

Improving the Performance of Oracle's Hyperion EPM Solutions

Accelerating EPM System Performance from the Data Center

Challenge

Web-enabling applications provide distinct accessibility benefits, but these benefits come at a cost. Web-based applications, for instance, consume at least 10 times more bandwidth than their client-server counterparts, creating performance and latency problems for remote users accessing the application over a WAN.

Solution

The Juniper Networks data center application acceleration (DX) platform dramatically improves the performance of Web-based EPM applications by increasing productivity of local, remote, and mobile users accessing the application over the WAN.

Benefits

Deployed in the data center in front of Web and application servers, the DX platform takes over the repetitive, CPU-intensive tasks typically performed by the servers themselves. Freed from these tasks, servers can perform much more efficiently because they can focus on doing do what they were designed to do: serve content and fulfill requests.

Enterprise performance management (EPM) software allows businesses to gather and integrate performance data from disparate sources throughout the organization and present the information in a standardized format, providing objective insight into how the company is actually doing.

Oracle, with its acquisition of Hyperion Solutions, a leading provider of performance management software, extends its business intelligence capabilities to offer the most comprehensive system for enterprise performance management, delivering solutions that enable corporate enterprises to collect, organize, and analyze performance data and then distribute that data throughout the organization using a rich, unified workspace to simplify the evaluation process. Oracle Enterprise Performance Management System integrates a modular suite of financial management applications with comprehensive business intelligence (BI) capabilities for reporting and analysis.

The Challenge

As corporate enterprises expand beyond traditional campus boundaries to include remote and branch offices around the globe, IT departments are finding it increasingly difficult to support the desktop client software required by client-server applications. In response, software vendors such as Oracle are Web-enabling their business applications and tools, allowing all users—local, remote, and mobile—to access the centralized application through a simple Web browser.

While Web-enabling these applications provides distinct accessibility benefits, these benefits come at a cost. Web-based applications, for instance, consume at least 10 times more bandwidth than their client-server counterparts, creating performance and latency problems for remote users accessing the application over a WAN. As the user population grows and as more Web-enabled applications are deployed, businesses need to purchase additional bandwidth to accommodate the rising traffic levels—an expensive proposition.

The problems don't end here. Web-enabled applications also put a tremendous strain on the Web tier—the Web and application servers in the data center that support the distributed workforce. As demands escalate and servers struggle to keep pace, performance suffers even more. To relieve the burden on back-end servers, businesses often deploy myriad point products to improve performance, enhance reliability, and impose and enforce security policies. As these devices grow in number, the data center becomes increasingly complex and costly, creating maintenance and management problems for IT and a financial burden for the company.

To fully realize the benefits of the Web-enabled Oracle applications, businesses need a solution that delivers the performance of client-server deployments, without the bandwidth demands imposed on remote, mobile, and branch-office users. They need a scalable solution that allows them to support a growing workforce without having to upgrade or redesign the data center infrastructure. They need a secure solution that eliminates the complexity and expense posed by the point products currently required to maintain passable performance.

The Juniper Networks DX Solution

Juniper Networks, a member of the Oracle Partner Network, delivers a solution that meets the challenges and makes Oracle's Hyperion applications powerful and efficient Web-based applications in today's extended enterprise.

The Juniper data center application acceleration (DX) platform dramatically improves the performance of Web-based EPM applications by increasing the productivity of local, remote, and mobile users accessing the application over the WAN. Deployed in the data center in front of Web and application servers, the DX platform takes over the repetitive, CPU-intensive tasks typically performed by the servers. Freed from these tasks, servers can perform much more efficiently because they can focus on doing what they were designed to do: serve content and fulfill requests (Figure 1).

