

[ At-A-Glance ]

# SEVONE SDN MONITORING SOLUTION FOR CISCO ACI:

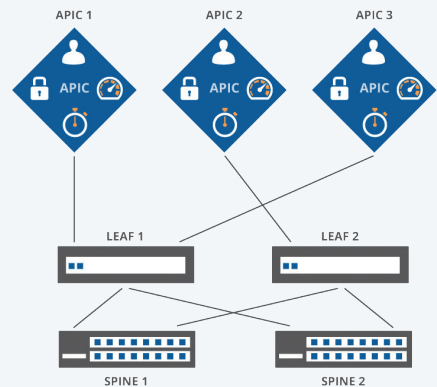
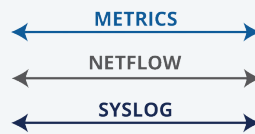
Managing the performance of a large-scale network was challenging enough when the infrastructure was fairly static. Now, with software-defined networking solutions like Cisco ACI being deployed in enterprise and carrier datacenter networks, allowing users to more easily scale out their networks by automating the provisioning of policies and paths through the network, the challenge is even greater.

Transitioning from a legacy, static-based network to one that is policy-driven adds enhanced features and levels of security and availability. However, customers are often left with two networks—both of which need to be managed. Fortunately, when integrated with a Cisco ACI network, the SevOne SDN Monitoring Solution 2.0 provides insights into the legacy and the new software-defined network with performance metrics

from both in a single dashboard. This reduces risk as the migration occurs.

The SevOne SDN Monitoring Solution 2.0 automatically detects physical and virtual endpoints as they come online and immediately monitors their performance in the context of the way they were provisioned. The SevOne SDN Monitoring Solution provides real-time inventory and performance metrics from the Cisco ACI northbound APIs and also through metrics gathered by SNMP and log messages sent from Cisco ACI deployments. This information helps operators understand changes at the virtual level (for example, virtual machine creation or deletion), along with physical hardware performance, providing a complete view of overall data center performance.

## Complete Visibility Across Cisco ACI-Based Infrastructure



### MITIGATE RISK.

Visualize relationships with automated mappings of your Cisco ACI deployment

### DEPLOY WITH CONFIDENCE.

Deploy service assurance automatically when you deploy Cisco ACI infrastructure

### ASSESS BUSINESS IMPACT.

Understand how SDN performance affects the applications and services



## HOW CAN SEVONE HELP WITH CISCO ACI?

The integration of the SevOne Platform and Cisco ACI provides a real-time view into the performance of the existing network and new ACI infrastructure, and alerts operators when performance is not optimal or when a change in the network is made. Using polled metrics via the Cisco ACI northbound API and SNMP combined with NetFlow and logs, SevOne provides unprecedented insights into application performance. When a performance event happens, statistics and notices are sent via the API and logs to SevOne to inform operators of the event.

SevOne's ability to combine polled metrics, flow data and syslog messages at scale, along with alerting when any performance anomalies occur in real-time, provides valuable insights into how the network is being utilized. These insights allow operations to

validate if the policies they've put in place are having the desired effect. Any changes in the environment are immediately alerted on, whether they're generated by metrics, flow data or log messages.

The ability to see the performance of both the physical and virtual networks is critical to operations. SevOne's collection and alerting abilities help users get the insight they need in real-time, while enabling them to validate operations procedures as they maintain the network. SevOne's year-long historical reporting and analytic features help network planners with sizing the next set of physical or logical resources that might be needed to deliver an application. Lastly, easy-to-use reporting and report creation dramatically cut the time it takes to install and gain value from the SevOne Platform.

## WHAT KEY PERFORMANCE INDICATORS MATTER AND WHY?

### Automated Monitoring

This solution utilizes a new SevOne Collector that integrates directly with the ACI Control layer and the underlying physical infrastructure for complete visibility into all the entities comprising a Cisco ACI-based deployment. This integration enables operations and engineering teams to visualize understand the health and performance of both the virtual (overlay) and the physical (underlay) components of an infrastructure, along with the relationships between them, including:

