Cisco Network Analysis Module 2200 Series Appliances with Software 5.1

It all comes down to knowing. Knowing who is using the network, knowing what applications are running on the network, knowing how the network is performing, knowing how traffic over the network is being used and how it is performing are the foundation for managing and improving the delivery of your business-critical applications. Knowing is the foundation for establishing and verifying quality of service (QoS) policies, undertaking WAN optimization projects, and rolling out voice over IP (VoIP). It is also the foundation for recognizing when a configuration change has unintentionally degraded application performance or for providing proof points that it is the application and not the network that is causing one of your business planning systems to perform poorly so that the appropriate actions can then be taken.

Product Overview

The Cisco Prime Network Analysis Module on NAM 2200 Series Appliances are your source for unparalleled network and application visibility, analyzing traffic flows between users and their critical applications to help you ensure that the network performs to the rigorous demands of the business. And, when there's a problem, they can help you find it fast, reducing the time it takes to resolve it from days to just minutes.

Figure 1. Cisco NAM Traffic Summary Dashboard

As a member of the Cisco NAM family of products, the Cisco NAM 2200 Series Appliances deliver granular traffic analysis, rich application performance metrics, comprehensive voice analytics, and deep insightful packet captures to help you manage and improve the operational effectiveness of Cisco Borderless Networks and the Cisco data center. An embedded graphical user interface (GUI) with dashboards (Figure 1) gives you an immediate view of network performance and workflows that help you simplify problem detection and resolution. The Performance Database preserves historical data, allowing you to understand what happened in the past when an event that affected network performance occurred. The NAM can be remotely accessed from anywhere so that you can know how the network is performing at any time.

Figure 2. NAM 2220 and NAM 2204 Appliances

Cisco offers two appliances models (Figure 2), the Cisco NAM 2220 Appliance and the Cisco NAM 2204 Appliance. The Cisco NAM 2220 Appliance includes two 10 Gigabit Ethernet monitoring interfaces for application monitoring in high-speed, high-density environments. The Cisco NAM 2204 includes four 1 Gigabit Ethernet monitoring interfaces to meet diverse performance analysis needs in scalable multi-gigabit switching and routing environments.

The Cisco NAM Appliances can be deployed anywhere. They are the glue binding your Cisco Borderless Network deployments, providing application visibility between and within disparate places in the network. Deployed within your Cisco data center, they help drive application delivery consistency and efficiency in both physical and virtual environments.

Cisco NAM 2200 Series Appliances Features and Benefits

The Cisco NAM offers an extensive set of features (Table 1) that provide a multilayer view of network performance to help you successfully navigate the labyrinth of application delivery challenges in today's hyperconnected world. They provide the foundation of knowing, giving you the edge in managing and improving network and application performance. Detailed description of software feature and benefits can be obtained from Cisco Prime NAM Software Datasheet.

Table 1. Cisco NAM 2200 Series Appliances Features and Benefits

Feature	Benefit
Deployment flexibility	As a self-contained device, you can deploy the Cisco NAM Appliances anywhere within the network to monitor your critical application traffic. They also can be redeployed to support new requirements, thus offering lasting investment protection.
Application performance intelligence	Characterize the end-user experience for TCP-based applications and isolate application response time problems to the network, server, or the application minimizing any triage process.
Comprehensive voice quality monitoring and real-time troubleshooting	Gather real-time reports on Mean Opinion Score (MOS) and other key performance indicators (KPIs) such as jitter and packet loss to understand and improve how the end user experiences the delivery of voice services. MOS is computed based on ITU-T Recommendations G.107 offering accurate characterization of voice quality. Combine monitoring with real-time troubleshooting using pre-packaged dashboards to improve the end-user service levels.
WAN optimized networks visibility	Obtain proof points demonstrating how WAAS has improved application delivery (for example, decreased application transaction times from client perspective or improved LAN data throughput).
Detailed traffic analytics	View short- and long-term performance data on hosts, conversations, and applications that use critical network resources.
Historical analysis	Look back to the past with the embedded Performance Database to understand what happened when an event that affects network performance occurred to accelerate root-cause analysis and prevent any reoccurrence. Use historical analysis for advancing optimization and capacity decisions.
Deep, insightful packet captures	Solve complex performance issues with trigger-based captures, filters, decodes and Packet Capture Error Scan features. Packet captures can be triggered based on performance thresholds allowing you to focus on specific performance issues. The captures can be initiated and analyzed remotely using the web-based user interface eliminating the need to travel to the remote site.
Site-based Monitoring	View network and application performance by logical groups or sites that you can create to mirror your network topology. For example, you can create sites by geographic locations, departments, or even managed customer networks. The feature facilitates tracking site-specific service-level objectives, resolving performance issues, or enforcing optimization policies.
Pre- and post-deployment metrics	Glean valuable before and after traffic analytics to help plan for and verify changes in network resources, such as introducing new applications, establishing QoS policies, consolidating servers, and deploying VoIP.
Open interface	Ease NAM configuration and export of computed NAM data using standards-based APIs (XML/REST for configuration, NetFlow Version 9 for data export).
Anytime, anywhere access	Access the web interface from any desktop, eliminating the need to send personnel to remote sites or haul large amounts of data over WAN links to the central site.

