

NETSCOUT Service Assurance Solutions for Cisco ACI SDN



Our Approach

With NETSCOUT®, IT teams are equipped to provide visualization into Cisco ACI deployments in the following manner:

- Monitoring data center operations at a “top of rack” perspective, including aggregation, border leaf, multi-spine, and multi-leaf layers.
- Monitoring in the fabric, factoring leaf-to-leaf / leaf-to-border, Virtual Extensible LAN (VXLAN) tunnel parsing, multi-spine, and multi-leaf.
- Monitoring ACI SPAN, factoring multi-node tenant and endpoint group (EPG) capture, and automatic adjustment if EP moves.
- Undertaking complex monitoring, including end-to-end service management and visualization into, for example, client communities, Citrix servers, application servers, database servers, etc.

In this manner, NETSCOUT closes visibility gaps that enable IT teams to maintain high quality and business continuity throughout Cisco ACI transformation. The benefits include:

- **Assuring real-time performance**, with visibility into applications and user experience, while enabling IT teams to validate properly implemented security controls.
- **Visualizing application dependencies in the Cisco ACI environment**, providing IT teams with the means to understand an app and baseline its performance.
- **Assessing quality of user experience** throughout the Cisco ACI SDN, as well as broader enterprise environment.
- **Lowering mean-time-to-remediate (MTTR) timeframes**, with faster resolution of application and network issues provided by visibility into both North-South traffic flowing in-and-out of the data center and East-West traffic within the data center.

Worldwide enterprise and government organizations have adopted Cisco® Application Centric Infrastructure (ACI) Software-Defined Networking (SDN) technology to reduce the cost, complexity, and performance challenges associated with managing traditional wide area network (WAN) solutions in distributed operations environments.

Migrating to Cisco ACI in data center operations environments offers a holistic architecture that provides centralized automation and policy-driven application profiles, delivering software flexibility with the scalability of hardware performance. Additional benefits include:

- Centralized policy management and Cisco Application Policy Infrastructure Controller (APIC).
- Open ecosystem of network, storage, management, and orchestration vendors.
- Simplicity delivered through use of non-designated paths/flows (i.e., best path method), Layer 2 routing, and a multiple paths/multiple devices approach.

- Use of Cisco Nexus data center switches, which support highly scalable data center fabric deployments.

However, for IT teams tasked with successfully deploying and ongoing management of these Cisco ACI investments, there are associated complexities and data service edge, or boundaries, that make it challenging to pinpoint the source of a network or application performance problem in SDN environments.

As a result, IT teams frequently need to introduce additional data source instrumentation to visualize performance in these new Cisco ACI environments and coordinate real-time monitoring to deliver assurance to executive leadership teams that business service delivery has not been adversely impacted by this SDN migration.

Additionally, since Cisco ACI deployments are often introduced concurrently with other digital transformation initiatives involving cloud migrations (e.g., Amazon Web Services, Microsoft Azure®), and VMware virtualization transitions, there is a further expansion of the range of service edges that IT Operations need to visualize to manage service delivery.

