



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 MACH5 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 Systems provides an end to end solution based on MACH5 technology 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

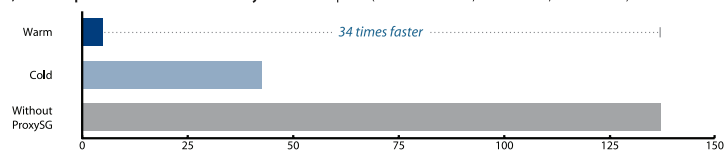
Microsoft email applications are mission and business critical. They are used for messaging, calendaring, and in many cases, file transfer and collaboration. Users in branch offices, unaware that emails need to traverse the WAN, often send large attachments to various users throughout the enterprise, 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.

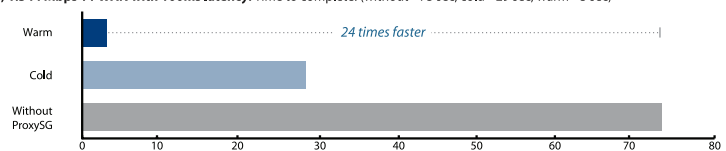
Performance Results

In tests with Outlook 2003 and Exchange 2003, Blue Coat SG 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

Blue Coat's MACH5 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.



Blue Coat Benefits

Shorten email transfer times

Byte caching and compression significantly reduces the time required to send emails, especially for redundant attachments.

Reduce bandwidth usage

Compression and byte caching of email attachments reduces the amount of data that needs to traverse the WAN.

QoS and Bandwidth Management

Deploy Blue Coat to intelligently prioritize and bandwidth shape email traffic, ensuring reliable access to email.

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.

About the Blue Coat ProxyClient

ProxyClient builds on Blue Coat's secure web gateway and acceleration technologies to extend application delivery to the desktop. Using MACH5 technology, including caching, compression and protocol optimization, ProxyClient accelerates web and office applications for roaming and small branch users. ProxyClient delivers LAN-like user experience and Blue Coat web filtering with a simple and easy footprint for installation, configuration, deployment and ongoing maintenance.

