Web Proxy and Internet Optimization

Enterprises are incorporating cloud services into their on-premise services, giving rise to a new kind of “hybrid” architecture. However, hybrid deployments create new issues for modern IT departments that are already dealing with a diverse set of requirements and business challenges: rapid adoption of SaaS, cloud, and video-based collaboration, latency due to cloud services, and the impact of moving LAN workloads to cloud services on Internet bandwidth.

How do you manage recreational Internet traffic while using bandwidth really required for business-critical applications? How do you control costs for additional bandwidth and MPLS circuits, as well as improve the end-user-experience for media and other applications?

Riverbed directly addresses these issues with the SteelHead Web Proxy capability, allowing you to improve web application performance while reducing bandwidth. End users enjoy a high quality experience and productivity is increased, all while reducing network infrastructure costs.

Riverbed has enhanced traditional HTTP interception and caching. While traditional SteelHead optimization requires a SteelHead appliance on both sides of the WAN, the new Web Proxy feature is a truly single-ended solution that optimizes internet HTTP(S) traffic using a single SteelHead appliance.

Some of the new key benefits of the Web Proxy feature include:

- Optimized business-critical video content and reduce congestion
- Reduced bandwidth consumption due to recreational or non-mission-critical traffic such as YouTube and Facebook
- Visibility into Internet traffic from audit trails
- Centralized configuration and management of Internet traffic

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Web Proxy optimization allows Internet traffic to either be backhauled to the corporate data center or connected directly from the branch.

The Web Proxy works transparently – it's easy to deploy and invisible to users. Web object caching includes all cacheable items delivered via HTTP(S) including large downloads like static video on demand (VoDs), YouTube video, system updates, or web site graphics.
As depicted in Figure 1 below, only one SteelHead is required. In this example, Internet optimization is implemented using only the branch-side SteelHead.

The SteelHead Web Proxy cache data store is distinct from the SteelHead scalable data reduction data store.

All user activity is logged for troubleshooting and audit and IT administrators can track all Internet optimized connections.

Some Internet video services, specifically YouTube, can take advantage of the caching features of Web Proxy. Other cacheable video content that is static in nature (for example, video-on-demand training and other non-streaming video services) can usually be cached as they are frequently marked as cache-eligible files.

HTTPS Optimization and Web Proxy

HTTPS proxy optimization allows caching content that is SSL encrypted. You simply configure a global HTTPS whitelist in the SteelCentral Controller for SteelHead (SCC) to contain the domains that you want to cache, as depicted in Figure 2 below. The required proxy certificates are created and signed automatically by SteelHead and SteelCentral Controller for SteelHead respectively; SteelCentral Controller for SteelHead then manages the automatic distribution of the certificates to the SteelHeads.
Additional Information

- The Web Proxy feature requires that SteelHead appliances be deployed in-path. WCCP/PBR or out-of-path deployments are not supported.

- The largest individual object size that the Web Proxy can cache is 2GB for all supported SteelHead models other than the CX555 and CX755 which support a 1GB limit.

- Interoperability with upstream web proxy that does URL/content filtering is supported when the upstream proxy is in transparent mode.

- The web proxy feature is available on SteelHead XX55 and XX70 models in 9.1 or later release.

About Riverbed

Riverbed, at more than $1 billion in annual revenue, is the leader in application performance infrastructure, delivering the most complete platform for the hybrid enterprise to ensure applications perform as expected, data is always available when needed, and performance issues can be proactively detected and resolved before impacting business performance. Riverbed enables hybrid enterprises to transform application performance into a competitive advantage by maximizing employee productivity and leveraging IT to create new forms of operational agility. Riverbed’s 26,000+ customers include 97% of the Fortune 100 and 98% of the Forbes Global 100. Learn more at Riverbed.com/SteelHead