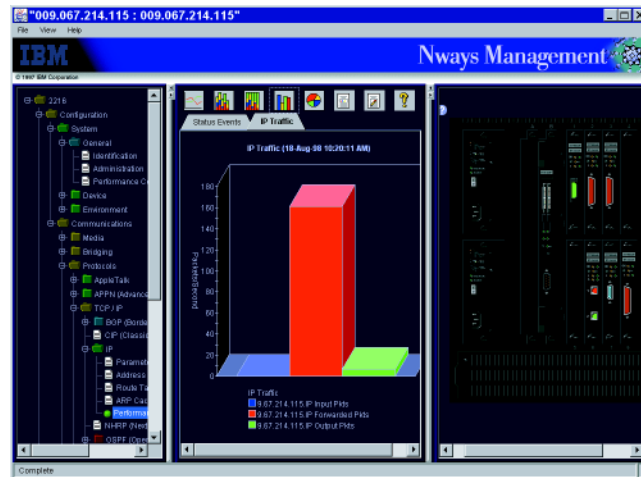




IBM Nways Manager for AIX

- **Reduces network ownership cost and improves network availability**
- **Provides comprehensive, easy-to-use, graphical network management**
- **Provides Web-based device and performance management using Java technology**
- **Year 2000 ready (AIX® only)**
- **Provides remote monitoring of your network's performance, through RMON and RMON2 support**
- **Provides comprehensive management for ATM networks, including support for non-IBM devices that use ATM Forum-compliant MIBs**
- **Manages switched virtual networks, including ATM Forum-compliant emulated LANs (ELANs)**
- **Enables you to view your network traffic from a protocol and application perspective**
- **Runs on TME 10 NetView® and selected functions on HP OpenView**



IBM Nways® Manager for AIX is a network management product that brings reliable, state-of-the-art management to your networking infrastructure. Nways Manager includes different applications to satisfy your network management demands, with management at the LAN, segment, device or port level for Token-Ring, Ethernet, FDDI and ATM networks and support for virtual LANs (VLANs). And Nways Manager for AIX supports Web-based device and performance management using Java™ technology, allowing you to access any SNMP device in your network through the corporate intranet or Internet.

Product Overview

Nways Manager applications provide an easy-to-use, cost-effective, comprehensive network management solution for customers with IBM networking devices in medium-to-large Ethernet, FDDI, Token-Ring and ATM networks, including VLANs. It also supports APPN networks and DLSw networks. Nways Manager for AIX consists of the following applications.

Campus Manager LAN provides comprehensive graphical device and network management for shared-media LANs and switched virtual networks, including Java Web-based management support.

Campus Manager ATM provides easy-to-use, efficient management for ATM networks, including virtual networks formed from ELANs.

Campus Manager Remote Monitor (ReMon), in conjunction with RMON- and RMON2-compliant agents, provides money-saving remote performance analysis of Token-Ring and Ethernet LANs, and gives the ability to view communication patterns across the network at network layers, allowing you to tune your network and identify problems between networks.

Traffic Monitor for AIX complements ReMon by providing detailed traffic analysis and by enabling you to graphically display and manage end-to-end connection traffic flow in your network.

Nways Manager for AIX is the management application for you to use to configure and operate heterogeneous, campus-wide networks.

Nways Manager for AIX Campus Manager LAN and Campus Manager ATM components require TME 10 NetView for AIX, and all are available on a single CD-ROM.

Reduces network ownership cost and improves network availability

The Nways Manager family provides integrated software applications that lower network operating costs. All the applications of Nways Manager have a common look and feel, so your network operator training is reduced and your personnel are more productive. These network management applications enable you to find and resolve problems quickly, reducing network outages. With Nways Manager your operators configure and manage the network and network devices remotely from a single network management workstation, reducing the number of operators and the amount of travel. Performance information available from Nways Manager facilitates performance refinements and network tuning, helping you to optimize your network.

Remote monitoring means that cost-savings and staff productivity go up as the number of RMON-managed LAN segments increases. Users are more productive as network operation and administration are reduced because problems are identified before they occur.

