

CASE STUDY: CareGroup Healthcare System

AT A GLANCE

Challenge

- Enable IT to get a complete picture of the application performance story running on shared infrastructure for effective capacity planning
- Understand “performance utilization” to support capacity expansion and tiered storage strategy

Solution

Install Akorri BalancePoint software in the data center.

Results

- More accurate capacity planning and better allocation of capital expenditures on storage resources
- Reduced over-provisioning
- Improved application performance
- Reduced troubleshooting time

CAREGROUP ENSURES APPLICATION PERFORMANCE WHILE INCREASING UTILIZATION AND SERVICE LEVELS

Headquartered in Boston, CareGroup Healthcare System is a healthcare network that includes Beth Israel Deaconess Medical Center, Mount Auburn Hospital, New England Baptist Hospital, and Beth Israel Deaconess Hospital Needham, as well as 72 ambulatory clinical practices. With more than 13,000 employees and 2,000 medical staff, CareGroup offers community-based primary care and a wide range of specialty services to serve patients through eastern Massachusetts. CareGroup’s 200-person IT staff is responsible for managing the rapidly growing operations of the system’s many affiliate organizations.

As one of the largest health service providers in New England, CareGroup has an extensive infrastructure supporting a wide range of both customer-facing and business applications that needs to be up and running 24x7. Change is a constant factor within CareGroup’s extensive and diverse infrastructure, which supports a wide variety of clinical, operational, communications and data management applications. Its storage area network (SAN) manages nearly 110 terabytes of patient and application data on behalf of roughly 100 servers running Windows, HP-UX and Linux.

CHALLENGE: Understand application performance impact on infrastructure growth and change

Given the rapidly changing application environment, capacity planning for storage resources while ensuring application performance, is an extremely labor intensive process. Since 1999, CareGroup’s SAN requirements have grown from two to 110 terabytes of data, with increases of up to 200 percent during certain years. The rapid data growth is a result of new applications being deployed and the adoption of an information lifecycle management (ILM) strategy that significantly expanded the storage requirements for patient records and clinical information.

As the SAN grew, so did the complexity of ensuring application performance and operational efficiency, as well as the cost associated with complying with government regulations. CareGroup’s IT team needs to be able to guarantee application service levels on a 24x7 basis as clinicians rely on the applications to deliver care to patients. “Application outages and data loss are catastrophic events in our business, because it means the medical staff cannot access critical information for diagnosing patients and prescribing treatment. Therefore, we need to ensure zero outages by being able to judge the impact that infrastructure changes will have on application performance before the changes become a problem,” said Rocky Grasso, Manager Technical Services for CareGroup.

“We had no way to set expectations, meet unwritten service level objectives, and assure business service availability,” said Grasso. “Our utilization planning and reporting capabilities were limited. We would compare weekly capacity reports with our SRM management data, to respond to the inevitable utilization questions, but not in context with the application performance or availability, which is precisely what management cares about the most.”

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Rocky Grasso
 Manager Technical Services
 CareGroup

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“BalancePoint enables us to ensure application performance issues do not arise while utilization and service levels are increased.”

Michael Passe
Storage Architect
CareGroup

ABOUT AKORRI

Akorri provides software for application service level management. Akorri's BalancePoint uses cross-domain analysis and advanced analytics to help companies manage, optimize and plan application performance across their entire data center infrastructure.

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SOLUTION: BalancePoint software delivers application service level management

With its agentless architecture, BalancePoint was installed rapidly, and within 24 hours was providing CareGroup with an index of how heavily utilized the infrastructure is from a performance viewpoint — across applications, servers and storage—allowing CareGroup's IT team to identify the resources that may be constrained with growth. This in turn has helped prevent over- or under-investment in key areas.

BalancePoint helped CareGroup answer several questions:

- How to better allocate capital expenditures on storage resources
- Where to place new applications given current utilization and performance factors
- How to fine tune existing applications to assure business service availability
- How to judge the impact of other infrastructure changes on application performance (i.e., “what-if” modeling)
- How to better troubleshoot emerging application performance problems in a complex, virtualized IT environment

BalancePoint is also helping CareGroup migrate from Tier 1 to Tier 2 storage while maintaining SLAs and appropriate “headroom.” “Identifying which applications can move to Tier 2 is difficult. I need intelligence to optimize applications across storage options,” said Michal Passe, storage architect for CareGroup. “With BalancePoint I can identify application IO and response times on different storage classes and volume migration analysis helps perform “what if” and “best fit” options.”

RESULTS: Optimized performance without over-provisioning

Through Akorri BalancePoint, CareGroup's IT team has been able to:

- Decide where to best spend IT dollars to optimize performance
- Plan for increased capacity in the IT infrastructure
- Avoid over-provisioning or misallocating resources by having the data needed to give them a complete picture of the system's needs
- Map application performance to capacity planning
- Solve planning challenges and avoid or quickly troubleshoot performance problems

BalancePoint is helping CareGroup manage application service levels, allowing the IT team to move away from volumetric capacity planning and turn to scenario modeling and “what-if” planning. As a result, CareGroup can avoid over-provisioning, and more intelligently share resources and control services.

“BalancePoint enables us to ensure application performance issues do not arise while utilization and service levels are increased,” said Michael Passe, Storage Architect, CareGroup. “BalancePoint's Utilization Index concept is very helpful: it allows us to provide our internal customers a relative index of infrastructure utilization, which is more easily understandable than providing discrete performance metrics.”