



AUTOMATED SERVICE PROVISIONING AND TESTING

Improve time to revenue and delight your customers by deploying services more quickly—without errors or issues

Challenges

Nothing frustrates customers more than suffering long delays to activate a new service, only to find it misconfigured or not working. To protect customers and revenues, operators need to provision services much more quickly—without errors or issues.

Solution

Automated Service Provisioning and Testing accelerates every step in the service provisioning chain while automatically testing and validating every new service.

Benefits

- Accelerate time to revenue by provisioning new services in days or hours instead of weeks
- Improve customer satisfaction by verifying services are configured properly before turning them over to customers
- Eliminate manual errors—and the time and costs required to fix them
- Optimize staff productivity by eliminating repetitive manual provisioning and testing tasks

In a marketplace where customers can activate new cloud services in seconds, expectations for communication service providers (CSPs) have never been higher. When it comes to the foundational network services business needs, however, deployments can still take weeks. Worse yet, in too many cases, when customers can finally access a new service, they find it's not delivering the performance they paid for—or it's not working at all.

Juniper Networks helps operators deploy new services in days or even hours instead of weeks with Automated Service Provisioning and Testing. By baking activation testing right into the process, Juniper gives businesses the services they ordered more quickly, configured correctly the first time, allowing operators to realize faster time to revenue—with much happier customers.

The Challenge

In the digital economy, customers have a world of services at their fingertips—available to them when they want them—and they usually want them now. When it comes to critical business networking services like Layer 2 and Layer 3 VPNs, Ethernet VPN (EVPN) and others, though, service activations can be excruciatingly slow, often taking weeks. And that's not the worst of it. In most cases, CSPs don't even know if they have properly configured the new service until it's in the customer's hands. In fact, according to one 2019 study, 60 percent of network problems are discovered by end users or are not reported at all.

The results are what you'd expect: long delays before operators can start generating revenue from new service orders, high failure rates with service delivery, frustrated customers, and higher churn. Indeed, these issues already drive some customers to seek alternative networking models like Internet broadband and 5G, even when they would prefer a more business-class service.

Why is it so hard to deliver new services quickly and correctly? Two big issues are at work.

- Provisioning has grown extraordinarily complex:** A decade ago, most network services were more or less the same. Today, operators contend with complex multivendor environments, with equipment from different vendors often using different provisioning processes, CLIs, and transport protocols. Yet many operators still rely largely on manual, error-prone provisioning processes with limited device-level configurations, frequently leading to stale configurations, lack of compliance, and lack of overall network consistency. Without an effective way to abstract all the underlying network complexities, operators can quickly get overwhelmed. These provisioning models can barely keep up with yesterday's expectations and cannot support the on-demand Network as a Service (NaaS) experience modern customers want.
- Testing is too often an afterthought:** As complicated as it has become to provision new WAN and wholesale services, it's even more difficult to accurately test and validate them. So many operators don't bother, skipping activation testing entirely and waiting for customers to tell them there's a problem. At that point, they're looking at an expensive manual troubleshooting effort—and an unhappy customer.

The Juniper Automated Service Provisioning and Testing Solution

With the Automated Service Provisioning and Testing Solution, you can now deliver new services more quickly, with assured end-to-end quality—even over today's most diverse and dynamic multivendor networks. Juniper's solution lets you combine service provisioning and activation testing into a single, automated operation, allowing you to onboard new customers in a fraction of the time while enabling a true on-demand network experience. And you can radically reduce failed service deliveries—along with the expensive troubleshooting efforts and unhappy customers that come with them.

Features and Benefits

More service providers have been automating the service provisioning process in recent years, but most still rely on inadequate activation testing—if they test at all. Juniper combines end-to-end automation of the service delivery chain with built-in testing and validation for every new service. This unique combination empowers operators to consistently deliver higher quality services more quickly, benefiting your customers as well as your balance sheet.

Table 1. Automated Service Provisioning and Testing—Features and Benefits

Capabilities	Business Benefits
Leverage powerful service-modeling capabilities, where the solution's abstraction layer defines the element of the model and dynamically maps it to the underlying physical or virtual infrastructure. Device models can be standards-based or customized.	Dramatically simplify provisioning and reduce manual efforts and errors by automating workflows for pre- and post-checks against the service model.
Automatically test the end-to-end service delivery chain and measure quality for every new service.	Increase customer satisfaction and loyalty by making sure each new service delivers the service-level and quality customers expect, from the moment they start using it.
Generate "birth certificates" for each new service, confirming that the service is configured correctly and meets the required service-level agreement (SLA).	Ensure that service quality remains consistent and verifiable, even as the network changes.
Scale to support huge service provider environments with thousands of customers and devices. For example, the solution can provision 3200 Layer 2 VPNs per minute across 10,000 devices.	Automate with confidence using a solution built for the most demanding large-scale service provider environments. All parts of the solution are carrier-grade: cloud-native, multivendor-programmable, elastically scalable, and highly available.
Use low-code workflow automation, predefined workflows, and service orchestration to design and implement even the most complex network operations and procedures.	Reduce time to revenue for new services, as well as the high costs and errors that come with manual provisioning processes.
Integrate with any network provider's programmable infrastructure, as well as the full service provider operations ecosystem, including operations support systems/business support systems (OSS/BSS), IT service management (ITSM) platforms, and a wide range of third-party billing, ticketing, and other systems.	Quickly and easily bring the benefits of automation to your existing environment.

