Cisco Prime Network Analysis Module Software
5.0(1T) Release Notes

June 15, 2011, OL-24432-01

These release notes describe how to use the Cisco Prime Network Analysis Module 5.0(1T) software with the Cisco Catalyst 6500 Series Network Analysis Module (NAM-3). It includes new features and enhancements, system requirements, software upgrade, limitations and restrictions, caveats, and links to product documentation.

The Cisco Prime Network Analysis Module software empowers Network Managers with actionable visibility to quickly troubleshoot performance issues, ensure optimal use of network resources, and deliver consistent end-user experience.

The Cisco Prime portfolio of enterprise and service provider management offerings supports integrated lifecycle management of Cisco architectures and technologies based on a service-centric framework. Built on an intuitive workflow-oriented user experience, Cisco Prime products help increase IT productivity and reduce operations costs through innovative management solutions for the network services, infrastructure, and endpoints.

Network administrators need multifaceted visibility into the network and application to help ensure consistent and cost-effective delivery of service to end users. Knowing how traffic over the network is being used and how it is performing is essential for managing and improving the delivery of your business-critical applications. It 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.
New Features and Enhancements in Cisco Prime Network Analysis Module 5.0(1T)

Cisco Prime Network Analysis Module 5.0(1T) is released only on the high performance Cisco Catalyst 6500 Series Network Analysis Module (WS-SVC-NAM3-6G-K9). This release offers integrated, high performance application visibility and troubleshooting in high speed, high density Catalyst 6500 Campus Backbone and Data Center environments. This release is not supported on any other Cisco platforms.

This release increases visibility into both physical and virtual switch environments, and enhances Catalyst 6500 operational manageability in physical and VSS switching environments.

Other features in Cisco Prime NAM 5.0(1T) are:

- Supports ERSPAN data for voice and RTP monitoring
- Supports up to 60k RTP streams and 30k calls monitoring
- Consolidates WebEx-relevant sessions into one call
- Supports 1588 time synchronization
- Supports external storage using a Mini SAS connector or 10 GbE FCoE port

Table 1 lists the software product number for NAM 5.0(1T).

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-SVC-NAM-501T-K9</td>
<td>Cisco NAM 5.0(1T) for Catalyst 6500 NAM-3</td>
</tr>
</tbody>
</table>
The NAM 5.0(1T) software does not support any upgrade paths from NAM 3.x, NAM 4.x, or NAM 5.x releases. NAM 5.0(1T) is the first release of NAM that runs on the high performance Cisco Catalyst 6500 Series Network Analysis Module (WS-SVC-NAM3-6G-K9), and the release only runs on this platform.

System Requirements

This section describes the platform hardware, platform software, NAM hardware, and NAM software requirements for NAM 5.0(1T) software:

- Platform Cisco Catalyst 6500 (NAM-3) Requirements
- Browser Requirements, page 3
- Data Storage Recommendation, page 4

Platform Cisco Catalyst 6500 (NAM-3) Requirements

Table 2 identifies the Cisco Catalyst 6500 NAM-3 requirements for using NAM 5.0(1T).

### Table 2  NAM Hardware Compatibility

<table>
<thead>
<tr>
<th>Module</th>
<th>Supervisor Module</th>
<th>Cisco IOS Software Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS-SVC-NAM3-6G-K9</td>
<td>SUP720-10G Series</td>
<td>12.2(33)SXJ1</td>
</tr>
</tbody>
</table>

Browser Requirements

Table 3 describes the browser requirements for the WS-SVC-NAM3-6G-K9.

### Table 3  Minimum Browser Requirements

<table>
<thead>
<tr>
<th>Browser</th>
<th>Versions</th>
<th>Client Platform¹</th>
<th>JVM Support²</th>
<th>Adobe Flash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Explorer</td>
<td>8.0 (7.0 not supported)</td>
<td>• Windows 7</td>
<td>Java Plug-In</td>
<td>Version 10.1 or greater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Windows XP Professional</td>
<td>1.5.0_11</td>
<td></td>
</tr>
<tr>
<td>Firefox</td>
<td>3.6 (4.0 not supported)</td>
<td>• Windows 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Windows XP Professional</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Linux (RHEL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Macintosh OSX 10.6+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ At least 4 GB of memory is recommended for optimal NAM GUI performance.
² A Java plug-in might be required to use the Java Virtual Machine (JVM).