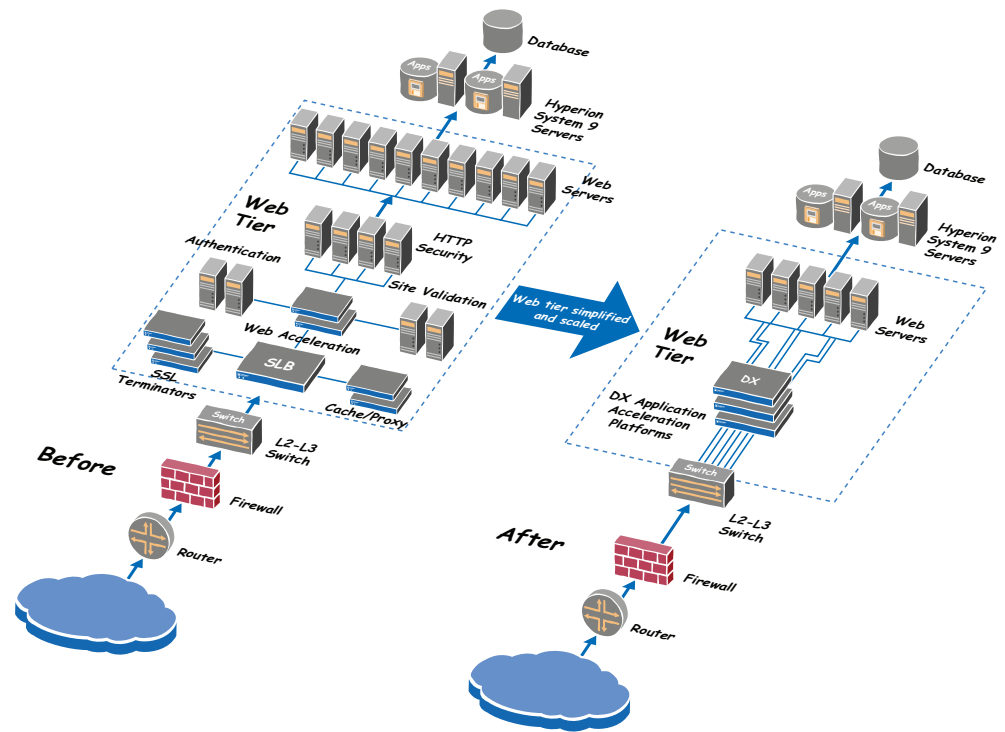


Figure 1 Data Center Network Before and After DX Deployment

To reduce complexity in the data center, the DX platform also integrates multiple services such as server load balancing (SLB), Secure Sockets Layer (SSL) encryption and termination, TCP connection multiplexing, object caching, and Web-object compression. By consolidating these capabilities on a single device, the DX platform eliminates the need for multiple point products in the data center, reducing overhead and complexity while delivering a highly scalable solution that easily grows with the enterprise without requiring additional infrastructure investments. For remote and mobile users accessing the Hyperion applications over the WAN, the DX platform's compression feature reduces the amount of traffic flowing across the link and competing for a limited amount of bandwidth, accelerating page downloads by up to 50 percent.

The DX platform also provides complete application and data center security by serving as a full request-and-response-fluent bidirectional HTTP proxy that processes and rewrites all incoming requests and outgoing responses, providing a protective buffer that shields back-end resources from external threats.

Features and Benefits

To relieve the connection-management burden on back-end servers, the DX platform multiplexes thousands of incoming TCP connections down to just a few by assuming responsibility for resource-intensive tasks such as session setup, session teardown, and SSL termination and encryption. As a result, servers can devote most of their processing power to fulfilling requests, enabling them to handle four times the normal number of transactions and deliver much faster response times for all users, even if they are dialing in over a 56k line.

The DX platform also provides a highly scalable solution that grows with the business, dramatically reducing data center overhead and optimizing existing resources. Users can initially deploy a DX platform to provide simple SLB and SSL termination capabilities. As demands increase, more powerful functions such as HTTP acceleration, compression, protocol scrubbing, 3G caching, and the AppRules adaptive content processing features can be added via simple license upgrades. This scalable approach allows businesses to eliminate their multiple point products, reducing data center infrastructure, management, administration, and bandwidth costs by up to 60 percent.

The DX platform's ActiveN scaling feature improves overall application availability and performance for very large enterprise networks by allowing new DX devices to be added incrementally, as needed, to meet escalating demands. Up to 64 units can be combined in a mesh topology, and the entire DX cluster acts as a single device, linearly scaling performance and delivering a new level of availability and reliability.

Working together, the DX platform's features deliver a powerful solution for accelerating the performance of Hyperion application deployments. Joint test results (see the June 3, 2005, Hyperion Solutions Performance Engineering Test Report) show that the DX platform reduces response times for complex EPM transactions by to 60 percent, while simpler transactions can be completed four times faster with the DX solution. With the DX application acceleration platform, Hyperion users can dramatically improve user productivity while reducing server and data center costs through more efficient operations and lower maintenance and management expenses.

Solution Components

The Juniper Networks solution consists of the Juniper data center (DX) application acceleration platform.

Summary: Oracle-Juniper Partnership for Hyperion Applications

Because of the mission-critical nature of Hyperion applications, it is essential that users have guaranteed, highly available, and reliable access to their required data. In addition, because many Hyperion systems are widely distributed, with users dispersed to remote locations around the world, secure and fast response times are key requirements.

Juniper Networks and Oracle have joined forces to deliver best-in-class Hyperion solutions to their joint customers, providing a new level of performance and reliability for Web-enabled BPM applications. The Oracle and Juniper partnership provides the customers of both companies with a highly secure, available, and high-performance environment for delivering the most powerful BPM solutions available today.

Next Steps

To find out how Juniper Networks data center application acceleration platforms can improve the performance of Web-enabled EPM applications, contact your Juniper Networks representative.

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ORACLE CERTIFIED ADVANTAGE
PARTNER



CASE STUDY: ChartOne

Business Benefits:

- Saved more than \$150,000 in server hardware upgrade costs
- Eliminated client-server application models in remote and branch offices
- Reduced number of costly security certificates required

ChartOne, Inc., a San Jose, California-based provider of medical chart management products and services, made a strategic decision to migrate its enterprise applications, including a Hyperion EPM solution, from a client-server model to a Web-based approach. Little did the company know that the move—designed to provide users with more flexible browser-based access to critical applications and to centralize operations to simplify maintenance and management—would render the applications virtually unusable for remote and mobile users.

Performance degraded so much that users at the company's 10 remote offices located around the country found that loading a simple tickler screen for one of the mission-critical applications could take up to 4 hours. The company spent more than \$50,000 on additional application servers, storage devices, and terminal servers just to keep up with demand, but performance was still unacceptable. Productivity, particularly within the accounts-receivable department—the lifeblood of the organization—fell by 20 percent or more.

Just as ChartOne's director of IT was preparing to ask for hundreds of thousands of dollars in infrastructure upgrades, he heard about a potential solution: the DX application acceleration platform from Juniper Networks. Feeling that he had nothing to lose, the director rolled out a pilot installation for a small group at the San Jose headquarters, providing a new URL for accessing one of the more popular applications. The results were immediate and impressive—so much so that the director immediately cancelled plans for \$150,000 worth of capital spending and adopted the DX platform as the corporate standard for fronting business-critical Web-enabled applications. All users—local, remote, and mobile—can now access the Hyperion EPM and other applications through a browser connection, and the company has sufficient memory and performance overhead to postpone the purchase of additional networking equipment.

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

To purchase Juniper Networks solutions, please contact your Juniper Networks sales representative at 1-866-298-6428 or authorized reseller.