Array
N E T W O R K S

HealthNet

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Healthcare provider bolsters PM and EMR system with Array virtual load balancing; improves performance and availability of mission-critical applications.

Background

Since 1968, HealthNet has served the inner-city neighborhoods of Indianapolis, with a goal of improving lives with compassionate health care and support services, regardless of the ability to pay. From its beginnings in a converted bank building staffed by a single physician, the Federally Qualified Health Center (FQHC) has grown to encompass 36 locations and 600-plus employees city-wide, with nine primary health centers, five dental clinics, an OB/GYN care center, a pediatric and adolescent care center, and several other facilities.

As Indiana's largest FQHC, HealthNet has earned the Joint Commission's Gold Seal of Approval, one of fewer than 300 health centers nationwide to achieve the honor. In addition, in 2015

Industry

Healthcare

Challenges

Aging patient management system was replaced by eCW PM and EMR appliances

Increasing patient workloads as well as a new disaster recovery site necessitated load balancing to assure performance and availability

In order to meet goals of patient satisfaction and positive user experience, as well as conform to virtualization strategy, virtual load balancers were required

Solution

Redundant pairs of Array vAPV virtual application delivery controller appliances deployed at the production and disaster recovery data centers

Global server load balancing licenses to allow fast failover in the event of an emergency (future)

Benefits

24/7 availability for physicians and others regardless of traffic load

Performance improvements to keep up with growing patient load

User experience preserved and maintained for greater user satisfaction

Interworking with SolarWinds network performance monitoring to provide accurate, up-to-date resource reporting and notifications

HealthNet was awarded the prestigious HIMSS Davies Award of Excellence for leveraging their electronic medical records (EMR) resources to improve care for children and newborns. Today, HealthNet serves nearly 60,000 individuals, accounting for more than 260,000 patient visits per year.

Challenges

In 2008, HealthNet was faced with an aging patient management (PM) system whose manufacturer changed hands twice, resulting in reduced support resources. HealthNet formed an interdisciplinary team to evaluate potential PM vendors, with the goal of adding an integrated electronic medical records (EMR) capability as well.

After a thorough and rigorous evaluation, eClinicalWorks PM and EMR was selected and installed, along with 3rd-party physical load balancers. The healthcare provider saw almost immediate return on investment; billing write-offs were reduced by 32%, storage space for paper-based medical records was repurposed as exam rooms and offices, and 'soft' ROI returns resulted in higher patient satisfaction and other benefits.

By 2016, however, it became apparent that the increased patient workload, as well as the addition of a new off-site disaster recovery data center, had resulted in the need for virtual server load balancing as well as global server load balancing in order to align with the organization's virtualization and disaster recovery strategy.

eClinicalWorks recommended Array Networks APV Series application delivery controllers. The cost savings afforded by Array's virtual ADCs allowed HealthNet to replace their previous ADC solution with four vAPV virtual load balancers – two in the production environment and two in the DR center.

Solution

HealthNet network engineer Eric Leickly had assisted with the initial eCW deployment in 2009, and was hired into HealthNet's IT department in early 2016, shortly after the vAPV load balancers were installed.

"At first it was a little bit overwhelming, because the vAPV load balancers have a lot of capabilities," said Leickly. An Array sales engineer held a training Webinar and assisted Leickly in the initial setup and configuration.

"Once I spent some time with them, they seemed rather easy to manage," he continued. "They don't require much attention. Most of the time I just let them do what they do. I rarely have to make changes," Leickly said.

"The vAPV virtual appliances make us more efficient and robust. They're a critical component of our EMR solution."

Eric Leickly
Network Engineer, HealthNet

Leickly has also deployed SolarWinds network monitoring to provide up-to-date network and server status as well as alarms should a server become disabled. The vAPV load balancers provide statistics to the SolarWinds solution via SNMP3, providing Leickly with continuously updated network and server information.

Benefits

The vAPV virtual ADCs balance PM and EMR traffic loads across three dedicated eClinicalWorks application servers and six real services, providing performance improvements and supporting failover in the event of a server going offline due to a server error or when maintenance is required. HealthNet physicians, medical professionals and others that need to access the PM and EMR applications receive a high-quality user experience at LAN speed.

"The vAPV virtual appliances make us more efficient and robust," said Leickly. They're a critical component of our EMR solution."

Further, the vAPV's SNMPv3 traps that feed into the SolarWinds network monitoring solution provide accurate, up-to-date information on network and server performance that allows Leickly to tune and optimize network resources as needed to assure optimum performance.

Leickly plans to deploy global server load balancing licenses for all four vAPV virtual load balancers in the near future to allow instant failover to the disaster recovery site. "GSLB will complete the solution," he concluded.