Cisco WAAS Network Analysis Module (NAM)
Virtual Service Blade 4.2

The network is the foundation for application delivery. Next-generation networks need to meet the growing challenge of effectively delivering applications and services in complex IT environments. Cisco® Wide Area Application Services (WAAS) is a comprehensive WAN optimization solution that accelerates applications over the WAN, delivers video to the branch office, and provides local hosting of branch-office IT services. Cisco WAAS NAM Virtual Service Blade enhances the application performance management capabilities of the WAAS products.

Cisco NAM Virtual Service Blade Support of WAN Optimization

Cisco NAM Virtual Service Blade provides a rich set of functionality for the WAN optimization solution. Cisco NAM Virtual Service Blade has the ability to process performance data from a variety of data sources. For WAN optimization, the NAM Virtual Service Blade utilizes the WAAS Flow Agent as a data source. WAAS Flow Agent is an embedded part of the WAAS software, running on WAAS products, which provides information about packet streams of interest traversing through both LAN and WAN interfaces of WAAS products. Traffic of interest can include specific servers and types of transactions to be exported. NAM processes the data received from the Flow Agents and derives application performance analytics and reports as part of application performance functionality called Intelligent Application Performance (IAP). Cisco NAM Virtual Service Blade can use IAP to provide a pre- and post-WAAS deployment application performance view. Customers can get valuable information in terms of WAN optimization achieved and help determine improvements in user experience.

The software form factor of the Cisco NAM Virtual Service Blade helps ensure that there is no additional hardware footprint and complements existing NAM hardware that consists of Cisco Branch Router Series NAM, Cisco Catalyst® 6500/Cisco 7600 Router series NAM and Cisco NAM appliances. The consistent functionality across all platforms helps customers to deploy a combination of these products depending upon network traffic loads in their network locations. Cisco NAM Virtual Service Blade can also provide for application performance management on data sources other than WAAS Flow Agent, including Cisco NetFlow and port-level statistics. Using multiple data sources for different network locations provides a holistic network-level view for customers through a single Traffic Analyzer GUI.

The Cisco NAM Virtual Service Blade is targeted for small data center deployments and proof of concept (PoC)/predeployment rollouts.

Cisco NAM Virtual Service Blade for Small Data Center Deployments

Cisco NAM Virtual Service Blade provides for integrated performance management capabilities on the WAAS appliances for small data centers by using WAAS Flow Agent from the data center as well as from remote sites. Small data centers can be typically characterized as network deployments of fewer than 4000 flows that have been optimized by the WAAS products. Figure 1 shows a typical deployment model for the NAM Virtual Service Blade.

Figure 1. Cisco NAM Virtual Service Blade Typical Deployment
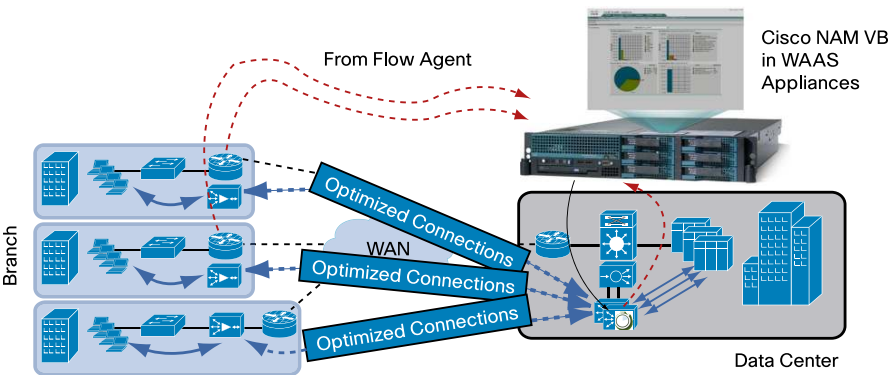
The integrated browser-based NAM Traffic Analyzer GUI can be used to create WAAS data sources to handle WAAS Flow Agent data (see Figure 2). The NAM Traffic Analyzer GUI provides for IAP-based statistics like response time, as well as other traffic statistics derived from Flow Agent data sources including applications, hosts, and conversations.

Figure 2. NAM WAAS Device Configuration

The Cisco NAM Virtual Service Blade is installed using the Cisco WAAS software. The Cisco WAAS software includes a Central Manager that eases Cisco NAM Virtual Service Blade rollouts by defining virtual environments within the WAAS products, copying NAM Virtual Service Blade images to local disks, and installing the NAM software within the virtual instance. Customers can use the WAAS Central Manager to install the virtual blade. More information about the Cisco WAAS software can be found at http://www.cisco.com/en/US/products/ps6870/index.html.

