AKU&H modernizes hospital information system with HPE Integrity Superdome X

Improves scalability, availability, and efficiency in patient care systems

Objective
Achieve cost-effective scalability for mission-critical hospital information system (HIS) supporting five hospitals across Pakistan

Approach
Modernize HIS infrastructure by moving from legacy HPE servers onto HPE Integrity Superdome X with support from HPE Pointnext

IT Matters
• Improved reliability with less downtime
• Reduced HIS infrastructure footprint by 60%
• Improved performance without increasing number of processor cores, reducing database licensing costs

Business Matters
• Ensured reliability and availability up to 99.99% for critical HIS services supporting patient care
• Gained capacity and flexibility to handle additional hospital workloads as they emerge
• Provided a cost-effective roadmap for long-term business growth

Choosing a mission-critical infrastructure for the long term

When it comes to caring for patients, doctors and nurses are critically dependent on the hospital information system. That’s why The Aga Khan University and Hospitals (AKU&H), the leading healthcare provider in Pakistan, has relied on Hewlett Packard Enterprise (HPE) servers powered by the Intel® Xeon® Processor E7 Family to run its Hospital Information Services (HIS) for over a decade. However, as AKU&H out-grew its legacy HPE platform, the organization needed to find a new platform that could ensure greater scalability with the highest reliability, availability, and performance for its mission-critical HIS.

Chris Handley, AKU&H’s chief information officer, remarks, “Our clinicians and administrators rely so heavily on the HIS that the hospitals would be severely crippled if our IT systems were not available or performing properly. Therefore, we required a hardware platform designed for mission-critical workloads.”
“With Superdome X we have modernized our mission-critical HIS infrastructure and gained a clear roadmap for the next seven years. That is a major achievement and essential for supporting the growing needs of our hospitals in caring for patients.”

— Omer Manya, Director of IT Infrastructure, The Aga Khan University and Hospitals

After evaluating several vendors, AKU&H selected the HPE Integrity Superdome X Server.

Handley explains, “HPE Superdome X offered a solution that met most of our requirements for cost-effective scalability and superior reliability to support our long-term needs.”

**HPE delivers the right mix of technology and services**

AKU&H deployed HPE Integrity Superdome X with two blades built on the Intel® Xeon® Processor E7 Family. The Superdome X runs more than 40 HIS application module databases in a Microsoft Windows Server® operating environment. The applications are virtually hosted on HPE BladeSystem server blades. On the Superdome X, AKU&H also takes advantage of nPars, which provide electrically isolated hard partitions for application separation. Two nPars are clustered for enhanced availability.

“Superdome X provides the hardware high availability we require for our mission-critical HIS,” says Muhammad Fahd, Senior Manager IT infrastructure, AKU&H. “By running a database cluster between two nPars, we gain high availability at the application level. Since our growth is rapid and unpredictable, nPars also provide flexibility to handle additional workloads as needed.”

HPE Pointnext worked with AKU&H to ensure a rapid and professional installation of the Integrity Superdome X infrastructure. This proved instrumental in the success of the project.

“For a mission-critical environment like HIS, we only wanted HPE engineers to install the Superdome X,” Fahd asserts. “With help from HPE Pointnext, we brought up the Superdome X in just four days with no issues. Previous server installations that did not include help from HPE Pointnext took as long as 20 days. Their services were a great value to our organization.”
Case study
The Aga Khan University & Hospitals

Industry
Healthcare

Customer at a glance

Application
• Health information management (HIS)

Hardware
• HPE Integrity Superdome X
• HPE BladeSystem
• Intel® Xeon® Processor E7 Family

Software
• Microsoft Windows Server®

HPE Pointnext services
• HPE Installation Service
• HPE Proactive Care

AKU&H also relies on HPE Proactive Care from HPE Pointnext. Fahd explains, “For something as critical as Superdome X, we wanted the assurance of having HPE Pointnext experts available to handle any issues that may come up.”

Reliability and efficiency to support critical patient care

With the Integrity Superdome X, AKU&H now has an HIS infrastructure that performs with greater performance, efficiency, and scalability to handle its growing healthcare network. In fact, the hospitals can now get much more out of their compute resources without increasing their database licensing costs, thanks to the efficient architecture of Superdome X based on the Intel® Xeon® Processor E7 Family.

The Integrity Superdome X runs AKU&H’s full database workloads at just 20 – 30% utilization, leaving plenty of headroom for growth. This is a dramatic improvement over its legacy platform, which was running at 90% utilization. Yet, the Superdome X achieves this efficiency with just two four-core processors per server blade. That means database license fees have held steady because the total core count has not changed from its previous platform, which had four processors with two cores each.

In addition, AKU&H was able to dramatically consolidate its data center footprint thanks to the efficient Superdome X design. The current two-node configuration consumes just 40% of the rack space of the previous platform, and provides tremendous savings in power and cooling. It also allows AKU&H to scale beyond its existing capacity by simply adding nodes, which opens up the opportunity for further consolidation by moving applications from the HPE BladeSystem to Superdome X.

HPE Integrity Superdome X also delivers the high reliability, availability, and serviceability (RAS) essential for AKU&H’s mission-critical HIS. In fact, with improved RAS, AKU&H has achieved 99.999% uptime. This will eliminate the need for “cold” hardware traditionally kept on hand — and unused — for disaster recovery.

Omer Manya, Director of IT infrastructure, AKU&H concludes, “With Superdome X we have modernized our mission-critical HIS infrastructure and gained a clear roadmap for the next seven years. That is a major achievement and essential for supporting the growing needs of our hospitals in caring for patients.”

Learn more at hpe.com/info/superdomex

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a00020907enw, August 2017