# Cisco Application Analysis Solution 2.0

Cisco® Application Analysis Solution (AAS) provides a visual and quantitative breakdown of the complex interactions among applications, servers, and networks to cost-effectively troubleshoot and confidently deploy networked applications. Cisco AAS rapidly pinpoints the source of application performance issues.

## Product Overview

Cisco Application Analysis Solution (AAS) enables you to visualize end-to-end application transaction dynamics graphically, from the view of both the network and application layers. Cisco AAS can diagnose whether problems in application performance are caused by the application, server, or network; automatically pinpoint the root cause for application-related issues in complex, multitier transactions; and assess proposed solutions, accurately predicting the performance that could be achieved with alternative approaches. Cisco AAS bridges organizational gaps between application development and IT infrastructure teams, helping speed deployment of new applications and reducing disputes over responsibility that often accompany end-to-end performance troubleshooting.

Cisco AAS is part of the Cisco Network Application Performance Analysis (NAPA) solution, an innovative combination of sophisticated management tools and services from Cisco that span all four phases of the lifecycle of networks and applications: planning, design, implementation, and operations. Cisco NAPA solution redefines how enterprises can monitor and manage application performance and network services to support business initiatives.

**Figure 1.** Visualize Application and Network Packet Levels

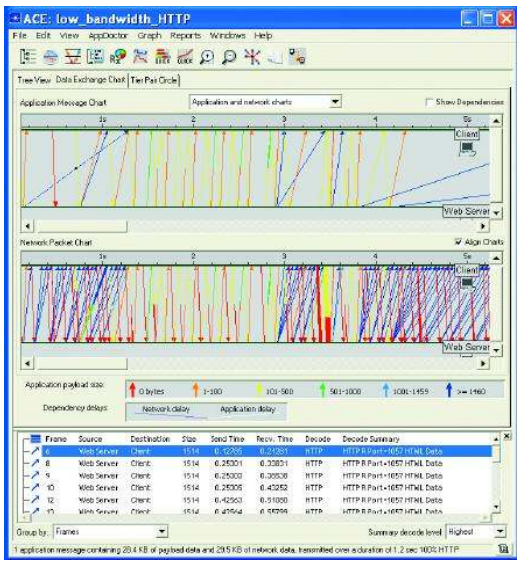
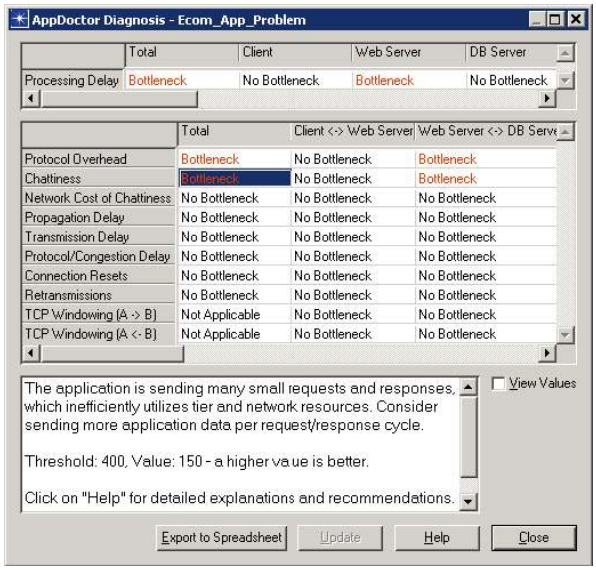



**Figure 2.** Diagnose Root Cause of Delay



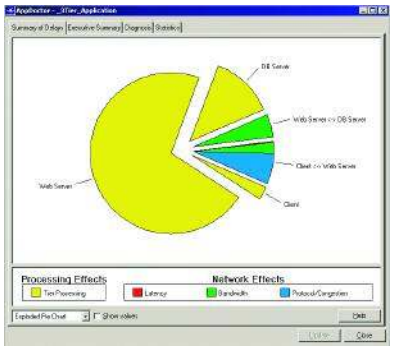

### Profile Application Transactions

Cisco AAS parses an application trace and analyzes it at the application message level and network packet level, with the interdependency of these levels presented graphically (Figure 1). Problematic application messages, including requests and responses between the server and the client, can be analyzed in further detail through an extensive library of application decodes. Standard reports provide a broad range of key application statistics, including processing delays, network delays, response times, number of application turns, and number of application messages.

### Diagnose End-to-End Performance Problems

Cisco AAS breaks down multitier applications into component flows, automatically determining dependencies among application messages. Performance statistics for individual tiers are presented to aid quick identification of problem sources and diagnose bottlenecks (Figure 2). Summary reports clearly indicate the factors that contribute to end-to-end response time, including transmission, propagation, network congestion, protocol overhead, and processing (Figure 3). Application decodes provide a more detailed diagnosis for many protocols and applications.