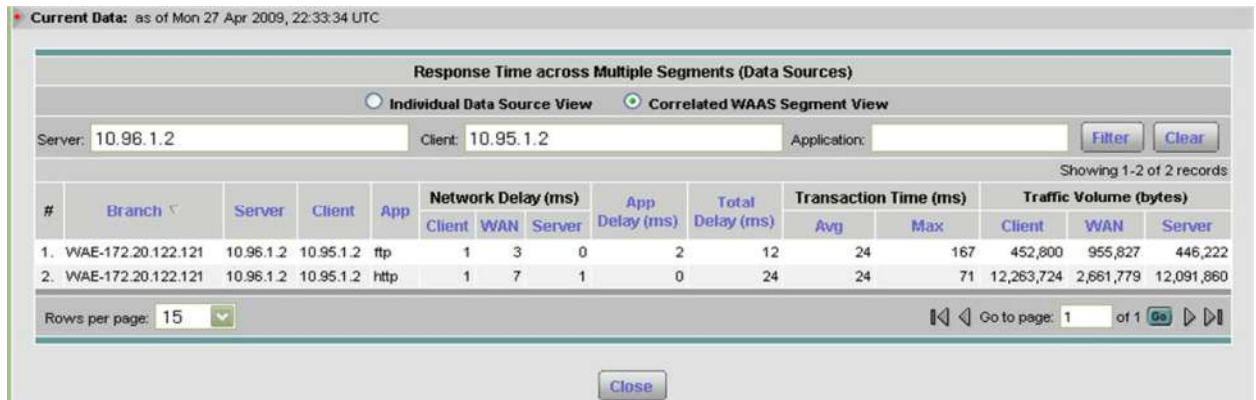## Cisco NAM Virtual Service Blade for Proof of Concept Scenarios

The NAM Virtual Service Blade provides integrated performance management capabilities for "before and after" analysis of the WAN optimization solution. Users currently have to use manual methods to evaluate the user experience improvements gained by deploying WAAS products. These manual methods may include capturing packets or observing performance using "stop watch" mechanisms. Improvement of user experience is also difficult to pinpoint in manual methods, especially when dealing with a number of transactions or flows. Cisco NAM Virtual Service Blade eases this process by providing users with the ability to view IAP-based statistics and understand performance improvements. Figure 3 highlights how average transaction time helps identify user experience improvements due to WAAS.

Figure 3. NAM Transaction-Based Reporting for Before and After Analysis
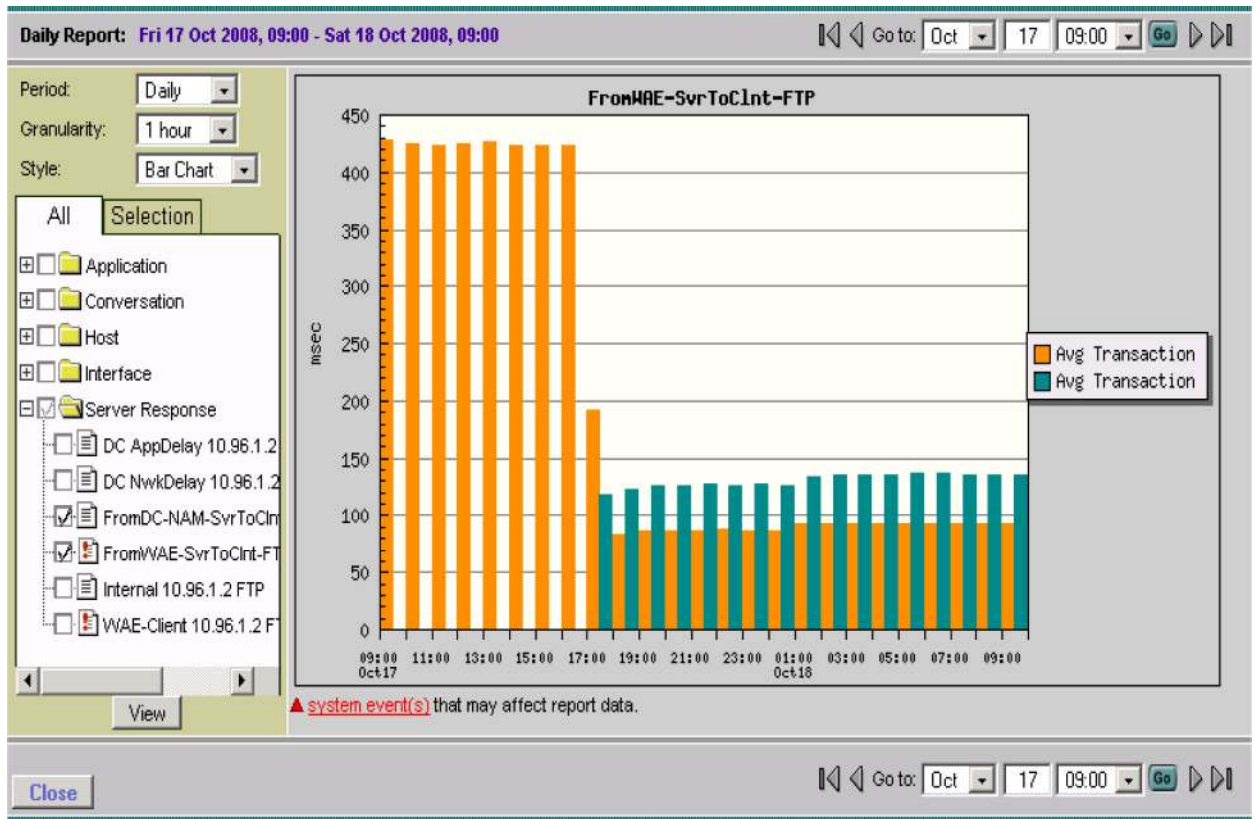
The NAM Virtual Service Blade can collect WAAS Flow Agent data from key sources in the network: server, WAN, and client. This allows NAM to identify potential candidates for WAN optimization based on Flow Agent data. The NAM can provide a correlated view of IAP-based response time metrics over these three key segments (see Figure 4).

