

## Optimized Healthcare Application Performance Supports Critical Patient Services

**Healthcare organizations rely on instant data access to make life-saving decisions. Availability of patient records at all times is not just a regulatory requirement - it is essential to delivering quality care. Healthcare IT managers must maintain a highly available and high performance IT infrastructure to run the clinical applications that support critical patient services.**

### Healthcare in Transition

Today's healthcare IT environment is experiencing major change due to new technologies, escalating costs and increasing regulations. The transition from paper to digital patient documentation has drastically increased the number of electronic medical records (EMRs), driving a need for more efficient ways to access, manage and store rapidly growing data. While all this information is being created and stored, it must flow throughout the healthcare organization so it can be easily shared to improve care delivery. Healthcare applications are inherently data and I/O intensive. With limited visibility into storage area network (SAN) I/O performance, healthcare IT managers face a significant challenge ensuring the performance and availability of clinical applications from leading healthcare application providers including Epic, Cerner, Siemens, GE and McKesson in both physical and virtual environments. Whether retrieving critical patient data such as x-rays and scans, or collecting and integrating new data from traditional clinical sources such as diagnostic centers, labs, and pharmacy benefit management (PBM) organizations, healthcare providers' and payers' ability to diagnose a patient's condition or deliver test results and medication can be significantly impacted by poor application response times caused by the fabric and storage layers of the IT infrastructure.

### WHY HEALTHCARE PROVIDERS CHOOSE VIRTUAL INSTRUMENTS

- Proactively identify and address infrastructure problems before they impact clinical workflow
- Eliminate the risk of unplanned outages and performance slow-downs when virtualizing healthcare systems
- Improve healthcare application performance to ensure fast reliable access to medical records
- Maintain and prove SLA/ Compliance or Joint Commission audits and HIPPA regulations
- Optimize SAN, server and storage port utilization to avoid unnecessary purchases; divert 50% CapEx savings to fund strategic healthcare initiatives
- Reduce trouble tickets by up to 80%; direct OpEx savings to patient care initiatives

**“Our IT team used to spend days—even weeks—troubleshooting the root cause for outages which affected our users and made them uncomfortable with the availability of key applications. With VirtualWisdom in place we were able to be proactive and improve the performance and availability of our electronic health records applications and improve the service levels delivered to our care providers.”**

**Director, Infrastructure Management Group  
National Healthcare Provider**

## Monitor the Healthcare IT Infrastructure

Comprehensive, real-time measurement of the physical and virtual infrastructure enables healthcare IT managers to proactively monitor their servers, switches and storage to identify the root causes of potential issues before they can interrupt the delivery of care. This approach makes it possible to increase agility and respond faster to the needs of healthcare providers, payers and patients. Such visibility can also optimize resource utilization to prevent unnecessary purchases, significantly reduce resources required to troubleshoot I/O problems, and eliminate the risk of deploying clinical applications in a virtualized environment.

Drawing on its extensive knowledge of Fibre Channel network monitoring, Virtual Instruments developed VirtualWisdom® as the only infrastructure monitoring and optimization solution that can non-intrusively improve application performance by analyzing SAN I/O traffic data. This helps healthcare IT managers optimize server, SAN and storage resources so they can eliminate over-provisioning and direct cost savings to patient initiatives. And by identifying application, SAN or storage latency and bottlenecks that can negatively impact operational IT systems, they can optimize application performance and availability which allows for enhanced clinical workflow, reliable access to medical records and improved quality of care.

## Comply with Healthcare Regulations

VirtualWisdom software and hardware help address the Health Insurance Portability and Accountability Act (HIPAA), Joint Commission, and European Union Data Directive requirements for business continuity. Intuitive, visually driven dashboards provide specific detail required by healthcare application, infrastructure and IT service delivery teams along with the summary information needed by functional management heads. These statistics also support regulatory compliance by validating adherence to external requirements as well as internal SLAs. VirtualWisdom's comprehensive real-time and historical reporting provide the management oversight needed to build strong foundations for service reliability.

## Enable IT Efficiencies

A key benefit of VirtualWisdom is its ability to proactively monitor the SAN infrastructure and troubleshoot technical issues, which in turn

decreases the number of helpdesk calls and trouble tickets by up to 80%. With fewer server or SAN storage issues to deal with, healthcare IT managers can focus on implementing strategic initiatives such as EMR and establishing a more reliable network infrastructure that is compliant with HIPAA. Operational expenditure (OpEx) savings can then be directed to patient care initiatives.

Capital expenditure (CapEx) savings that VirtualWisdom monitoring capabilities enable complement IT efficiencies and (OpEx) savings, and can be diverted to clinical workflow enhancements that improve caregiver and patient services. By optimizing the use of virtualized server and SAN infrastructure investments, healthcare IT managers can eliminate overprovisioning and reduce server and SAN hardware investments by up to 50%. VirtualWisdom finds underutilized resources, enables load rebalancing, and alleviates the need to purchase servers, storage or switch ports that end up being underutilized.

Some healthcare organizations are considering cloud solutions as a way to lower IT costs and make critical data more accessible to patients and caregivers. The VirtualWisdom solution can help simplify the move to a private cloud environment allowing for even more predictable and agile IT spending. Healthcare organizations looking at private cloud solutions will dramatically benefit from adding monitoring capabilities for tracking SLAs and meeting compliance requirements.

## Improve Quality of Care

Many healthcare organizations are struggling to implement innovative technologies like EMR that directly impact the quality of patient care due to costly, complex virtualized infrastructures that require significant resources to maintain. VirtualWisdom's ability to monitor, report, trend and diagnose performance and availability issues from the application level to the SAN in a reliable and scalable way is essential for healthcare IT managers responsible for the infrastructure that maintains clinical workflow, access to patient data and the overall delivery of quality care.



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