



Performance Summary

- › Realize up to 117 times improvement for applications using FTP.
- › Reduce bandwidth utilization by 99 percent or more for applications using FTP.
- › Guarantee minimum bandwidth for FTP traffic, improve user productivity with policy to selectively prioritize other applications or users relative to FTP.

Test Scenario

These tests were performed using a Windows XP client retrieving files from an ftp server hosted on Windows 2003 server. The tests were run on a simulated WAN of 256Kbps with 40ms latency, and a T1 link with 100ms latency.

- › For the cold test, the starting condition is no traffic has passed through the Blue Coat yet.
- › For the warm test, the starting condition is same or similar traffic has already passed through the Blue Coat once.

Blue Coat Accelerates and Optimizes FTP

FTP, or File Transfer Protocol, is one of the earliest and simplest methods to transfer data over a private network or the Internet. Today, enterprises still rely heavily on FTP for bulk file transfers, whether it is backup, video, images, or raw data in a global environment. However, FTP performance can slow to a crawl when transferring data across the WAN due to high latency and limited network bandwidth. Blue Coat appliances accelerate FTP transfers by neutralizing the effects of latency and eliminating repetitive data transferred over the WAN.

FTP over the WAN

FTP runs over TCP. FTP clients establish a connection to FTP servers, typically on port 21, to open a control channel. To actually transfer files, an additional connection, the data channel, must also be established. The transfer mode specified in the control channel can either be active or passive mode FTP.

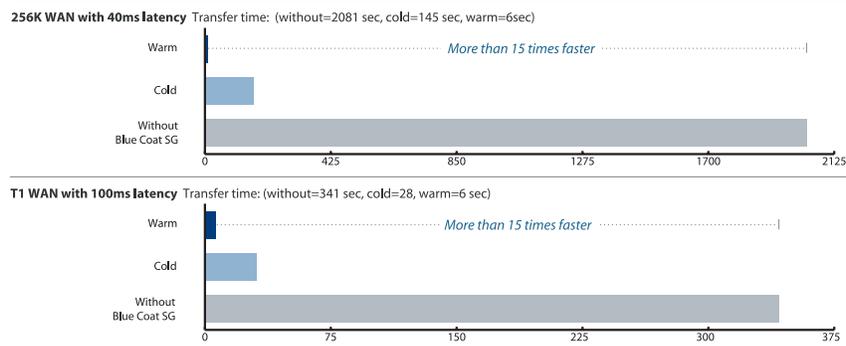
In active mode, the FTP client opens and listens on a random port and specifies this port number to the server to initiate the data channel.

In passive mode, the FTP client receives a random port from the server to which it can bind to for the data channel.

Many applications continue to use FTP, whether they are commercial backup tools, or internally developed utilities leveraging existing tools and scripts.

Performance Results

In a test of transferring a file via FTP, ProxySG appliances reduced the transfer time by over 99% to LAN wire speed, and decreased bandwidth usage by up to 100%. The test was transferring a 50MB file over a 256Kb WAN with 40 ms latency, and over a T1 with 100ms latency.



How Blue Coat Accelerates and Optimizes FTP

Blue Coat appliances have been accelerating and optimizing FTP traffic since 1996. Blue Coat is the industry leader in web acceleration, pioneering object caching and TCP protocol optimization techniques. FTP transfers over large bandwidth networks can be massively accelerated with TCP optimizations, while repeat file transfers can be object cached.

In addition to TCP protocol optimization and object caching, Blue Coat's MACH5 byte caching and compression technologies, in combination with bandwidth management, further improve and accelerate any FTP application. FTP traffic usually contains compressible and repetitive elements which respond extremely well to MACH5 byte caching and compression technologies to significantly reduce overall data transferred.

Finally, the Blue Coat solution also provides the ability to employ bandwidth management/QoS for any class of FTP traffic to be appropriately prioritized in alignment with the needs of the organization. For example, FTP traffic can be given maximum priority at night when an offline replication must complete, but be given secondary priority in the day time when user productivity is paramount.



Blue Coat Benefits

Improve transfer times, reduce bandwidth usage

TCP optimizations and Byte caching significantly decrease FTP transfer times while conserving bandwidth.

Share data immediately

Reducing file transfer times allows users to share data sooner.

Remove unwanted traffic

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

Secure the Web

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

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.

