



## **LANalyzer for Windows 2.2: Product Details**

LANalyzer® for Windows 2.2 is a complete monitoring and analyzing tool for troubleshooting both Ethernet and token-ring networks. With this tool, you can quickly identify and diagnose network problems, reducing or eliminating costly downtime. You can also use this software to examine the performance trends that take shape as your network grows, thus preventing problems before they happen.

LANalyzer for Windows enables you to go beyond merely managing workstations, servers, and other network devices. With LANalyzer for Windows, you can tackle the more complex challenge of managing the interaction among these devices.

LANalyzer for Windows monitors all network traffic and captures raw packets sent across the Ethernet or token-ring wire. It then analyzes the packets and makes specific recommendations for troubleshooting and fine-tuning the network. LANalyzer for Windows fully interprets all AppleTalk, NetWare®, NFS, SNA, and TCP/IP protocol suites. It helps you answer questions like the following:

- Do any workstations have faulty network adapters?
- When and how should I segment my network?
- Why can't this workstation talk to the server?
- Why is the network slow?
- Who is using most of the network processing power?
- When is the best time to back up my server?

LANalyzer for Windows provides valuable management and diagnostic capabilities on any network. It runs on either Windows 3.1 or Windows 95 and supports the widest possible choice of network adapters and clients, including all current IntranetWare™ Clients as well as Microsoft's Network Driver Interface Specification (NDIS). Many software developers also use LANalyzer for Windows to predict how their programs will behave on a production network.

### **Features**

- Significantly enhanced performance
- Full Novell Directory Services™ (NDS) support
- Multitasking
- Easy-to-use graphical user interface
- Comprehensive monitoring
- Automated problem detection
- Automated analysis and problem resolution
- Simplified record keeping and growth planning
- Built-in training

### **Enhanced Performance**

Powerful operating systems that run on 32-bit clients give LANalyzer for Windows 2.2 users the same high performance found in hardware-based analysis systems while enabling them to maintain the low cost and ease of use associated with software analysis. When running on Windows 95 with 32-bit clients, LANalyzer for Windows obtains a 100-percent capture rate of traffic on 10 Mbit/s Ethernet and 16 Mbit/s token-ring segments.

## Full Novell Directory Services Support

Novell Directory Services enables LANalyzer for Windows 2.2 to interpret all NDS™ frames so that users can gather station names from anywhere in an NDS tree. In addition, you can assign station addresses to user names systemwide.

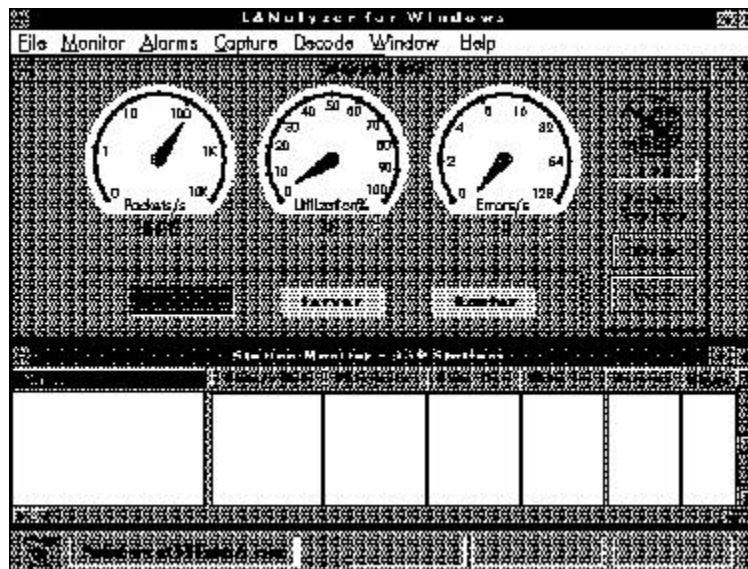
## Multitasking

When running in the Windows 95 environment, LANalyzer for Windows 2.2 runs simultaneously with other Windows 95 applications. This multitasking capability eliminates the need for TSRs and frees memory for other functions.

