silver peak™ | Performance Brief: Oracle E-Business

Enhance the performance of your Oracle application with Silver Peak

Oracle E-Business is an integrated suite of applications for the enterprise that relies on an Oracle Database as the backend and a Web frontend.

Oracle E-Business may perform well within an office, but performance often deteriorates across a wide area network (WAN). SQL queries and Oracle Data Guard, which is used to protect Oracle databases, often move large amounts of data across the WAN. Real-time SQL queries are also susceptible to latency and loss, inhibiting database access across large geographic distances. Older E-Business deployments may also rely on Jinitiator, which creates a stream of small packets on the WAN, each requiring a TCP acknowledgement. This magnifies the effects of latency and slows overall performance.

Addressing these challenges has been complicated by numerous factors. The Oracle E-Business Suite encrypts traffic at the client, undermining deduplication technologies. Adding WAN bandwidth fails to address the challenges of latency and network congestion, such as packet loss or out-of-order packets. Lower-priority traffic can also add congestion to the WAN, undermining E-Business performance.

Silver Peak Accelerates Oracle

Silver Peak enables Oracle applications to perform as well across the WAN as on the LAN. Organizations can secure Oracle traffic end-to-end with SSL. Silver Peak's byte-level, deduplication and compression algorithms reduce the amount of data sent across the WAN by 10-times or more. Latency problems are overcome by optimizing TCP and CIFS, and selecting the shortest path. Network congestion problems, which disrupt E-Business applications, are also eliminated or reduced with Adaptive Forward Error Correction (FEC) and Packet Order Correction (POC).

Performance Results

Customer testing shows that Silver Peak accelerates Oracle query times by more than 80 percent and login times became near instantaneous *(see figure 1)*. Data Guard performance also improves by more than 80 percent, reducing a data transfer that required 6.7 hours to 1.3 hours *(see figure 2)*. All results were gathered with Silver Peak software "out-of-the box" without any protocol adjustments or special add-ons. Silver Peak strongly encourages organizations to test Oracle performance themselves as numerous factors may impact individual results.

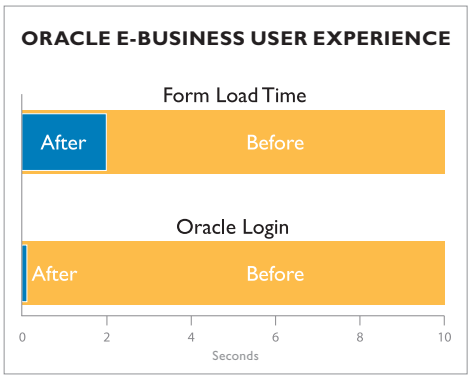


Figure 1

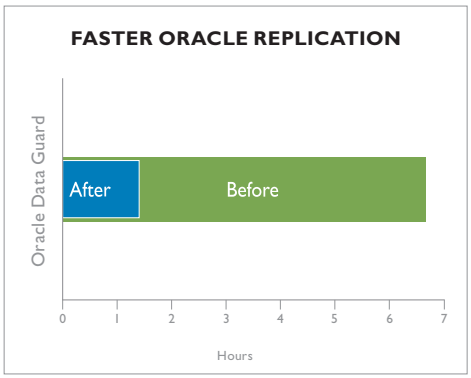


Figure 2

Summary

- Improved logins by 99%
- Opened forms 80% faster
- Replicated data in 83% less bandwidth

Testing Details

Testing results for Oracle applications were compiled from two customers – a cosmetics manufacturer and a leading Information, Communications and Technology (ICT) provider.

The cosmetics manufacturer examined Oracle E-Business performance across a 10 Mbps MPLS connection with 60ms of latency. Packet loss was nominal. Testing measured the time to load a sample Oracle form and login into a database.

The ICT provider examined Oracle Data Guard (ODG) performance across a 40 Mbps MPLS connection with 10 Mbps allocated to ODG. Latency was 20ms and packet loss ranged between one percent and two percent.

Results were reported before and after deploying Silver Peak. In the case of ODG performance, "LAN" reflects the amount of data sent to Silver Peak; "WAN" reflects the amount of data delivered across the WAN after applying compression, deduplication etc.