Note

Although NAM does not require a Java plug-in, you might be required to use the Java Virtual Machine (JVM). The Java plug-in versions listed have been tested for browsers that require a plug-in for the JVM. Cisco recommends JRE Version 5.0 Update 6.
Data Storage Recommendation

The Cisco Catalyst 6500 Series Network Analysis Module (WS-SVC-NAM3-6G-K9) offers external storage connectivity for extended capture durations and higher capture bandwidths. This connectivity is provided through two front-panel ports, one Mini Serial Attached SCSI (SAS, SFF-8088), and one Fibre Channel Over Ethernet (FCoE, SFP+). The external SAS storage array can be directly attached, while most FCoE arrays require an FCoE-capable switch (such as the Nexus 5000 Series Switch) to connect to a NAM-3. A Nexus 5000 Series Switch can connect to multiple FC and FCoE storage arrays.

If you are using FCoE storage, Cisco recommends that your Nexus 5000 Series Switch is running NX-OS 5.0(3)N1(1) or higher.

<table>
<thead>
<tr>
<th>Module</th>
<th>Switch Used in FCoE Array</th>
<th>NX-OS Software Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS-SVC-NAM3-6G-K9</td>
<td>Nexus 5000 Series Switch</td>
<td>5.0(3)N1(1)</td>
</tr>
<tr>
<td></td>
<td>Other FCoE-capable switch</td>
<td></td>
</tr>
</tbody>
</table>

Upgrading to NAM 5.0(1T)

This section provides the following topics:

- Supported Upgrades, page 4
- Installing NAM Software, page 4
- Upgrading ROMMON, page 5

Supported Upgrades

The NAM 5.0(1T) software does not support any upgrade paths from any other NAM 3.x, NAM 4.x, or NAM 5.x releases. NAM 5.0(1T) is the first release of NAM that runs on the high performance Cisco Catalyst 6500 Series Network Analysis Module (WS-SVC-NAM3-6G-K9), and the NAM 5.0(1T) release only runs on this platform.

Installing NAM Software

For installation information, see the Cisco Prime Network Analysis Module (NAM-3) Catalyst 6500 Series Switch Installation and Configuration Note 5.0(1T), which is available on Cisco.com:

Upgrading ROMMON

Cisco router ROM monitor (also known as ROMMON) runs when the router is powered up or reset. The firmware helps to initialize the processor hardware and boot the operating system software. You can perform certain configuration tasks, such as recovering a lost password or downloading software over the console port, by using the ROM monitor. If there is no Cisco IOS software image loaded on the router, the ROM monitor runs the router.

The BIOS and ROMMON images for the NAM-3 blade are bundled together, and are always installed in one process. To update the TriX86 Boot Firmware using the BIOS disk TFTP utility:

1. Copy `biosdisk_tri_x_y_z.bin` to your TFTP server.
2. Connect to the local TriX86 console.
3. Break into TriX86 ROMMON if you are in an autoboot mode.
4. Select the external ethernet interface port that is on your TFTP network (if not already the default port in ROMMON). This is done from the ROMMON CLI using the `interface` command.
5. Set the ROMMON TFTP parameters:
   - local port IP address: `addr w.x.y.z`
   - server IP address: `serv w.x.y.z`
   - gateway IP address if applicable: `gate w.x.y.z`
   - file path on TFTP server: `file userid/biosdisk_tri_x_y_z.bin`
   - NAM management VLAN: `vlan x`
6. Verify the connection to the server with a ping, using either `ping server` or `ping w.x.y.z`.
7. TFTP boot the BIOS disk utility using the command `tftpdnld`.
8. The BIOS disk will automatically reprogram the boot SPI flash, and then stop at the BIOS disk CLI prompt. Enter `reboot` after the installation is complete to reset the NAM.

