

Cisco Catalyst SD-WAN Analytics



SD-WAN has evolved

Applications and users are more distributed than ever, and the internet has become the new enterprise WAN. As SD-WAN has transformed to connect users across multicloud, branch, data center, and a hybrid workforce, IT and network operations teams are constantly challenged to deliver reliable connectivity, application experience, and security over networks and services they don't own or directly control.

In parallel, networks and devices generate a multitude of data points across thousands of sites, network paths, applications, and distributed users. It has become impossible to digest and make sense of this data. Time spent on the identification of issues and troubleshooting requires significant resources and further prolongs negative impacts on productivity.

To deliver transformation, IT leaders need a network analytics solution that provides visibility, predictivity, and automation to help them simplify network operations over such a dynamic environment.

Benefits of Cisco Catalyst SD-WAN Analytics

- **Optimize efficiency:** Correlate raw telemetry sources, establish historical benchmarks, and provide operational insights, thereby transforming network operations from a reactive to a highly predictive model.
- **Optimize resiliency:** Monitor network and application performance proactively, while validating implemented policies with business requirements to avoid performance issues that could impact users.
- **Optimize user experience:** Enable the unified application experience your end users have come to expect, regardless of their location and associated network environment.
- **Optimize operational sustainability:** Establish a perpetual optimization cycle that achieves overall CapEx and OpEx efficiency. Predictive analytics improve network engineering that enables organizations to plan optimal capacity, and forecast future bandwidth requirements thereby driving

CapEx efficiency. OpEx efficiency is achieved by proactively preventing user-impacting issues, automating resolution, and reducing the overall troubleshooting cycles.

- **Optimize productivity:** Create a proactive engagement model that allows IT to address network conditions that may otherwise have gone unnoticed. A proactive operating model will ultimately free up resources and time that can be shifted to higher-level strategic and innovation priorities.
- **Optimize operations:** Deliver strategic business outcomes to enterprise and service providers. Workforce challenges in the IT sector are not new, with ongoing difficulties in finding the right talent to keep up with attrition and growth. Skill gaps grow greater each year as employers chase a smaller pool of highly skilled workers with expertise in cloud-native platforms, networking engineering, and security. Enhanced visibility, automation, and prediction can fill the gaps by standardizing operations and executing routine operational activities on a proactive basis.

Cisco Catalyst SD-WAN Analytics

Cisco Catalyst™ SD-WAN Analytics simplifies network operations by providing granular network insights, predictivity, and automation that not only heighten network integrity but also deliver optimal application experience. By liberating IT and network teams from complex network operations, Cisco Catalyst SD-WAN empowers IT and network operation teams to maximize productivity and improve operational efficiency and resiliency, ultimately accelerating digital transformation and innovation.

Cisco Catalyst SD-WAN Analytics includes the following key capabilities.

Unified Assurance and Management

Catalyst SD-WAN offers a unified interface that combines assurance and management capabilities, providing customers with a comprehensive and near real-time view of network and application health, configurations, and security status. The unified dashboard streamlines administrative tasks, minimizes operational complexities, and strengthens network oversight and governance for our customers. By leveraging Cisco SD-WAN Analytics, customers can synthesize extensive telemetry data, blending application performance insights with network conditions in an intuitive and simplified dashboard. This advanced analytics capability not only improves network visibility but also establishes historical benchmarks, helping our customers quickly identify the root cause of any issues. This translates to actionable intelligence, full-context alerts, and detailed security insights, enabling NetOps and SecOps teams to effectively safeguard their networks against evolving cyber threats.

