



Success Brief

Intel® Xeon® processor
7400 series

Healthcare
Server virtualisation



Limbering up for a virtual future

Intel® Xeon® processor 7400 series increases IT agility for Israel's largest healthcare provider

Clalit is the largest healthcare maintenance organisation (HMO) in Israel, with 54 percent market segment share, and the second largest HMO in the world. With 14 hospitals, more than 1,300 clinics and pharmacies across the country, it has a large IT environment consisting of 33,000 employees, 3,000 servers and 2,500 wide area network (WAN) communication lines. A leader in business and technology innovation, Clalit introduced virtualisation into its data centre environment three years ago. Spurred on by the benefits of this initial project and keen to reduce energy consumption, increase data centre density and improve enterprise agility, Clalit made a decision to virtualise even more of its IT infrastructure.

“Migrating to a virtual infrastructure is a major step forward in achieving our vision of becoming a real-time enterprise.”

Doron Ytshaki,
CTO, Clalit

- **Increasing agility.** To become a real-time enterprise with greater IT flexibility, making it easier to map IT resources to business goals
- **Virtual infrastructure.** IBM System x3850* servers running on the Intel® Xeon® processor 7400 series and Microsoft Windows* Servers 2003 and 2008 under Hyper-V* to create up to 20 virtual machines (VM) per physical server
- **Extensive benefits.** Reduces footprint in the data centre, simplifies IT management and lowers energy consumption, reducing operating costs by 90 percent; makes it possible to allocate server resource to new projects within minutes, not months

Clalit identified virtualisation as a way to meet head-on many of the challenges it was facing at its Tel Aviv data centre. Rising power and cooling costs, together with limited floor space, meant that it was no longer viable to keep purchasing new hardware every time it needed more server resource to support new projects. Clalit decided that the sensible alternative would be to make greater use of its existing assets through virtualisation, which would also enable it to realise its goal of becoming a real-time enterprise.

From 10 IBM System x3850 servers running on the Intel® Xeon® processor 7400 series with four cores and Microsoft Windows Servers 2003 and 2008 under Hyper-V*, Clalit was able to create up to 20 VMs per physical server. Eighty percent of these are now used to support the development and testing of new services, such as the latest version of Microsoft Office SharePoint* Server and Citrix*, with the remainder used for production, running Web services for the Clalit website, and many smaller applications.

The Intel Xeon processor 7400 series has built-in Intel® Virtualization Technology (Intel® VT). With support from the processor, chipset, BIOS and enabling software, Intel VT improves traditional software-based virtualisation. By offloading workloads to system hardware, it ensures the performance of the virtualised environment is equal to any non-virtualised infrastructure. To aid management of the virtual environment, Clalit also uses Microsoft System Center Virtual Machine Manager 2008 (SCVMM*), which allows fast physical-to-virtual (P2V) migration.

Virtualisation based on Intel® Xeon® processor technology helps Clalit map IT resources to business goals

A consolidation ratio of 20:1 helps Clalit increase density in its data centre, saving on valuable floor space. It also simplifies IT management and reduces energy consumption significantly. Combined, Clalit estimates that these benefits will reduce operational expenditures by up to 90 percent, as well as saving on capital expenditures, since the company will need to purchase fewer physical servers.

Virtualisation aids the dynamic balancing of computing needs across the organisation since resources can be allocated at the touch of a button. For example, Clalit can now allocate server processing power to new IT projects in just 30 to 60 minutes rather than two to three months, taking into account the purchasing of new hardware, installation and configuration. This has enabled it to shrink the timeframe for development and testing.

Decreasing the time taken to respond to business requests for computing resources means that Clalit's IT infrastructure has far greater agility, helping it to meet its goal of becoming a real-time enterprise. This also makes it easier to switch over resources in the event of a failure, improving business continuity and the high availability of mission-critical applications.

Spotlight: Clalit

- The healthcare system in Israel was established by Clalit in 1911 when a group of 150 immigrant workers joined together to form a mutual aid healthcare association
- Since then, it has initiated, defined and set health standards for the entire country, becoming one of the most progressive public health organisations in the world
- It now has around 33,000 employees, more than 1,300 clinics, 14 hospitals and 420 pharmacies throughout Israel and provides medical services to 3.7 million people



Clalit is also in the process of rolling out nine servers running on the Intel® Xeon® processor 7400 series with six cores and VMware ESX Server* at its disaster recovery site in Tel Aviv. It will also take advantage of Intel® VT FlexMigration technology, which will make it easy for Clalit to move live virtual machines between previous, present and future generations of 45nm Hi-k next generation Intel® Core™ micro-architecture based platforms. This makes it much simpler for Clalit to facilitate failover, further improving business continuity and increasing uptime.

Virtualisation, based on Intel Xeon processor technology, is enabling Clalit to increase the efficiency of its data centre environment, helping it to lower the total cost of ownership, while enhancing IT flexibility and increasing business agility.

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Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain computer system software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