## Easy-to-Use Graphical User Interface

Because it is a Windows-based product, LANalyzer for Windows 2.2 includes a graphical user interface that provides an easily understandable view of network conditions. The dashboard-like interface shows all network activity. You can easily monitor network status using the dashboard gauges and the Station Monitor table. Menu-driven and mouse-based functions make it simple to use even the product's most advanced capabilities. Unique features such as automatic workstation name gathering, point-and-click filtering, and context-sensitive Help further eliminate confusion. And, to make viewing the network as easy as possible, LANalyzer for Windows identifies workstations, servers, and routers by familiar names rather than by hardware addresses.

**Figure 1: LANalyzer for Windows 2.2 has an intuitive, dashboard-like interface.**



## Comprehensive Monitoring

LANalyzer for Windows 2.2 monitors and analyzes all traffic on the network segment or ring in real time and displays network activity information for every workstation on the network, presenting statistics in real-time graphs.

## Automated Problem Detection

LANalyzer for Windows 2.2 automatically discovers and reports network problems. Abnormal network events such as excessive errors and high utilization set off network alarms, which are logged to a file. Warning lights and alarm icons signify network problems. You can configure LANalyzer for Windows to launch another application (for example, one that would automatically dial your pager) when an alarm goes off.

## Automated Analysis and Problem Resolution

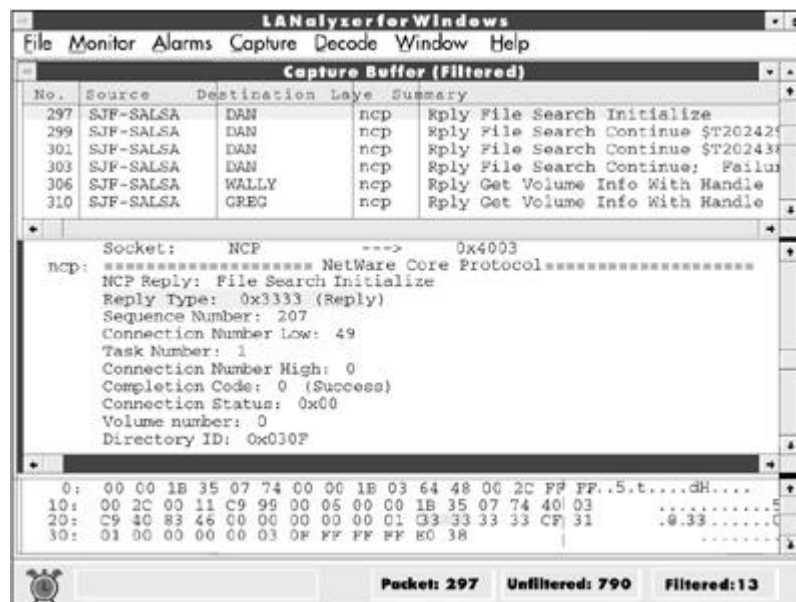
LANalyzer for Windows 2.2 can automatically diagnose many network problems and offer likely solutions. The alarms and Station Monitor functions enable you to easily pinpoint the source of network errors. The NetWare Expert™ system detects network abnormalities and prescribes solutions to correct them.

LANalyzer for Windows has the following analytical capabilities:

- Registers and captures all packets, regardless of protocol
- Identifies and captures error packets
- Summarizes details for each captured packet
- Enables quick and simple protocol decodes
- Fully interprets all NetWare versions (including Burst Mode and NetWare Lite)
- Fully interprets AppleTalk Phase I and Phase II protocols
- Fully interprets TCP/IP protocols, including SNMP, NFS, and FTP
- Fully interprets SNA packets
- Uses point-and-click filtering to focus on packets of interest
- Provides linked highlighting to associate hex data with corresponding listed interpretation (byte highlighting)

With LANalyzer for Windows, you can use point-and-click filtering to search for packets matching selected criteria. For example, clicking the NetWare NCP™ packets transmitted to a particular server causes LANalyzer for Windows to zoom in on that area. The software interprets the packet information and displays it in an easy-to-understand format. Packet summary, detail, and hex windows provide a clear view of what is happening on the network wire. You can then save the packet trace to a file for archiving purposes or send it to a service or support organization where it can be analyzed in greater detail.

