Achieving Full Network Visibility Across a Complex Healthcare Delivery System

Hospital Group Extends Network Monitoring Capabilities

As the Internet of Things (IoT) becomes more prevalent, more and more data is being circulated over the network. Ensuring that the network performs at an optimum level and can serve up business data quickly and reliably is an important goal. When the medical industry is involved; however, and lives could be at stake, achieving that outcome is essential. So, when a large healthcare service delivery system began feeling ill effects from its complex, heterogeneous network infrastructure, there was cause for concern.

Overseeing some two-dozen owned or affiliated hospitals and clinics, the organization was managing large data centers for its customers—supporting numerous physical and virtual networks, systems and applications. And while the organization had CA Application Delivery Analysis (ADA) and CA Application Performance Management (APM) in place to monitor application performance, they only had limited visibility into their complete network infrastructure. Application performance degraded as a result, and the IT team was unable to fully leverage these vital CA solutions to deliver a high quality user experience to their large medical staff.

The limited visibility was due to the fact that many applications were custom, commercial-off-the-shelf or thin-client applications that didn't lend themselves to modern monitoring methods associated with Java™ and .Net environments. It also stemmed from the need to monitor ever-increasing volumes of network traffic. By partnering with Keysight, CA Technologies was able to craft an alternative approach that eliminated these blind spots and other limitations while providing a comprehensive and scalable network monitoring solution.

By delivering all required traffic from anywhere in the network to CA APM and CA ADA systems, the Keysight Vision ONE™ network packet broker enables 100 percent of network traffic to be monitored and analyzed. Organizations that take advantage of this partnership can quickly deploy monitoring solutions with full network visibility and easily

Company

- Large Healthcare Organization

Key Issues

- Extend monitoring capabilities to include all needed network traffic
- Understand the impact of network changes and interdependencies on application performance
- Increase service availability and optimize performance

Solutions:

- CA Application Delivery Analysis
- CA Application Performance Management
- Keysight Vision One network packet broker

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scale them as needed to drive higher levels of service delivery and application performance.

Risks From Limited Visibility

Expanding its healthcare delivery system through acquisitions and the addition of new affiliates had led to this complex, heterogeneous infrastructure. And with network monitoring limited to only four access points per data center, IT lacked the visibility to understand what was happening across the entire network infrastructure.

Specifically, IT couldn't monitor the network at each data center all the way down to the respective server and application tiers. And the existence of blind spots associated with the organization's virtualized, or private cloud infrastructure meant IT needed more time and resources to isolate and triage performance problems. Further, these gaps in visibility impaired IT's understanding of network changes on the performance of critical systems and applications since the team couldn't assess all related interdependencies. The strain on network monitoring from increased network traffic also challenged the organization to deliver a good user experience to the medical community.

An CA ADA and CA APM customer, the organization reached out to CA Technologies for help. Presented with the joint CA Technologies and Keysight Vision ONE solution, IT management realized they could address their network challenges and preserve their investment in existing technologies

Challenge

Extend monitoring capabilities to include all needed network traffic

Understand the impact of network changes and interdependencies on application performance

Increase service availability and optimize performance

Solution

CA Application Delivery Analysis

CA Application Performance Management

Keysight Vision ONE network packet broker

Benefits

Full network visibility into all physical and virtual infrastructure components

Reduced MTTR for improved application availability

More reliable end-user experience

Faster delivery of critical information to medical staff

Improved ability to drive revenue within healthcare facilities

The Solution: Extend Network Monitoring With Keysight Vision One

The Keysight Vision ONE solution works with CA APM and CA ADA to capture and analyze network traffic in a scalable solution that accurately and efficiently monitors networks of any size. Traffic is aggregated from all needed access points in the network and delivered to CA ADA and CA APM solutions to provide comprehensive visibility, with unwanted traffic—such as duplicate packets—removed. In this case, Keysight Vision ONE extended network monitoring so that the organization can monitor 48 locations in the network.

Keysight Vision ONE also enabled the organization to monitor 480G of network traffic compared to the 10G it was currently monitoring. And in addition to physical network traffic, Keysight Vision ONE now allows all virtual traffic of interest to be delivered to CA ADA for analysis. What's more, it supports the efforts of individual teams like Digital Security by sharing and carving the data feed into specific packets for security monitoring (and analysis by CA ADA) based on the team's unique requirements.

Enhanced Performance and Availability

Today, the organization can monitor 12 times the number of network access points for increased network visibility all the way through to the back-end infrastructure. This increased visibility means they can troubleshoot problems faster, reducing mean time to resolution (MTTR) by up to 40 percent through fewer and shorter crisis management calls. And with resulting improvements in application availability and performance, doctors can get test results quicker and initiate life-saving treatments more rapidly. By providing greater reliability in this dynamic environment, the healthcare delivery system offers an attractive choice to existing and potential healthcare partners—helping the organization both protect and build revenue. Meanwhile, as the organization grows, it can flexibly scale the joint CA Technologies and Keysight solution to handle increased network traffic.

