


Leading telecom turns virtual IT infrastructure into real competitive advantage

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Mitel consolidates and virtualizes its IT resources to outpace competitors.

Mitel (www.mitel.com) is a leading provider of communications solutions that deliver Internet Protocol (IP)-based voice, video, and data services over a single broadband network. Building on three decades of success as a private branch exchange (PBX) innovator, Mitel has developed an award-winning portfolio of breakthrough IP PBX products—from intuitive desktop appliances and applications to platforms that enable companies to adopt next-generation communications at their own pace.



Mitel interacts with satellite offices, partners, and resellers throughout the world from its corporate headquarters in Ottawa, where the company's core systems—SAP R/3, an Oracle® database repository, and R&D applications—run in a virtual server environment (VSE) based on the HP-UX 11i operating system.

The HP VSE infrastructure enables Mitel to synchronize information technology (IT) with business processes and capitalize on change in the fast-moving, global IP market. Working with HP, its IT provider for more than 20 years, Mitel is using HP virtualization tools to consolidate and integrate IT resources. The resulting infrastructure enables Mitel to make more productive use of its competitive assets—including its people, processes, and technologies.

"Mitel is poised to take advantage of the upsurge in interest in voice-over-IP," says David Grant, data center manager at Mitel. "We wanted an engine room capable of sustaining our business growth. Our HP-UX 11i-based VSE infrastructure is a key differentiator for Mitel in becoming number one."

Solutions for the adaptive enterprise.





Transforming IT with a proven partner

Mitel began its IT consolidation initiative with its most business-critical assets: the SAP R/3 and Oracle database systems that run its global operation.

“We have a very strong relationship with HP, which has been our IT provider for many years,” says Grant. “HP has consistently delivered good service to us. We have a lot of faith in our local HP account team. So when we were looking for new technologies, we looked at what HP had to offer. We were impressed with the array of innovations, especially in virtualization. And we knew that HP Services would ensure our success.”

Working with an HP Services team, Mitel replaced the 12 N- and L-Class servers that formerly ran its SAP R/3 and Oracle database systems with a high-availability HP Serviceguard cluster of two HP 9000 rp8420-32 Servers. The new platform runs an HP VSE configuration based on the HP-UX 11i operating system and HP-UX Workload Manager software, which automates control and allocation of server resources.

Mitel’s consolidation and virtualization project extends to storage. Mitel increased storage capacity more than fourfold by consolidating its repository onto two clustered network-attached file storage (NAS) devices based on HP StorageWorks 3000 and 5000 Enterprise Virtual Arrays in the UK and Canada, respectively. Enhancing availability, HP OpenView Data Protector software automates real-time backup of all corporate data, which resides on dual HP StorageWorks MSL tape libraries with Fibre Channel switches.

HP Services consultants and project managers helped the Mitel data center team to plan, architect, and install the new environment within just three months. HP Services now provides ongoing support to enable continuity and availability of key business processes.

“Our transition to this consolidated world was a very good experience, thanks to the excellent collaboration between the HP Services and Mitel IT teams,” says Mark MacGowan, director of IT Services at Mitel. “The HP Services people are topnotch and very responsive. We made a complex transition rapidly with no business interruptions.”

Architecting agility, efficiency—and bottom-line savings

Working with HP Services consultants, the Mitel IT team designed and achieved a sound and flexible foundation for consolidating and integrating IT resources within and beyond the data center. Its core design principles of simplicity, standardization, and modularity increase IT agility and efficiency at all levels, from corporate data center platforms to users’ appliances.

Mitel’s HP VSE implementation is based on HP hard partitions (nPars) that segment the CPUs and memory of the two HP 9000 systems into electrically isolated partitions, each running an SAP instance on the HP-UX 11i v2 operating system. HP software partitions (vPars) subdivide the nPars partitions into more virtual servers. With HP-UX Workload Manager, CPU assets become modular resources that can be instantly reassigned among the virtualized servers to meet dynamic user requirements, such as spikes in workload. Mitel no longer needs to purchase excess processing power that remains on idle standby to handle cyclical peaks in demand.

Shifting processing power to meet dynamic business requirements, HP-UX Workload Manager software automatically allocates resources in real time to fulfill the service level agreements (SLAs) that the IT group has contracted with the business units.

While doubling resource utilization, the HP VSE configuration eliminates business disruptions. With HP Serviceguard high-availability software integrated into the VSE, Mitel can preserve business service levels in case of server downtime. For example, IT personnel can isolate a component requiring maintenance, use HP Serviceguard to move the workload to another server or partition, and execute the process without shutting down the entire server.

