

JUNIPER MIST™ WI-FI ASSURANCE

Product Overview

The Juniper Mist Cloud Architecture is moving IT operations closer to the intelligent Self-Driving Network™ in the era of the AI-Driven Enterprise.

Juniper's machine learning, the engine of our Wi-Fi Assurance service, replaces manual troubleshooting tasks with automated wireless operations. Minimize costs while maximizing Wi-Fi performance and reliability.

The Juniper Mist platform is built on a modern microservices cloud architecture, which enables elastic scalability to meet your changing wired and wireless network market requirements. Our platform delivers operational simplicity, 100% API-based programmability, and customer engagement through location-based services.

Wi-Fi Assurance replaces manual troubleshooting tasks with automated wireless operations. This subscription service makes Wi-Fi predictable, reliable, and measurable with unique visibility into user service levels. For example, you can set up and track service-level thresholds for key wireless criteria.

Anomaly detection automates triggers to capture packets for event correlation and builds network intelligence with Radio Resource Management (RRM) at the client level. These functions deliver unprecedented visibility into each user's wireless network experience, allowing you to reliably extend Wi-Fi quality to the end user.

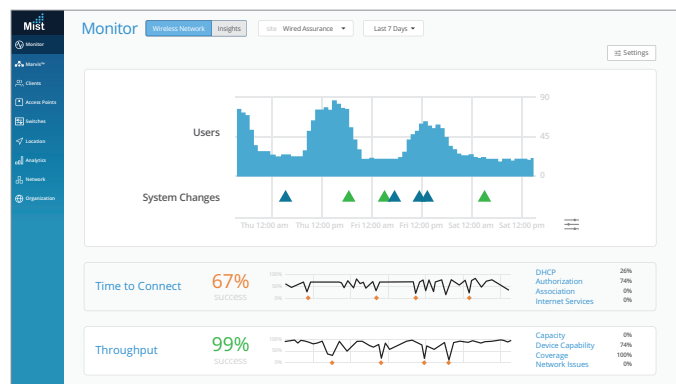
The Juniper Mist cloud services are 100% programmable with all functions (provisioning, monitoring, alerts) available through open APIs, which enable you to integrate with your IT applications to automate your network and line-of-business operations.

Key Benefits of Wi-Fi Assurance

Maximize Wi-Fi User Experience	Minimize IT Support Costs
Proactively optimize performance	Dynamic packet capture for troubleshooting
Prioritize applications, resources, and users	Proactive root cause identification
Gain simple and secure access to resources	Network automation with APIs

Set, Monitor, and Enforce Service Levels

Set up and track service-level thresholds for key wireless pre- and post-connection metrics, such as time to connect, capacity, coverage, and throughput. At any given time, you can see how your network is performing against service level expectations (SLEs) with deep visibility, including location context into impacted users, applications, and devices.

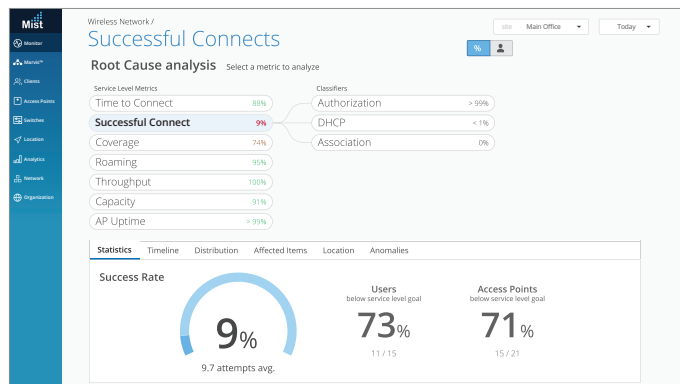


Comprehensive Network Performance and SLE Dashboard Analytics

In addition to proactively correlating events and providing remediation recommendations, the platform also provides a daily and weekly trend of the SLE metrics. These reports provide unprecedented visibility over the last week for longer-term trend analysis into anomalies seen at the AP, device, application, and OS levels. The current set of available SLEs are: Time to Connect, Successful Connects, Throughput, Roaming, Coverage, Capacity, AP Uptime, WAN.

Simple Root-Cause Analysis and Remediation

Juniper dynamically collects information from all endpoints and correlates it for quick wireless, wired, and device problem identification. More than 150 state changes are captured for each client device and access point every few seconds. Predictive recommendations and automated workflows let you quickly remediate problems or prevent them entirely. This root-cause analysis feature can be further enhanced by the Marvis Virtual Network Assistant service.