**Figure 2: The Packet Summary screen displays information in an easy-to-understand format.**



### Simplified Record Keeping and Growth Planning

LANalyzer for Windows 2.2 incorporates trend analysis of network activity for record keeping and growth planning. It continually saves network statistics to disk, so you can review trends graphically or export them to a spreadsheet.

### Built-in Training

LANalyzer for Windows 2.2 doesn't merely provide information; it also provides the training you need to quickly interpret and act on the information.

LANalyzer for Windows includes the unique NetWare Expert feature, which is much more than an online Help system. NetWare Expert contains more than eight hours of on-demand computer-based training prepared by Novell's professional instructors. The tutorials incorporate three levels of network management training:

- **Skills training** teaches you how to troubleshoot and manage a network. Interactive screens explain networking technology in simple-to-understand terms, using colorful illustrations and animation.
- **Evaluation-based training** tests your current knowledge and then offers additional information targeted at only those areas where you need improvement. This feature also reinforces what has been taught.
- **Inquiry-based training** offers ready information relating to specific topics of interest. The system can search for any of more than 150 topics, instantly calling up a definition of the term and more information. There are approximately 80 topics relating to token-ring networks and 70 relating to Ethernet.

NetWare Expert is an infinitely patient private instructor. Information can be accessed in linear fashion or on demand, according to the needs and convenience of users.

LANalyzer for Windows also includes a book and a 30-minute videotape that demonstrate how to solve common problems with minimal effort.

**Figure 3: The unique NetWare Expert feature in LANalyzer for Windows 2.2 is a ready source of answers, training, and diagnostic intelligence.**



### Hardware Requirements

- 386SX-based PC or above
- 4MB of RAM (recommended)
- 5MB of free disk space, plus 5MB for NetWare Expert Tutorial
- 3.5-inch diskette drive
- Standard VGA monitor or better (color recommended)

- Ethernet, Fast Ethernet (100 Base-T and 100 Base-VG), or token-ring network adapter with an Open Data-Link Interface-compliant driver that supports promiscuous mode

### **Software Requirements**

- Novell DOS™ 6.0, or MS-DOS 3.3 or above
- Windows 3.1 (enhanced mode) or Windows 95
- NetWare Client 32™ for Windows 95 and NDIS driver

### **Implementation**

You can install LANalyzer for Windows 2.2 on any standard Windows PC workstation. It uses a standard network adapter and does not require any additional hardware.

### **Specifications**

#### **Basic Statistics**

All basic statistics are available for both the network as a whole and for the packets that meet the filter criteria.

|                        |                                      |
|------------------------|--------------------------------------|
| Packets:               | total, rate, average rate, peak rate |
| Broadcast packets:     | total, rate                          |
| Multicast packets:     | total, rate                          |
| Bandwidth utilization: | instantaneous, peak                  |
| Bytes:                 | total, rate                          |
| Errors:                | total, rate, peak rate               |

#### **Ethernet**

- CRC/Alignment
- Oversized
- Undersized
- Fragments
- Jabbers

#### **Token-Ring**

- Soft Errors
- Congestion
- Beaconing
- Internal Errors
- Abort Delimiter
- Frequency Errors
- A/C Errors

#### **Trend Statistics**

- Packets per second
- Percentage of network utilization
- Errors per second
- Kilobytes per second

Trends can be exported in comma-separated variable format.

### **Station Monitor Statistics**

Workstation name, workstation address  
Workstation order (token-ring)  
Total packets transmitted, received  
Total kilobytes transmitted, received  
Total errors transmitted  
Packet transmit rate, receive rate  
Byte transmit rate, receive rate

Maximum number of workstations monitored: 1,000

### **Server Monitor and Router Monitor Statistics**

Server name, router name  
Server address, router address  
Server type, router type  
Server status, router status

### **Ring Monitor Statistics**

Complete ring information for each workstation, including error types, ring order, and last entry/exit time.

