Mist AI and Gluware Deliver AI Powered Automation for Enabling Self Driving Networks

Automate finding and resolving network issues affecting user experience using Juniper AI-Driven network through integration with Gluware intelligent network automation.

THE CHALLENGE

Enterprise IT often have multi-vendor networks including legacy devices which are manually managed and rely on slow SNMP to detect issues.

During network degradation or outages, it is common to execute manual device-by-device troubleshooting procedures which are complex and time consuming with negative impact on end user experience and productivity.

THE JUNIPER-GLUWARE SOLUTION

Juniper and Gluware have partnered to deliver an integrated solution that enables integration of automating the network layer to identify configuration change, audit for known misconfigurations and provision standard policy across a brownfield network powered by Juniper AI-Driven wireless at the edge.

BENEFITS

When user-experience is impacted at the network edge, the Mist AI engine proactively identifies the root cause and determines the needed corrective actions, whether within the Juniper system or on interconnected network elements.

Through API integration, Juniper's self-driving capabilities can automatically trigger Gluware to take a corrective action without changing platforms, and all without manual intervention.

With Gluware supporting 14 vendors and over 20 operation systems, including platforms from Juniper and Junos OS, now customers can automate complex, multi-vendor networks to deliver better network experiences and ultimately boost productivity.

Manual intervention is alleviated and the need for programming or application of domain expertise in real-time is avoided, bringing instant and proactive results.

Enterprise IT face a constant battle: manage the old while deploying and upgrading to the new. While they may have deployed best-in-class wireless solution like Juniper at the edge, they are often still managing legacy devices across their network. These devices are not programmatic and are managed using manual interaction at the command-line-interface (CLI), or by writing scripts to automate repetitive tasks. Automating the network using scripts has proven to have limited impact due to the skill gap required, time it takes to develop, test and maintain along with the risk of an error causing a large outage.

While Juniper modernizes the wireless infrastructure, Gluware enables automation of the brownfield multi-vendor network bringing software control and intelligence without programming. Through the integration of published APIs, external systems to Gluware, like the Juniper Mist™ cloud, can make calls to trigger actions to detect and resolve network issues.

The Challenge

Enterprise IT teams rely on paper standards and largely manual implementation for configuration change and various Create, Read, Update and, Delete (CRUD) procedures. Without an automated approach, manual configuration changes and procedures often result in errors that have an impact on an end-user or application. Often the impact goes unnoticed until a user is complaining about access or performance which is directly impacting the business. Next a lengthy and siloed mostly manual troubleshooting effort likely occurs seemingly to find a needle in the haystack errored configuration command.

The Juniper–Gluware Solution

Juniper Networks, a leader in artificial intelligence (AI)-driven networking, and Gluware, a leading provider of intelligent network automation and orchestration, have partnered to deliver an integrated solution to enhance the experience of the end user from the class leading Juniper Mist wireless edge across a multi-vendor, brownfield network infrastructure.

The combined Juniper-Gluware solution delivers integration to execute automated network tasks when degraded performance related to the network is proactively identified by the Juniper Mist cloud.

FEATURES AND BENEFITS

The integration of the AI-driven networking from Juniper and intelligent network automation from Gluware delivers:

- Enhanced user experience through automated action to resolve network issues

- Elimination of manual steps to identify, audit, troubleshoot and implement configuration change

- Minimize or eliminate business impact through AI and automation to keep the network in policy and secure

SOLUTION COMPONENTS

The Juniper AI-Driven Network includes the following components:

Juniper Mist Cloud Architecture: All wireless deployment, operational, and management functions are handled via the Juniper Mist cloud, which delivers the following Wi-Fi and virtual Bluetooth® LE services:

- Juniper Mist Wi-Fi Assurance: Includes user service levels, anomaly detection, automated event correlation for troubleshooting, dynamic packet capture, policy configuration, guest WLAN access, and more

- Marvis Virtual Network Assistant: Provides natural language queries with integrated help desk functionality for rapid and simple root cause determination and problem resolution while realizing the self-driving network with its Marvis Actions framework

- Juniper Mist User Engagement: Pushes location-based information to mobile users, such as turn-by-turn directions and proximity notifications

- Juniper Mist Asset Location: Finds high-value resources such as shipping pallets, wheelchairs, security personnel, etc.

- Juniper Access Points are deployed on premises for Wi-Fi, BLE, and/or IoT access.

The Gluware solution components include:

Gluware Control: An intelligent network automation software platform which can run as a SaaS from a cloud or on-prem installed as one or more virtual machines depending on scale and performance requirements. Gluware provides a web browser based user-interface or can be run via published APIs. In addition, Gluware provides intent-based applications to perform automated network services such as:

- Real-time inventory of network device details

- Config Drift and Audit – to identify any network configuration changes across your network and run standards based, company standards and ad-hoc audits with rapid, no-code policy creation

- OS Manager – Automate the full process of operating system upgrades, downgrades or patches required to address vendor vulnerabilities or enable new features

- Config Modeling – Gluware is able to import network policies from verified reference devices and dynamically create data-model driven policies to then enforce across the network. Leveraging abstractions, Gluware can deal with the complexity of the underlying network layer consisting of different device types and vendors enabling intelligent, no-code, policy-based automation

Summary

COMBINE AI-DRIVEN WIRELESS FROM JUNIPER WITH INTELLIGENT NETWORK AUTOMATION FROM GLUWARE TO ELEVATE USER EXPERIENCE

Enterprises are relying on the network for nearly every aspect of their business. The IT organization is currently providing the "human glue" to make all the systems, old and new, work together. As the edge of the network is upgraded to the AI-Driven Enterprise from Juniper, it becomes obvious that the legacy network carrying the traffic will need to keep pace. Leveraging the Gluware intelligent network automation platform enables IT to automate and integrate with 3rd party systems like Juniper to perform API driven config change detection, config audit and policy enforcement. This integration will minimize configuration and troubleshooting time resulting in significantly less downtime and business impact.

Next Steps

To learn more about the joint Juniper-Gluware solution, please contact your Gluware or Juniper Mist representative, or visit www.gluware.com and www.juniper.net.

ABOUT JUNIPER MIST

Mist built the first AI-driven Wireless LAN (WLAN), which makes Wi-Fi predictable, reliable, and measurable and enables scalable indoor location services like wayfinding, proximity messaging and asset visibility. In addition, Mist's AI technology plays a key role in bringing automation and insight across the full IT stack, delivering seamless end-to-end user experiences and substantial IT cost savings. In 2019, Mist was acquired by Juniper Networks and operates as a business unit focused on the AI-Driven Enterprise which combines Mist's next-generation Wireless LAN (WLAN) platform with Juniper's best-in class wired LAN, SD-WAN and security solutions to deliver unsurpassed end-to-end user and IT experiences.

For more information, visit www.mist.com.

ABOUT GLUWARE

Gluware is the leader in Intelligent Network Automation, delivering an Intent-Based orchestration engine that empowers Network Operations to successfully automate and orchestrate mission-critical networks at scale. Gluware applications keep complex multi-platform, multi-vendor networks in policy while enabling new features required as business objectives evolve. Gluware solutions work across brownfield or greenfield environments, dramatically reducing time to value for organizations while minimizing the risk to their networks of human-induced errors or planning omissions. The Gluware® Applications Suite addresses the mission-critical steps required to manage complex enterprise networks and includes: Gluware® Control, Gluware® Drift and Audit, Gluware® OS Upgrade, Gluware® Config Modeling and Gluware® Workflows. Gluware is deployed globally in the mission-critical networks of leading Global 2000 enterprises.

Learn more at www.gluware.com.