Better Together

Recognized worldwide as industry-leading solutions, CA ADA and CA APM allow organizations to proactively analyze and monitor application performance so they can spot anomalies faster and rapidly take corrective action. When visibility becomes limited due to increasing network complexity and growth, introducing Keysight Vision ONE makes sense since it expands monitoring to more access points along the network. As partners, CA Technologies and Keysight offer a best-of-breed solution for ultimately improving application performance and availability. Simple to deploy and with quick time-to-value, it serves all parts of the infrastructure.

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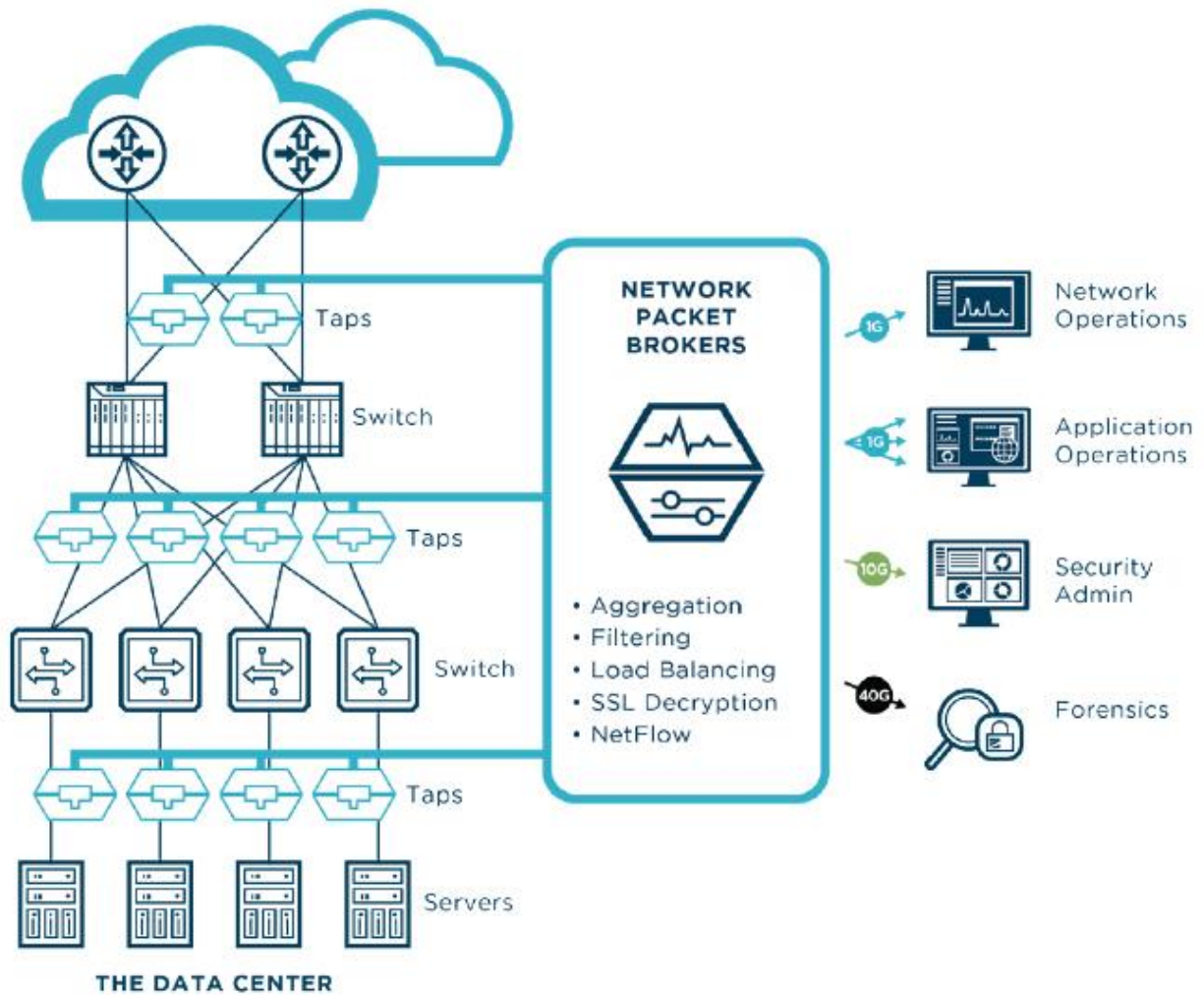
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