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Fresh Technology's NetVision Simplifies Network Management

By Dennis Fredette, Niche Agency

If you are looking for a better way to get information about network usage and to evaluate network performance—especially if you've been using tools such as the NetWare v2.*x* FCONSOLE utility and the NetWare v3.*x* console MONITOR—you'll probably be tempted by the capabilities of Fresh Technology's NetVision.

A menu-driven tool for analyzing network performance, NetVision is designed to allow you to easily obtain the information necessary to do regular preventive maintenance as well as to troubleshoot suddenly appearing network problems. NetVision v2.0, released at the end of last summer, contains several features not present in version 1.1 and a number of improvements on existing features.

For NetWare v3.*x*, NetVision allows you to get the same information available in the NetWare v.2*x* FCONSOLE utility (much of FCONSOLE's functionality is not present in the NetWare v3.*x* utilities). More importantly, NetVision automatically collects information and compiles it into a meaningful form. You can get and present information quickly, with minimal effort.

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Troubleshooting Your Network with Novell's New Network Analyzer

By Laura Chappell, Novell, Inc.

At NetWorld Europe (April 28-30), Novell announced LANalyzer for NetWare, an affordable, Windows-based, hardware-independent network analyzer and monitor. Specifically designed to benchmark, troubleshoot, and optimize NetWare Ethernet LANs (standard, thin-net, or 10Base-T), LANalyzer for NetWare includes a full seven-layer decoder for every version of NetWare (NetWare v2.x, NetWare v3.x, and NetWare Lite), as well as AppleTalk Phases 1 and 2.

Why Use a Network Analyzer?

Every network will eventually experience some sort of problem, whether it is a cable break, a faulty transceiver, a bad network interface card, or application problems. Since many problems and performance issues cannot be resolved by viewing the NetWare monitor screen or by reading error messages, network analyzers and monitors will become increasingly important for managing today's networks.

LANalyzer for NetWare allows you to monitor the communications occurring on the network cable. You can improve network performance, troubleshoot network problems, monitor network utilization, plan for growth, and learn about your network.

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Highlights

Read Part 4 of the "Understanding Token-Ring Source Routing" series on page 8.

Do you need in-depth information about NetWare and network computing? Attend a NetWare Users' Conference in a city near you! See page 20.

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Monitor Performance

LANalyzer for NetWare uses the Windows graphical interface to provide an overall view of network performance. Designed much like a car dashboard, the LANalyzer for NetWare interface includes the following. (See Figure 1.)

- Real-time gauges for packets per second, errors per second, and bandwidth utilization
- Packet capture dial
- Traffic and server alarm buttons

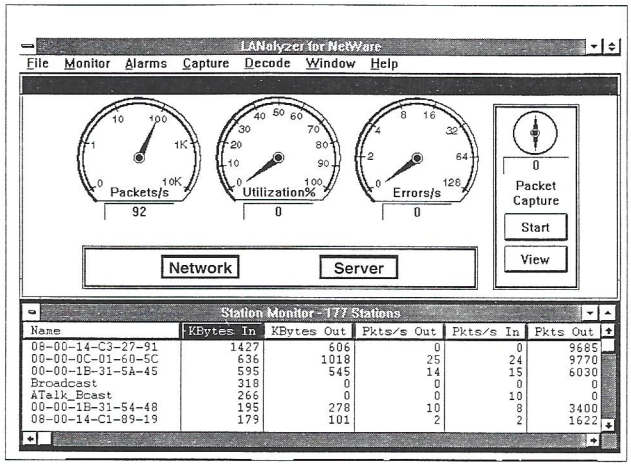

Figure 1: LANalyzer for NetWare includes a dashboard and station monitor.

You can set the dashboard real-time gauges to show both global information for the network and filtered information. For example, you may want to view all the traffic on the network and then have a separate needle on the dial track only traffic to and from a particular file server.

Many network performance issues can be solved by viewing the LANalyzer dashboard and sorting the associated station monitor screen. The station monitor screen lists all active stations on the network and provides statistical information about their communications, such as packets in/out or kilobytes in/out.

