-Passport is standard with each of the SK-NET FDDI network interface cards. A DOS SNMPagent is provided with the SK-Passport drivers and can be monitored with Novell's NetWare Management System (NMS). In addition, the SK-NET FDDI cards are ANSI X3T9.5 compliant and have been tested at the ANTC FDDI test center for conformity to the FDDI standard.

SK-NET FDDI cards are available as single or dual attached stations (SAS and DAS), using UTP, STP, and fiber. The cards support EISA, ISA, and MCA bus computers.

Available: Now
Contact: Sales Department
Phone: 800-SK2-FDDI
Internat'l phone: 408-725 4650
Fax: 408-725-4654

SysKonnect, Inc.   **Yes it runs with NetWare**
12930 Saratoga Avenue, Suite D-1
Saratoga, CA 95070

LAN Adapters

TCNS 100 Mbps Adapters

Reliable routing platform for 100 Mbps LAN connectivity

Thomas-Conrad TCNS 100 Mbps Adapters (TC3042, TC3045, TC3046, and TC3047) can be integrated with all versions of NetWare server and client software to provide reliable 100 Mbps connectivity for your NetWare LAN. By integrating multiple adapters on standard PC hardware with the NetWare MultiProtocol Router software, these adapters provide an excellent price/performance routing platform.

TCNS 100 Mbps Adapters are available with MCA, 8-bit, or 16-bit EISA bus architectures and support coaxial, twisted pair, or fiber-optic cable. Thomas-Conrad provides toll-free technical support 24 hours a day, 7 days a week.

Available: Now
Contact: Sales Department
Phone: 800-332-8683
Internat'l phone: 512-836-1935
Fax: 512-836-2840

Thomas-Conrad   **Yes it runs with NetWare**
1908-R Kramer Lane
Austin, TX 78758

LAN Adapters

Thomas-Conrad ARCnet Adapters

Reliable routing platform for ARCnet LANs

Thomas-Conrad ARCnet Adapters (TC6242, TC6245, and TC6246) can be integrated with all versions of NetWare server and client software to provide reliable ARCnet connectivity for your NetWare LAN. By integrating multiple adapters on standard PC hardware with the NetWare MultiProtocol Router software, these adapters provide an excellent price/performance routing platform and reliable ARCnet LAN connectivity.

ARCnet Adapters are available with MCA and 8-bit or 16-bit ISA bus architectures. They also support coaxial and twisted pair wires. Each card includes on-bracket node ID switch and diagnostic LEDs. Thomas-Conrad provides toll-free technical support 24 hours a day, 7 days a week.

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LAN Adapters

Thomas-Conrad Ethernet Adapters

*Reliable connectivity for NetWare MultiProtocol Routers
and LANalyzer for Windows*

Thomas-Conrad Ethernet Adapters (TC5045, TC5046, and TC5143) can be integrated with all versions of NetWare server and client software to provide reliable Ethernet connectivity for your NetWare LAN. By integrating multiple adapters on standard PC hardware with the NetWare MultiProtocol Router software, these adapters provide an excellent price/performance routing platform and reliable Ethernet LAN connectivity. In addition, the Thomas-Conrad Ethernet adapters support the ODI promiscuous mode extensions required by LANalyzer for Windows.

Ethernet Adapters are available with MCA and 8-bit or 16-bit ISA bus architectures and support 10Base-T and 10Base-2 standards. The TC5045 and TC5046 adapters support high-speed bus-mastering technology and include an AUI connection. The TC5143 adapter is software-configurable and uses industry-standard NE2000 drivers. Thomas-Conrad provides toll-free technical support 24 hours a day, 7 days a week.