Automation for Deployment and Provisioning

The Juniper Mist platform is 100% programmable, using open APIs, for full automation and seamless integration with complementary products across LAN, WAN, security, engagement, and asset location domains.

Network Rewind and Dynamic Packet Capture

The Wi-Fi Assurance service automatically detects and starts capturing packets when an anomaly is detected. With this record, you are able to rewind back in time to see what was going on exactly when the event occurred. This eliminates hours or even days of guesswork or time spent trying to reproduce an issue.

Client Events 47 Total 31 Good 7 Neutral 9 Bad					
Association	Scanner 2	12:25:50.827 AM, Jun 30	AP	Main	Server IP Address 10.1.1.1
Fast BSS Assoc Failure	Scanner 2	12:25:48.458 AM, Jun 30	Reason	Falling DHCP DISCOVER from 5d:5d:25:10:10:d2 on wlan 1 with Xid 1234567728- No DHCP Request seen from client in response to the Offer from the Server	BSSID 5d:5d:25:10:10:d2
IP Assigned	Scanner 2	12:25:47.385 AM, Jun 30			SSID Network 1
DNS OK	Scanner 2	12:25:45.023 AM, Jun 30			Subnet 10.1.1.1/16
Default Gateway ARP Success	Scanner 2	12:25:42.837 AM, Jun 30			Transaction ID 92234945
DHCP Stick - Bind Failure	Scanner 2	12:25:39.947 AM, Jun 30	RSSI	-53	
Authorization	Scanner 2	12:25:38.287 AM, Jun 30	VLAN	1	
DNS OK	Scanner 2	12:25:36.104 AM, Jun 30	Failure Count	1	
Fast Roaming 802.11R	Scanner 2	12:25:37.009 AM, Jun 30			
Reassociation	Scanner 2	12:25:36.099 AM, Jun 30			

Client Profiling

Juniper Mist profiles clients for device types, operating systems, applications, location, and user role. This enables WxLAN to autodetect printers, Apple TVs, and other IoT devices and to categorize them for security and audit reasons, without requiring any manual database management.

Risk Profiling Driven by Mist AI

WAN Assurance is a key component of the Risk Profiling solution, which brings network security to the distributed network edge. Risk Profiling provides visibility into infected wired or wireless clients that's observable within the Juniper Mist cloud and assigns a threat score determined by the Juniper ATP cloud. From within the Juniper Mist cloud you can geospatially locate infected devices and take one-touch mitigation actions like ban or deauthenticate.

AI-Driven Radio Resource Management

Unlike other solutions, Mist uses data science and cumulative SLE performance to learn and improve radio settings to assure performance, while also instantaneously adapting to intermittent outside interference. Our AI-driven Radio Resource Management proactively feeds coverage and capacity anomalies based on client experience (SLE metrics) into RF decisions so that RF planning continues to improve and adapt.

WxLAN Policy Creation and Enforcement

Juniper Mist delivers operational simplicity by allowing you to create policies for role, device type, and user-based access on the network with our inline policy engine, WxLAN. Global labels created for physical and logical resources (users, WLAN, AP, IP addresses, IP subnets, applications) enable policies to be enforced at the edge on our access points.

Personal WLAN

Create your own personal wireless network (with personalized preshared key) through a self-serve portal. This feature can be used to secure IoT and guest traffic as well as provide a scalable solution for multitenant networks.

With the Wi-Fi Assurance service, the Juniper Mist AI-driven WLAN solution is the platinum standard for any digital deployment, helping you deliver a dynamic user experience while simplifying management, planning, and troubleshooting for your IT team. This service includes comprehensive wireless, security, guest access, and network management functions with a single subscription.

Guest Portal

Juniper Mist enables customers to create custom guest portals that can optionally include: terms of service, email/text login, or even social media login to help boost customer engagement.

Accelerate Your Digital Transformation with Network Insights

Wi-Fi Assurance includes a base analytics capability for analyzing up to 30 days of data. These analytics enable you to simplify the process of extracting network insights from data and analytics across your enterprise. Review your network throughput peaks to properly align your support resources. To extend these capabilities to third-party network elements, gain the ability to consume up to one year's worth of data, and have the option to generate customized reports, you can tap into the Mist Premium Analytics service as an additional subscription service.

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability and equality.

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