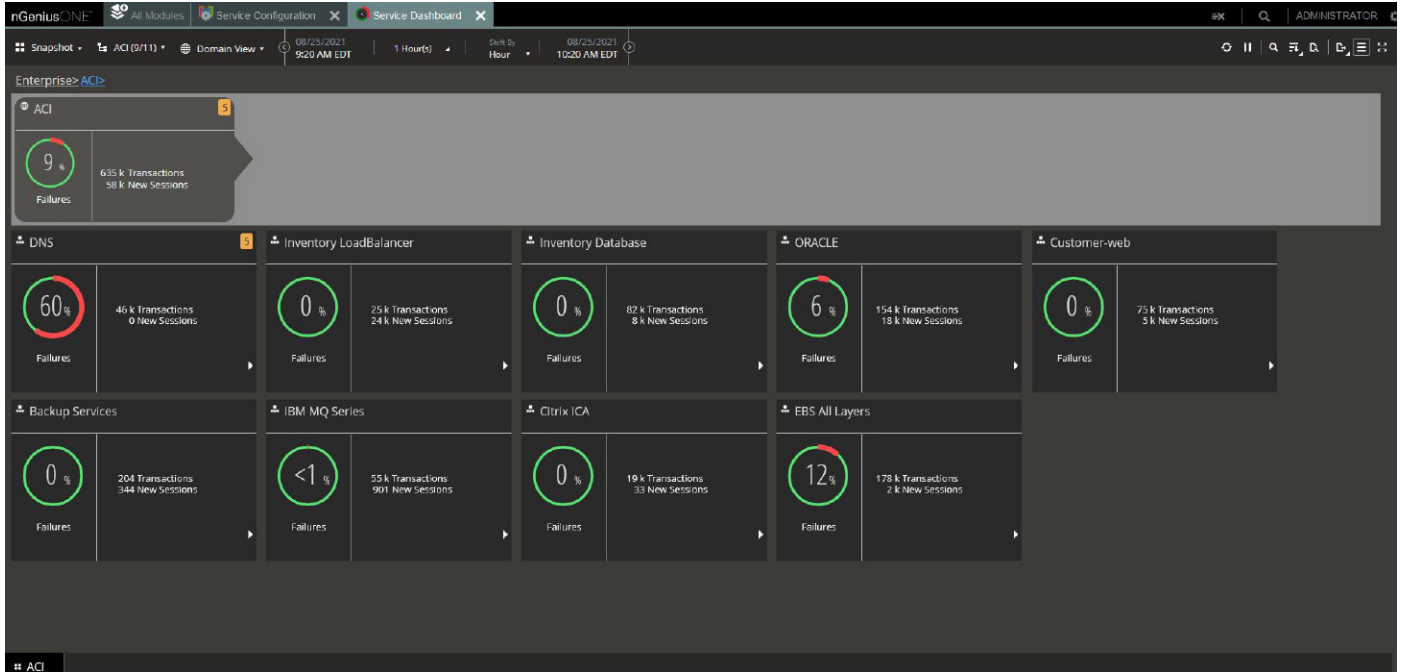


Figure 1: The nGeniusONE Service Dashboard provides a real-time snapshot of Cisco ACI SDN performance in either a dedicated view or within the context of other business-critical network and application services. As seen here, nGeniusONE analytics provide at-a-glance views into Cisco ACI SDN service health that can be used for successful proactive monitoring, as well as contextual drill-downs for efficient troubleshooting and resolution.

Our Solution

The NETSCOUT nGeniusONE® Service Assurance solution is being used by many Cisco ACI customers. It leverages our “Visibility Without Borders” approach, patented smart data technology, and nGenius® smart analytics to provide an end-through-end solution for real-time monitoring of SDN deployments.

The nGeniusONE Service Assurance platform delivers unrivaled “single pane of glass” visibility into business services and provides contextual workflows to speed problem resolution. Through overarching views into the performance of applications and user experience, nGeniusONE exposes underlying service dependencies that help IT teams to effectively manage health, availability, security, and user experience issues across Cisco ACI deployments.

Provided as patented technology in our InfiniStreamNG® (ISNG) software and hardware appliances and vSTREAM® virtual appliances, NETSCOUT Adaptive Service Intelligence® (ASI) technology takes packet analysis beyond traditional data centers and north-south traffic into virtualized environments to provide deep insights into east-west traffic. Regardless of deployment location, ISNG technology with ASI generates NETSCOUT smart data in real-time from network packet traffic across enterprise environments. ISNG software and hardware appliances are designed for deployment in any environment, ranging from the network edge, small remote facilities, satellite offices, and disaster recovery locations, Co-located Data Centers (Co-lo’s), and onto the data center core. In addressing scalability and monitoring needs in very large environments, multiple ISNG software and hardware appliances can be deployed to provide virtually unlimited scalability.

With ASI-generated smart data as the foundation for vSTREAM virtual appliances for cloud (e.g., Amazon Web Services, Microsoft Azure, Google Cloud, Oracle Cloud

Infrastructure) and virtual (e.g., VMware NSX-V and NSX-T) environments, ISNG software and hardware appliances can be deployed in tandem with vSTREAM.

Our nGeniusONE analytics consume this smart data to provide real-time views that scale across Cisco ACI SDN deployments operating alongside hybrid cloud, virtual, and legacy data center environments.

Given the complexity of transformed Cisco ACI network environments, both our nGenius® Packet Flow Switch (PFS) 7000 series and 5000 series packet brokers (which are available as appliances or Packet Flow Operation Software for PFS solutions) support high-speed 100GB network segments by distributing wire traffic from network links in Cisco ACI deployments to downstream monitoring and security tools, including our ISNG appliances.

Additionally, the NETSCOUT Smart Edge Monitoring solution provides “last mile” visibility into work-from-home and remote environments, with ISNG and vSTREAM appliances with our Cloud Adaptor deployed throughout the ACI environment providing the means to combine nGenius®PULSE nPoint synthetic testing results for end-user experience metrics with the smart data fueling nGeniusONE analytics. In this manner, NETSCOUT Smart Edge Monitoring enables cross-IT Operations teams to visualize the quality of WFH and remote employee interactions with “as-a-service” solutions for Software, Unified Communications & Collaboration, Desktop, and Infrastructure technology platforms being accessed directly through Virtual Private Networks, Virtual Desktop Infrastructures, and Internet Service Providers.

Our Value to Cisco ACI Customers

NETSCOUT Service Assurance solutions offer the following benefits to organizations deploying Cisco ACI SDN:

- Provide visibility into numerous Cisco ACI deployment scenarios, with nGeniusONE providing real-time Service Dashboard snapshots and Service Monitoring into Cisco ACI performance, alongside VMware, Citrix VDI, Webservices, Oracle database, and hybrid cloud services, for example.
- Improve visibility into modern data center environments required for real-time monitoring of Cisco ACI, as well as VMware NSX®, AWS®, Microsoft Azure, and Google Cloud Platform®, and Oracle Cloud Infrastructure.
- Deliver “before-and-after” views into application dependencies, user experience, and real-time network performance to assure business continuity was not adversely impacted by the Cisco ACI transformation.
- Equip IT Operations with contextual drill-downs from top-level nGeniusONE Service Dashboard and Service Monitor views to on-board forensic analysis required for deep-dive troubleshooting into Cisco ACI issues (e.g., routing back to the data center core) and reduced mean-time-to-repair cycles.

NETSCOUT

Corporate Headquarters

NETSCOUT Systems, Inc.
Westford, MA 01886-4105
Phone: +1 978-614-4000
www.netscout.com

Sales Information

Toll Free US: 800-309-4804
(International numbers below)

Product Support

Toll Free US: 888-357-7667
(International numbers below)

NETSCOUT offers sales, support, and services in over 32 countries. Global addresses, and international numbers are listed on the NETSCOUT website at: www.netscout.com/company/contact-us