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Phone:	800-332-8683
Internat'l phone:	512-836-1935
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LAN Adapters

Thomas-Conrad Token-Ring Adapters

Reliable routing platform for token-ring LANs

Thomas-Conrad Token Ring Adapters (TC4043, TC4045, and TC4046) can be integrated with all versions of NetWare server and client software to provide reliable token-ring connectivity for your NetWare LAN. By integrating multiple adapters on standard PC hardware with the NetWare MultiProtocol Router software, these adapters provide an excellent price/performance routing platform and reliable token-ring LAN connectivity.

Token Ring Adapters are available with MCA, 8-bit, and 16-bit bus architectures and support 16/4 Mbps token ring. The TC4043 is a plug-and-play, IBM compatible, token-ring adapter. The TC4045 and TC4046 adapters use high-speed bus-mastering technology and provide connectors for Type 1 and Type 3 cables. They also include diagnostic LEDs. Thomas-Conrad provides toll-free technical support 24 hours a day, 7 days a week.

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ISDN Direct offers switched, digital service that carries data 27 times faster than regular telephone service. It can connect two or more Novell routers for a LAN/WAN application and it can connect a Novell router and a remote workstation. A terminal adapter is required at both points.

ISDN Direct uses a basic-rate interface that consists of two B channels operating at 64 kilobytes per second and one D channel operating at 16 kilobytes per second over copper wires. It supports synchronous data transmission and provides higher transmission speeds that reduce costs compared to traditional dial-up alternatives. In addition, ISDN Direct connects geographically dispersed NetWare MultiProtocol Routers for transparent LAN-to-LAN connectivity.

Together, ISDNDirect and Novell products provide customers with one-stop shopping, ordering, and installation of fast and efficient digital service.

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Phone:	708-248-5259
Fax:	708-248-3944

Ameritech
2000 W. Ameritech Center Drive, 4D59D
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Advanced Digital Network (ADN)

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Advanced Digital Network (ADN) is a universally available, dedicated, digital, private-line transport service that is offered intraLATA and interLATA. It provides full-duplex, end-to-end digital transport at 2.4, 4.8, 9.6, 56, and 64 kilobits per second and can be point-to-point or multipoint. It also provides interconnection with DS-1 service. ADN runs on NetWare MultiProtocol Router v2.1 and MultiProtocol Router Plus v2.1.

ADN offers reliable, continuous, end-to-end digital service using well-proven, industry-standard technology. Its fixed, mileage-based pricing is often the lowest-cost option for users with high volumes of traffic between fixed locations.

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Cost-effective digital service for high-volume data and voice applications

High-Capacity Digital Service is a point-to-point private line service that is available in transport capacities ranging from 256 kilobits per second to 1.44 megabits per second (Fractional T-1 to full T-1 bandwidth). High capacity services are suitable for a variety of high-volume data and voice applications and can be used for IntraLATA and access to all interexchange carriers. This service is one of the WANtransport options supported by the MultiProtocol Router Plus v2.1.

High Capacity services are extremely flexible, offering you a range of transport capacities that allow you to migrate easily between capacity levels and pay only for what you use. These services are designed to give you the highest level of reliability and error-free performance. And the reconfiguration options allow you to redirect your data based on time of day or disaster-recovery needs.

Pacific Bell has led the nation in aggressively pricing high-capacity services, offering you more transport capacity choices than any other local exchange carrier.

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Telecom/Carrier Services

Public Packet Switching

X.25 network for dedicated or dial-access services

Public Packet Switching (PPS) is a public X.25 network that offers dedicated or dial access and transmits data via the standard X.25 protocol. PPS allows you to interconnect users up to 56 kilobits per second and provides gateways to national and international carriers. Pricing is based on data transmitted and is distance-insensitive. PPS is one of the WAN transport options supported by the MultiProtocol Router Plus v2.1.

PPS contains error checking for high quality and network reliability. It meets international standards to ensure national and international connectivity. It is an excellent option for short bursty transactions such as point-of-sale service transactions (for example, medical verification, claims processing, and electronic mail).