If the dashboard shows network utilization is high, you could sort the station monitor screen by the "Kbytes Out" field. LANalyzer for NetWare will then display a descending list of users based on their bandwidth utilization. You can then determine which users are monopolizing the wire.

View Types of Packets

By monitoring packets, you can pinpoint such problems as incorrectly formed packets and excessive errors, thereby controlling network traffic. You can specify the type of packets you want to view using two filters: capture filters and display filters.

Capture filters (also known as "pre-filters") allow you to capture packets that meet a defined criteria and save them in the buffer. You can use capture filters to locate packets based on a sending or destination station address or protocol type, such as AppleTalk or NetWare.

With display filters (also known as "post-filters"), you can isolate packets that meet a defined criteria and display these packets in the buffer. You can use display filters to define the sending or destination node, protocol type (such as AppleTalk, Link Level, or NetWare), packet type, or field value.

You can use filters to view a myriad of packet types, including the following:

- AppleTalk packets such as AARP, AFP, ATP, NBP, ELAP, PAP, RTMP, or ZIP
- Link Level packets such as 802.2, 802.3, or Ethernet frame types
- NetWare packets such as broadcasts, diagnostic packets, IPX, NetBIOS, NCP, SAP, RIP, SPX, serialization packets, NetWare Lite, or watchdog packets

Using a mouse to point to a network component, such as packet type, station address, or network address, you can search for all occurrences of that

component. For example, if a "network receiving . . ." error intermittently appears on a workstation screen, you can point and click on a packet with the station's node address. LANalyzer for NetWare will find all packets addressed to or from that workstation.

LANalyzer for NetWare actively queries NetWare servers to find the names of all NetWare and Macintosh nodes logged in to the network. This feature allows you to identify network stations by usernames, rather than by node addresses. Station node addresses such as 00-00-1B-09-45-12 are replaced with the user's login name, such as FRED.

Monitor Network Events

The detail statistics and trend information graphs plot network events such as the following:

- Packets per second
- Errors per second
- Bandwidth utilization
- Kilobytes per second

You can use trend information to establish baseline activity over a period of time. This information is saved to disk and can be exported to a spreadsheet for further analysis.

You can also use trend information to determine the best time to perform backups, to define peak usage times, to benchmark average network performance rates, or to plan future growth of the network. By evaluating peak usage times, for example, you can foresee what will happen if you add more workstations.

Set Alarm Thresholds

On the bottom of the main screen is a ticker tape alarm, which will display error messages. The messages are also stored in an alarm log for later viewing.

You can set a variety of event alarms, including the following:

- Packet rate
- Error rate
- Bandwidth utilization

You can set the alarm thresholds. For example, you may want LANalyzer for NetWare to notify you when the bandwidth utilization reaches 70 percent. The dashboard gauges appear red where thresholds are set, much like a car's tachometer.

Decode Packets

The LANalyzer for NetWare decodes packets for NetWare and AppleTalk, allowing you to decipher communication between network nodes. The values of each packet are translated into plain English (where appropriate).

The LANalyzer for NetWare provides full seven-layer decoding of Novell's IPX/SPX and NetWare Core Protocols (NCPs) for NetWare Lite, NetWare v2.*x*, NetWare v3.*x*, as well as complete decoding of the AppleTalk Phase 1 and Phase 2 protocol stacks.

Because the LANalyzer for NetWare does not require any special hardware, you do not have to lug a portable computer to client or branch offices. You only need to take the LANalyzer for NetWare diskette and load it on an available Windows 3.*x* workstation. This hardware independence also makes the NetWare for LANalyzer more affordable.

System Requirements

The LANalyzer for NetWare requires a minimum 80386-based computer, Windows v3.*x*, 4MB RAM, 5MB free drive space, and one 5.25-inch or 3.5-inch disk drive.

The LANalyzer for NetWare will be available through Novell distribution channels in May at an introductory cost of $995 (U.S.). The suggested retail price is $1,495 (U.S.). For more information, contact your local Novell office or reseller.

If you've been putting off purchasing a network analyzer because of cost or complexity, check out the LANalyzer for NetWare. Specifically designed for NetWare LANs, this Windows-based network analyzer and monitor is easy to use and provides insight into your Ethernet network.

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