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Cisco Provider Connectivity Assurance

Formerly Accedian Skylight Performance Analytics

Contents

Designed for networks with stringent performance requirements, Cisco® Provider Connectivity Assurance (formerly Accedian Skylight) provides a service-centric, end-to-end view of network and application performance. Leveraging predictive AI-enabled analytics, the platform delivers real-time visibility into network and service health so that network and IT teams can find and fix problems before end users are impacted.

Product overview

As networks have become more complex, performance data is increasingly stored in multiple silos, with different tools and technologies used to monitor the various parts of the network. This approach reduces the ability to understand what is happening holistically across the network, thereby impacting productivity. Provider Connectivity Assurance offers a cloud-native option for end-to-end, real-time network performance monitoring and service-centric visibility.

Built on a big data stack, Provider Connectivity Assurance provides powerful visualization across the entire network and can correlate network performance data into powerful insights, enriching it with third-party device telemetry (e.g., router utilization). This accelerates Mean Time to Resolution (MTTR) and Mean Time to Insight (MTTI) by empowering network operations teams with the information needed to proactively detect anomalies, isolate faults, identify root cause, and automate remediation. The use of statistical analysis and AI-enabled machine learning algorithms helps to identify and proactively predict issues impacting the network, leading to improved, data-driven decision making.

Open APIs from the platform's analytics engine enable customers to seamlessly automate service assurance as part of their service lifecycle, thereby increasing operational velocity. The platform allows customers to implement closed-loop automation, driving management efficiency and reducing costs.

Features and benefits

Table 1.   Cisco Provider Connectivity Assurance features and benefits

Feature	Benefit
Real-time visibility	Minimize downtime and improve customer experience with personalized dashboards that provide customers with a unified view of their network and services.
Correlation	Enhance network data with contextual metadata and powerful analytics to quickly identify issues. Use Cisco and third-party data with analysis tools to pinpoint service issues.
Anomaly detection	Receive alerts for network abnormalities to prioritize tickets and troubleshooting tasks.
Prediction	Anticipate network issues with forecasting.
Alerting	Improve operational efficiency and reduce alert fatigue with prioritized, actionable alerts.
Baselines	Use baselines for network key performance indicators (KPIs) to automatically uncover service performance irregularities and trends.
End-customer portal offering	Differentiate service offerings and enhance the Business-to-Business (B2B) end-customer experience with customized reporting and analytics, role-based access control, and single sign-on.

Feature	Benefit
Open REST APIs	Automate service assurance by integrating seamlessly with service and domain orchestrators to enable closed-loop network automation.

Prominent features

Gain service-centric visibility and actionable insights: Leveraging advanced analytics and AI-enabled machine learning, Provider Connectivity Assurance delivers real-time, service-centric visibility into the network and its overall health by correlating granular performance data and KPIs alongside third-party telemetry into a unified view.

Scale up with hosted Software as a Service (SaaS): Deploy a managed, cloud-native solution with low Total Cost of Ownership (TCO) that scales rapidly to provide real-time and highly granular network performance monitoring.[*]

Harness the power of metadata: Use metadata to discover correlations that more easily suggest potential root causes, filter and group data, and control permissions.

Leverage AI-enabled machine learning: Reduce noise with data cleaning and deduplication, examine causality with trend analysis and correlations, capture anomalies with alerts based on baselines, and extrapolate future events with forecasting for more effective analysis and troubleshooting workflows.

Automate end-to-end service assurance: Seamlessly add service assurance as you deploy a new service and enable the network controller to take corrective or optimization actions on the network.

Collect data from diverse services and infrastructure: Reduce data silos by unifying and correlating service performance and network performance in a single view for multiple stakeholders.

[*]On-premises deployments of Cisco Provider Connectivity Assurance are available conditionally on request.

Licensing

Cisco Provider Connectivity Assurance is licensed through a Right-To-Use (RTU) license to enable the desired set of capabilities and volume-based licensing specific to the type of assurance customers are looking for.

Table 2.   Provider Connectivity Assurance RTU licenses

Description	PID
SKY Essentials RTU License	SKY-ESS-RTU
SKY Advantage RTU License	SKY-ADV-RTU

Table 3.   Provider Connectivity Assurance volume licenses

License type	Description
Test session	• Continuous network and service assurance for Layer 2 (Y.1731) or Layer 3 (Two-Way Active Measurement Protocol [TWAMP] or Internet Control Message Protocol [ICMP]/User Datagram Protocol [UDP] Echo) • RFC 6349, service activation tests for Layer 4 TCP throughput • Continuous protocol testing to monitor endpoint responsiveness • RFC 2544 and Y.1564 Service Activation Test (SAT) – requires hardware sensors
Flows	Continuous application performance assurance leveraging the Provider Connectivity Assurance Capture Sensor to measure transactions through the network
Telemetry	Pulls in other Cisco and third-party time series performance data; common examples include: • MDT performance metrics on Cisco IOS devices • Simple Network Management Protocol (SNMP) network performance metrics on third-party devices • SD-WAN vendor performance data

See the Cisco Provider Connectivity Assurance Sensor data sheets for the range of software and hardware sensor options.

Product specifications

Cisco Provider Connectivity Assurance is built for carrier-grade, high-performance networks and services with stringent performance requirements at the forefront. Whether your focus is on integrations or automation, the platform has been developed to be user-friendly and address customer use cases. Cisco Provider Connectivity Assurance has three primary touchpoints into the network.

Table 4.   Standard protocol support: Southbound Interface (SBI) and Northbound Interface (NBI)

Topic	Protocol details
Sensor, service, and test session provisioning	REST, RESTCONF/YANG
Data queries and export	REST, gNMI
Data collection	CSV, SNMP, gNMI, MDT, OpenMetrics

System requirements

Provider Connectivity Assurance has two components:

- Provider Connectivity Assurance platform
    - Sensor management, central data ingestion, and an AI-driven analytics solution that can be deployed on the customer premises or hosted by Cisco.
    - System compute requirements vary based on the amount of data ingested and how long data is retained.
    - Please contact your Cisco account representative to get the appropriate sizing for your use case.
- Data collector
    - Supports collecting data over a variety of protocols and securely streaming to the Provider Connectivity Assurance platform.
    - The data collector is commonly deployed near the Assurance Sensors or other data sources.

Table 5.   Provider Connectivity Assurance platform minimum requirements

Feature	Description
Disk space	HDD – 17 TB SSD – 2 TB
CPU (virtual CPUs)	198 vCPUs
Memory	500 GB RAM
Software	Docker 24.05 or later Debian 11 is recommended

Table 6.   Data collector requirements

Feature	Description
Disk space	100 GB
CPU	4 CPUs
Memory	2 GB RAM
Software	Docker 24.05 or later Debian 11 or CentOS 7.3 or higher

For more information on System Requirements, consult the [documentation page](#).

Ordering information

Please contact your Cisco account representative for details about how to order Provider Connectivity Assurance.

Warranty information

Cisco Provider Connectivity Assurance technical support plus software update availability is included with the subscription software.

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For more information

Does your organization have a service-centric, end-to-end view of your network and application performance? Put digital experience first. Start leveraging AI-enabled analytics and real-time visibility into your network and service health today.

Speak to your Cisco account representative to learn more or schedule a demonstration.

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