Provides easy-to-use, graphical network management

Nways Manager lets you take control of your networks (Ethernet, FDDI and Token-Ring LANs, DLSw networks, APPN networks, ATM networks, switched networks and VLANs). The graphical user interface gives you topology views of your network and realistic views of your network resources, with color-coded status of resources and overall status of each network. The easily recognizable color-coded icons on the network views make navigating the network a snap.

The auto-discovery capability assists with the initial topology and identifies configuration changes. When a network changes, the discovery capability identifies the changes and updates your network map. You can

allow discovery of particular SNMP agents, can filter discovery based on criteria such as IP address and can set the discovery interval to optimize polling.

The Campus Manager LAN component supports APPN and DLSw topologies. With the APPN topology feature you can view your APPN networks end to end. You can discover participating APPN resources, view them and view their status as color-coded icons. APPN protocol performance and error events (data and graph) are also provided. The DLSw technology provides the ability to transport SNA, NetBIOS and APPN traffic across an IP network. The DLSw topology displays connectivity, resources and color-coded status in your DLSw network. The topology is refreshed as new nodes are discovered.

In Campus Manager LAN and Campus Manager ATM you can set up VLANs remotely using a drag-and-drop interface and manage the VLAN applications remotely.

In Nways Manager you can set performance-thresholding capabilities, collect real-time and historical statistics and display the information your network operator needs to manage your networks and networking devices proactively.

Extensive support for problem management includes trap management, polling intervals, threshold notification and the graphical network-monitoring already mentioned. By defining an element as a critical resource, you can have the Campus Manager LAN application perform a specific fault-management task, based on an alert from the resource. This function is especially helpful when monitoring large networks because you can concentrate your fault management on critical resources.

You can also download code updates to specific devices.

To provide security you identify the level of access controls that you need. Nways Manager then uses the security features inherent in TME 10 NetView and SNMP to control access to networking devices. Management applications for specific devices such as the 8235 Dial-In Access to LANs (DIALs) Server supply additional security features, such as limiting access by user or IP address.

Provides Web-based management using Java technology

Java-based management support in Nways Manager for AIX Campus Manager LAN enables you to manage your devices from your intranet, the Internet and from your local AIX workstation. When Nways Manager is installed and configured for Web-based management, you can use your JavaSoft JDK-1.1-enabled Web browser to access Nways Manager Campus Manager LAN functions from any platform anywhere in your enterprise.

This management support includes real-time status of the device (complete with a graphical view of the supported IBM devices), the ability to configure the device through a user-friendly hierarchical navigation tree and the ability to do performance management of these devices.

Provides comprehensive device management

Nways Manager offers management support for a wide range of IBM LAN and ATM networking hardware, and the same support for non-IBM devices that use ATM Forum-compliant MIBs. You can configure, reset, monitor, set performance thresholding capabilities for, collect real-time and historical statistics for, download microcode to and Telnet to devices in your network. The graphical user interface gives you realistic views of your network devices, with color-coded status of components and overall status of the device. Nways

Manager provides a complete set of messages, traps and event notifications for devices in the network.

You get the following device management support with Nways Manager for AIX Campus Manager LAN component:

- IBM 2210 Nways Multiprotocol Router
 - IBM 2212 Access Integrator
 - IBM 2216 Nways Multiaccess Connector
 - 6611 Network Processor
 - IBM 8210 Nways Multiprotocol Switched Services (MSS) Server
 - IBM 8224 Ethernet Stackable Hub
 - IBM 8225 Fast Ethernet Stackable Hub
 - IBM 8229 Token-Ring Bridge
 - IBM 8230 Token-Ring Controlled Access Unit
 - IBM 8235 Dial-In Access to LANs (DIALs) Server, including IBM 8235 Dial-In Access to LANs (DIALs) Switch Model I40
 - IBM 8237 Stackable Ethernet Hub 10BASE-T
 - IBM 8238 Token-Ring Stackable Hub
 - IBM 8239 Token-Ring Stackable Hub
 - IBM 8244 FDDI Workgroup Concentrator
 - IBM 8245 10/100 Ethernet Stackable Hub
 - IBM 8250 Multiprotocol Intelligent Hub
 - IBM 8260 Nways Multiprotocol Switching Hub
 - IBM 8260 Switching Module Series (blades/modules in the 8260)
 - IBM 8265 Nways ATM Switch
 - IBM 8270 Nways LAN Switch Models 600 and 800
 - IBM 8271 Nways Ethernet LAN Switch Models 108, 216, 212, 412, 512, 612, 624, 712, E12, E24, F12, and F24
 - IBM 8272 Nways Token-Ring LAN Switch Models 108, 216, 208, and 408
 - IBM 8273 Nways Ethernet RouteSwitch
 - IBM 8274 Nways LAN RouteSwitch (requires IBM Nways RouteSwitch Network Manager for UNIX, sold separately)
 - IBM 8275 Nways Ethernet LAN Switch
 - IBM 8276 Nways Ethernet RoutePort (requires IBM Nways RouteSwitch Network Manager for UNIX, sold separately)
 - IBM 8277 Nways Ethernet RouteSwitch (requires IBM Nways RouteSwitch Network Manager for UNIX, sold separately)
 - IBM 8281 Nways ATM LAN Bridge
 - IBM 8282 Nways ATM Workgroup Concentrator
 - IBM 8285 Nways ATM Workgroup Switch
 - IBM Network Utility
 - Any SNMP device in your network (generic Java-based management)
 - IBM Ethernet and Token-Ring adapters
 - MSS Client Universal Feature Card (UFC) in:
 - IBM 8270 Nways LAN Switch
 - IBM 8272 LAN Switch modules (3 slot models)
 - MSS Domain Client UFC in:
 - IBM 8270 Nways LAN Switch
 - IBM 8272 Nways Token-Ring LAN Switch model 216
 - IBM 8271 and 8272 LAN Switch Modules (2 or 3 slot modules in the 8260)
 - And more! For more details see www.networking.ibm.com/netmgt
- Remote Monitor and Traffic Monitor provide support for these RMON-enabled products:
- IBM 8225 Fast Ethernet Stackable Hub
 - IBM 8230 Token-Ring Controlled Access Unit

- IBM 8237 Stackable Ethernet Hub 10BASE-T
- IBM 8238 Token-Ring Stackable Hub
- IBM 8250 Advanced Token-Ring Management Module
- IBM 8260 Token-Ring Media Access Daughter Card
- IBM 8260 Ethernet Media Access Daughter Card
- IBM 8260 Switching Module series
- IBM 8270 Nways LAN Switch
- IBM 8271 Nways Ethernet LAN Switch
- IBM 8272 Nways Token-Ring LAN Switch
- IBM 8273 Nways Ethernet RouteSwitch
- IBM 8274 Nways LAN RouteSwitch
- Other RMON-compliant probes
 - Remote Monitor and Traffic Monitor provide support for these ECAM-enabled products:
- IBM 8250 Ethernet RMON Probe
- IBM 8260 High-End Token-Ring Media Access Daughter Card
- IBM 8260 High-End Ethernet Media Access Daughter Card
- IBM Token-Ring Universal Feature Card (UFC) that goes in in:
 - IBM 8270 Nways LAN Switch
 - IBM 8272 Nways Token-Ring LAN Switch
 - IBM 8272 LAN Switch modules for the IBM 8260 Nways Multiprotocol Switching Hub
- Other RMON2 probes that implement the Enterprise Communications Analysis Module (ECAM)

Provides performance management using distributed polling engines for large networks

Performance management provides the ability to select and monitor specific MIB objects or collections of MIB objects. Creating collections of MIB objects allows you to create complex expressions that provide a better representation of performance information, so tasks such as identifying percent utilization are performed more easily.

You can specify which objects or collections of objects to monitor, set thresholds for these objects, specify the action to occur when a threshold is exceeded, display the data graphically (for example pie charts, line graphs, bar charts) and store the data for report generation.

Using this performance information allows you to base-line and tune your network, thus allowing you to proactively manage your network (be notified of problem situations before they occur).