Architectural Benefits

- 50 percent lower TCO.
- 20 minutes to download and deploy.
- No forced upgrades.
- Improve every application.
- Minimize support costs.

Silver Peak Features

Silver Peak addresses the major performance challenges of running Oracle E-Business across the WAN, requiring no additional hardware, software tuning, or application-specific plug-ins:

Bandwidth – Silver Peak data deduplication conserves bandwidth consumed by Oracle E-Business by eliminating redundant data from the WAN. The first time data is sent from the WAN, it is fingerprinted and compressed by Silver Peak. Subsequent requests are fulfilled from the local Silver Peak instance.

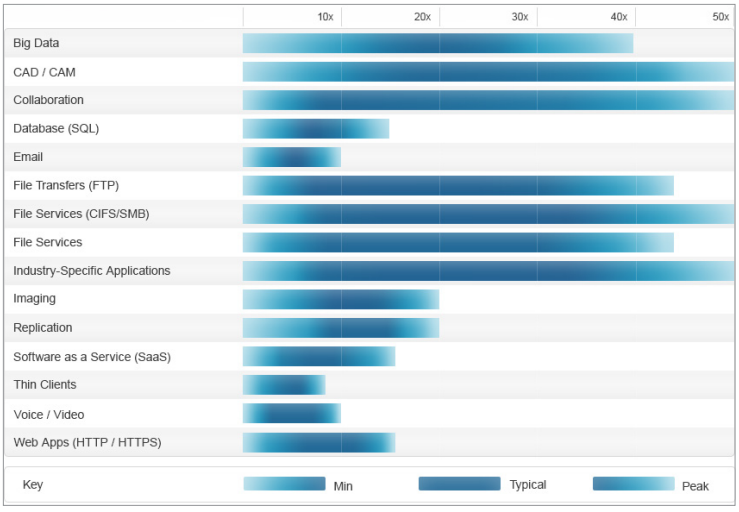
Latency – Silver Peak mitigates latency making E-Business applications more efficient over distance. CIFS Acceleration includes CIFS read-ahead, CIFS write-behind, and CIFS metadata optimizations TCP Acceleration includes window scaling, selective acknowledgements, and HighSpeed TCP. Packet coalescing re-packages multiple smaller packets into a larger one, and Dynamic Path Control selects the fastest path to a remote location.

Congestion - Silver Peak makes E-Business performance more predictable across congested WANs. Applications can be directed down the least-congested path. Lost or out-of-order packets are recovered and resequenced in real time, avoiding retransmission delays. Traffic shaping and QoS mechanisms ensure E-Business receives the necessary bandwidth.

Secure – Silver Peak establishes an IPSec virtual private network (VPN) between locations, securing all data with AES-256, the enterprise standard for data encryption. Data-at-rest is also encrypted with AES. Silver Peak also supports SSL/TLS end-to-end encryption. Access to Silver Peak software is protected with TACACS+ and RADIUS.

Silver Peak does all of this to any scale, improving application performance from small offices to large ones, making Silver Peak the most scalable data acceleration platform in the industry.

Silver Peak Optimizes Any Enterprise Application



Silver Peak optimizes every application. Actual performance will vary based on many factors.

- Eliminate import costs.
- Minimum purchase costs.
- Go virtual when ready.

Deployment Benefits

Improve Productivity

Enable users to utilize Oracle E-Business more effectively and with less frustration.

Keep Users Happy

Correct the network problems undermining E-Business performance, giving users a more consistent experience.

Protect Data over Distance

Improve Oracle replication throughput and protect more data, even over long distances.

Secure Data

Secure SQL data with SSL, IPsec, and AES disk encryption without impacting optimization performance.

Lower Bandwidth Charges

Eliminating redundant data from the WAN dramatically reduces recurring bandwidth charges.

For More Information

Visit www.Silver-Peak.com

Read why AutoDesk, ASA and others selected Silver Peak WAN optimization.

Watch the IT director at Progressive Financial explain how his company benefited from Silver Peak optimzation.

Calculate your theoretical benefit with Silver Peak software using our throughput calculator.

Test the Silver Peak software for free. It takes about 20 minutes to download and deploy.