Cisco Network Analysis Module Software 4.0

Overview Presentation

Improve Operational Efficiency with Increased Network and Application Visibility
Virtualization

• Enable effective campus network resource segmentation
• Manage Cisco® Catalyst® 6500 Virtual Switching System (VSS) deployments

Collaboration

• Ensure reliable delivery of converged network services- data, voice, and video
• Enhance end-user quality of experience

Operational Efficiency

• Accelerate problem isolation and root-cause analysis
• Minimize the effect of service disruption to the end user
Monitor application performance

Effectively use Cisco® Wide Area Application Services (WAAS) optimization to improve application performance

Validate and fine-tune QoS

Perform per-application, per-user traffic analysis

Troubleshoot performance issues in real time

Gather switch and router health statistics

Access web-based console from anywhere, anytime
Customer Benefits

Network and Application Visibility
Ensure consistent application and service delivery.

Improve Operational Efficiency
Accelerate problem resolution.

Maximize IT Investments
Optimize network resources.

Anticipate Infrastructure Changes
Understand usage and trends.

Right-Size the Network
Meet changing global business needs.
Cisco Catalyst 6500 Virtual Switching System Deployments
Cisco NAM Enhances Operational Visibility

NAM enables:

- Visibility into traffic running on all switch ports of both virtual switches from either NAM
- Simplification of application performance management by using SPAN to analyze traffic on both switches
- Monitoring of the health of both switches from either NAM

NAM benefits include:

- Understand what is happening on the network before and after deploying Cisco® Catalyst® VSS.
- Ensure the consistent and efficient delivery of business-critical applications to end users.
- Improve the operational effectiveness of switch, server, and application resources.
Campus Network Virtualization
Cisco NAM Enables Secure Network Resource Segmentation

<table>
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<tr>
<th>Source</th>
<th>Destination</th>
<th>Application</th>
<th>Port</th>
<th>Packets</th>
<th>Bytes</th>
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Cisco NAM
Maps Users to Applications to Server Port

Layer 2 Access Infrastructure
Layer 3 Core
Path Isolation
VLAN, GRE, and MPLS
Access Control
802.x Identity, NAC, and MAC Auth Bypass
Policy Enforcement
Firewall, Context (Cisco® Security Manager and Cisco ACE)

Helps Establish Security Policies to Segment Pools of Resources
Monitor end-user experience for business-critical services such as voice and TCP-based business applications.

Traffic analysis: Discover what applications are running on your network and view real-time statistics.

Advanced troubleshooting: Accelerate problem resolution with intelligent packet captures, decodes, and filters.

Northbound interface: Export performance data to build additional value.
Integrated Monitoring and Management
Flexibility to Use Multiple Data Sources to Best Advantage for Comprehensive Network Visibility

- Analyze traffic on the host Cisco® Catalyst® switch using Switched Port Analyzer (SPAN).
- Monitor remote switches using Remote SPAN (RSPAN) and Encapsulated SPAN (ERSPAN).
- Analyze WAN ports by using VACLs or forwarding NetFlow data.
- Monitor port statistics for host Cisco Catalyst switch interfaces using mini-RMON.
- Use VACLs to advantage to prefilter traffic directed to Cisco NAM using SPAN for analysis.
- Enhance application visibility by using NBAR-Protocol Discovery MIB supported on host Cisco Catalyst switch.
Cisco NAM 4.0 Feature Highlights

Intelligent Application Performance (IAP)
- Reflection of true end-user quality experience
- Transaction-aware performance metrics that accurately characterize end-to-end application performance

Advanced Voice-Quality Monitoring
- Standards-based voice-quality (MOS) measurements
- Integration with Cisco® Unified Communications Management Suite for enterprise-wide monitoring

Visibility into WAN-Optimized Networks
- Identification of opportunities for WAN optimization
- Effect of Cisco WAAS deployment on application performance
- Real-time troubleshooting
Intelligent Application Performance
Advanced Analytics for Monitoring TCP-Based Applications

- Comprehensive transaction- and session- based statistics (more than 45 metrics)
- Improved response-time granularity
- Broader coverage of response time in complex deployments

- Data-transfer time
- Transaction time
- Connection duration
- Number of bytes and packets retransmitted
- Retransmission delay
- Acknowledgement delay
- Number of open connections
- Number of closed connections
- Number of refused connections
- Number of unresponsive connections
- And more…

Unifies Application Performance with End-User Experience
Cisco® NAM accurately reports on application response time, WAN bandwidth usage, LAN and WAN data throughput, and other application performance metrics to:

- Identify application optimization opportunities
- Analyze effect of Cisco WAAS implementation
- Take advantage of visibility for ongoing optimization improvements and troubleshooting
Advanced Voice-Quality Monitoring

- Characterize voice quality accurately with R-Factor-based MOS.
- Proactively detect voice-quality degradation.
- Drill down to individual RTP stream for analysis and real-time troubleshooting.

Analyze VoIP traffic by DSCP values.
Investigate interface statistics.
Monitor Cisco® Unified Communications Manager response time using IAP analytics.
Real-Time and Historical Traffic Analysis

- Identify what applications are running on the network, who is using them, and how much bandwidth they are consuming.
- Proactively spot bottlenecks before your network suffers degradation in performance.
- Define and improve the consistency and quality of both individual and overall network services to take advantage of comprehensive traffic visibility.
- Understand network behavior before and after a business change such as data center consolidation, WAN optimization, and VoIP deployment.
Advanced Troubleshooting
Intelligent Packet Capture, Filter, and Decode

- Trigger packet capture proactively with performance thresholds.
- Perform multiple captures simultaneously.
- View decodes while the data is still being captured.
- Use filters and a capture analysis toolkit to accelerate problem identification and resolution.
- Save captures onboard or remotely.
Cisco NAM 4.0 Platforms and Data Sources

Cisco NAM Combines a Rich Set of Embedded Data Collection and Performance Analytics with a Remotely Accessible, Web-Based Management Console—All on a Single Blade or Appliance.
Deployment Flexibility Enables Networkwide Visibility

Cisco® Unified Communications Manager Cluster

Cisco Catalyst® 6500 NAM

NetFlow Data Export to Cisco 6500 NAM Appliance

Cisco 7200

PSTN

Web, Email, File, Application Servers

Cisco NAM Appliance

NetFlow Data Export to Cisco NAM Appliance

Data Center

NetFlow Data Export to Cisco NAM Appliance

Cisco Catalyst® 6500 NAM

Cisco NAM Appliance

PSTN

WAN

Web, Email, File, Application Servers

Cisco NAM Appliance

Branch – Data Center Traffic

Cisco Catalyst® 6500 NAM

NME-NAM

Branch Office 1

Cisco WAAS

Cisco Catalyst® 6500 NAM

NME-NAM

Branch Office 2

Cisco WAAS

Inter-Branch Traffic

Branch – Data Center Traffic