

Optimizing the hospital data center, leveraging IT outsourcing to increase efficiency and flexibility

Today's healthcare chief information officers (CIOs) are often managing a veritable mash-up of legacy, in-house, home-grown, server- and cloud-based systems, usually sitting on an aging infrastructure. They must balance resources and budgets to ensure they are delivering and continuously optimizing all of the services their customers need. With the shift to electronic medical records, they must deliver applications 24/7 to ensure high-quality clinical care.

While there are some large health systems that have the resources to optimize, manage and support all their data center needs with internal staff, many hospital CIOs are taking advantage of increasingly sophisticated outsourcing options that allow them to order from a virtual a la carte menu of solutions. As hospitals IT leaders adapt to changing reimbursement and value-based care models, many are choosing to outsource some or all of their IT environments. Partnering with a full service solutions provider allows them to optimize data center performance and improve efficiency, flexibility, care quality and reduce costs.

Outsourcing can enhance flexibility, giving CIOs the ability to quickly add new capacity, capabilities and technology as business needs continue to evolve at a rapid pace. In order to combine in-house resources and external service providers to achieve the optimal levels of service, IT leaders should take a close look at their staff's strengths and weaknesses, areas where their group performs well and where there has been a history of inconsistent service levels. This gap analysis can help identify where outsourcing can be a good fit to drive cost savings and efficiency.

Finding the right fit for data center optimization

Maintaining the physical aspects of a data center such as power, cooling, rack space and cabling, while also ensuring that a growing number of clinical and business applications can share information efficiently, requires resources and significant behind-the-scenes work. However, by leveraging Infrastructure as a Service (IaaS), a hospital can move some or all of its applications to a hosted or cloud solution. Outsourcing providers can provide a fully optimized or virtualized infrastructure with appropriate Service Level Agreements (SLAs) to meet the needs of different users. In these agreements, Single Sign On (SSO) can be an added benefit, saving staff significant time by eliminating multiple logons. A virtualized environment, in fact, allows CIOs to reduce internal hardware cost by leveraging the compute resources of the cloud.

Further, CIOs can eliminate the need to maintain legacy systems by extracting data and making it available and accessible through a modern database engine, which both ensures regulatory compliance and keeps the information available to business users. Taking this approach alleviates the headaches and high cost of keeping these aging systems running. Hospitals and health systems can save money by working with solutions providers in part because they can lower costs by amortizing total data center expenses across multiple hospital clients.

Leveraging automated monitoring for optimization



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IT leaders – whether they choose to utilize an IaaS solution or not – will realize significant benefits from automated monitoring of networks, configurations and application performance. With the ability to monitor Key Performance Indicators (KPIs) around capacity management, network performance or application performance, problems resolution can occur before users experience any issues that might affect their work. Automated monitoring and alerting can relieve unnecessary burdens on the support staff and help ensure maximum uptime. Performance and capacity data from the monitoring tools can be linked to help desk functions – whether remote or on-site – which adds another layer of proactive support.

Optimizing for High Availability (HA)

Physicians and other clinicians are highly demanding of system performance. Anything that slows down their work will create frustration. Since technology touches almost every aspect of care delivery, even brief downtimes are unacceptable. One advantage of outsourcing is that the data centers have layers of redundancy built into their environment. By ensuring there is no single point of failure, IaaS allows CIOs to know critical systems such as electronic health records (EHRs) will be “always on” and available. Virtualization provides an insurance policy, where an enterprise hypervisor for handling nearly instant failover and a load balancing solution for performance optimization ensure maximum possible server uptime.

As some hospitals are leveraging virtualization in their data centers, one potentially problematic issue is how some large vendors architect their solutions to be standalone environments, to ensure performance and availability metrics. A full-service solutions provider can help integrate these systems into existing environments to reduce “one-off” environments and provide better integration into an enterprise.

Striking the right balance in data center optimization

Healthcare IT leaders can balance the utilization of internal resources and services provided by an external partner by analyzing what they do best, most cost effectively and identify operational areas where outsourcing can create efficiency and lower costs. This helps build a strong business case for leveraging a partner in the remaining areas who will be more than just a service provider, but rather a strategic partner who can advise on new initiatives and long-term planning.

Healthcare leaders who leverage the right partnerships to ensure data center optimization will be able to provide an efficient technology infrastructure that enables high-quality patient care and position their organization to maintain optimized, flexible systems that can quickly adapt to changing clinical, regulatory and business requirements.

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