(intel)
Look Inside.™

Data Center Optimization Offers Ideal Remedy for Rapid Company Growth

IT infrastructure refresh with Intel® Xeon® processors helps 21st Century Oncology support corporate expansion, improve application performance, and maintain uptime

21st Century Oncology needed to expand its IT environment in anticipation of new company acquisitions. After conducting a thorough data center assessment with Intel, the company underwent a significant infrastructure refresh project. Refreshing servers and storage with the latest Intel® Xeon® processors helped the company support the acquisition of new businesses, boost application performance, and maintain uptime while controlling data center costs. As a result, the company can deliver exceptional care and service to a growing number of patients.

Challenges
- **Increase capacity.** Accommodate new corporate acquisitions and provide a stable technology foundation for future expansion.
- **Improve uptime.** Increase data center reliability and availability to ensure continued high-quality patient care and service.
- **Control costs.** Reduce the costs of running and managing a growing infrastructure.

Solution
- **New servers and storage powered by Intel Xeon processors.** The IT team deployed servers from Stratus, HP, and Dell plus EMC Isilon* scale-out network attached storage (NAS) based on Intel Xeon processors.

Technology Results
- **High availability.** Reliable servers equipped with Intel Xeon processors help improve data center uptime and availability.
- **Enhanced application performance.** Powerful compute capabilities help reduce billing process cycle times from six or seven hours to less than an hour.
- **Reduced power consumption.** High-density Intel Xeon processor–based servers help reduce power consumption by 20 percent and minimize data center cooling requirements.

Business Value
- **Improved business performance and enhanced patient care.** The refreshed infrastructure helps 21st Century Oncology boost productivity, respond quickly to rapid changes in the healthcare environment, and ultimately improve patient care.

21st Century Oncology

"By refreshing our environment with new infrastructure powered by the Intel® Xeon® processor E5 family, we were able to support an additional 2,000 users while controlling costs. It was a very good technology decision and a sound financial decision."

*– Antoine Agassi,
Senior VP and Chief
Information Officer,
21st Century Oncology*

A leading provider of advanced radiation therapy and integrated cancer care, 21st Century Oncology operates and manages 185 radiation treatment centers in the U.S. and Latin America. The company has experienced considerable growth in recent years, expanding its operational reach through a series of strategic business acquisitions.

To prepare for a new series of corporate acquisitions, the company's IT team asked Intel to perform a comprehensive assessment of its primary data center. "We had been adding hardware and equipment to keep up with our growth, but it wasn't part of a comprehensive plan," says Antoine Agassi, senior vice president and chief information officer at 21st Century Oncology. "We needed

a sound technology blueprint that would allow us to grow in a way that optimized our infrastructure performance and maximized our investment while providing a stable foundation for future growth."

The company's IT infrastructure plays a crucial role in delivering high-quality patient care. "We depend on technology for everything from scheduling appointments and processing billing to monitoring vital signs, storing radiology images, tracking patient treatment plans, and facilitating collaboration among physicians," says Agassi. "We need infrastructure that can deliver the performance, reliability, and availability for those critical healthcare applications."

Intel® Xeon® processors deliver powerful, cost-efficient performance

Building a Robust IT Infrastructure

Intel consultants provided the 21st Century Oncology IT group with an objective assessment of the company's existing environment and presented a comprehensive set of recommendations for addressing challenges. "We know we can count on Intel to provide solid, objective advice without pushing a specific product or technology," says Agassi.

Following recommendations from the Intel consultants, the IT team refreshed its infrastructure, implementing servers from Stratus for clinical care applications plus Cisco UCSB-B200-M3* blade servers equipped with Intel Xeon processors E5-2660 and E5-2680 v2 for business applications. All servers use Intel Xeon processors. The IT group also implemented EMC Isilon scale-out network attached storage (NAS) as well as EMC VNX* 5600 series SAN storage, whose controllers are equipped with Intel Xeon processors E5603 and E5-2660. "Knowing that the hardware is equipped with the latest Intel processor technology gives us the confidence that we can expect the best performance and optimal return on our investment," says Agassi.

Accelerating Application Performance

Implementing new servers based on Intel Xeon processors has helped the company improve application performance. "In the past, some of our billing processes took six to seven hours to complete. Now they take less than an hour," says Agassi. "In some cases, we needed to enhance our network performance just to handle the millisecond response times our servers can deliver."

The company has seen similar performance gains for analytics applications. "With our previous dashboards, we often waited an entire day for new metrics and other performance indicators to refresh and update," Agassi says. "Now our managers have the most up-to-date data at their fingertips in just a matter of hours. That performance allows them to make more intelligent decisions and react quicker to changing business conditions."

Meeting New Growth Demands

The new infrastructure provided the processing power and additional capacity the company needs to support its immediate corporate expansion plans while creating a solid foundation for the future. "By refreshing our environment with new infrastructure powered by the Intel Xeon processor E5 family, we were able to support an additional 2,000 users while controlling costs," says Agassi. "It was a very good technology decision and a sound financial decision."

Saving Space and Reducing Power Costs

Deploying servers with powerful, energy-efficient Intel Xeon processors has enabled 21st Century Oncology to build a dense infrastructure that reduces energy consumption. "Refreshing our infrastructure allowed us to support more users without having to lease more data center space," says Agassi. "At the same time, we were able to cut power costs by as much as 20 percent. Those cost savings enable the company to adopt new technologies and introduce new services that improve patient care."

Maintaining Uptime

The new Intel Xeon processor-based servers also helped sustain uptime by providing the high performance needed to support a large number of simultaneous users. "In a healthcare setting, maintaining uptime is critical. Doctors and staff must be able to reliably access resources to deliver seamless, uninterrupted treatment and service," says Agassi. "The new infrastructure has delivered the reliability we need. Even as we add thousands of users, we've been running at 100 percent uptime."

Lessons Learned

The consulting engagement with Intel illustrated the inherent business value that can be gained from a thorough, unbiased IT evaluation. "It's important to work with an objective third party," says Antoine Agassi, senior vice president and chief information officer, 21st Century Oncology. "You need an impartial observer who will provide open and honest opinions and will make recommendations that are in your best interest and matched to your individual needs."

Maximizing ROI and Improving Patient Care

As the company continues its aggressive growth schedule, the IT team is confident it can keep up with its capacity demands while controlling costs. "We expect a return on investment in record time," says Agassi. "Now we have a solid infrastructure in place that will allow us to sustain predictable growth for the next 12 to 24 months."

Most importantly, the company has infrastructure that supports its ongoing mission of delivering the highest-quality care. Says Agassi, "We have a much more robust, reliable foundation for delivering quality care to thousands of patients every day."

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