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Switched Digital Service 56

Dial-up service for digital data communications

Switched Digital Service 56 (SDS 56) is a dial-up service that provides digital data communications. SDS 56 is available over a two-wire or four-wire, nonloaded business line. SDS 56 communications are switched, two-way, synchronous transmissions at 56 kilobits per second. The NetWare MultiProtocol Router v2.1 and NetWare MultiProtocol Plus v2.1 provide basic support for SDS 56. The service will also work with any router that meets the technical specifications for SDS 56.

SDS 56 gives you flexible access to multiple long-distance carriers. By connecting to a long-distance carrier, you can complete interstate and international calls. You can even change long-distance carriers on a call-by-call basis. Pricing is usage-sensitive: you pay for bandwidth when you use it.

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Phone: 510-901-9308

Pacific Bell
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San Ramon, CA 94583

Switched Digital Service IS

The lowest-cost option for dial-up digital data service

Switched Digital Service Integrated Systems (SDSIS) is an ISDNbasic rate interface (BRI) service that offers standard 2B+D capability including two B channels that support circuit-switched voice, circuit-switched data, or packet-switched data at 64 kilobits per second, and one D channel that supports packet-switched data at up to 9.6 kilobits per second. SDS ISis sold in conjunction with standard voice dial-up business service and interoperates with long-distance carriers. It works with any of the WAN adapters that support the industry standards for ISDN BRIservice.

     SDSIS provides digital end-to-end service capable of supporting up to 128 kilobits per second on a dial-up basis. You can have the equivalent of three circuits on a single physical circuit. This service is an excellent option for telecommuting or home-office applications that require occasional connections at 56 kilobits per second.

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Phone: 510-901-9308

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SanRamon, CA 94583

Switched Multi-Megabit Data Service

Affordable, high-speed LAN interconnection services

Switched Multi-Megabit Data Service (SMDS) is a public-switched, fast packet service. It is ideal for LAN interconnection and bandwidth-intensive applications such as CAD/CAM or medical imaging. The service is available in all major California metropolitan areas and throughout their LATAs. SMDS works with the WAN adapters and routers that support the industry standards for SMDSservice.

SMDS provides high-speed LAN interconnection with LAN-like performance and address screening for security of your interenterprise applications. Its fast packet technology offers each user on your LAN access to the full available bandwidth when needed. In addition, SMDS offers cost savings as compared to dedicated line networks for users with more than four locations. You can realize a savings not only in WAN transport costs but also in associated communications hardware.

Available: Now
Contact: Local Pacific Bell representative
Phone: 510-901-9308

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Appendices and Indices

Appendix A. Glossary of Terms

agent
The part of a networked system that performs information preparation and exchange on behalf of a software entity.

AppleTalk
Protocol suite developed by Apple Computer that can be used by Apple and non-Apple computers for communicating and sharing resources such as printers and file servers.

ARCnet
Proprietary token-bus networking architecture developed by Datapoint Corporation in the mid-1970s. ARCnet is licensed by third-party vendors and is a popular networking architecture in smaller installations. It is relatively fast (2.5 Mbps), reliable, and supports coaxial, twisted-pair, and fiber-optic implementations.

AUI
Attachment unit interface. IEEE 802.3 cable that connects the network device to the media access unit (MAU). The DB-15 connector on the back panel of a network board is also called the AUI.

bandwidth
Carrying capacity of a circuit, usually measured in bits per second (bps) for digital circuits, or hertz (Hz) for analog circuits.

BNC connector
Connector for coaxial cable that locks when one connector is inserted into another and rotated 90 degrees.

bridge
Device that connects two or more physical networks, forwarding frames between networks based on information in the data-link header. Because it operates at the data-link layer, it is transparent to the network-layer protocols.

