Multi-user optimization for XenDesktop and XenApp

Citrix® XenDesktop™ is gaining momentum as the desktop virtualization solution of choice for businesses interested in delivering desktops as an on-demand service. XenDesktop relies on the Citrix ICA® delivery protocol to transmit interactive screen information and other application data between the desktop running in the datacenter and remote users. ICA is a highly efficient protocol that provides the best performance for single-user access over low bandwidth and high latency networks.

However, branch offices can present challenges for XenDesktop delivery due to the demands of increased user and application density competing for the same bandwidth. Customers are forced to make a trade-off between user experience and cost of ownership for virtual desktops and applications in the branch office. To maintain a consistent user experience, customers are spending money on network bandwidth upgrades at branch offices, delaying some of the ROI benefits associated with desktop and application centralization. Yet bandwidth upgrades have been unable to overcome the challenges and provide an optimal desktop performance for branch users.

Citrix Branch Repeater

Citrix® Branch Repeater™, with HDX™ IntelliCache and Broadcast technologies, provides groundbreaking multi-user optimization for virtual desktops and applications, allowing customers to get more out of their existing network infrastructure while providing a high definition user experience to branch office users.

How it works

HDX IntelliCache adaptively orchestrates with the XenDesktop and Citrix® XenApp™ server to disable the native ICA compression used for optimizing single-user sessions. It then optimizes XenDesktop and XenApp delivery across multiple user sessions by locally caching and de-duplicating transmission of commonly accessed data including bitmap graphics, files, print jobs and streamed media. Branch caching for hosted desktops and applications occurs transparently, requiring no additional configuration or tuning on the Branch Repeater appliance or the XenDesktop server. It fully supports basic and advanced ICA encryption to maintain end-to-end security while optimizing traffic delivered to the branch. Users in locations without Branch Repeater and mobile users working outside the office continue to benefit from native ICA compression for single-user sessions.

Figure 1: De-duplication of common data with branch caching

Branch caching for hosted desktops and applications works in conjunction with the HDX Broadcast technologies in Branch Repeater that provide reliable, high-performance XenDesktop delivery over any network.

Adaptive TCP flow control accelerates the flow of all TCP-based traffic, including ICA, by sensing and responding to high network latency and packet loss. The result is significantly higher network throughput and performance than standard TCP implementations.

Adaptive compression uses a highly tuned engine to compress ICA optimally based on traffic characteristics, infrastructure capabilities and network conditions.

Adaptive protocol acceleration performs intelligent acceleration of ICA while sensing and responding to the network and traffic conditions.

Traffic prioritization and QoS allows administrators to set rules that define which applications or ICA virtual channel types have the highest priority when there is severe network congestion.

Key benefits

Deliver a high definition user experience

The Branch Repeater multi-user optimization for XenDesktop and XenApp traffic accelerates time-consuming tasks such as printing, file downloads and video playback while speeding up application launch times by 37 percent.

Reduce desktop and application delivery network costs

Multi-user optimization reduces XenDesktop and XenApp traffic resulting in up to 25 times bandwidth savings per desktop and up to four times more XenApp users in each branch without upgrading bandwidth.

Accelerate ROI without sacrificing user experience

Branch Repeater accelerates the ROI associated with desktop and application centralization without compromising the high definition experience users expect.

Summary

Citrix Branch Repeater accelerates the ROI associated with desktop and application centralization by up to 50 percent. Branch office users expect the same level of user experience with virtual desktops and applications as they do with local desktops and applications. Citrix Branch Repeater with multi-user optimization for XenDesktop and XenApp helps meet this requirement by providing a high definition experience for branch office users.

Additional resources

- Visit http://www.citrix.com/branchrepeater and http://www.citrix.com/hdx
- Branch Repeater ICA Performance Assessment http://support.citrix.com/article/ctx120160
- Understanding Citrix HDX Technology for Optimizing the Branch Office http://support.citrix.com/article/CTX120455

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