



Performance Summary

- › Reduce bandwidth usage by 100 times or more for SAP
- › Improve user productivity by increasing overall responsiveness, reducing login, download and transaction times
- › Securely accelerate SAP applications
- › Reduce SAP server utilization by 50% or more

Test Scenario

These tests were performed using a Windows XP client retrieving files from a SAP ERP cluster. The tests were run on two simulated WANs: one with 768Kbps with 30-50ms latency, and a T3 link with 150ms latency with 0.1% packet loss.

- › Cold test, starting condition: no traffic has passed through the Blue Coat appliances.
- › Warm test starting condition: the same or similar traffic has already passed through the Blue Coat appliances once.



Blue Coat Accelerates and Optimizes SAP Applications

Users of business critical applications require fast response times when performing task based operations. More specifically, users of the earlier generation SAP suite of business and enterprise applications have grown accustomed to the performance and responsiveness of the SAPGUI, a thick client. As SAP and other business applications migrate to application delivery via web protocols, users are now required to use a browser to access the same functionality via HTTP and HTTPS. To maintain the look and feel of a thick client, these browser based applications are usually rich in graphics and images. When accessed from a local area network, users do not notice any degradation in response times. However, for users in branch offices, the expectation may be for "LAN-like" performance, but when combined with WAN latency and limited bandwidth, users are now seeing extremely poor performance and response times, even for simple tasks and operations. Due to the content included in these applications (such as graphics, style sheets, and Java Scripts) Blue Coat's Mach5 technologies - including object caching, byte caching and compression - are especially well suited to improving response times and reducing bandwidth consumption.

SAP Applications over the WAN

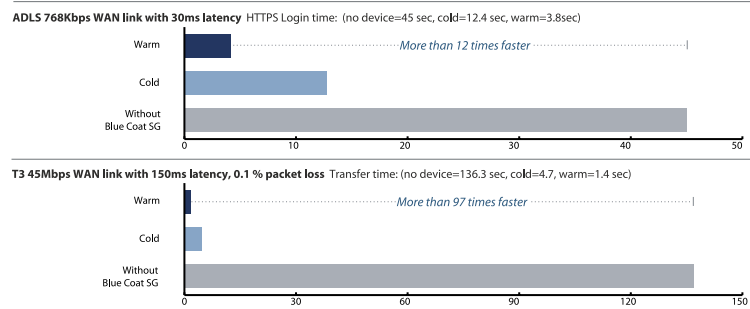
SAP business and enterprise applications are usually deployed in a multi-tiered architecture with back end datastores and server farms hosting application servers/portals. While SAP can be deployed in various methods, the client entry point to the SAP application server/portals are typically hosted either internally or at an external hosting site. Users are normally required to authenticate via an HTTPS or HTTP forms page. Once the user is logged in, the user is tracked through a cookie and then redirected to the portal page. From the portal page, users can then access other types of applications and resources.

Using a browser to access SAP applications over the LAN versus a WAN can lead to completely different user experiences. For example, while login times over a LAN may take only 2 seconds to complete, the same login from a branch office across the WAN may take 25 seconds or more depending on the bandwidth, latency, and packet loss.

Performance Results

In a test of SAP login over an ADSL 768 Kbps link with 30ms latency, ProxySG appliances improved login times by 12 times or more, while also reducing bandwidth usage by up to 99%.

In a test of SAP file retrieval over a T3 45 Mbps link with 150ms latency and 0.1% packet loss, ProxySG appliances improved file retrieval times by 97 times or more, reducing bandwidth usage by more than 99%.



How Blue Coat Accelerates and Optimizes SAP Applications

Since SAP's business and enterprise applications are rich in graphics and other cacheable content, Blue Coat's object caching algorithms and heuristics are extremely effective. Objects that are cached are served immediately to users from the branch SG appliance, recreating the "LAN like" user experience.

HTTP and HTTPS protocol optimizations are also effective in reducing the number of round trips, while TCP optimizations maximize overall transfer and link utilization. Since SAP recommends that traffic over the WAN be encrypted, Blue Coat's SSL hardware accelerators decrease the time required for SSL handshakes and bulk encryption, minimizing response times, while offloading SAP servers.



Blue Coat Benefits

Improve user productivity, reduce bandwidth usage

Object and byte caching significantly improve SAP application response times while conserving bandwidth.

Secure/Simple Deployment

- Avoid exposing sensitive private keys from SAP servers unlike other SSL solutions.
- Easy to deploy, no need to explicitly gather and install/import private keys for each and every SAP application.
- Securely accelerate Internet/outsourced SAP applications.

Server Offload

Deploy Blue Coat for SAP acceleration to offload and reduce CPU/connection utilization on servers or increase server capacity. Competing WAN Optimization products that operate at the transport layer do not help with server overload.

Remove Unwanted Traffic

Deploy Blue Coat to unclog your networks by removing business irrelevant and malicious web traffic hiding inside HTTPS.

Secure the Web

Blue Coat provides granular and flexible policy to enforce your company's security requirements and protect your users.

Finally, Blue Coat's byte caching and compression techniques also reduce the amount of traffic that needs to be sent over the WAN, freeing up bandwidth for other applications.

About Blue Coat MACH5 Acceleration Technology

Blue Coat MACH5 technology is a patent-pending combination of five separate application management and tuning technologies that provide unrivaled improvements in application performance and bandwidth utilization. Whether at the edge of your network, or right in the heart of it, MACH5 technology provides a powerful toolkit for meeting any application delivery challenge. These technologies include:

Bandwidth Management

Assign priority and network resources based not only on port or device, but on users, applications and content to more accurately reflect your corporate policies on the network. Works by itself, or integrates with your infrastructure QoS to provide application intelligence to the packet switching network.

Protocol Optimization

Improves the performance of protocols that are inefficient over the WAN through specific enhancements that make them more tolerant to the higher latencies typically found there. Blue Coat has been optimizing network protocols for over a decade, and offers multiple improvements for TCP, CIFS, HTTP, HTTPS, MAPI and most streaming video and IM protocols.

Byte Caching

Cache repetitive traffic found in the byte stream and serve it locally to reduce the amount of traffic that actually uses the WAN at all. Works like a customized compression algorithm for your network traffic, and leads to dramatic bandwidth savings.

Object Caching

Store files, videos and web content locally, providing LAN-like performance for WAN users, without the overhead and risk of traditional wide area file services. For content delivery, no technology does more to reduce latency and bandwidth to improve the end user experience.

Compression

Inline compression can reduce predictable patterns even on the first pass, making it an ideal complement to byte caching technology.

SG Client

SG Client extends application delivery and acceleration to the desktop. Using MACH5 technology, including caching, compression and protocol optimization, the SG Client accelerates web and office applications for roaming and small branch users. The SG client delivers LAN-like user experience with a simple and easy footprint for installation, configuration, deployment and ongoing maintenance.

