

Sky Lakes Medical Center Simplifies IT to Deliver Highly Reliable Patient Care with Cisco HyperFlex

Sky Lakes Medical Center · Industry: Community Health Services · Size: 1508 employees · Location: Klamath Falls, Oregon

Located in Klamath Falls, Oregon, Sky Lakes Medical Center is a not-for-profit, community-owned, internationally accredited acute care teaching hospital serving more than 80,000 people in south-central Oregon and northern California. As the only hospital in a 10,000-square-mile area, Sky Lakes provides a complete range of medical services for the residents of four rural counties, including cancer treatment, joint and spine care, diagnostic imaging, and family medicine. For more information, visit skylakes.org.



Challenges

- Replace aging legacy storage, compute, and network fabric
- Scale for future workload and imaging storage demands
- Simplify operations for a small IT infrastructure team

Results

- Streamlined management of nearly all workloads on a single tool
- Secured data storage with physical encryption
- Reduced power consumption by 70 percent
- Established fully redundant data center for complete failover, backup, and recovery

Solutions

- Cisco HyperFlex™ system
- Cisco Intersight™ infrastructure management
- Cisco DNA™ Center
- Cisco® Unified Communications
- Cisco Umbrella™
- Cisco Stealthwatch®

For more information

- [Cisco HyperFlex](#)
- [Cisco Intersight](#)
- [Cisco DNA Center](#)
- [Cisco Unified Communications](#)
- [Cisco Umbrella](#)
- [Cisco Stealthwatch](#)

Challenge: Simplify and scale IT infrastructure for high reliability with limited resources

In community healthcare, IT operates in a pressure-cooker of competing demands. Delivering life-saving patient care requires unerringly high reliability and availability. At the same time, advances in data-hungry diagnostic platforms now push IT infrastructure to its limits. But every dollar for IT vies for a slice of a modest capital budget with everything from physician recruitment to replacing carpets.

At Sky Lakes Medical Center, director of information systems John Gaede had spent years making do with what they had: four racks of traditional three-tier IT architecture—including a rack of blade servers running 500 virtual machines and 200 TB of storage in a single data center—and only a team of six to manage all of it.

“In a community hospital, anyone who works in IT wears multiple hats,” says Gaede. “A network administrator could be doing everything from fixing a PC to configuring switches or solving wireless problems, all in the same day.”

In late 2016, it became clear to Gaede that major upgrades to their core IT infrastructure would be necessary. Servers and storage were nearing end of support. At the same time, Sky Lakes diagnostic imaging clinicians were eager to adopt new tools that require massive amounts of data processing and storage.

Gaede knew Sky Lakes had to be smart about tackling the big challenges it faced. “With our limited resources, how do you provide state-of-the-art, highly reliable IT infrastructure to support healthcare when patient lives depend on it?”

Trust and simplicity

The answer was hyperconverged infrastructure (HCI). Instead of managing separate but integrated compute, storage, and networking tiers, Sky Lakes could unify and manage it all in a single solution.

“Hyperconverged infrastructure brings something we need desperately in the community hospital: simplicity,” says Gaede. “We don’t have enough hours in the day or enough money in a year to do all the things we need to do for the organization. Solutions that simplify our infrastructure help us a great deal.”

Gaede and his team undertook extensive HCI vendor evaluations of five potential solutions. Through a rigorous nine-month process, Cisco won over Gaede and his team with the simplicity of Cisco HyperFlex, its commitment to the solution, and an attainable implementation roadmap.

“The Cisco account team listened to our story and worked hard to earn our business through trust, honesty, and respect,” says Gaede.

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Sky Lakes Medical Center

Small and mighty

To date, Sky Lakes has migrated almost all of its workloads to Cisco HyperFlex—including clinical systems for the Cancer Treatment Center, perinatal monitoring, and radiology imaging—running two clusters with a total of 16 nodes.

“We’re not defining only certain workloads for HyperFlex, we’re going all-in,” says Gaede. “We’re now running about 500 virtual servers and every flavor of system on Cisco HyperFlex, and with Cisco Intersight we have a single pane of glass for management.”

The small footprint of Cisco HyperFlex also provides Sky Lakes with savings on power and cooling. By reducing four racks of compute, storage, and networking to just two-thirds of one rack, Sky Lakes now spends 70 percent less on data center power usage. The compact, relatively self-contained platform now permits Gaede to fully replicate his entire Cisco HyperFlex environment at a second data center.

“In the past, it would have been much harder and more costly to do with multiple systems,” says Gaede. “Now we will have full redundancy.”



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John Gaede, Director of Information Systems, Sky Lakes Medical Center



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Encrypted to the core

Sky Lakes also breathes more easily knowing that patient information is secure, with Cisco HyperFlex data storage drives self-encrypted at the core.

In addition, Sky Lakes is implementing a full portfolio of enterprise security features, including Cisco DNA Center network management, Cisco Umbrella cloud-based secure Internet gateway, firewalls, and Cisco Stealthwatch security analytics.

“Micro-segmentation in our network is huge,” says Gaede. “We are now able to isolate and assign distinct security zones for specific endpoints and applications in our standalone community hospital. Traditionally, this would only have been available in very large healthcare organizations with deep technical personnel benches and pocketbooks, and it helps us protect clinical systems even when many vendors struggle to keep up with security updates.”

Building for a healthy future

With Cisco HyperFlex at its core, Sky Lakes is now extending the system to its new Collaborative Health Center, which will provide a single location for five clinics to increase patient access to healthcare. In addition, Sky Lakes will implement Cisco’s upgraded networking backbone, wireless, and Cisco Unified Communications System, all running on Cisco HyperFlex and managed through Cisco Intersight.

“By running Cisco Unified Communications System on HyperFlex,” says Gaede, “Sky Lakes is now able to efficiently and economically complete an enterprise-wide transformation of its entire legacy phone system.”

Gaede credits the approach Cisco has brought to working with Sky Lakes. “With the success of implementing Cisco HyperFlex,” says Gaede, “Cisco has shown they are a true partner that wants to help solve real IT problems related to patient care at a community hospital.”

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