[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 Cisco ACI, customers can more easily scale out their networks by automating the provisioning of policies and paths through the network, the challenge of monitoring such a dynamic environment 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. SevOne SDN Monitoring Solution for Cisco ACI provides insights into both the legacy network and the new Cisco ACI fabric with performance metrics from each in a single dashboard.

This interface helps our customers ensure fabric health and performance as the migration occurs.

Built from and integrated with the full power SevOne Network Data Platform, the SevOne SDN Monitoring Solution automatically detects physical and virtual endpoints as they come online and immediately monitors their performance in the context of how they were provisioned. Cisco ACI networks provide reliability, security, and optimal application performance using automation. When integrated with Cisco ACI, the SevOne SDN Monitoring Solution helps operators automatically understand both physical hardware and virtual network performance, providing a complete view of overall data center health.

Complete Visibility Across Cisco ACI-Based Infrastructure
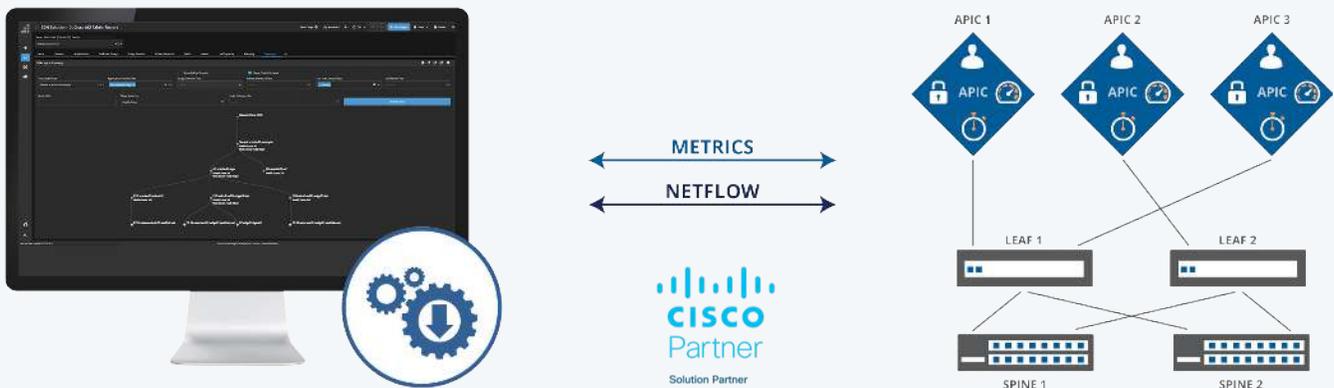
EASE THE TRANSITION.

Monitor your existing traditional network and new software-defined infrastructure from the same dashboard

ASSESS BUSINESS IMPACT.

Understand how infrastructure performance affects applications and services

EXTENSIBILITY.

Easily extend visibility to other critical data center assets, or across the campus, wide area networks and branch offices

HOW CAN SEVONE HELP WITH CISCO ACI?

The integration of the SevOne Network Data Platform and Cisco ACI provides a real-time view into the performance of the existing network and new ACI infrastructure. With unprecedented insights into Cisco ACI and the rest of the data center, this SevOne solution alerts operators when performance is not optimal or when a change in the network is made.

The SevOne SDN Monitoring Solution can now scale to meet the needs of the largest Cisco ACI deployments in the world. This SevOne solution supports larger, multi-site deployments through automated discovery from Cisco ACI Multi-site Orchestrator, easing the transition for network operations and engineering teams deploying multiple Cisco ACI-based data centers.

SevOne's ability to combine polled metrics and flow data 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 or flow data.

The ability to see the performance of both the physical and virtual networks is critical to operations. The SevOne Network Data Platform'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. Yearlong 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 Network Data Platform.

WHAT KEY PERFORMANCE INDICATORS MATTER AND WHY?

Automated Monitoring

This solution utilizes a SevOne Data 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 and 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
- ACI Contract
- APIC Status
- Application Profile
- Bridge Domain
- Capacity
- Controller CPU
- Controller Interface
- Controller Memory
- End Point
- End Point Group
- ES Virtual Machine
- Fabric
- Fabric Group Reference
- Fan Tray
- 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

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.

Fault Display

Easily display current Cisco ACI faults on-demand, and then filter these faults by tenant, domain, and by type. Additionally, this fault display allows users to link directly from topology to fault reports.

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 spine/leaf, 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. This solution also allows users to expand & collapse tree structures and link to reports for alert information, status details and metadata.

WHAT KEY PERFORMANCE INDICATORS MATTER AND WHY? (CONTINUED)

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.

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 data center is represented by the data being displayed.

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.

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.

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 Cisco ACI fabric components, including the recognition of ACI Contract objects. This collection provides important configuration-related details within reports and dashboards, and provides additional metadata for enhanced reporting. 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.

ACI Fault Integration

Quickly view a snapshot of Cisco ACI-based faults, while also integrating these alerts with standard alert processing and management of the SevOne Data Platform.

Interactive Logical to Physical Mapping Table

Users can quickly report, filter and search on the logical and physical mapping relationships between tenant, application profiles, end point group IP address/OS/state, domain, controller, VLAN, Pod, and Switch name/port, and then leverage report linking to visualize performance history.

Aggregated End Point, Tenant & Bridge Domain Utilization

Users can also take a step back and see aggregated views of overall end point group, tenant and bridge domain utilization. Users can then leverage the power of the SevOne Data Platform to baseline and alert on any of the aggregated views.

WHAT KEY PERFORMANCE INDICATORS MATTER AND WHY? (CONTINUED)

Calculated Spine to Leaf Link Utilization

Leveraging raw ingress/egress link data, this solution calculates the % utilization of link based on its max capacity, enabling users to easily visualize link utilization across multiple different sized links within their data center using a red/yellow/green heat chart.

Heatmap Visualizations

Visualize your infrastructure through Calendar Heatmaps, providing users the ability to identify changes over time, as well as discover discrepancies throughout an ACI infrastructure. Users can also visualize their infrastructure through TopN Heatmaps, allowing users to quickly sort and visualize their infrastructure by any given KPI.

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:

- **QuickStart for SevOne SDN Monitoring Solution**
  Ensure your SevOne SDN Monitoring 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, 24/7 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

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