Viavi Observer SightOps: Infrastructure Monitoring for the Cloud Era

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) White Paper and Case Study
Prepared for Viavi Solutions

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Table of Contents

Executive Summary

Enterprises are migrating applications and services to the cloud, adding yet another layer of technology and potential visibility monitoring challenges to their existing internal IT infrastructure. Network operations will be tasked with troubleshooting and optimizing infrastructure that spans their own data centers and external public cloud resources. Given this reality, network operations must adjust their management tools and practices for a hybrid world where applications and services span private infrastructure and public clouds.

Viavi Solutions has introduced Observer SightOps, a cross-domain infrastructure monitoring system with visibility into private cloud, their associated components like virtualized servers, and leading public cloud environments. SightOps offers network operations an option for unified monitoring and troubleshooting of hybrid infrastructure.

Enterprise Network Operations Must Retool for the Cloud

The era of cloud and hybrid IT operations has arrived. Many IT enterprise organizations now support a combination of internal and external cloud resources that are orchestrated and managed as one unified hybrid infrastructure. These IT organizations deploy enterprise applications that span these resources. With applications hybridized like this, assuring cloud performance becomes essential.

This transition to the cloud comes with challenges for network operations. Enterprise Management Associates (EMA) research has found that 76% of networking professionals are now experiencing difficulty with monitoring and troubleshooting cloud services, including 39% who singled out external public cloud services as a particular area of trouble.[1] That same research found that only 26% of networking professionals had monitoring and troubleshooting tools that provided adequate visibility into external public cloud service, and just 37% had adequate visibility into hybrid clouds.

Given this new reality, network operations teams must evolve to support cloud infrastructure. They need network infrastructure tools that support the cloud and integrate cloud operations with overall network operations. In unpublished research conducted in 2015, EMA found that 90% of network management teams have added new network monitoring tools specifically to address cloud visibility.

While new tools for cloud monitoring will provide a benefit, IT organizations must be careful not to fracture their overall infrastructure monitoring toolset. With hybrid IT infrastructure, network monitoring must seamlessly combine internal, typically extensively virtualized server environments and external infrastructure views. This is especially true when cloud operations is responsible for applications that span these highly distributed resources. Network operations teams need a tool that combines these into a single coherent view.

These cloud monitoring tools must also extend their visibility beyond network resources. Forty percent (40%) of networking professionals say their network operations monitoring is now conducted by a converged, cross-domain operations center.[2] Cloud network operations will require a unified and integrated view of fault and performance conditions across systems, hypervisors, and storage resources wherever they reside. Software-defined networking (SDN) visibility should also be considered, as SDN will become essential to supporting cloud infrastructure. This is evident in new EMA research, which found that early adopters of SDN saw cloud orchestration skills (OpenStack, CloudStack, etc.) as the number one training priority for networking teams supporting SDN.[3]

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[1] EMA, "Managing Networks in the Age of Cloud, SDN, and Big Data: Network Management Megatrends 2014," April 2014.
[2] Ibid.
[3] EMA, "Managing Tomorrow's Networks: The Impacts of SDN and Network Virtualization on Network Management," December 2015.

Optimizing Service Management for the Cloud

Network operations must evaluate and evolve its management tools and practices to ensure that it can support an enterprise's transition to private or public cloud. This process begins with helping the test and development team prepare an application for the cloud. Network infrastructure monitoring tools will need to baseline applications on internal legacy infrastructure to give the IT organization an understanding of current levels of performance. Then the networking team will have to monitor the performance of these same applications in a cloud test environment.

Network operations will need a monitoring tool that provides visibility into both internal infrastructure and the cloud so that IT can compare performance across the two environments. Comparing cloud performance to baseline legacy performance will help IT understand whether the transition to the cloud will negatively impact application performance. For instance, will an application become more sensitive to latency in the cloud? Will jitter disrupt unified communication applications that have migrated to the cloud?