Product Specifications

Table 2 lists the product specifications.

Table 2. Product Specifications

NAM2204 Feature	Description
Chassis	1RU with four-post rack mounting
Processor	Intel E6400 Core 2 Duo
Memory	8 GB SDRAM
Hard disk drive	Two 250 GB SATA server grade
Monitoring ports	Four 1 Gb 10/100/1000Base-T RJ-45 or four 1 Gb Small Form-Factor Pluggable (SFP) including 1000BASE-T, SX LC connector, and LX LC connector
Management port	10/100/1000 RJ-45
Physical dimensions	Dimensions (H x W x D): 1.7 x 17.0 x 20.0 inches (4.3 x 43.2 x 50.8 centimeters); depth is without bezel or mounting hardware
Power consumption	350W (maximum output, power supply rating)
Heat dissipation	1660 BTU/hour
Weight	35.0 lb (15.9 kg)
Operating environment	• Operating temperature: 50 to 95 degrees F (10 to 35 degrees C) • Non-operating and storage temperature: -40 to 158 degrees F (-40 to 70 degrees C) • Non-operating relative humidity: 95% non-condensing at +35 degrees C • Operating and non-operating altitude: 2000m at 40 degrees
NAM2220 Feature	**Description**
Chassis	2RU with four-post rack mounting, optional hot-swappable, redundant power supply
Processor	Two Intel Xeon E5440 Quad Core
Memory	16 GB SDRAM
Hard disk drive	Six 146 GB SAS, hot-swappable, RAID 1 on two operating system drives; RAID 0 on four capture data storage drives
Monitoring ports	Two 10 Gb XFP including 10 Gb 850 nm SR and 10 Gb 1310 nm LR
Management port	10/100/1000 RJ-45
Physical dimensions	Dimensions (H x W x D): 3.54 x 17.0 x 20.0 inches (8.8 x 43.2 x 50.8 centimeters); depth is without bezel or mounting hardware
Power consumption	600W (maximum output, power supply rating)
Heat dissipation	1200 BTU/hour
Weight	44.7 lb (20.3 kg)
Operating environment	• Operating temperature: 50 to 95 degrees F (10 to 35 degrees C) • Non-operating and storage temperature: -40 to 158 degrees F (-40 to 70 degrees C) • Non-operating relative humidity: 50-90% non-condensing at +35 degrees C • Operating and non-operating altitude: 3000m at 40 degrees
All NAM Appliances	**Description**
Tested platforms	Tested with Cisco Catalyst 4500 Series, Catalyst 6500 Series, Cisco 7600 Series, and Cisco Nexus 7000 Series. Please read the NAM 5.1 Release Notes for any limitations that may apply.
Supported topologies and data sources	• LAN: Switched Port Analyzer (SPAN), Remote SPAN (RSPAN), Encapsulated RSPAN (ERSPAN), VLAN access control list (VACL)-based captures, NetFlow (versions 1, 5, 6, 7, 8, and 9), and WAAS Flow Agent • WAN: NetFlow (versions 1, 5, 6, 7, 8, and 9) from local and remote devices, VACL-based captures for FlexWAN/Optical Service Module (OSM) and Shared Port Adapter (SPA) interfaces, and WAAS Flow Agent
Supported interfaces	• HTTP/HTTPS with embedded web-based Cisco NAM • Simple Network Management Protocol Version 1 (SNMPv1), v2c and v3, with standards-based applications
Cisco Prime Network Analysis Module Software	• Web-based: Requires Microsoft Internet Explorer 8.0+ or Firefox 3.6+; supports both English and Japanese versions • Supports Secure Sockets Layer (SSL) security with up to 256-bit encryption • Role-based user authorization and authentication locally or using TACACS+