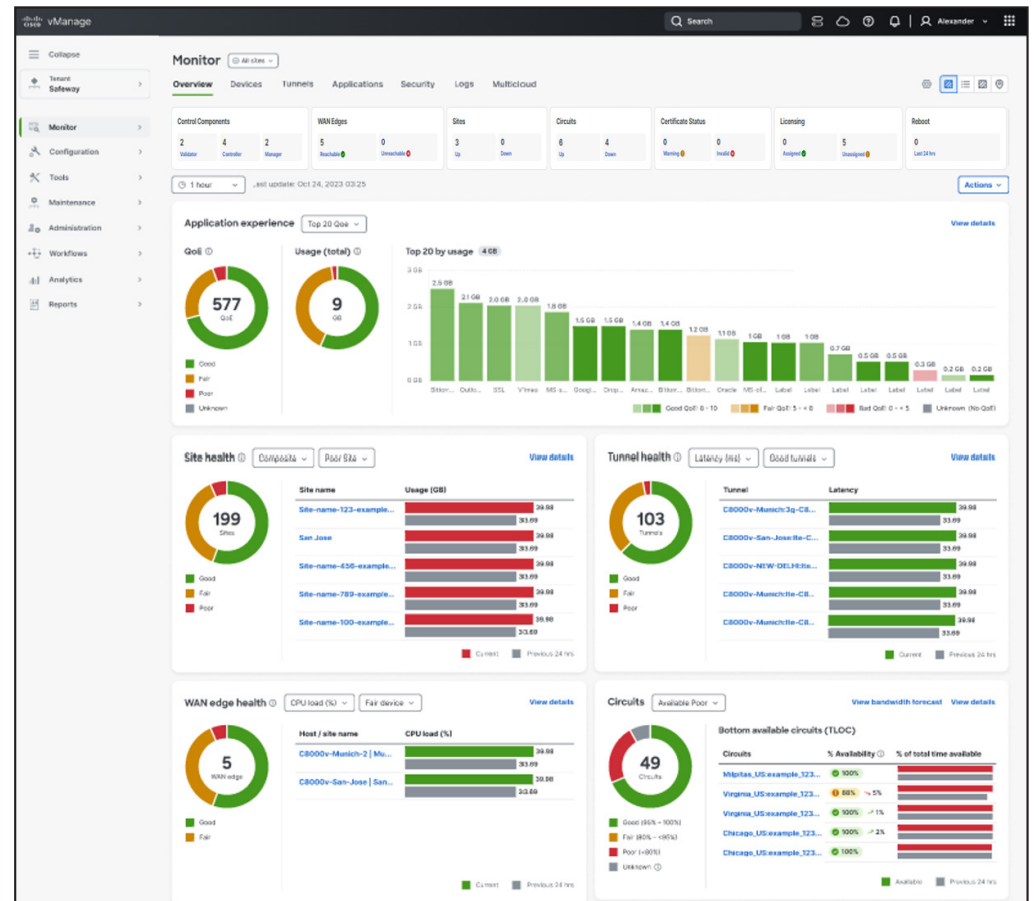


Figure 1. SD-WAN analytics, monitoring and management view in a single dashboard

Predictive Path Recommendations

Predictive Path Recommendations (PPR), powered by Cisco ThousandEyes® WAN Insights, an integral component of Cisco Predictive Networks, delivers a predictive network solution, enabling Cisco Catalyst SD-WAN customers to proactively improve the application experience for users. Leveraging advanced algorithms and predictive models, PPR determines the performance and policy compliance of the paths carrying the site application traffic. When performance is below historical benchmarks or service-level agreements, PPR can make recommendations and automatically implement corrective actions – before users are impacted.

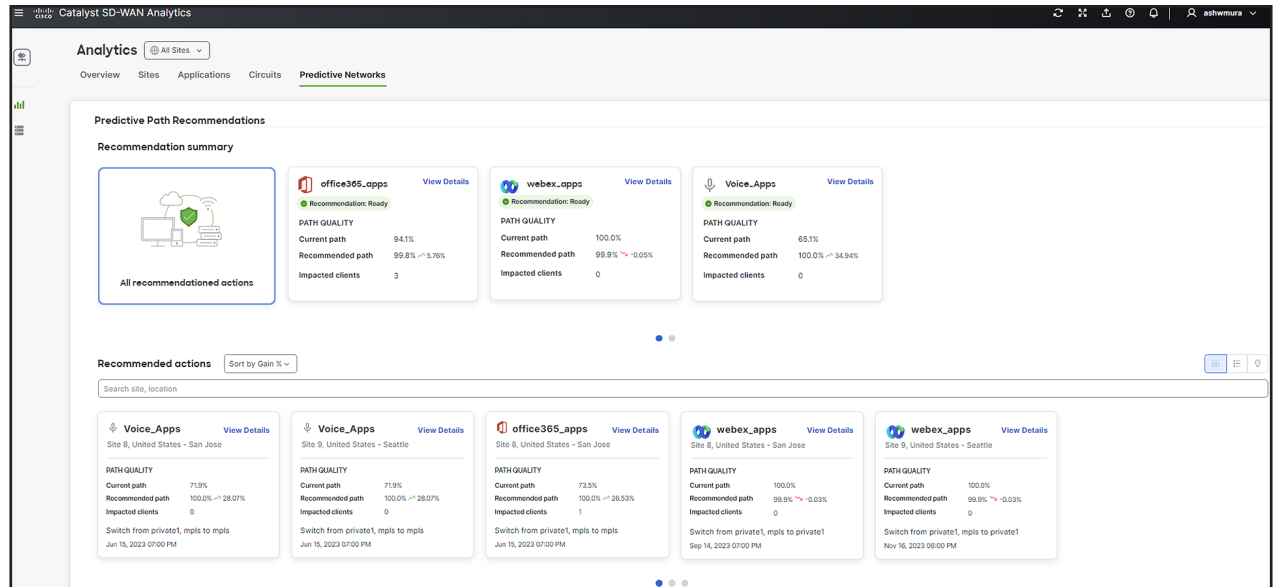


Figure 2. Proactive insights into Application performance with Predictive Path Recommendations

