

Cisco Provider Connectivity Assurance



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The network has become the bedrock of digital business, employee productivity, and customer experience. For organizations, the stakes are high because network reliability directly impacts customer retention, revenue, and brand reputation. Yet, as network architectures evolve to embrace multicloud, and diverse network and IT domains, complexity is creating unprecedented challenges that legacy monitoring tools were never designed to handle.

Product overview

Cisco® Provider Connectivity Assurance is an AIOps platform that provides comprehensive, real-time visibility and control over network and application performance. As networks evolve, Provider Connectivity Assurance delivers end-to-end, service-centric monitoring enabling IT and network operations teams to proactively detect, diagnose, and resolve issues before they impact business outcomes.

With advanced AI-driven analytics, unified cross-domain visibility, and flexible deployment options, Provider Connectivity Assurance transforms operational intelligence, accelerates troubleshooting, and ensures optimal user experience across even the most complex environments.

Provider Connectivity Assurance offers comprehensive visualization across the entire network. It enables the correlation of network performance data with third-party device telemetry (for example, router utilization) for enriched insights. This accelerates mean time to resolution (MTTR) and mean time to insight (MTTI) by empowering operations teams with the intelligence to proactively detect anomalies, isolate faults, pinpoint root causes, and automate remediation processes. AI-powered analytics proactively identify and predict network-related issues, leading to improved, data-driven decision making.

Open REST APIs from the platform’s analytics engine allow you to effortlessly automate service assurance as part of the service lifecycle, and implement closed-loop automation, leading to improved 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 anomalies to prioritize tickets and troubleshooting tasks.
Prediction	Anticipate network issues with forecasting.

Feature	Benefit
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.
Open REST APIs	Automate service assurance by integrating seamlessly with service and domain orchestrators to enable closed-loop network automation.
Intelligent fault correlation	Reduce alert noise by correlating both fault and performance management and enable teams to prioritize severe issues that impact users and isolate the true root causes.

Prominent features

Gain service-centric visibility and actionable insights: Leveraging AI-powered analytics, 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.

AI-enabled analytics : 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.

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

Unified data collection: Reduce data silos by unifying and correlating service performance and network performance in a single view for multiple stakeholders.

Segment routing analytics: Visualize and analyze segment routing paths for advanced traffic optimization. Gain new perspectives on network health with a view of latency across key nodes.

Kubernetes container management: Deploy assurance with ease using OpenShift, Rancher, generic Kubernetes, Azure Kubernetes Service (AKS), and Google Kubernetes Engine (GKE).

Enhanced user experience: Assure real-time user quality of experience maintaining quality even during peak congestion and challenging network conditions.

*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	<ul style="list-style-type: none">• 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	<p>Pulls in other Cisco and third-party time series performance data; common examples include:</p> <ul style="list-style-type: none">• 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.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more](#).

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.

Document history

New or Revised Topic	Described in	Date
AIOps Platform	Product Overview	September, 2025

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

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