Limitations and Restrictions

The following limitations and restrictions currently apply to the NAM 5.0(1T) software release:

- Data Storage (NFS and iSCSI)
- NAM Support With Non-Cisco H.323 Voice Devices and Call Managers
- ACS Version Supported
- No Default CLI Password
- Response Time and Voice Quality Analytics
- WAAS Intelligent Application Performance
- IOS Issues That Might Affect NAM 5.0(1T)
- Most Recent NAM 5.0(1T) Information
Data Storage (NFS and iSCSI)

In previous releases of NAM, you use the Administration > Capture Data Storage option to set up remote file systems to store capture data, and you could choose the type NFS or iSCSI. In the NAM 5.0(1T) release, you use the Capture > Packet Capture/Decode > Data Storage option to set up external data storage, and NFS and iSCSI storage are not supported.

NAM Support With Non-Cisco H.323 Voice Devices and Call Managers

NAM voice call monitoring may not function properly with some of the non-Cisco voice devices and Call Managers such as Avaya. This is only for non-Cisco voice devices. Cisco IP Phone and Call Managers do not have any problems.

ACS Version Supported

The only ACS server versions supported are ACS versions 5.1 and 4.2.

No Default CLI Password

For security purposes, beginning with NAM 4.1, we no longer provide a default root password. After you install NAM 5.0(1T), you must specify a password for the root account. Store this password in accordance with your site’s security policies. You will need the root account password for additional software upgrades.

Response Time and Voice Quality Analytics

The calculation of Application Performance Response Time and voice quality metrics in NAM 5.0(1T) depends on the actual packet arrival time and packet sequences. In events such as packet drops, duplicated packets, or asymmetric routing, the NAM might not be able to calculate accurate quality metrics for the associated polling interval.

You should pay attention to the NAM syslog messages and system alerts to remain aware of any packet drops or duplicated packets occurrences.

WAAS Intelligent Application Performance

Due to the way NAM 5.0(1T) processes packets in a TCP connection, response time monitoring on WAAS data sources probably will not include the first response of the TCP connection. This occurs because the WAAS optimization engine might not be able to determine to which optimized or non-optimized segment the first few packets belong.

This issue will be noticed when you monitor a TCP connection that has only a single response. No response time will be reported for this connection. The NAM determines response time by taking the average response time over multiple TCP connections. Because most TCP connections have multiple responses, this issue is generally unnoticed over a longer period of monitoring.
Most Recent NAM 5.0(1T) Information

To see the most recent version of the NAM 5.0(1T) User Guide, see the technical documentation for the Cisco Prime Network Analysis Module on www.cisco.com:


IOS Issues That Might Affect NAM 5.0(1T)

The following IOS issues might affect your use of NAM 5.0(1T) depending on other software versions.

- Running IOS Image Newer Than 12.2(18)SXF5

Running IOS Image Newer Than 12.2(18)SXF5

If you upgrade your IOS to an image newer than 12.2(18)SXF5, you remain vulnerable to a security issue where IOS switches the SNMP communication between the NAM and the SUP from inband to EOBC. Due to this issue, you should not apply the NAM CLI command `supervisor address <sup-address>`. To remove this configuration from the NAM, use the negating form of the command, `no supervisor address`.

Note

This issue has not yet been resolved.

Caveats

This section provides information about active anomalies in the NAM 5.0(1T) software.

- Known Anomalies in NAM 5.0(1T), page 8

To obtain more information about known problems, access the Cisco Software Bug Toolkit at the following URL:

http://www.cisco.com/cgi-bin/Support/Bugtool/home.pl
Known Anomalies in NAM 5.0(1T)

Table 5 provides a list of known anomalies in NAM 5.0(1T) software. Each anomaly includes a description of the symptom, conditions in which the anomaly occurs, and any workaround.