Bandwidth Forecasting

Bandwidth Forecasting takes a comprehensive approach to provide predictions of circuit usage based on historical network traffic patterns. This helps network operators monitor performance trends on the circuits and provides capacity planning for the Catalyst SD-WAN overlay. The forecasting is primarily based on the ingress and egress bandwidth information of circuits in the WAN fabric. To ensure insights use underlying long-term trends, the circuit usage data is aggregated as daily data points while tracking daily Min/Max ranges.

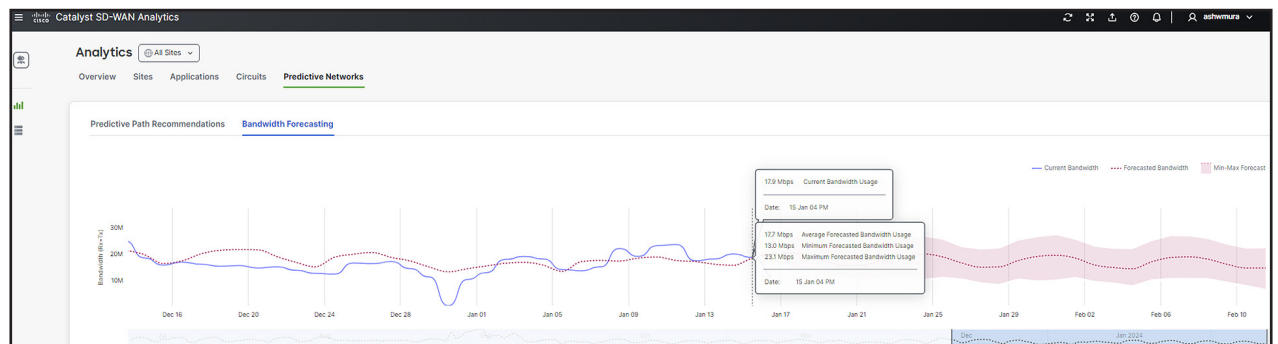


Figure 3. WAN Circuit Bandwidth Forecast

Aggregated data over extended periods is used to generate a forecast for several weeks in the future. A combination of common predictors and those based on deep learning techniques are used to generate more reliable and robust forecasts.

Advanced Security Analytics with Talos Integration

The integration of Talos Security with SD-WAN Analytics offers enhanced threat detection and response capabilities for Cisco's SD-WAN solution. By leveraging real-time threat intelligence from Talos, SD-WAN Analytics can identify and alert network administrators to potential security threats across the WAN. Network teams will now be able to quickly identify potential malicious network attacks from the same SD-WAN Analytics dashboard and send important details to SecOps to further remediate.

This integration enables proactive threat mitigation, rapid incident response, and improved security posture for WAN deployments. With actionable and full-context alerts and detailed security insights, netops and secops teams can effectively safeguard their networks against evolving cyber threats.