### **Available Decodes**

LANalyzer for Windows 2.2 provides decodes for NetWare, AppleTalk, TCP/IP, SNA, and data-link protocols as follows:

### **NetWare Protocols**

All protocols through NetWare 4™ including Burst Mode  
Internetwork Packet Exchange™  
Sequenced Packet Exchange™  
Service Advertising Protocol  
Routing Information Protocol  
NetWare 2 Core Protocol  
NetWare 3™ Core Protocol  
NetWare 4 Core Protocol  
Packet Burst Protocol  
NetWare Lite Protocol  
NetWare Link Services Protocol™  
NetWare Lite Sideband Protocol  
Novell Directory Services  
NetBIOS  
Watchdog Protocol  
Serialization Protocol  
Broadcast Notification Protocol  
IPX™ Diagnostic Support Protocol  
NetWare/IP™

### **AppleTalk Protocols**

All Phase I and Phase II protocols

- Ethernet Link Access Protocol
- Extended Datagram Delivery Protocol
- Routing Table Maintenance Protocol
- AppleTalk Echo Protocol
- AppleTalk Transaction Protocol
- Name Binding Protocol
- AppleTalk Data Stream Protocol
- Zone Information Protocol
- AppleTalk Session Protocol
- Printer Access Protocol
- AppleTalk Filing Protocol
- AppleTalk Address Resolution Protocol
- Short Datagram Delivery Protocol

### **TCP/IP Protocols**

- All protocols contained in the NetWare 3 or NetWare 4 NOS
- Address Resolution Protocol
- Internet Control Message Protocol
- Internet Protocol
- Open Shortest Path First Routing Protocol
- Reverse Address Resolution Protocol
- Routing Information Protocol
- Simple Network Management Protocol
- Transmission Control Protocol
- User Datagram Protocol
- NetWare/IP™
- Telnet
- File Transfer Protocol
- Trivial File Transfer Protocol
- Network File System
- Domain Name System

### **Data-Link Protocols**

- IEEE 802.2 Logical Link Control (802.2)
- IEEE 802.3 Data-Link Layer (802.3)
- Ethernet Data-Link Layer (ether)
- IEEE 802.5 Data-Link Layer (802.5)
- IEEE 802.5 Logical Link Control (802.5)
- Token-Ring media access control

### **Automatic Name Gathering**

- Macintosh computers on segment/ring
- NetWare servers or routers on segment/ring
- NetWare workstations logged in to servers on segment/ring
- NetWare Lite nodes on segment/ring

### **NetWare Expert Alerts**

### **Network Alarms**

- Excessive packet rate

Excessive broadcast rate  
Excessive utilization  
Excessive error rate

#### **Ethernet Alarms**

Excessive CRC rate  
Excessive fragment rate  
Undersized packets  
Oversized packets  
Jabber packets

#### **Token-Ring Alarms**

Excessive soft error rate  
Receiver congestion  
Beaconing  
Internal error  
Abort delimiter  
A/C  
Frequency

#### **Server Alarms**

Dead server  
Overloaded server

#### **Router Alarm**

Dead router

#### **Ordering Information**

You can order LANalyzer for Windows 2.2 from any Novell Authorized, Gold, or Platinum Partner. For more information, contact your local Novell® office or call the Novell Customer Response Center at 1-801-228-4CRC (1-801-228-4272). Or, in the United States and Canada, call toll free 1-888-321-4CRC (1-888-321-4272). You may also visit Novell's World Wide Web site at <http://www.novell.com> or use Novell's Product Information FaxBack system at 1-801-861-3030. Or, in the United States and Canada, call 1-800-209-3500.

The kit includes the following items:

- LANalyzer for Windows software on 3.5-inch diskettes (supports both Ethernet and token-ring)
- LANalyzer for Windows documentation: *User's Guide*
- Tutorial videotape: *Troubleshooting with LANalyzer for Windows*
- Network analysis book: *Novell's Guide to NetWare LAN Analysis*

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