To provide support for larger networks Nways Manager's performance functions use Java-based distributed polling engines. The polling engines enable you to offload the polling of information from the manager workstation, freeing the processor on the manager, and to place the polling close to the devices being polled, freeing bandwidth across WAN links. These polling engines are intelligent agents that you can configure to notify Nways Manager when exceptions (threshold exceeded) occur. The polling engines can be placed in any Java-enabled (Java virtual machine) workstation in the network.

Provides remote monitoring of your network's performance, through RMON and RMON2 support

RMON and RMON2 are standards from the IETF that advance the state-of-the-art in open network performance management and fault diagnosis.

RMON (RFC 1757 for Ethernet and RFC 1513 extension for Token Ring) defines a standard set of MAC-layer statistics and the ability to filter and capture data packets for analysis. RMON2 provides additional statistical information at the network and application layers of the protocol stack. IBM's RMON2 support is based on the ECAM that will be migrated to RMON2.

ECAM lets you go beyond the current RMON standards to full seven-layer

data collection, including segment, host and conversations statistics, for the major protocols and application types. When you view the conversations across the network, the real communications patterns and the use of expensive links become apparent. With this information you can tune the network and adjust the location of key resources such as file servers. ECAM also allows network operators to view the internetwork traffic for troubleshooting.

The Nways Manager ReMon application provides not only the RMON functions but also takes advantage of the ECAM capabilities (RMON2) to provide address translation and protocol distribution within your network. Address translation translates MAC addresses to network-layer addresses. Protocol distribution allows you to view the protocols and applications being used on the network.

The Nways Manager ReMon application also provides the RMON2 ability to do protocol-matrix analysis of Layer 3 or higher protocols using the ECAM capability in the RMON2 probe. The protocol matrix provides information about who is talking to whom in the network and what protocols they are using. Nways Manager for AIX ReMon component application also includes the Traffic Transmission Monitor Module (TTMM), which provides a fast, effective means of transmitting captured packets to specific segments or rings for stress-testing or network simulation. The captured data can also be loaded from other LAN analysis tools, such as IBM DatagLANce Network Analyzer.

Enables you to view your network traffic from a protocol and application perspective

Nways Manager for AIX traffic monitor component gathers the data you need to manage traffic flows in your network, using the data from RMON and ECAM probes. End-to-end matrix information is organized by connection. For any specific host, server, or conversation, the breakdown of protocols and applications

is clearly detailed. Traffic Monitor sees all the hosts transmitting onto monitored segments—no matter which protocols they use—providing a complete top-down view.

Provides comprehensive management for ATM networks

Nways Manager Campus Manager ATM component provides easy-to-use management for ATM networks, including virtual networks formed from ATM Forum-compliant ELANs.

Campus manager ATM component will discover ATM devices that use ATM Forum compliant MIBs, including:

- IBM 8210 Nways Multiprotocol Switched Services (MSS) Server
- IBM 8260 Nways Multiprotocol Switching Hub ATM components
- IBM 8265 Nways ATM Switch
- IBM 8270 Nways LAN Switch with ATM Universal Feature Card (UFC)
- IBM 8271 EtherStreamer/Nways Ethernet LAN Switch with ATM UFC
- IBM 8272 LANStreamer/Nways
- Token-Ring LAN Switch with ATM UFC
- IBM 8281 Nways ATM LAN Bridge
- IBM 8282 Nways ATM Workgroup Concentrator
- IBM 8285 Nways ATM Workgroup Switch
- IBM 2210 Nways Multiprotocol Router
- IBM 2216 Nways Multiaccess Connector
- Other ATM devices that implement the ATM or LAN Emulation (LANE) standard MIBs

One of the premiere features of the Nways Manager for AIX Campus

Manager ATM component is its ability to fine-tune the auto-discovery capability for ATM. You can allow discovery of particular SNMP agents, such as non-IBM ATM devices, can filter discovery based on criteria such as IP address or device type and can set the discovery interval to optimize polling.

When viewing the topology map you can display an entire ATM network, or you can zoom in on the subnetwork or device of interest. You can choose monitored resources by selecting resource icons using drag-and-drop to place them on the monitor panel.