<table>
<thead>
<tr>
<th>Bug ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCtq27947</td>
<td>Changing the System Time may cause the NAM-3 to restart. There is no workaround.</td>
</tr>
<tr>
<td>CSCtq30121</td>
<td>When the VPN-SPA (shared port adapter) module is present, the NAM-3 doesn’t recognize its interfaces as configurable SPAN sources. However, once the configuration is done via CLI, the status is reported in the GUI. There is no workaround.</td>
</tr>
<tr>
<td>CSCto59439</td>
<td>The incorrect clear time is shown in the Alarm Table. On the Alarm Summary page (Monitor &gt; Overview &gt; Alarm Summary), scroll down to the Last 50 Alarms table, and click the All Alarms button to launch the “All Alarms” table. If a new alarm is triggered but not cleared, the clear time will show “-.” If the time range is less than or equal to the last hour, the table shows “-” correctly. If the time range is set to greater than or equal to the last four hours, the NAM shows the incorrect clear time, which is even earlier than the trigger time. There is no workaround.</td>
</tr>
<tr>
<td>CSCto59473</td>
<td>The NAM-3 fails to send the alarm trap to the server. If you set up a trap server on the NAM, set an Alarm action to send the trap out, and check the server when alarm happens, the trap is not found on the server. When you set up a syslog to send to the same server for an Alarm, it functions properly. There is no workaround.</td>
</tr>
<tr>
<td>CSCto72361</td>
<td>After you delete a site, an interactive report cannot be saved. If you create two sites on the NAM (Site A and Site B), create and save an interactive report with Site A as the source, create and save an interactive report with Site B as the source, and then delete Site A and try to save another interactive report, after clicking the Submit button, nothing happens. There is no workaround.</td>
</tr>
<tr>
<td>CSCto54858</td>
<td>The NAM information in the IOS show module output is missing some information. The “Mod Online Diag Status” shows “Bypass” for Modules 1-4, and Module 2 is missing from the Sub-Module.</td>
</tr>
<tr>
<td>CSCtq28034</td>
<td>A memory leak could be caused by Netflow Data Export. After configuring an Application Conversation and Network Conversation with data, the percentage of mond memory from “top” could increase and the free memory decrease.</td>
</tr>
<tr>
<td>Bug ID</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CSCtq15493</td>
<td>The <code>nslookup</code> may not function when using <code>hostname</code>. Some hostnames cannot be resolved by the DNS and some SQL errors are seen in some pages. The problem has been seen in the following pages. Analyze &gt; Response Time &gt; Client-Server   Analyze &gt; Response Time &gt; Client   Analyze &gt; Response Time &gt; Server   Analyze &gt; WAN Optimization &gt; Conversation Multi-segments (the GUI shows “No data available” but the SQL error is seen in the log file)</td>
</tr>
<tr>
<td>CSCtq06446</td>
<td>In a Scheduled Export, the time is not accurate in the Sydney time zone. This happens when the timezone is configured to be Australia / Sydney (AEST/AEDT) on the client PC and/or the NAM using Administration &gt; NAM System Time. The workaround is to set the timezone of the NAM via Administration &gt; NAM System Time to be another timezone with the same offset (such as, for example, Australia / Melbourne) and on the client PC. For the client PC, this need only to be done when the report is being scheduled, and can be reverted back after it is done.</td>
</tr>
<tr>
<td>CSCtq22021</td>
<td>The Host Conversation screen title shows Cumulative units for Rate. From the Home page, select any host from the Top N Hosts chart, and left-click to select Host Conversations. From the popup window, you can see the selector for Data is Rate, but the title for the table is showing Packets and Bits, not Packets per second and Bits per second. The workaround is to click on any place in the table, and the title will be changed to the correct one.</td>
</tr>
<tr>
<td>CSCtq22111</td>
<td>Buffer I/O errors are seen in a reverse telnet session on the NAM-3. Reverse telnet is a new feature added for Cisco IOS that supports the NAM 5.0(1T) release. It is similar to a console to the NAM. There is no workaround.</td>
</tr>
<tr>
<td>CSCtq27320</td>
<td>TCP Stream and Analysis do not function properly for IPv6. Capture traffic between IPv6 addresses only; in the decode window, click the TCP Stream button. It will tell you to select a TCP packet. Save the capture to a file. From Capture &gt; Files, select the file and click Analysis, and there is no statistics for Host. There is no workaround.</td>
</tr>
<tr>
<td>CSCtq40855</td>
<td>When Web Publishing is enabled, there is no megamenu after logging out and logging in. This occurs in Microsoft Internet Explorer only. The workaround is to use a different browser.</td>
</tr>
<tr>
<td>CSCtq38670</td>
<td>In a scheduled RTP report, the column title and data do not match. The data format has commas, and Microsoft Excel will put it all in a separate column.</td>
</tr>
</tbody>
</table>
Table 5  Known Anomalies in NAM 5.0(1T)