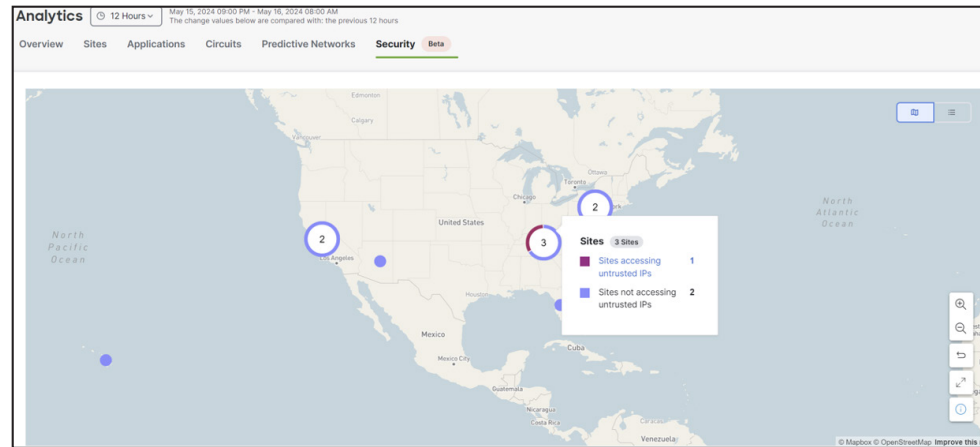


Figure 4. Security Analytics powered by Talos Threat Intelligence

ThousandEyes Integration

The integration of Cisco Catalyst SD-WAN and ThousandEyes brings end-to-end visibility into application delivery and network performance beyond the traditional enterprise network boundaries. This integration provides the only SD-WAN solution with turnkey ThousandEyes vantage points, delivering an optimal application experience over any network. Enterprises and other organizations can expedite the deployment of ThousandEyes agents through Catalyst SD-WAN Manager integration to quickly pinpoint the source of issues, get to resolution faster, and manage the performance of what matters.

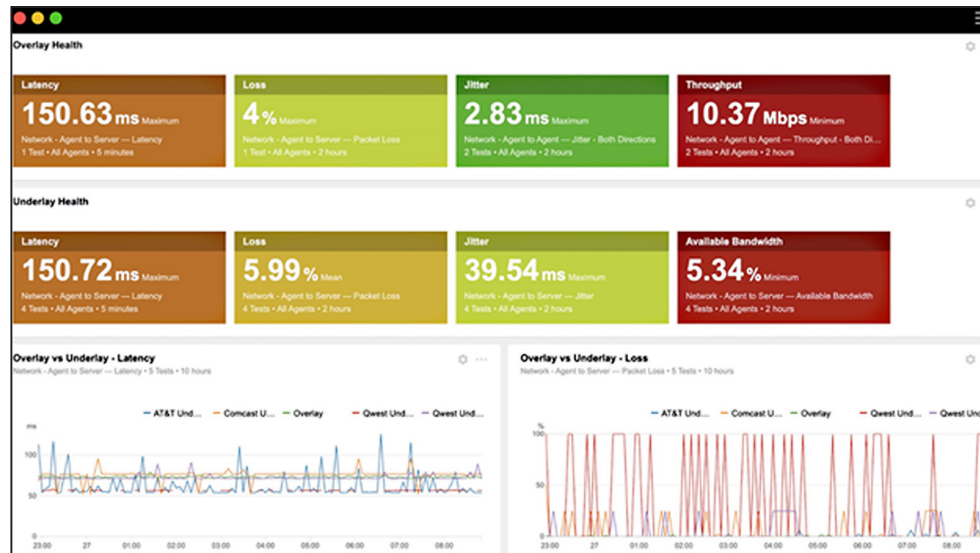


Figure 5. Enhanced visibility into overlay and underlay with ThousandEyes

How do you enable Cisco SD-WAN Analytics?

Cisco SD-WAN Analytics is onboarded alongside your new Cisco Catalyst SD-WAN fabric from the [Cisco Catalyst SD-WAN Portal](#). In case it is not on-boarded previously, then it can be enabled from the admin settings in the Catalyst SD-WAN Manager. Please refer to the [Cisco SD-WAN Analytics user guide](#) for details.

[Watch the demo.](#)

How do you activate Predictive Path Recommendations?

The entitlement for Predictive Path Recommendations powered by ThousandEyes WAN Insights is included in Cisco DNA Advantage. It can be activated from Catalyst SD-WAN Analytics. Please refer to the [SD-WAN Analytics user guide](#) for details.

[Watch the demo.](#)

How do you deploy Cisco ThousandEyes?

Cisco ThousandEyes integration is available with eligible Cisco Catalyst 8200, 8300, and 8500 Series Edge Platforms and Cisco 4000 and 1000 Series ISRs, as well as Cisco ASR 1000 Series Aggregation Services Routers. Existing ThousandEyes customers can use their available ThousandEyes license and units toward new tests. New ThousandEyes customers will need to purchase a ThousandEyes license to activate the ThousandEyes agents. Cisco SD-WAN Manager supports deployment and full life-cycle management of ThousandEyes.

- [Watch the demo.](#)
- [View configuration guide.](#)

Learn more

- [Cisco Catalyst SD-WAN Analytics.](#)
- [Cisco Catalyst SD-WAN Analytics video.](#)
- [Simplify IT video.](#)
- [Cisco Catalyst SD-WAN Manager.](#)
- [Cisco Catalyst SD-WAN.](#)
- [Cisco ThousandEyes.](#)