

Content Delivery Solutions for Tomorrow's ISPs

As the explosive growth of new Internet users continues, Internet Service Providers (ISPs) must quickly scale their network infrastructures to provide high-quality service for all their users. Service quality is critical for broadband service offerings as subscribers expect the fastest response times available. Network Appliance™ NetCache provides ISPs with a high-performance Web caching platform. NetCache provides local delivery of Web and streaming media traffic to enable ISPs to accelerate downloads, improve streaming media quality, and easily scale their networks to accommodate expanding traffic and content-distribution requirements.

Challenges to ISPs

Bandwidth capacity is being overwhelmed due to the growth in the subscriber base and the increase in data-rich content. These new users are requesting a variety of Internet content from standard Web pages and file transfers to network news and streaming media. In response, service providers have been investing in additional high-bandwidth WAN connections to both their network data centers and POPs. However, new WAN connections do not adequately solve the problem as new users being added to the network quickly use up this new bandwidth. The results are slow Web response times and poor quality of service perceived by the end user. In addition to quality of service challenges, service providers are faced with increased competition, which typically forces lower subscriber access fees. To improve competitiveness, service providers must offer new value-added services to their subscribers to develop new revenue streams.

The NetCache Appliance

Network Appliance NetCache is a high-performance content delivery appliance that meets the growing bandwidth demands of service providers' networks. By deploying NetCache throughout the network, Web content is stored and served locally, which will consider-

ably reduce network congestion. Installing NetCache instead of additional WAN connections accelerates network expansion, provides significant cost savings, and offers a rapid return on investment.

Acceleration

Local caching means that frequently viewed Web pages do not have to request content from the origin Web servers. Content is delivered faster and end user response times are reduced. NetCache can reduce end user response times by a factor of 10 and lower bandwidth costs by up to 50%.

Ease of Administration and Scalability

The NetCache appliance architecture ensures system availability and optimal performance with minimal administration and maintenance. With transparent caching, a NetCache installation does not require subscribers to reconfigure their browsers as Web traffic can be routed transparently to the cache using an L4 switch or a Web Cache Control Protocol (WCCP). As your network expands, additional NetCache appliances can easily be installed in a cluster or a hierarchy to rapidly scale your capacity. Easily deployable at backbone exchange points, data centers, and remote POPs, NetCache provides a complete Web caching solution for your entire network.

Content Filtering

Offered with integrated Web content filtering, NetCache can be used to provide new value-added services to filter inappropriate content for home or corporate users. The filtering list of blocked Web sites is automatically updated on a weekly basis to ensure the blocked sites are current and accurate. NetCache can also control access based on user-defined rules such as time of day or user group.

Streaming Media

By efficiently proxying streaming media content within your network, the NetCache streaming media solution can split audio and video streams to serve thousands of simultaneous users with improved quality. NetCache supports all three of the main streaming media formats.

Network News

By reducing the resources and maintenance required for Network News Transfer Protocol (NNTP) the NetCache NetNews caching solution provides a cost effective, scalable, and simplified solution to improve delivery of news service.

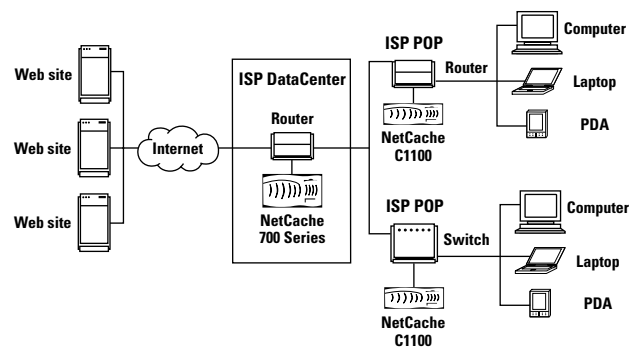
Value-Added Services

Network Appliance is a cofounder of the Internet Content Adaptation Protocol (iCAP). iCAP will enable ISPs to integrate value-added services at the edge of the network, offering new revenue opportunities such as virus detection and localized ad insertion, language translation, and delivery to wireless devices.

Case Example

A major European Internet Service Provider became one of the fastest growing ISPs in the region when it began to offer free Internet service to any new user. Several hundred thousand accounts opened within the first few months of this offer. To maintain this offer and its profitability, the European ISP had to rapidly and economically scale its network infrastructure. Adding new Internet WAN connections was impractical due to their high monthly costs and inability to install adequate connections fast enough.

The European ISP installed NetCache throughout its network and kept pace with its growing subscriber base. The NetCache deployment provided the ISP with a 50% reduction in Web traffic throughout its network.



Using NetCache at data centers and POPs, service providers can scale their networks to provide high-quality Web services, achieve significant bandwidth savings, and utilize a platform to build new value-added services.

Key NetCache Benefits

- ◆ Accelerates Web browsing and reduces network latency for end users by storing and serving Web content locally
- ◆ Controls network bandwidth demands and congestion by eliminating redundant traffic
- ◆ Reduces the need to install expensive Internet WAN connections at various network points to support a growing user base
- ◆ Provides an open, scalable platform for value-added services
- ◆ Reduces network demands for streaming media and provides improved quality
- ◆ Provides scalability with cluster and hierarchical capabilities as your network needs grow
- ◆ Delivers reliability with embedded appliance OS, file system, and RAID support
- ◆ Enables remote administration and manageability for deployment at points of presence

For more information on Network Appliance, visit our Web site at www.netapp.com.