CSU
Channel service unit. Digital signal processor that performs transmit and receive filtering, signal shaping, longitudinal balance, voltage isolation, equalization, and remote loopback testing for digital transmission. It functions as a guaranteed safe electrical circuit, acting as a buffer between the customer's equipment and a public carrier's wide area network. CSUs prevent malfunctioning digital service units (DSUs) or other customer premises equipment (CPE) from disabling a public carrier's transmission system. The design of a CSU must be certified by the FCC. See also DSU.

directory services Network service that provides information about an entity of interest. It is like an electronic phone book to help network clients find services. There are several designs, including the X.500 standard, the Domain Name System, and Novell's NetWare Directory Services.

DS-0 Digital service-0. Standard that specifies the electrical characteristics for 64 Kbps data transmission; also referred to as fractional T1. Fractional T1 bridges the gap between 56 Kbps DDS service and full T1.

DS-1 Digital service-1. Standard specifying the electrical characteristics for 1.544 Mbps data transmission over four wires; for example, in T1 transmission.

DSU Digital service unit. Device between a user's data terminal equipment (DTE) and a common carrier's digital circuits. It formats data for transmission on public carrier wide area networks and ensures that the carrier's requirements for data formats are met.

EISA Expanded Industry Standard Architecture. Bus standard that is compatible with earlier Industry Standard Architecture (ISA).

encapsulation Technique used by network-layer protocols in which a layer adds header information to the protocol data unit from the preceding layer. Also used in "enveloping" one protocol inside another for transmission (for example, IP inside IPX).

enterprise-wide network Internetwork that connects a corporation's local and remote sites.

fault management Ensures that faults are detected and controlled. One of the five management categories defined by the International Organization for Standardization (ISO) to manage Open Systems Interconnection (OSI) networks.

fractional T1 See DS-0.

Frame Relay Switching interface and network that operate with variable length packets, such as X.25, but with less processing time, supporting the bursty data of high-speed networking.

gateway   Internetworking device that operates from the network to application layers of the Open Systems Interconnection (OSI) model. Sometimes used as a synonym for "router."

HMI   NetWare Hub Management Interface.

hop count   Routing metric used to measure the distance between a source and a destination; each hop equals the transmission of a packet across one network.

hub   Concentrator or repeater at which node connections meet in a star topology.

IGP   Interior Gateway Protocol. Protocol used to exchange routing table information between collaborating routers in the Internet. The Routing Information Protocol (RIP) and the Open Shortest Path First (OSPF) protocol are examples of IGPs.

IMSP   Independent Manufacturers Support Program.

INETCFG   NetWare Loadable Module (NLM) that simplifies the installation of Novell internetworking products by allowing a network administrator to configure boards and enable parameters from a menu.

ISA   Industry Standard Architecture. Bus design for IBM PC/XT and PC/AT computers.

MCA   Micro Channel Architecture. Bus design in IBM PS/2 computers.

MIB   Management Information Base. Database of network management information used by the Common Management Information Protocol (CMIP) and the Simple Network Management Protocol (SNMP).

MIB Browser   A NetWare Management System facility that provides SNMP access to any MIB for IP or IPX.

MIB Compiler   The software that compiles the concise MIB files into a binary file that is used by the MIB Browser.

NLSP NetWare Link Services Protocol. IPX link-state protocol used by IPX routers to share information about their routes with other devices on the network. Enables network managers to interconnect small or large networks without routing inefficiencies.

ODI Open Data-Link Interface. Supports media- and protocol-independent communications by providing a standard interface that allows network-layer protocols to share a single network board without conflict.

out-of-band signaling Method of signaling that uses a frequency within the passband of the transmission facility but outside of a carrier channel normally used for data transmission.

promiscuous mode Mode in which the hardware on a LAN receives and passes to the upper-layer protocols all packets that arrive.

redirector Software within a computer that redirects a request to the proper resource; most often used for a DOS TSR that redirects requests for disk access to a network server.

remote bridge Bridge that uses wide-area links to connect separate LANs.

RMON Draft-standard Simple Network Management Protocol (SNMP) Management Information Base (MIB) for network data collection and analysis.

router Device that connects two networks using the same networking protocol. It operates at the Network Layer (Layer 3) of the OSI model for forwarding decisions.