You can select key performance counters and track their variations over time. This data can be stored and displayed in various graphical forms across a selected time interval.

With the connection-tracking function you get true ATM end-to-end management capability. This function graphically displays any virtual connections between two endpoints on the ATM network. Connection-tracking shows all the actual hardware resources that support the entire path of the connection, such as adapters, concentrators, switches and bridges. This function launches other management functions on these devices, such as performance-monitoring.

The ATM interface logical link support can now manage all the logical links available on an interface. This allows the configuration of any logical links, including the ones defined on WAN interfaces.

Manages switched virtual networks, including ATM Forum-compliant emulated LANs

You can set up a VLAN remotely, using the drag-and-drop feature of the graphical interface to assign applications to the VLAN. For networks that contain 8250s, 8260s, 8271s or 8272s, you can assign ports on those devices to VLANs. In an ATM network you can assign ATM devices to ELANs.

Comprehensive support for LANE includes automatic discovery of LAN Emulation Servers (LESSs), LAN Emulation Clients (LECs) and proxy clients (in LAN switches). Discovered topologies are dynamically updated to show color-coded device status and devices assigned to VLANs. Templates help automate VLAN configuration by grouping a set of individual actions and executing them with a single command.

Offers seamless integration

Nways Manager for AIX Campus Manager LAN, ATM and ReMon management components work together seamlessly, helping you configure and manage your network, and detect and resolve potential network problems before they occur.

Year 2000 ready

The Nways Manager for AIX is Year 2000 Ready when used in accordance with its associated documentation and is capable of correctly processing, providing and receiving data within and between the 20th and the 21st centuries, provided that all other hardware, software and/or firmware used with the product properly exchange data with it.

Benefits

- Uses the distributed polling capabilities of Distributed Intelligent Agent (DIA), reducing the management load by distributing the discovery and polling functions across a set of management stations
- Provides Web-based device management enabling you to manage your devices from the intranet, the Internet and from your local NT workstation
- Discovers, maps and monitors a wide variety of campus devices and automatically updates the topology map when a change is detected, keeping you up-to-date on the status of your network at all times
- Includes trap management, polling intervals and threshold notifications that provide extended support for problem management
- Allows you to define levels of access to network devices, enforcing tight security across your network
- Displays all virtual connections between two endpoints to provide end-to-end ATM management
- Supports LANE, allowing automatic discovery of and updates to LANE servers, clients and proxy clients in LAN switches
- Provides displays of network, segment, device and port configurations that allow network managers to set and change configuration parameters
- Delivers real-time statistical information on remote networks, providing up-to-date status of your entire network
- Provides the ability to perform protocol-matrix analysis of Layer 3 or higher protocols to give you information about who is talking to whom in the network and what protocols are being used
- Manages any RMON-compliant agents or probes and supports all Ethernet and Token-Ring groups to provide comprehensive remote LAN performance analysis
- Provides a complete top-down view of traffic flow, zooming down to find detailed data, graphs and charts about links, servers and other devices to streamline troubleshooting
- Correlates data from multiple probes, eliminating duplication to create a single, accurate view
- Offers comprehensive graphing and reporting of real-time and historical data to facilitate problem solving and determination
- Provides Java-based performance management, enabling you to analyze historical performance data for network planning and fault prevention
- Allows you to view performance graphs in any one of several formats from your Web browser

Nways Manager Specifications

IBM Nways Manager for AIX

Program	Program Number	FC	PN
Nways Manager for AIX	5801-AAR	2269	4300293
Nways Manager for AIX-Campus Manager LAN component key	5801-AAR	2270	4300291
Nways Manager for AIX-Campus Manager ATM component key	5801-AAR	2271	4300281
Nways Manager for AIX-Campus Manager ReMon component key	5801-AAR	2272	4300287
Nways Manager for AIX-Campus Manager Traffic Manager component key	5801-AAR	2273	4300286

Supplementary Information

The following sales tools are available for Nways Manager product:

- Specification sheet:
IBM Nways Manager for AIX, G224-4531-01
- Information on Nways Manager products is available at:
www.networking.ibm.com/netmgt