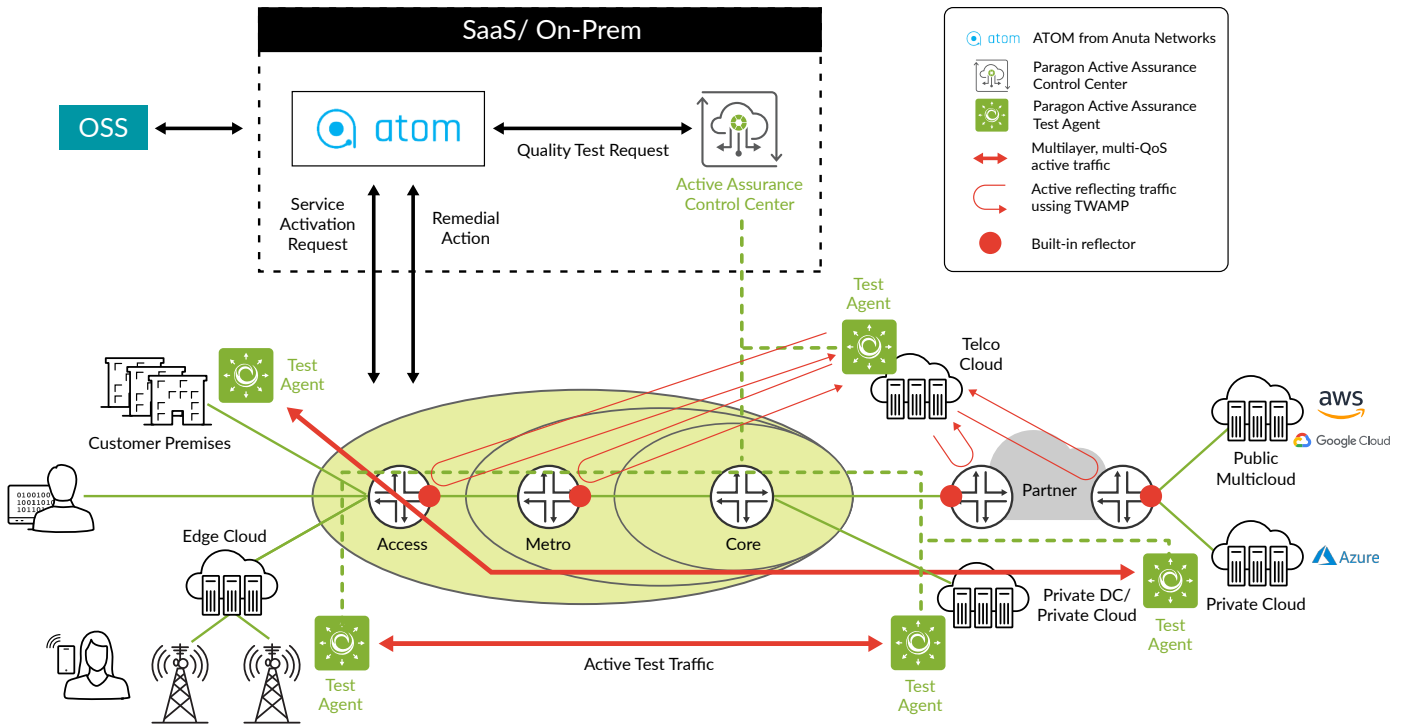


Figure 1: The Juniper Automated Service Provisioning and Testing Solution

Solution Components

The Automated Service Provisioning and Testing Solution draws on two powerful components of the Juniper Paragon™ Automation portfolio:

- Anuta ATOM Network Automation Platform:** This cloud-native, modular network automation platform provides the complete toolset to automate end-to-end provisioning of network services in the largest, most complex and demanding operator environments. This multivendor, highly scalable, microservices-based platform combines the best of model-driven architectures with the latest technologies in network orchestration, monitoring, and closed-loop assurance.
- Juniper Paragon Active Assurance:** This cloud-native testing and assurance solution provides active Layer 2 through Layer 7 testing across large-scale multivendor, multicloud networks. The solution automatically installs test agents as part of all new service deployments to capture the real-time performance of the actual data plane—instead of inferring quality from passive measurements. It offers a next-generation assurance solution for any network topology or use case, including physical, hybrid, and virtual environments, either on premises or in the cloud.

Summary—Accelerate and Improve Quality of Service Delivery

In the coming years, network services will only become more dynamic and complex. If CSPs want to compete, they will need to meet ever-rising expectations for on-demand service delivery and consistent high quality. With the Automated Service Provisioning and Testing solution, you can implement a framework to ensure that you always deliver the right service the first time and every time. By automating and accelerating the end-to-end service delivery chain, you can begin earning revenues from new services in days or hours instead of weeks—while continually meeting sky-high expectations and winning the satisfaction and loyalty of your customers.

Next Steps

For more information, contact your Juniper account representative and visit the [Juniper Paragon Automation](#) webpage.

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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