



**Performance Summary**

- › Reduce the time required for data backups
- › Reduce bandwidth utilization by 90 percent or more, even for real-time data replication
- › Blue Coat MACH5 accelerates replication for Data Areas, Data Queues, User Profiles, Dynamic Database Changes, or IFS

**Test Scenario**

Tests were performed with \*noMAX data replication software on an IBM AS400. The tests were run on a simulated 1.544Mbps (T1) WAN link with 50ms latency.

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

**Blue Coat Accelerates and Optimizes \*noMAX**

Organizations collect vast amounts of information, with data storage being one of the greatest challenges in comprehensive data management. Maximum Availability's \*noMAX Suite of Products allows for reliable replication of data for IBM System i servers, most often over the WAN to a remote disaster recovery center. WAN links, however, have higher latency and much less bandwidth than either a LAN or Fibre Channel network, causing poor performance and bandwidth congestion for replication of even small amounts of data. Blue Coat Systems provides an end-to-end solution based on MACH5 technology to reduce bandwidth usage and significantly reduce the time to complete data replication tasks, whether the replication is for Data Areas, Data Queues, User Profiles, Dynamic Database Changes, or Integrated File Systems (IFS).

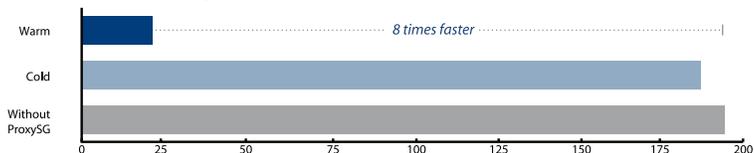
**\*noMAX Products over the WAN**

The \*noMAX Suite of Products enables enterprises to realize savings in resources, time, and cost through the use of remote journaling and real-time replication of objects and data between ASP's (Application Service Providers) and LPAR's (dynamic logical partitions) on multiple systems. Additionally, replication of IFS - including file paths, structures and IFS data - is also supported. Regardless of which tasks are performed, the latency and limited bandwidth associated with WAN links cause replication tasks to take hours, or even days in some cases. With these tasks taking so long, how can companies effectively maintain backups? Or worse, how can they restore them quickly in the event of a disaster?

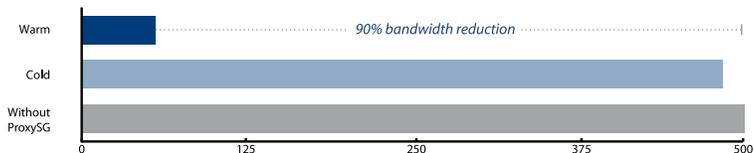
**Performance Results**

In a test using \*noMAX Defender installed on an IBM AS400, Blue Coat ProxySG appliances reduced data replication time by over eight times, and decreased bandwidth usage by over 90%. The test was a replication of a 500 MB database over a 1.544 Mbps (T1) link with 50ms latency.

**Replication Test, 1.544 Mbps WAN with 50ms latency: Time to Complete:** (without= 195 mins, cold= 190 mins, warm= 24 mins)



**Replication Test, 1.544 Mbps WAN with 50ms latency: Bandwidth used:** (without= 500 MB, cold= 490 MB, warm= 50 MB)



**How Blue Coat Accelerates and Optimizes TCP**

Blue Coat's MACH5 byte caching and compression technologies, in combination with TCP enhancements and bandwidth management, improve and accelerate the \*noMax Suite of Products by eliminating redundant data over the WAN and round-trip latencies. File and data replication tasks, whether from Data Areas or Queries, or from IFS, all contain compressible and repetitive elements which respond extremely well to MACH5 byte caching and compression technologies. Additionally, the Blue Coat solution also provides the ability to employ bandwidth management/QoS for any class of traffic, ensuring that business-critical traffic is uninterrupted.



Blue Coat Benefits

Shorten replication times

Byte caching significantly reduces the time required to complete data replication tasks.

Reduce bandwidth usage

Conserve bandwidth through the use of byte caching, by reducing the amount of repetitive data that traverses the WAN.

QoS and Bandwidth Management

Deploy Blue Coat to intelligently prioritize and bandwidth shape replication traffic relative to other business--critical traffic.

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.