- **ACI Adjacency**
- **APIC Status**
- **Application Profile**
- **BridgeDomain**
- **Capacity**
- **Controller Interface**
- **Controller Memory**
- **Endpoint Group**
- **Fabric**
- **Fabric Group Reference**
- **Fantray**
- **Hypervisor NIC**
- **Leaf/Spine CPU**
- **Leaf/Spine Memory**
- **Loose Link**
- **Loose Node**
- **Management NIC**
- **Physical Interface**
- **Power Supply**
- **Private Network**
- **Sensor**
- **Storage**
- **Supervisorcard**
- **Switch Capacity**
- **Tenant**
- **Tunnel**
- **VM**

### Dynamic Tenant-Driven Visibility

When this solution is integrated with a Cisco ACI-based infrastructure, operations and engineering teams can understand their network from a tenant and application first perspective. This includes dynamic visualizations of the logical connection between tenants, application profiles, private networks/VRFs, bridge domains, end point groups, end points, IP path/port info and node connections. Status dots can be hovered over to display health score and highest fault severity for the node.

### Tenant Health Scores with Historical Data

When deploying a Cisco ACI-based network, operations and engineering teams need to understand the health of the overall system and of individual tenant-based operations. With this solution, users have access to both real-time and historical views of health statistics across tenants, nodes, profiles and more.

### Application Network Profile and Endpoint Group Faults

When deploying a Cisco ACI-based network, operations and engineering teams need to understand the health of the overall system, including logical entities like end point groups, and application network profiles and tenants, both in real-time and historically. Cisco ACI-based implementations automatically calculate health scores across sets of entities such as end point groups, application network profiles, and tenants. This solution enables users to access these health scores in real time, but store them historically.

## WHAT KEY PERFORMANCE INDICATORS MATTER AND WHY? (CONTINUED)

### APIC Status

When deploying a Cisco ACI-based network, operations and engineering teams need to understand the health of their APIC cluster(s), and be alerted if a cluster node goes out-of-service. SevOne Data Collector for Cisco ACI adds a unique user-defined name to the beginning of the Cisco ACI device names and components. This allows operations teams to view performance across multiple Cisco ACI clusters, while understanding which datacenter is represented by the data being displayed.

### Proactive Detection of Anomalies

Cisco ACI health data can be saved like any other metric in the SevOne system. Like all other metric data in the SevOne system, baselines can be set to help you detect abnormal behavior. With this solution, operations and engineering teams can be automatically alerted when behavior of Cisco ACI systems are abnormal based on historical trends.

### End Point Group Topology

Cisco ACI-based implementations are a set of physical and logical entities that have a series of relationships. The SevOne SDN Monitoring Solution automatically displays these relationships, including spine, leaf and end point group relationships. The SevOne SDN Monitoring Solution automatically displays the physical and logical relationships enabling users to quickly visualize their Cisco ACI implementation.

### ACI Fabric & Capacity Analysis

This solution includes Cisco ACI fabric & switch capacity analysis dashboards for at-a-glance visibility into resource consumption information, allowing operators to anticipate and plan for capacity upgrades while helping to ensure that application service delivery is uninterrupted and is maintained at the highest level.

### ACI Fabric & Metadata Enrichment

SevOne automatically collects and updates metadata related to the ACI fabric components, providing important configuration-related details within reports and dashboards. When health scores fall or performance degrades, operations teams need to know information about the components in question in order to effectively troubleshoot problems. Asset information such as model, firmware, and serial number are also useful when troubleshooting issues.

## PROFESSIONAL SERVICES, SUPPORT AND TRAINING

SevOne offers a complete set of services to help your organization make the most of your ACI Infrastructure Investment, including:

- **Implementation Services**  
Ensure your SevOne Solution is successfully implemented to meet your requirements
- **Post Implementation Services**  
Engage with SevOne Professional Services for the life cycle of your project with a range of Business and Platform Optimization Services
- **Custom Integration**  
Integration with your existing tools and solutions based on customer specific requirements
- **Gold and Platinum Maintenance**  
A full suite of services from eSupport, Software Updates, 7x24 Technical Customer Assistance, 10-Day New Device and Log Certifications and more
- **Customer Training**  
Increase your team's effectiveness and on-going success with customer training sessions led by SevOne experts

GET STARTED WITH SEVONE:  +1.302.261.8718  [solutions@sevone.com](mailto:solutions@sevone.com)  [www.sevone.com](http://www.sevone.com)