<table>
<thead>
<tr>
<th>Bug ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCtq38715</td>
<td>The data on the Analyze &gt; NDE Interface window shows “% Utilization” as the default unit. The workaround is to refresh the screen, after which it will show the correct unit, Bytes per Second.</td>
</tr>
<tr>
<td>CSCtn81263</td>
<td>On the Administration Megamenu, the “Users” column is missing. If you go to your browser and zoom in, then that column will appear (you may have to zoom in more than once). If you zoom out, it will disappear.</td>
</tr>
</tbody>
</table>

Documentation

Cisco Prime Network Analysis Module Software 5.0(1T)

This section provides a list of the Cisco Prime Network Analysis Module Software 5.0(1T) software documentation. You can find links to all NAM software documentation at the following URL:


The following is a list of the documentation, in the order in which you should address it.

- Cisco Prime Network Analysis Module Software 5.0(1T) Documentation Guide
- Cisco Prime Network Analysis Module Software 5.0(1T) Release Notes
- Cisco Prime Network Analysis Module Software 5.0(1T) User Guide
- Cisco Prime Network Analysis Module Software 5.0(1T) Command Reference
- Cisco Prime Network Analysis Module Software 5.0(1T) API Programmer Guide
- Cisco Prime Network Analysis Module Software 5.0(1T) Third Party and Open Source Copyright Notices

Cisco Prime Network Analysis Module Software 5.0(1T) Documentation Guide

78-19966-01

The Documentation Guide for Cisco Prime Network Analysis Module Software, 5.0(1T) provides a pointer to all customer documentation for the NAM hardware and the NAM software releases.


Cisco Prime Network Analysis Module Software 5.0(1T) Release Notes

OL-24432-01

The Cisco Prime Network Analysis Module 5.0(1T) Release Notes provide a collection of information including software and hardware compatibility and information about new features, requirements, and anomalies that might exist.

Cisco Prime Network Analysis Module Software 5.0(1T) User Guide

OL-24437-01
The Cisco Prime Network Analysis Module 5.0(1T) User Guide describes how to use the Cisco Prime Network Analysis Module and NAM 5.0(1T) software.

Cisco Prime Network Analysis Module Software 5.0(1T) Command Reference

OL-24997-01
The Cisco Prime Network Analysis Module 5.0(1T) Command Reference provides information about how to use the NAM command-line interface to manage the NAM-3 device, which is supported by NAM 5.0(1T) software.

Cisco Prime Network Analysis Module Software 5.0(1T) API Programmer Guide

OL-25000-01
The Cisco Prime Network Analysis Module 5.0(1T) API Programmer Guide describes APIs that are available to connect to the NAM system. The NAM API provides a mechanism for provisioning and retrieving data from the NAM servers using an eXtensible Markup Language (XML) interface. The API utilizes REpresentational State Transfer (REST) methodology to execute requests (web services) over HTTP or HTTPS by sending the XML data to the API server.

The developers who use the APIs should have an understanding of a high-level programming language such as Java or an equivalent.

The Cisco Prime Network Analysis Module 5.0(1T) API Programmer Guide is available on the Cisco NAM Technology Center. The Cisco NAM Technology Center is an online resource for additional downloadable Cisco NAM support content, including help for developers who use Cisco NAM application programming interfaces (APIs). The website provides information, guidance, and examples to help you integrate your applications with Cisco NAM. It also provides a platform for you to interact with subject matter experts. To view the information on the Cisco NAM Technology Center website, you must have a Cisco.com account with partner level access, or you must be a Cisco NAM licensee. You can access the Cisco NAM Technology Center at http://developer.cisco.com/web/nam/home.

Cisco Prime Network Analysis Module Software 5.0(1T) Third Party and Open Source Copyright Notices

OL-24409-01
The Cisco Prime Network Analysis Module 5.0(1T) Third Party and Open Source Copyright Notices provides a listing of all copyright notices for the open source third-party software used in NAM 5.0(1T).
Obtaining Documentation and Submitting a Service Request

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