Figure 4. NAM Multisegment Correlated View - Server, WAN, and Client

Cisco NAM Virtual Service Blade is thus an ideal offering to help customers rapidly roll out WAN optimization-based WAAS offerings by providing users before and after analysis and user experience improvements, identifying sources of delay-causing issues, and providing a correlated multisegment view.

Cisco NAM Virtual Service Blade provides a consistent set of features with other hardware platforms, allowing customers to deploy appropriately sized NAM offerings. The Cisco NAM Virtual Service Blade is targeted for small data centers and complements existing hardware products like the Cisco Branch Routers Series NAM (on the integrated services router), Cisco Catalyst 6500/7600 Series NAM for data centers, and Cisco NAM 2200 appliances for regional and large 10 Gigabit Ethernet data centers.

Cisco NAM Virtual Service Blade Licensing

Cisco NAM Virtual Service Blade licensing is based on Cisco Software Licensing. Additional details can be obtained at http://www.cisco.com/go/clm. The Cisco NAM Virtual Service Blade provides for a 60-day evaluation license. Existing customers of applicable WAAS platforms can download the NAM Virtual Service Blade at Cisco Software Center.

System Requirements

Table 1 lists the appliances that support Cisco NAM Virtual Service Blade.

Table 1. Virtualization-Capable Cisco WAAS Appliances

Platform	Hardware	Deployment Scenarios	Images
Cisco WAVE-574	• 3 or 6 GB DRAM. • 500 GB hard disk drive. • RAID-1 optional. • 2- and 4-port inline card options. • Cisco WAAS Software 4.1.3 and later.	• Edge deployments at enterprise branch offices. • Core deployments at small data centers.	
Cisco WAE-674	• 4 or 8 GB DRAM. • 600 GB hard disk drive. • RAID-5 optional. • 4-port inline card optional. • WAAS Software 4.1.3 and later.	• Edge deployments at large enterprise branch offices. • Core deployments at medium-sized data centers.	

Notes:

- More information on the Cisco WAE-674 appliance can be found at http://www.cisco.com/en/US/prod/collateral/contnetw/ps5680/ps6474/product_data_sheet0900aecd80329e39.html.
- More information on the Cisco WAVE-574 appliance can be found at http://www.cisco.com/en/US/prod/collateral/contnetw/ps5680/ps6474/data_sheet_c78-495801.html.

Ordering Information

Cisco NAM Virtual Service Blade on the WAAS appliances is available for purchase through regular Cisco sales and distribution channels worldwide. To place an order, visit the Cisco Ordering Homepage. To download software, visit the Cisco Software Center.

Table 2 provides ordering information for Cisco NAM.

Table 2. Ordering Information

	Part Number
Cisco NAM Virtual Blade on WAAS appliances (Top Level)	NAM-WAAS-VB
Cisco NAM Software 4.2 for WAAS 574/674	WAAS-VB-NAM-4.2
Cisco NAM Virtual Blade on WAAS appliances (eDelivery Top Level)	L-NAM-WAAS-VB
Cisco NAM Software 4.2 for WAAS 574/674 (eDelivery License Only)	L-WAAS-VB-NAM-4.2

Cisco Services

Using the Cisco Lifecycle Services approach, Cisco and its partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and return on investment. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

For More Information

For more information about Cisco NAM Virtual Service Blade on the WAAS, 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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