MIBs	The Cisco NAMs are standards compliant and support the following major MIB groups: • MIB-II (RFC 1213) - All groups except Exterior Gateway Protocol (EGP) and transmission • RMON (RFC 2819) - Alarm and Event groups only • RMON2 (RFC 2021) - trapDestTable only • Cisco Discovery Protocol • EntityMIB (RFC 2737)
Protocols	Cisco NAM identifies hundreds of unique protocols and automatically detects unknown protocols. The NAM also allows customization of the protocol engine by defining protocols on a single port or on a range of ports. Protocols supported include (this list is not all-inclusive): • TCP and User Datagram Protocol (UDP) over IP including IPv6 • HTTP and HTTPS • VoIP including Skinny Client Control Protocol (SCCP), Real-Time Protocol/Real-Time Control Protocol (RTP/RTCP), Media Gateway Control Protocol (MGCP), and Session Initiation Protocol (SIP) • SigTran protocols • Mobile IP protocols including General Packet Radio Service (GPRS) Tunneling Protocol (GTP) • Storage area network protocols • Database protocols • Peer-to-peer protocols • Switch and router protocols • Cisco proprietary protocols • Unknown protocols by TCP/UDP ports, Remote Procedure Call (RPC) program numbers and so on
Approval and compliance	Regulatory: • CE Marking (89/366/EEC and 2006/95/EC) Safety: • UL 60950-1 • CAN/CSA-C22.2 No. 60950-1 • EN60950-1 • IEC 60950-1 • AS/NZS 60950-1 EMC: • 47CFR part 15 Class A (FCC regulations) • AS/NZS CISPR22 Class A • CNS13438 Class A • EN55022 Class A • ICES003 Class A • VCCI Class A • EN50082-1 • EN61000-6-1 • EN55024 • EN61000-3-2 • EN61000-3-3 • CISPR2

Warranty Information

Find warranty information on Cisco.com at the Product Warranties page.

Ordering Information

To place an order, visit the Cisco Ordering Home Page. See Table 3 for part numbers. To download software, visit the Cisco Software Center.

For new Cisco NAM customers, please select NAM Software 5.1, part number NAM-APPL-SW-5.1-K9, as the software option when ordering your Cisco NAM device, and it'll be delivered to you preloaded on your NAM hardware. For current Cisco NAM customers, NAM Software 5.1 can be downloaded from the Cisco.com Software Center at no charge using your Cisco SMARTnet® contract access privileges.

Table 3. Ordering Information

Cisco NAM 2204-RJ45 Appliance	Part Number
Cisco NAM 2204 Appliance, four 1 Gb Ethernet, RJ-45	NAM2204-RJ45
Cisco NAM Software 5.1	NAM-APPL-SW-5.1-K9
Cisco NAM 2204-SFP Appliance	**Part Number**
Cisco NAM 2204 Appliance, four 1 Gb Ethernet, SFP	NAM2204-SFP
1000BASE-T SFP (Spare)	GLC-T(=)
GE SFP, LC Connector SX Transceiver (Spare)	GLC-SX-MM(=)
GE SFP, LC Connector LX/LH Transceiver (Spare)	GLC-LH-SM(=)
Cisco NAM Software 5.1	NAM-APPL-SW-5.1
Cisco NAM 2220 Appliance	**Part Number**
Cisco NAM 2220 Appliance, two 10 Gb Ethernet	NAM2220
Hard Disk Drives, six 146 GB	NAM2220-HDD-6X146G
RAM DIMM, 16 GB	NAM2220-DIMM-16GB
Second AC Power Supply	NAM2220-AC-PS(=)
XFP, 10 GE, Short Range (Spare)	XFP-10GBASE-SR(=)
XFP, 10 GE, Long Range (Spare)	XFP-10GBASE-LR(=)
Cisco NAM Software 5.1	NAM-APPL-SW-5.1-K9

Cisco Services

Services from Cisco and Our Partners

Realize the full business value of your technology investments with smart, personalized services from Cisco and our partners. Backed by deep networking expertise and a broad ecosystem of partners, Cisco Services enable you to successfully plan, build, and run your network as a powerful business platform. Whether you are looking to quickly seize new opportunities to meet rising customer expectations, improve operational efficiency to lower costs, mitigate risk, or accelerate growth, we have a service that can help you. For information about Cisco Services, go to http://www.cisco.com/go/services. Table 4 shows the technical support service recommended for NAM appliances.

Table 4. Cisco Technical Services

Technical Services
Cisco SMARTnet Service • Around-the-clock, global access to the Cisco Technical Assistance Center (TAC) • Unrestricted access to the extensive Cisco.com resources, communities, and tools • Next-business-day, 8x5x4, 24x7x4, and 24x7x2 advance hardware replacement[2] and onsite parts replacement and installation available • Ongoing operating system software updates within the licensed feature set[1] • Proactive diagnostics and real-time alerts on Smart Call Home enabled devices

Footnotes:
[1]. Cisco operating system updates include the following: maintenance releases, minor updates, and major updates within the licensed feature set.
[2]. Advance hardware replacement is available in various service-level combinations. For example, 8x5xNBD indicates that shipment will be initiated during the standard 8-hour business day, 5 days a week (the generally accepted business days within the relevant region), with next business day (NBD) delivery. Where NBD is not available, same day ship is provided. Restrictions apply; please review the appropriate service descriptions for details.

For More Information

For more information about Cisco NAM 2200 Series Appliances, visit http://www.cisco.com/go/nam, contact your local account representative, or email the Cisco NAM product marketing group at nam-info@cisco.com.

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