Blue Coat Accelerates and Optimizes HTTP

Enterprises face mounting challenges as the adoption of web based HTTP applications grow, many of them mission critical. Although easy to use and simpler to manage, the current generation of Web 2.0 applications are more bandwidth hungry and latency sensitive than the more static applications they replace. Worse, as organizations rely more on HTTP web applications, it becomes harder to separate mission critical HTTP traffic from casual web surfing. Blue Coat appliances intelligently optimize HTTP traffic, accelerating applications, reducing latency, increasing WAN throughput, and controlling unnecessary web traffic.

HTTP over the WAN

The immense growth and popularity of HTTP is due to the rich and diverse set of content and applications hosted on the Internet. Organizations have embraced this model, "webifying" internal applications and services within an enterprise’s private network (Intranet). This is all made possible because of HTTP, or Hyper Text Transfer Protocol, which is the underlying protocol used by the Web. Today, modern web applications provide a rich user experience, at the cost of consuming bandwidth and creating additional latency.

HTTP consists of simple commands or "methods", and relies on a simple request/response mechanism to define how content is transferred between clients (typically browsers) and web servers. While HTTP is a stateless protocol, modern web applications may use cookies or other techniques to preserve state or "session" to return dynamic content customized for each user session.

Performance Results

In a test of transferring a file via HTTP, 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 40ms latency, and over a T1 with 100ms latency.

How Blue Coat Accelerates and Optimizes HTTP

Blue Coat appliances have been accelerating and optimizing HTTP traffic since 1996. Blue Coat is the industry leader in web acceleration, pioneering object caching and protocol optimization techniques such as pipelining (parse and simultaneously retrieve multiple embedded objects in parallel) and adaptive refresh (refresh based on internal model of how actual web content changes). Blue Coat also provides HTTP level compression, and provides a rich and granular policy framework to control or rewrite specific classes of HTTP requests and responses.

In addition to protocol optimization and object caching, Blue Coat’s MACH5 byte caching and compression technologies, in combination with TCP enhancements and bandwidth management, further improve and accelerate any web application. Many dynamic web applications contain compressible and repetitive elements which respond extremely well to MACH5 byte caching and compression technologies. Finally, the Blue Coat solution also provides the ability to employ bandwidth management/QoS for any class of HTTP traffic to be appropriately prioritized in alignment with the needs of the organization.
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.

---

Blue Coat Benefits

**Improve user productivity, reduce bandwidth usage**
Object and Byte caching significantly improve HTTP response times while conserving bandwidth.

**Direct to Net Acceleration**
Continue to accelerate web HTTP applications even with a single Blue Coat appliance. Other vendors need a symmetric or paired installation to accelerate HTTP over the Internet. Only Blue Coat provides a complete solution that can still accelerate web traffic with a single appliance.

**Server Offload**
Deploying Blue Coat for HTTP acceleration offloads web servers, unlike competing products which operate at the transport layer and may create server overload.

**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 and protect your users.

---

**Typical Speedup**

<table>
<thead>
<tr>
<th>Service</th>
<th>Typical Speedup</th>
<th>Upper/Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Services – CIFS</td>
<td>40</td>
<td>300</td>
</tr>
<tr>
<td>File Services – NFS</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Collaboration – MAPI Email, Exchange</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>Collaboration – Lotus Notes</td>
<td>20</td>
<td>70</td>
</tr>
<tr>
<td>Web – Internet HTTP/HTTPS</td>
<td>20</td>
<td>400</td>
</tr>
<tr>
<td>Web – HTTPS ERP, Web 2.0</td>
<td>20</td>
<td>240</td>
</tr>
<tr>
<td>Backup and Replication</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>Streaming Video – Real, Microsoft</td>
<td>18</td>
<td>1000</td>
</tr>
<tr>
<td>Software Distribution – SMS</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>Database – SQL</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>ERP – Fat Client</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Citrix</td>
<td>20</td>
<td>200 or more - &gt;</td>
</tr>
</tbody>
</table>

---

Blue Coat Systems, Inc. 1.866.30.BCOAT // 408.220.2200 Direct // 408.220.2250 Fax // www.bluecoat.com

Copyright © 2007 Blue Coat Systems, Inc. All rights reserved worldwide. No part of this document may be reproduced by any means nor translated to any electronic medium without the written consent of Blue Coat Systems, Inc. Specifications are subject to change without notice. Information contained in this document is believed to be accurate and reliable, however, Blue Coat Systems, Inc. assumes no responsibility for its use. Blue Coat is a registered trademark of Blue Coat Systems, Inc. in the U.S. and worldwide. All other trademarks mentioned in this document are the property of their respective owners. V05-AB-HTTPAPPS-1208