“We’re no longer bound by the physical,” says Grant. “Servers are logical rather than physical constructs. Data-center management becomes an exercise in resource allocation rather than procurement, installation and commissioning—which takes a lot of headaches away. We face no acquisition costs or lead time. We simply allocate a new CPU or RAM from the pool of available resources to support new business requirements.

“This environment captures spare resources and redistributes them to where they’re needed most,” Grant continues. “You don’t have service sitting idle. Our processing speed has more than doubled, and we automatically manage peaks and troughs in workloads with no disruption to business services.”

Challenge

- Fast-changing business with highly variable transaction volumes
- Increasing service-level demands without corresponding increase in IT budget
- Rapid rollout of innovations a must in highly competitive VoIP industry

Solution

- Two clustered HP 9000 rp8420-32 Servers
- HP-UX 11i v2-based HP Virtual Server Environment
 - nPars and vPars
 - HP Serviceguard
 - HP-UX Workload Manager
- 50 HP ProLiant BL20p G2 and G3 Blade Servers
- NAS cluster of HP StorageWorks 3000 and 5000 EVA units with HP OpenView Data Protector software and dual HP StorageWorks MSL tape libraries equipped with Fibre Channel switches
- HP Services consulting and project management for planning, design, and installation of configuration, including transfer to new platform; and ongoing Business Continuity Support
- HP Financial Services leasing solution

Results

Simplicity

- Automated distribution of server resources based on SLAs
- Resource allocation within 30 minutes rather than weeks by deploying partitions instead of servers

Agility

- Higher processing capacity with far smaller footprint
- Doubling of server resource utilization
- Improved control, continuity, and availability
- Fourfold gain in storage capacity and instant data replication

Value

- Reduction in data-center operating costs by \$CDN 300,000 per year
- Increased productivity in business, R&D, and IT
- Better cash flow and seamless procurement through leasing

Users are more productive now that they access the IT resources they need without delays or maintenance downtime. The HP VSE infrastructure also increases IT staff productivity by simplifying management. Comprising just two servers rather than 12, the virtualized HP-UX 11i v2 environment occupies a much smaller footprint than the former servers but delivers a fivefold gain in power and more than double the processing speed. At the same time, streamlined virtual management lowers the cost of ownership. Mitel has already substantially reduced the annual cost of data-center operations.

Extending IT virtualization throughout the enterprise

With the HP VSE infrastructure, Mitel easily and cost-effectively extended its high-availability, virtualized environment to R&D operations.

"We've created a brand-new data center that increases our capacity, reduces the complexity of our environment and pulls together our people, processes and technologies," says MacGowan. "We've melded two IT organizations—one for R&D and another for business—into one, and brought high availability to parts of the business that never had it before.

"Our business is changing rapidly and now our computing environment adapts just as quickly," MacGowan continues. "We no longer face resource bottlenecks. We're achieving better performance, availability and continuity for less money. We've reduced our operating costs by about \$CDN 300,000 per year."

Soon, the same flexible, virtual infrastructure will extend to applications based on Linux® and Microsoft® Windows® operating systems, which Mitel recently transferred to more than 50 HP ProLiant BL20p G2 and G3 Blade Servers. The next phase of consolidation will provide single-console virtual management of all data-center assets. Mitel will upgrade the HP 9000 servers to

industry-standard HP Integrity servers running the HP-UX 11i operating system. HP Integrity Essentials Global Workload Manager and HP Systems Insight Manager will bring the same high level of efficiency, agility, and availability to the entire data center while further decreasing total cost of ownership.

Simplifying all dimensions of IT management, Mitel negotiated a customized HP Financial Services lease as part of its HP solution. While enabling Mitel to preserve cash flow—a must for a rapidly growing company in a volatile industry—the HP Financial Services lease also radically streamlines procurement. As Mitel adapts its IT investment to keep pace with evolving technologies and business needs, the company simply replaces equipment, avoiding time-consuming trade-ins and capital disposal costs. And HP VSE software can integrate leasing terms with utility-pricing features such as pay per use to automate procurement.

Virtual data engine powers real IP innovations

Mitel relies on IT to develop and distribute its productivity-enhancing IP innovations, including applications that advance customer relationship management, messaging, and multimedia collaboration. By consolidating and virtualizing IT resources, Mitel frees its employees to spend more time creating value and outpacing competitors by speeding the time to market of breakthrough products.

"We've reduced the size of our infrastructure team," concludes MacGowan. "Yet we're able to provide more services to our clients and deliver innovative applications that people are looking for. We've focused on becoming a best-in-class IT organization. We've accomplished that with HP."

For more information, visit www.hp.com

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