Performance Summary

> Enhance overall end-user experience and productivity in branch offices

> Send email 34 times faster, completing in seconds instead of minutes

> Blue Coat ProxySG Acceleration Edition provides MAPI 2003 protocol optimizations to ensure smooth email operations

Test Scenario

These tests were performed using Outlook 2003 on a workstation running XP SP2, and Exchange 2003 on a server running Windows 2003 SP2. The tests were run on a simulated 1.544Mbps (T1) WAN link with 100ms latency.

> Branch user test scenario: an email is sent from the branch office to another person in the same branch office.

> Broadcast test scenario: an email is sent from the branch office to multiple people in corporate headquarters.

> 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.

Blue Coat Accelerates and Optimizes Microsoft Email Applications

Corporate email applications are the backbone of any successful business, connecting users through communication, collaboration and calendaring features for productivity. As a result, IT organizations devote tremendous effort to ensure smooth email operation even across networks that suffer from latency and bandwidth constraints. Email systems and applications, such as Microsoft Exchange 2003 and Outlook 2003, recognizing the needs of the modern, distributed organization have developed synchronization and optimization improvements to enhance end user experience and minimize bandwidth requirements.

While these new features help address some of the issues introduced by latency and bandwidth limitations, users in branch offices still suffer poor performance. Blue Coat provides an end-to-end acceleration solution to improve performance and response times, reduce and prioritize bandwidth usage, and significantly reduce the time to complete email operations.
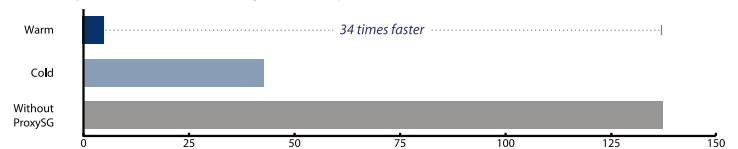
Microsoft Email Applications over the WAN

Microsoft email applications are mission and business critical. They are used for messaging, calendaring, and in many cases, file transfer and collaboration. Users in branch offices, unaware that emails need to traverse the WAN, often send large attachments to various users throughout the enterprise, even if they are in the same branch office. These emails not only take a long time to get delivered, they can congest the WAN, causing other applications to suffer.

The optimizations in Outlook 2003 and Exchange 2003, along with protocol improvements in MAPI 2003, are not enough to give users in branch offices a smooth and problem-free experience. Even though Cached Exchange Mode allows remote users to remain productive by working offline, it does not address the fundamental issue that WAN latency and bandwidth limitations degrades performance for mail that must still be sent and received.

Performance Results

In tests with Outlook 2003 and Exchange 2003, Blue Coat ProxySG appliances reduced the completion time more than 24 times. The tests included sending an email from a branch office with a 5MB attachment to multiple people at corporate headquarters, over a WAN link of 1.544 Mbps (T1) with 100ms latency.

Branch user scenario, 1.544 Mbps T1 WAN with 100ms latency. Time to complete: (without= 137 sec, cold= 42 sec, warm= 4 sec)

Broadcast scenario, 1.544 Mbps T1 WAN with 100ms latency. Time to complete: (without= 73 sec, cold= 29 sec, warm= 3 sec)
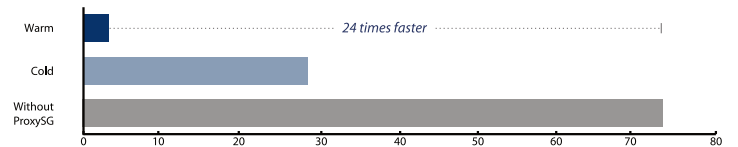
How Blue Coat Accelerates and Optimizes Microsoft Email Applications

ProxySG Acceleration Edition TCP optimizations and MAPI 2003 protocol enhancements improve and accelerate Microsoft Email applications over the WAN. Byte caching and compression technologies help reduce redundant data and attachments, while batching and pre-population provides users with a "LAN-like" experience when downloading email. Additionally, the Blue Coat solution also provides the ability to employ bandwidth management/QoS, allowing for any class of traffic to be prioritized, ensuring that Email services remain reliable.

About Blue Coat Acceleration Technology

Blue Coat acceleration technology is a patent-pending combination of data reduction and application acceleration techniques that provide measurable improvements in performance and reduction of bandwidth. Whether at the edge of your network, or right in the heart of it, Blue Coat acceleration technology provides a powerful toolkit to optimize performance for distributed applications.

These technologies include:

Protocol Optimization

Improves the performance of protocols that are inefficient over the WAN by eliminating the impact of latency native to their design. Blue Coat has been optimizing network protocols for over a decade, and offers multiple improvements for TCP, CIFS, HTTP, HTTPS, MAPI and streaming video and IM protocols.

Byte Caching and Compression

Dictionary-based gigabyte caching combines high performance disk storage for large byte patterns with innovative indexing and referencing techniques to drastically reduce bandwidth from large, repetitive data transmission. Inline compression reduces predictable patterns even on the first pass, making it an ideal complement to byte caching technology.

Asymmetric Pipelining and Object Caching for Web and SSL

Blue Coat's pipelining parallelizes multiple connections within compound web pages, moving data and objects much more quickly to the user. Object caching, with patented adaptive refresh, assures that the freshest content is served immediately to the users – without the network wait. Blue Coat delivers this acceleration in an asymmetric architecture, requiring only a single box at the branch to accelerate internal and external HTTP and SSL traffic – with no appliance required on the other side of the transaction.

Video Split Streaming, Object Caching & CDN

Large video files – whether static or streamed live – are difficult to deliver in distributed environments due to large bandwidth requirements. Blue Coat's live split streaming takes a single stream from the WAN and splits it into multiple streams at the remote site, enabling all employees to view live streams at the bandwidth cost of just one stream. Video caching makes on-demand video instantly available to employees, while CDN capabilities enable you to pre-position content at non-peak times.

Recreational traffic control & SaaS Acceleration

Classify each external website access with Blue Coat WebFilter and our real time WebPulse service in order to prioritize business, minimize recreation and prevent malware infections. Unique internet caching capabilities let you reduce bandwidth for allowed Web sites – and accelerates Software as a Service (SaaS) applications important to your business. Note, Web filtering and WebPulse are only available with the ProxySG Proxy Edition.

Bandwidth Management

Prioritize 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.

About Blue Coat ProxyClient

ProxyClient builds on Blue Coat's Secure Web Gateway and WAN Optimization technologies to secure and accelerate application delivery for roaming and small branch users. Combining Blue Coat's acceleration technologies with Blue Coat WebFilter and WebPulse service, ProxyClient delivers LAN-like user experience, policy enforcement and malware protection at the PC-level.