No enterprise expects to move 100% of its applications and services to the public cloud. Enterprises will continue to maintain a great deal of internal infrastructure, frequently deployed as private clouds or hosted across highly virtualized server environments making visibility into these assets critical. Since the performance of both the internal infrastructure and the external cloud will impact the business, network operations must be prepared with monitoring tools that offer a unified, integrated view into all resources to avoid swivel-chair toggling between management consoles.

Given that the public cloud shifts a large portion of IT expenses from capital investments to operational costs, the network operations team should help ensure that these new cloud investments are paying off. This means that network operations needs a monitoring tool that can determine whether public cloud resources are performing as promised and meeting service-level agreements.

Given that most IT organizations don't have the resources for extensive retraining of personnel, it will also be useful if the tools used to monitor cloud operations are familiar to existing network operations personnel. Therefore, it may be preferable to consolidate management systems where possible to ensure that IT personnel won't have to learn multiple management tools. Finally, these monitoring tools should have the analytical capabilities to help network operations optimize internal hosted and cloud resources to maximize the organization's IT service investments.

Viavi Observer SightOps Offers Cloud and Hybrid Infrastructure Monitoring

Viavi Solutions is well known for its Observer Management Platform portfolio of network management products, including the Observer GigaStor line of packet capture appliances and the Observer Analyzer performance management software.

Now Viavi is introducing Observer SightOps, an infrastructure availability and performance management system that monitors and alerts on resource health, beginning with a network view but extending to servers, storage, and virtualization. SightOps, powered through Viavi's close technology partnership with ScienceLogic, is a proven platform with over 25,000 installations.

Designed for hybrid IT monitoring, SightOps can monitor and troubleshoot internal and cloud infrastructure, with support for private cloud components like server virtualization and popular cloud environments like Amazon Web Services and Microsoft Azure. SightOps also has a live infrastructure dependency mapping feature that allows network operations to monitor critical applications across hybrid infrastructure.

Viavi is enhancing this core SightOps intelligence via integration with its existing transaction and performance analysis expertise. Specifically, enterprises can deploy SightOps with GigaStor for a deeper view into hybrid operations.

When SightOps detects a problem with the underlying resources, troubleshooting teams can capture the communications between the components in question in an automated or ad hoc manner with the GigaStor appliance. The conversations can then be inspected with Analyzer for deeper insight into application transactions and network performance. The solution provides correlation and contextual continuity between underlying infrastructure and transaction behavior for accelerated service anomaly resolution. This combination and GigaStor's back-in-time capabilities can greatly reduce MTTR by eliminating reactive captures. It also offers deep IT resource intelligence for capacity planning, automation initiatives, cloud deployment go / no-go decisions, and visibility for optimizing capital and operational expense objectives.

EMA Perspective

EMA research has shown that network management teams struggle with monitoring and troubleshooting the private and public cloud. They must evolve for the cloud era by adapting their management systems to these new environments. Their monitoring tools must provide a view into cloud environments that is unified and integrated with their existing infrastructure management tools. This adaptation will provide end-to-end visibility into public and private cloud infrastructure. Furthermore, a network monitoring solution that looks beyond the network to cross-domain operations will help network managers contribute to the cross-domain operations teams that are emerging to support hybrid infrastructure.

With SightOps, Viavi Solutions is offering an infrastructure monitoring solution that addresses these needs. Based on a partnership with a leading infrastructure monitoring solution provider, SightOps is a proven platform for cross-domain monitoring and cloud monitoring. Network operations teams that are supporting their organization's migration to the cloud should evaluate SightOps to determine whether it meets their requirements.

About Viavi Solutions

Viavi (NASDAQ: VIAV) software and hardware platforms and instruments deliver end-to-end visibility across physical, virtual, and hybrid networks. Precise intelligence and actionable insight from across the network ecosystem optimizes the service experience for increased customer loyalty, greater profitability, and quicker transitions to next-generation technologies. Viavi is also a leader in anti-counterfeiting solutions for currency authentication and high-value optical components and instruments for diverse government and commercial applications. Learn more at www.viavisolutions.com and follow the company on Viavi Perspectives, LinkedIn, Twitter, YouTube, and Facebook.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on Twitter, Facebook or LinkedIn.

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