SNMP Simple Network Management Protocol. An industry-standard protocol that describes objects and lets management stations get information about the objects and set values in an efficient and standard manner.

SRB Source-route bridging.

SRT bridging Source-route transparent bridging. Bridging scheme proposed by IBM that attempts to merge the two most prevalent bridging strategies (source-route bridging and transparent bridging); employs both

technologies in one device. No translation is done between the bridging protocols.

SR/TB bridging	Source-route–to–transparent bridging. Method of bridging in which source-route stations can communicate with transparent bridge stations with the help of an intermediate bridge that translates between the two bridge protocols.
10Base-T	IEEE standard for 10 Mbps baseband over unshielded twisted-pair wire.
traps	SNMP alarms.
virtual circuit	In packet-switching networks, a circuit that appears to be a physical point-to-point circuit. It connects two end points, conveying sequenced data packets reliably; in fact, it shares the underlying links and relay systems with other users of the network.
X.25	Set of protocols developed by the Consultative Committee for International Telegraphy and Telephony (CCITT) organization to define the interface between an X.25 public data network and a packet-mode user device.
X.500	Open Systems Interconnection (OSI) standard that defines where to find the address to put on the electronic envelope of an X.400 transmission. It becomes an X.500 directory of names and addresses similar to the yellow pages of a telephone directory.
zone	On a local area network such as AppleTalk, a subgroup of users within a larger group of interconnected networks.

Appendix B. SNMP and MIBCompiler Listing

The NetWare Management System (NMS) includes a MIB Browser, an application that implements SNMP. It allows users to set, retrieve, and display information about any SNMPdevice on the network. The MIBBrowser can work independently of NMS. For example, if you know the IP or IPX address of a device, the MIB Browser can gather information about the device, even if NMS can't discover the device.

Using the MIB Browser

Users can retrieve specific information about a specific device on the network. You can retrieve the data just once or repeatedly at an interval you decide. You can also display the data in tables and graphs.

You can manually enter the attributes each time you want information or you can define a profile of the specific devices you want to know about and the type of information you want to retrieve. A profile is an ASCII file that specifies different information (such as what protocol, what method of display, and what attributes to retrieve). You can edit existing profiles, create new profiles, and delete profiles.

To use the MIB Browser, simply select either the IPX or IPaddress of the device and the information you want. NMS provides you with predefined profiles or you can develop your own profiles.

Third-Party MIBs

The following third-party developers provide a MIB that may or may not be compiled with the NMSMIB Browser.
(If the third-party MIB is not compiled, NMSprovides a compiler to easily add to the Browser.)

ACC	NCD
Bellcore	Novell LANtern
Cisco	Novell Net Explorer
Crescendo	Novell NW2SNMP
David Systems	ODSEthernet
HLS-Brid	ODS Token Ring
HostMib	RMON
HostProx	SynOptics
HP-Unix	Timeplex
Hub	TWG
MIB II	Ungermann-Bass
	Xyplex

For more information on MIBs

Network management requests for comments (RFCs) create the basis for the Internet-standard Network Management Framework. Some of these RFCs are MIBs that range from general management fundamentals to specific management tasks, such as hub management. Besides the standard MIBs, many companies also publish their enterprise-specific MIB modules for public access. The public repository of MIBs is located at USC/Information Sciences Institute in California.

To place an enterprise-specific MIB module in this area, mail a copy to the Internet Assigned Numbers Authority. At a minimum, the module must contain an SNMP-compliant description of the MIB. In addition, a textual description of the MIB module may be included. The MIB module will be checked for compliance with the Internet-standard SMI and then placed in the "mid/" area by the IANA. These MIBs are not registered in any sense; they are simply available for public inspection.[1]

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1. Marshall T. Rose, *The Simple Book*, Prentice-Hall, Inc., 1991.

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