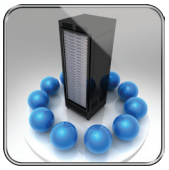
CASE STUDY

Down-to-Earth Values, ROI Up in the Clouds

Featuring Mellanox Interconnect Products for the Enterprise Data Center



Mellanox server and storage interconnect products deliver down to earth values that relieve the most critical pain points in the data center today.

To be precise:

1. If you are virtualizing your servers, Mellanox simply delivers you more virtual machines per server
2. If you are connecting your servers to the SAN and LAN, Mellanox reduces the number of I/O adapters, cables and switches
3. If you are running data warehousing, OLTP, or financial services applications, Mellanox delivers more transactions per second using fewer servers, helping you make faster and better decisions
4. If you are a cloud appliance or services provider, Mellanox reduces equipment acquisition costs dramatically while improving your ability to exceed your SLAs with customers by a handsome margin
5. Mellanox delivers all of the above benefits while reducing your power consumption for IO by 30% to 50%

These are a few examples of how Mellanox is helping change the face of the data center with high performance, scalable and efficient server and storage connectivity products. Below are five proof points relating how fortune 500 customers are availing these benefits to save money, build more efficient and greener datacenters thereby improving their competitive edge through better service delivery to their end users and customers.

Case Study 1: Managed Hosting Services Provider

60% more VMs per server --> 60%+ ROI benefits

The customer is a large managed hosting services provider servicing web based travel related transactions for their customers. The volume of transactions per day is greater than that of Amazon.com, requiring the customer to manage its data center efficiently and scale in a cost effective way. One of its datacenter components serviced customers through the use of applications in 256 virtual machines, which prior to using Mellanox-based solutions, required the use of 4 racks of 4U servers, 16 edge switches, and 192 I/O cards. The capital cost to build out that infrastructure was $744,000. With Mellanox-based products, without requiring any changes to their applications or affecting services to its customers, the new component build-out required only $347,000, saving $397,000 in capital expenses. The cost savings came from the use of 1 rack of 1U servers, 2 I/O Directors and 32 I/O cards that could still support the 256 virtual machines. Operating expenses came down through reduced floor space and power requirements, bringing total savings to more than $500,000 (amortized over 3 years).

OVERVIEW

Mellanox is helping change the face of the data center with high performance, scalable and efficient server and storage connectivity products.

Case Study 2: Airline Company

Fewer I/O adapters, cables and switches – 80% TCO savings

This major airline company was using Gigabit Ethernet (GigE) and Fibre Channel (FC) I/O adapter cards and switches in the datacenter which comprised of 12 HP Blade Enclosures with 96 HP Blade Servers. Each chassis included 4 FC ports and 18 GigE ports. They were connected using 48 Brocade DCS-based ports and 216 Cisco Catalyst 6509-based ports respectively. HP Virtual Connect modules and licenses were used to deliver virtualized I/O services. When the FC and GigE ports were replaced by Mellanox-based unified I/O ports, each HP Blade chassis could now do with just 4 Mellanox-based InfiniBand I/O ports without requiring any change to user applications and experience. Now, only 4 Brocade DCS-based ports and 16 Cisco Catalyst 6509-based ports are needed. This resulted in capital expenditure savings of $1.2M and another $200,000 in operational expense savings from floor space and power reductions (amortized over 3 years).

Case Study 3: Less the half the number of servers deliver the same transaction rate - $2.6M TCO savings

63% more transactions/second with half the servers – $2.6M TCO savings

This very large package shipping company applied Mellanox InfiniBand-based server to server interconnect products (adapters and switches) for processing Oracle RAC database-based invoice processing workloads. By doing so, the company was able to achieve 63% more invoice processing transactions per second, allowing it to service its customers faster and better. The TCO savings comprising of server, I/O, software license and maintenance expenses over a 4 year amortization period amounted to a whopping $2.6M.

Case Study 4: Financial Services Company

82% more transactions/second at 70% lower costs and 3 times less power

Rapid growth of data on capital markets and increasing use of automated transactions such as algorithmic trading is increasing the pressure on financial institutions worldwide to upgrade their IT infrastructures to stay competitive. An example of such an application used by the large financial institution in this case study is the Reuters Market Data System (RMDS) which serves as a platform for market data distribution. In each of the critical metrics that have a direct bearing on the performance of the financial institution, Mellanox products deliver excellent value – 82% higher updates per second, 62% lower mean latency at 70% lower costs and 3 times lower power consumption.

Case Study 5: Private Cloud Appliance Provider

Better VM replication and DB scaling with 75% lower hardware acquisitions costs

This case study involves a private cloud appliance provider that delivers the same benefits of Software as a Service (SaaS) while allowing cloud customers to maintain compliance and data security in their own datacenters. This vertical solution includes integrated solutions for Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS), with Mellanox interconnect delivering an efficient, scalable and high performing interconnect in the IaaS layer. In typical deployments such as with a large Japanese conglomerate, network hardware acquisition costs were reduced by up to 50% and network management costs by up to 30%. At the same time, Mellanox products dramatically reduced the performance impact of real-time virtual machine replication for fail over purposes, and through use of unified memory space across servers, database applications were scaled up efficiently through use of fewer servers. Overall, hardware acquisition costs were reduced by 75%.

Mellanox TECHNOLOGIES

350 Oakmead Parkway, Suite 100, Sunnyvale, CA 94085
Tel: 408-970-3400 • Fax: 408-970-3403
www.mellanox.com