This article describes how to troubleshoot the integration of Network Analysis Module (NAM) into the WAAS Central Manager.

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The Cisco Network Analysis Module (NAM) is a standalone network analysis product that you can access through the WAAS Central Manager if you have a NAM server installed in your network. This article describes how to troubleshoot the integration of NAM into the WAAS Central Manager.

NOTE: Support for NAM integration into the WAAS Central Manager was introduced in WAAS version 4.4.1. This section is not applicable to earlier WAAS versions.

Connectivity Issues

If you are unable to connect to NAM from the WAAS Central Manager, do the following:

- In the Central Manager GUI, choose **Configure > Network Analysis Module (Beta) > Basics >**

Setup and ensure that NAM server address and credentials are entered correctly, then click **Test Connectivity/Credentials.** All of the address, user, and password fields should show a green check mark to indicate success. Any fields that show a red X are configured incorrectly.

- Ensure that the NAM HTTP or HTTPS server is enabled.
- Ensure that the NAM server IP address and port are reachable both from the Central Manager and from the client computer on which you are running the browser to access the Central Manager. You should be able to use the same IP address and port to access the NAM server from both machines, regardless of whether NAT is involved.
- Check your browser settings. In Internet Explorer, you may need to revert to the default settings in the Security and Privacy tabs of Tools > Internet Options, then change the Privacy setting to Low.
- If you are using the NAM HTTPS server, the NAM self-signed certificate may not be installed in the browser. Manually add the NAM self-signed certificate into your browser. Alternatively, you can launch the NAM user interface in a separate browser tab or window and accept and install the certificate, which allows you to view the integrated charts.

If you are unable to directly telnet into the NAM server, use the **exsession on** command on the NAM console

Rendering Issues

If the NAM page does not render properly or some action buttons on NAM do not work, it is likely due to an incompatible browser version. The NAM server has the following browser requirements:

- Internet Explorer 8 or later, or Firefox 3.6 or later
- Java version 6 update 22 or later
- Adobe Flash 10.0.45.2 or later (install the latest version from Adobe)
- JavaScript must be enabled

If you get the message, "Navigation to the webpage was canceled" when you click on a NAM report, log out of the Central Manager and log in again. When the browser asks if you want to view only the content delivered securely, click "No" to show all content. The Central Manager data is based on HTTPS and NAM access uses HTTP by default, so the browser must be able to show both secure (HTTPS) and unsecure (HTTP) content.

Chart Data Issues

Charts Show Unexpected Results
If the charts show unexpected results, this is likely caused by lack of clock synchronization. If the clock on the client machine running the browser is not synchronized, you may see the following error on the page: Client or NAM time incorrect. Ensure that the clocks on the client machine running the browser, the NAM server, and the WAAS Central Manager are synchronized. One way to do this is by configuring an NTP server on all three machines.

Transaction Time Over Time Charts Show Zig-Zag Pattern
This chart pattern is common in POC scenarios where there is usually only one flow traversing the WAAS network. NAM's default granularity for response time metrics is five minutes. If the flow duration is greater than five minutes and less than ten minutes, and this is done continuously in a loop, it still results in a zig-zag pattern because the FA flows are reported by WAEs to NAM only after they end.

Throughput > Network Charts Show Unusual Router Interface Names
The router interfaces may be displayed as if2, if15, and so on, instead of actual interface names such as GigaE 0/0, Tunnel0, and so on. To see the correct router interface names, configure the netflow data source with SNMP credentials/community strings. In the Central Manager GUI, choose **Configure > Network**

Analysis Module (Beta) > Advanced > Data Sources. Select the Netflow data source and edit it and provide SNMP credentials/community string.

Charts Show Higher Volume Than Expected
Charts may show higher than expected volume due to double counting. Filter to a specific data source to avoid double counting.

Data Sources Do Not Show on NAM
If a data source does not show on NAM, it could be due to network or firewall issues. Ensure Netflow is enabled on UDP port 3000 and flow-monitor on TCP port 7878, and they are not blocked by a firewall.

Flow Agent Connection Issues Persist
If Flow Agent connection issues persist, disable the flow monitor on the WAEs, restart NAM, and reenable the flow monitor on the WAEs. You can control the flow monitor setting from the Central Manager GUI on the **Configure > Monitoring > Flow Monitor** page.

Top Talkers Data Discrepancy
You may see a discrepancy in byte count between Top Talkers Detail and Top N Applications in Top Talkers Summary due to a difference in the way these two reports count traffic:

- Top Talkers Detail counts payload bytes only
- Top Talkers Overview counts packet header and payload bytes

Higher Than Expected Throughput on Top Application or Application Throughput Charts
If netflow is enabled on both LAN and WAN interfaces on the same router, when a netflow data source is selected, the Throughput > Top applications and Application charts show aggregated throughput, which is the sum of the LAN and WAN throughput. To get accurate throughput data, either change the data source to WAAS flow agent, PA, or change the netflow export to limit results to only the WAN interface.

No Passthrough Data Shown on the Performance Analysis > Application page
Make sure that the WAAS data sources are configured with the correct segments selected. The recommended configuration is to have the branch WAE configured with Client and Pass-through segments, and the server side WAE configured with Server WAN and Server segments.

Why Is There a Difference in Statistics When Different Data Sources Are Selected?
The netflow data source reflects data through the netflow export device (router/switch) and the FA data source reflects data intercepted by WAAS.