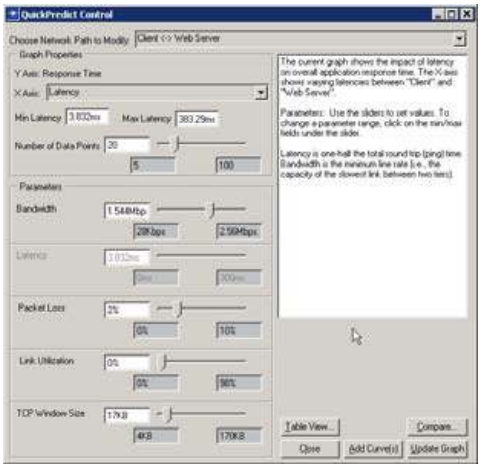
**Figure 3.** Understand Sources of End-to-End Delay



### Assess Alternative Solutions

Cisco AAS provides the ability to model proposed solutions to an application performance problem, measured in end-to-end response time. Poorly designed applications can be modified in the model using an intuitive graphic interface. Cisco AAS can quickly predict the impact of changes to system and network parameters, including latency, bandwidth, packet loss, congestion, and window sizing (Figure 4). It can also be used to model conditional application logic. Recommendations are provided for improving overall performance. Cisco AAS incorporates advanced simulation technology to enable studies of response time in various change-impact ("what-if") scenarios.

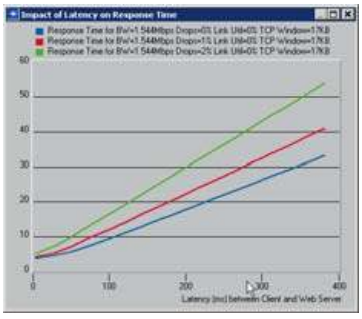
**Figure 4.** Test Changes to Infrastructure Variables




### Plan Application Deployment

To assess the ability of the network infrastructure to support new applications, Cisco AAS can derive a simple baseline network model from application traces, capturing key performance characteristics to support simulations. It can project the impact of increasing usage of the application over time as well as changes in the infrastructure topology and capacity (Figure 5). Cisco AAS helps reduce risks and delays associated with new application deployment.

**Figure 5.** Predict the Impact of Changes on Response Time



### Flexible Data Capture

Cisco AAS includes remote software “Capture Agents” to acquire application traces from desktops. Capture Agents are easy to install from a CD, from the Web, or from an e-mail attachment sent to a remote location. Multiple trace files of the same transaction that are captured from multiple network segments can be merged to automatically calculate delays. Cisco AAS integrates with the Cisco Network Analysis Module (NAM) to obtain trace data for application analysis. Output from many third-party tools can also be used.

## Advanced Capture Module

The optional Cisco AAS Advanced Capture Module (AAS-ACM) is especially useful for troubleshooting intermittent problems. Packets are stored on the target platform in a rolling buffer. When a problem occurs, the relevant packets can be retrieved by Capture Agents based on when the problem transaction was observed. Cisco AAS-ACM can also automatically determine access link capacity requirements to support new application deployments.

## System Requirements

**Table 1.** System Requirements

| | Cisco Application Analysis Solution | Capture Agent |
|---|---|---|
| **Disk space** | 20 GB | • 4 MB (Windows)<br>• 8.5 MB (Solaris; Linux; HP UX; AIX) |
| **Hardware** | Intel Pentium 3, 4, D, Xeon, or equivalent 1.5+ GHz | • Intel Pentium 3, 4, or equivalent (Windows, Linux)<br>• Sun SPARC Family (Solaris)<br>• HP PA7000 v1.1c or higher (HP UX)<br>• IBM RS/6000 (AIX) |
| **Memory** | 1 GB (minimum) | • 2 MB when idle; 5 MB during capture (Windows)<br>• 4.5 MB when idle; 9 MB during capture (Solaris; Linux; HP UX; AIX) |
| **Software** | Only English-language versions are supported:<br>• Windows XP Professional<br>• Windows 2000 Professional<br>• Red Hat Enterprise Linux 3 (V2.4 Kernel)<br>• Red Hat Enterprise Linux 4 (V2.6 Kernel) | Only English-language versions are supported:<br>• Windows 95<br>• Windows 98/ME<br>• Windows NT 4.0<br>• Windows 2000 (32 bit)<br>• Windows Server 2003 (32 bit)<br>• Windows XP (32 bit)<br>• Solaris 7<br>• Solaris 8<br>• Solaris 9<br>• Linux Kernel 2.2<br>• Linux Kernel 2.4<br>• HP UX 11.0 (32 bit)<br>• AIX 4.3.3 (32 bit)<br>• AIX 5.x (32 bit) |

## Ordering Information

Cisco AAS 2.0 is available for purchase through regular Cisco sales and distribution channels worldwide. To place an order, contact your Cisco representative or visit http://www.cisco.com.

Cisco AAS 2.0 licensing options are described in the Cisco Application Analysis Solution 2.0 product bulletin, viewed at: http://www.cisco.com/en/US/products/ps6362/prod_bulletins_list.html.

## Service and Support

Cisco delivers a wide range of services programs through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you to protect your network investment, optimize network operations, and prepare the network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, contact your Cisco representative or visit http://www.cisco.com.

## For More Information

For more information about Cisco Application Analysis Solution, contact your local account representative or visit: http://www.cisco.com/en/US/products/ps6362/index.html.

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: +31 0 800 020 0791
Fax: +31 0 20 357 1100

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