

Seeing Clearly Now



Human Kinetics relies on Cisco Prime Virtual NAM to provide visibility in the cloud.

EXECUTIVE SUMMARY

Customer Name: Human Kinetics
Industry: Publishing
Location: Champaign, Illinois
Number of Employees: 300

BUSINESS CHALLENGE

- Gain visibility of network traffic inside company's private cloud to improve network and application performance as well as security

NETWORK SOLUTION

- Cisco Prime vNAM virtual appliance for application awareness, performance analytics, and network visibility

BUSINESS RESULTS

- Quickly resolved longstanding network traffic issue in cloud
- Prevented future performance issues by modeling application updates
- Established daily processes to maintain optimal network performance

Business Challenge

How do you know what's happening to your applications in the cloud? Do you know where the data is? Is it going where it needs to go? Is it getting there fast enough? For Human Kinetics, an online publisher of products related to physical activity and health, the company's private cloud is every bit as important as the central nervous system is to the human body. It hosts many of its business-critical applications. It provides a computing environment, enabling the 10-person IT team to rapidly respond to the needs of the business. And it helps keep costs in line. However, since deploying the private cloud, the team has been challenged to see the traffic running inside it.

"The technology to analyze traffic once it left the cloud had been available to us for years," says Brad Trankina, assistant director of technology at Human Kinetics. "But we really had no way to inspect the traffic between servers in the cloud to detect network and application performance issues." Adds Stuart Lyons, security engineer at Human Kinetics, "From a security perspective, we weren't able to

confirm that the packets were actually going where we intended them to go."

As a result, Trankina's group found itself with nagging performance issues that the team struggled to solve, despite spending significant amounts of time on them. "We knew there were lost opportunities for optimization," says Trankina, "and the lack of visibility meant there was always the potential for data corruption or a security breach."

Network Solution

Human Kinetics has experienced growing demand for its digital content, which helps scholars, sports and health professionals, and the general public to lead healthier, more active lives. As website traffic has flourished, the IT team looked to Cisco® to help them find solutions to improve the scalability, manageability, and performance of their data center. Today, Human Kinetics deploys solutions such as Cisco Nexus® and Catalyst® switches, Cisco Unified Computing System™ (UCS®), and the Cisco Network Generation Appliance to deliver digital content more quickly and at lower cost.



Expanding the Cisco data center network solution to help manage the private cloud, Trankina's organization recently deployed the latest version of Cisco Prime™ Virtual NAM (vNAM) on one of its Cisco UCS servers in the cloud as part of a beta test program. The benefits to his team were immediate. It let them understand traffic behavior across the entire network; analyze the network by application, host, and virtual machine; and identify bottlenecks that affect performance and availability—all from a single application. The team now has visibility that they did not have before, helping them solve acute problems that they couldn't before, and giving them a higher level of control over the private cloud.

Business Results

Obtaining Immediate Benefits

"The vNAM deployment was one of the easiest things we've ever done," says Trankina. "From the download of the virtual appliance to full visibility took less than 45 minutes, and within an hour of having it up and running, we were able to use it to avoid a significant disruption to our network." The application development team had been planning to deploy an update, and when they described the new process for the deployment, Trankina's team was concerned about the impact on the network. Using Cisco Prime vNAM, they were able to model the new process and learn that their external firewall did not have the capacity to handle the change, which would have had a significant negative impact on customers visiting the company's website. "Without vNAM, we would have deployed the new process and then have been up all night trying to figure out what went wrong, what had been changed, and why some customers couldn't access our website," says Trankina.

Quickly Solving Difficult Challenges

While the Prime vNAM has helped the IT team solve issues proactively, saving considerable time and frustration, it has also helped them solve some longstanding and hard-to-nail-down issues. Prior to the deployment of Cisco Prime vNAM, the Human Kinetics IT team had a running battle with an Active Directory domain controller that constantly went down. Because the Active Directory service was in the cloud, the problem was extremely difficult to trace. Using vNAM, the team was able to do packet traces in the cloud, analyze the traffic, and zero in on the source of the problem: a device generating a much higher DNS load than expected. "Once the DNS traffic was more equally distributed, uptime on the domain controller greatly improved," says Lyons. "Isolating the problem also eliminated the repeated productivity drain that the downtime had caused."

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— Brad Trankina, Assistant Director of Technology, Human Kinetics

In addition, Prime vNAM helped the IT team discover that the cause of a problem was not the network configuration, a usual suspect. Human Kinetics also deploys voice servers in the private cloud. When an engineer encountered difficulty configuring several new Cisco Analog Telephone Adapters (ATAs), he contacted the Cisco Technical Assistance Center (TAC). The TAC representative requested a network trace, which had always been difficult for Human Kinetics to produce for cloud traffic. With Cisco Prime vNAM, however, the Human Kinetics engineer-while still on the phone with the TAC representative-was able to set up a network trace, capture it to a file, and email it to the TAC representative. This saved the engineer many hours of painstaking effort. And a fast identification of the root cause avoided unnecessary blaming.

Enabling Smooth Network Operations

Today, Trankina reviews network performance using Cisco Prime vNAM every day. The vNAM provides multidimensional analysis, weaving together network usage statistics, application performance metrics, and packet captures into a service-oriented workflow that helps the IT team quickly tackle a myriad of challenges. "It's like a Swiss Army Knife for network management, said Trankina, "allowing us to quickly detect, understand, and resolve many different types of issues across our virtual and physical network."

PRODUCT LIST

Network Management

- Cisco Prime Virtual NAM
- Cisco NetFlow Generation Appliance

Data Center

- Cisco UCS B200 Blade Servers
- Cisco Nexus 5010 Switches
- Cisco Catalyst 6513 Switches

And with more efficient and effective operations, the IT team now has more time to undertake the bigger, more strategic projects supporting their cloud deployment. Lyons says, "The Prime vNAM is just the game changer our IT team needed."

For More Information

To find out more about the Cisco Prime vNAM, go to:
<http://www.cisco.com/go/vxnam>.

To find out more about Human Kinetics, go to:
<http://www.humankinetics.com>.



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