EXPAND networks

SOLUTION SHEET

VIRTUALLY EVERYWHERE
ACCELERATING ALL IT CONSOLIDATION AND VIRTUALIZATION ENVIRONMENTS

Infrastructure consolidation and virtualization is no longer a trend, but a business imperative for providing improved ROI, hardware utilization, and management. Companies are collapsing, leveraging virtualization, and migrating edge servers, software, and IT resources at record rates. When successful, consolidation leads to solid returns, but when challenged by wide area network constraints consolidation projects regularly fall short. No matter what approach to consolidation you choose, Expand Accelerators deliver the true experience of server and application proximity to physically distributed enterprises over the WAN.

WHY CONSOLIDATE?

Cost savings, control, and concerns over data control have made server consolidation a top priority in IT. Eliminating servers at the edge of the network and consolidating them in the datacenter significantly lowers management and monitoring costs while enabling economies of scale through pooling of hardware resources and services. Centralized storage, centralized backup paradigms, high availability, and fail-over are all easiest and best delivered through a consolidated enterprise. Having a single repository of hardware resources and storage within an organization simplifies data planning, provisioning, and protection. All of this returns control, efficiency and predictability to the world's IT infrastructures but also introduces new challenges to be tackled in each case.

VIRTUALIZATION'S IMPACT ON CONSOLIDATION

Virtualization is being adopted by more and more enterprises as the datacenter IT infrastructure of choice.

Over-provisioned and underutilized server hardware is consolidated into a smaller number of powerful servers running multiple virtual OS/Application environments. This effectively removes wasted CPU, memory, and disk resources providing much tighter control on hardware costs and their growth. Server virtualization also contributes to extremely high server densities providing further cooling, power, and management savings. These impacts are only expected to grow as global market adoption solidifies. With predictions for over half the world's physical servers to be virtualized by 2011 with the vast majority being virtualized by 2015, it is clear virtualization will be a pillar of IT infrastructure planning for the future and a key enabler to server consolidation.

HARDWARE CONSOLIDATION

- Business imperative
- Introduces new network challenges
- Enabled by Virtualization and VDI
- Impacts end-user performance and productivity

EXPAND INTEGRATES AND OPTIMIZES ALL IT CONSOLIDATION INITIATIVES!

THE SERVER-BASED COMPUTING SOLUTION

When first faced with reigning in distributed IT, enterprises identified the server intensive applications as the largest cause of the problem. These business critical application servers represented one of the highest server processing requirements in their branch offices. To enable the collapse of these hardware resources to the central Datacenter businesses turned to Server-Based Computing solution like CITRIX and Microsoft Terminal Services. Designed for WANs, these thin solutions were based on bandwidth conserving protocols that solved the limited bandwidth challenges on the network. They effectively enabled server consolidation and remote application delivery over limited WAN connections. Still today application migration to server-based computing solutions remains the preferred method for collapsing hardware to the datacenter while still delivering those existing services to the branch.

VDI – THE NEXT STEP IN CONSOLIDATION

Desktop consolidation is the next step in IT consolidation, providing still more cost reduction and further operational simplicity to the enterprise. Like server consolidation efforts, desktop consolidation must address user productivity, application performance and security issues directly derived from deployment over the wide area network. Rooted in the strong foundations of server virtualization, actual desktop environments are now consolidated to the datacenter, the entire user environment virtualized and delivered over the network to the user. This centralization of user environment requires more real-time sensitive traffic to be delivered over the same challenged WANs than ever before. When implemented correctly, virtual desktop delivery can complete the consolidation picture. Virtualized desktops join the server infrastructure design and enterprises replace expensive and under-utilized laptop and desktop user PC's with significantly cheaper hardware such as thin-terminal user devices.

ACCELERATING ALL IT CONSOLIDATION AND VIRTUALIZATION ENVIRONMENTS

CHALLENGES

These high return consolidation projects come with a host of challenges. They increase the distance between the remote user and server processing creating performance impacts in application environments. Application performance dramatically decreases and user experience can become unacceptable risking the very success of the implementation. The key challenge in any distributed server consolidation effort is the network environment. More traffic over constrained WANs increases the probability of congestion. Latency and bandwidth constraints create application limiting environments. As a result, server consolidation efforts can lead to user dissatisfaction and lost productivity. In non-functional consolidations data security issues arise when users store important data locally to avoid the delays working with the central site. And lastly, as people grapple with these issues, current solutions may not fit their future-focused infrastructure plans, requiring out-of-plan implementations that handicap complete consolidation.

ACCELERATION IN CONSOLIDATED ENVIRONMENTS

Expand Networks, the recognized leader in WAN Optimization, remedies the challenges ensuring a smooth delivery of server based computing, Virtual Desktop Infrastructures (VDI) and Branch Office Server Consolidation across the WAN; as part of a complete flexible infrastructure. Expand's technology can be implemented in an appliance, virtualized appliance, router blade, or client software solution making it the most flexible in the world and ensuring it's technology can be applied where you need it

Expand's technology uses a varied toolset to accelerate real-time and time-sensitive applications like delivery of branch server functionality, VDI environments, Citrix Presentation Server (XenApp), and Microsoft Terminal Services traffic. Enterprises leveraging server-based computing and VDI will see network and server infrastructure costs controlled, 2-5 times more users hosted on the same hardware, and an impressive and rapid ROI on an Expand investment. Enterprises leveraging branch file server replacements will enjoy the world's only full function wide-area file services implementation. Expand quickly and fully integrates with Microsoft domains and branch office environments to supply top to bottom edge services to branches, replacing multiple branch server roles in a single solution.

OPTIMIZING CONSOLIDATED ENVIRONMENTS

- Server Based Computing plug-ins
- VDI Acceleration
- No latency, memory-based compression
- Next generation layer 7 QOS
- Full-featured WAFS offering
- Branch office services

By providing a comprehensive option for optimizing network performance and accelerating applications over the WAN, Expand makes it possible to enjoy the cost savings of server consolidation without sacrificing application performance, user satisfaction, or IT strategy. The Expand Accelerator is a standards-based, tightly integrated, multi-service platform that delivers a complete application acceleration solution. Now that solution can flexibly join virtualized and non-virtualized environments alike. No matter what consolidation method, Expand offers significant impacts on any effort. With the ability to join into the virtualization infrastructure of the future and accelerate any type consolidation traffic type, Expand is a cornerstone technology for any consolidation initiative.