

Tier 1 Service Provider Uses ScienceLogic to Monitor Customers' Cisco ACI Networks

Executive Summary

The advanced technologies group of a Tier 1 telecommunications service provider is using ScienceLogic's hybrid IT monitoring platform to manage its enterprise customers' Cisco Application Centric Infrastructure (ACI) deployments. ScienceLogic's ability to integrate with and monitor Cisco's software-defined networking solution has allowed this service provider's operations team to deliver reliable data center network services to its customers.

Cisco ACI Monitoring Requires Service Abstractions

The advanced technologies group of a Tier 1 telecommunications service provider in the Asia-Pacific region recently designed and deployed three data center networks based on Cisco ACI for two of its customers. Robert Gruener, the service provider's support and program manager, is monitoring the health and performance of this software-defined networking (SDN) technology with ScienceLogic's hybrid IT monitoring platform.

Cisco ACI—and SDN in general—requires a new approach to network monitoring, Gruener said. “ACI is a complex platform when it comes to finding things and making quick decisions about what is working correctly or not,” he said. “ScienceLogic has been quite good, and it's brought us into prominence [within our organization]. None of the other monitoring platforms were able to cope with [ACI].”

Traditional network infrastructure monitoring is centered on polling the status of various objects within a network device, from power supplies to interface counters. Management of Cisco ACI is different because it requires the logical abstraction of individual devices. ACI is a policy-driven network architecture in which the network operator creates logical groupings of server workloads, known as endpoint groups. These endpoint groups represent applications for which the network operator creates policies for security, quality of service, and other variables.

Cisco's Application Policy Infrastructure Controller (APIC) collects telemetry from network devices and calculates health scores for various abstractions, such as endpoint groups, application profiles, and network profiles. These abstractions facilitate high-level monitoring and management. A network manager can view these health scores within the APIC management console, but Cisco has not designed the console to serve as a monitoring platform.

“It can take time to find things in the APIC controller,” Gruener said. “There are a lot of menu options to click through. ScienceLogic can find the health scores and present them quickly. It can provide trending of those health scores, too.”

HIGHLIGHTS

Vendor name: ScienceLogic

Solution: Hybrid IT Monitoring

Product function: Cloud and IT infrastructure availability and performance monitoring

Availability: Available now



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ScienceLogic provides eight ACI-specific dashboards out of the box with its ACI PowerPack, a collection of software extensions that enable monitoring of ACI. Gruener's team can see health scores and trends for abstractions ranging from individual application profiles to an overall ACI fabric. Also, since a single instance of ScienceLogic can monitor across several networks, it can also present ACI health scores by customer.

Gruener and his team monitor these health scores within ScienceLogic. When they observe the scores dropping below an acceptable threshold, they dig deeper into the tool to find the event that triggered the change.

"ScienceLogic gives you a good view of that raw event and helps you understand what it is. Within ScienceLogic we're doing first-level investigation of events, based on historic monitoring trends. A lot of events with ACI are about people misconfiguring an endpoint group or application profile. We can see those [in ScienceLogic] and set them aside and talk to people about those configuration issues later."

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Once ScienceLogic has revealed an event is caused by something other than a configuration error, Gruener can then log into the APIC controller to troubleshoot the issue. Overall, this ability to quickly sort out events in ScienceLogic has streamlined network operations for Cisco ACI.

The Business Benefits of Monitoring Cisco ACI with ScienceLogic

ScienceLogic's ability to adapt quickly to ACI and other technologies has improved this service provider's relationships with its customers. It has also improved the managed services team's relationships with other parts of the service provider's business, which recognize the ability of Gruener's team to monitor just about anything. In addition to the three ACI environments, Gruener monitors 50 customer networks with ScienceLogic.

"[Our team] is an early adopter of technologies," Gruener said. "We have new technologies coming in all the time, and we can get [them] supported very quickly. We can integrate [them] very well with ScienceLogic. So if someone says they have a new cloud-based service coming along and they need monitoring for it, we can do it."

In other words, thanks to ScienceLogic, other business units within this telecommunications service provider's organization have recognized the ability of Gruener's team to rapidly provide monitoring of new infrastructure and services.

ScienceLogic's role-based access controls also allow Gruener's team to grant full visibility to clients. Customers have their own portals into ScienceLogic, where they can see everything that the managed services team sees. Gruener is also developing custom dashboards in ScienceLogic for one ACI customer that has a highly seasonal business. "Half their revenue comes from a two-month period," he said. "They want very focused analysis of what's going on in that environment so that we can detect and resolve faults quickly."

ScienceLogic's ability to provide a customized, tenant-based view to customers has helped to boost the service provider's net promoter score, which is a major strategic focus of the company's customer brand reputation and customer retention efforts.

"We want our customers to be our best advocates," Gruener said. "Their advocacy of us and ScienceLogic is so high that they are trying to get their senior management to allow them to bring it more fully into their stack. Our net promoter score has gone up."

EMA Perspective

Enterprise Management Associates (EMA) research has determined that the majority of early SDN adopters lack network management tools that can fully support SDN. In fact, just 40% of early adopters of SDN solutions like Cisco ACI said their network performance monitoring tools fully support the technology, and only 37% said their network troubleshooting tools fully support it.

Network operations teams require management systems that can adapt to SDN platforms. SDN technology introduces myriad new objects and abstractions that tools must discover, monitor, and present to network operators. In the case of ACI, Cisco's APIC controller creates abstractions such as endpoint groups, application profiles, and network profiles. The controller's algorithms assign health scores to these abstractions. A network monitoring tool must be able to collect this information and present it in a meaningful way to the operations team.

ScienceLogic has demonstrated that its hybrid IT monitoring platform is not only adaptable enough to integrate with Cisco ACI's REST APIs. It also possesses the flexibility to present ACI telemetry to network operators so that they can monitor and manage the health and performance of these new and still-maturing networks. The success of this Tier 1 telecommunications service provider demonstrates that adopters of Cisco ACI should evaluate and consider ScienceLogic as an SDN network operations tool.

About EMA

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