

Session Smart Routing and AIOps Tech Talk

*Secure client-to-cloud
automation, insight and
AI-driven actions*

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CLIENT TO CLOUD

Automation

Insight

Actions

Wired LAN

Wireless LAN

WAN

Security

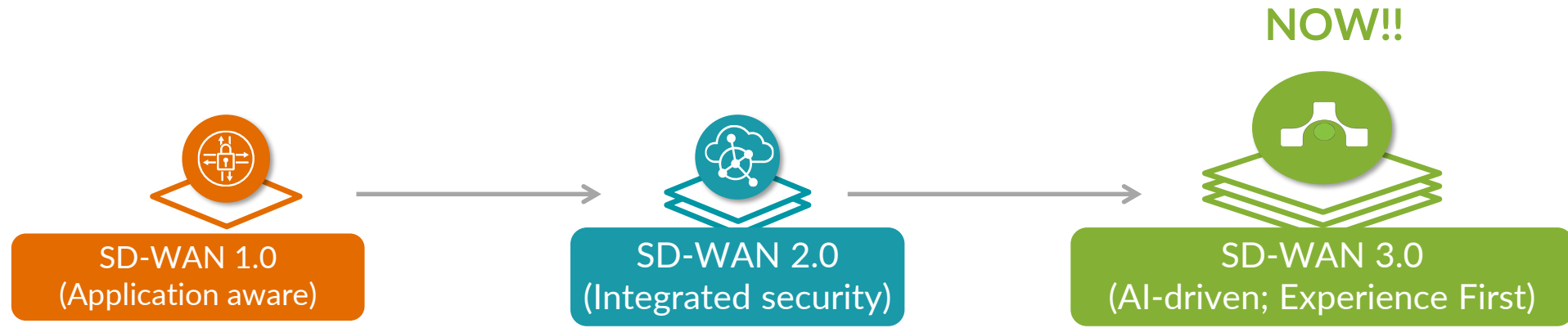
Data Center

STRONG ENTERPRISE MOMENTUM



- **\$1.6+B** Enterprise business, **up 3% Y/Y** (FY2020)
- 4 consecutive years enterprise growth
- Grew Mist **new logos over 125% Y/Y** (Q4-2020)
- FY2020 was a **record year** for campus & branch revenue (**+13% Y/Y**), including record EX bookings
- Acquired 128 Technology in December 2020

SD-WAN 3.0: THE WAN EDGE IS EVOLVING



BENEFITS OF THE JUNIPER SESSION SMART ROUTER SOLUTION (formerly 128T):

User-Centric
policies, not tied to
IP addresses

Sub second
failover

No tunnels = 30%
lower telco and
hosting costs

Secure “out of the
box” with zero trust
+ enhanced security



AI-driven
enterprise

Optimized experiences across WLAN/LAN/WAN

JUNIPER
driven by mist AI



MARVIS



WI-FI
ASSURANCE

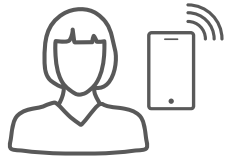


WIRED
ASSURANCE



WAN
ASSURANCE

CLIENT



Wireless LAN

Wired LAN

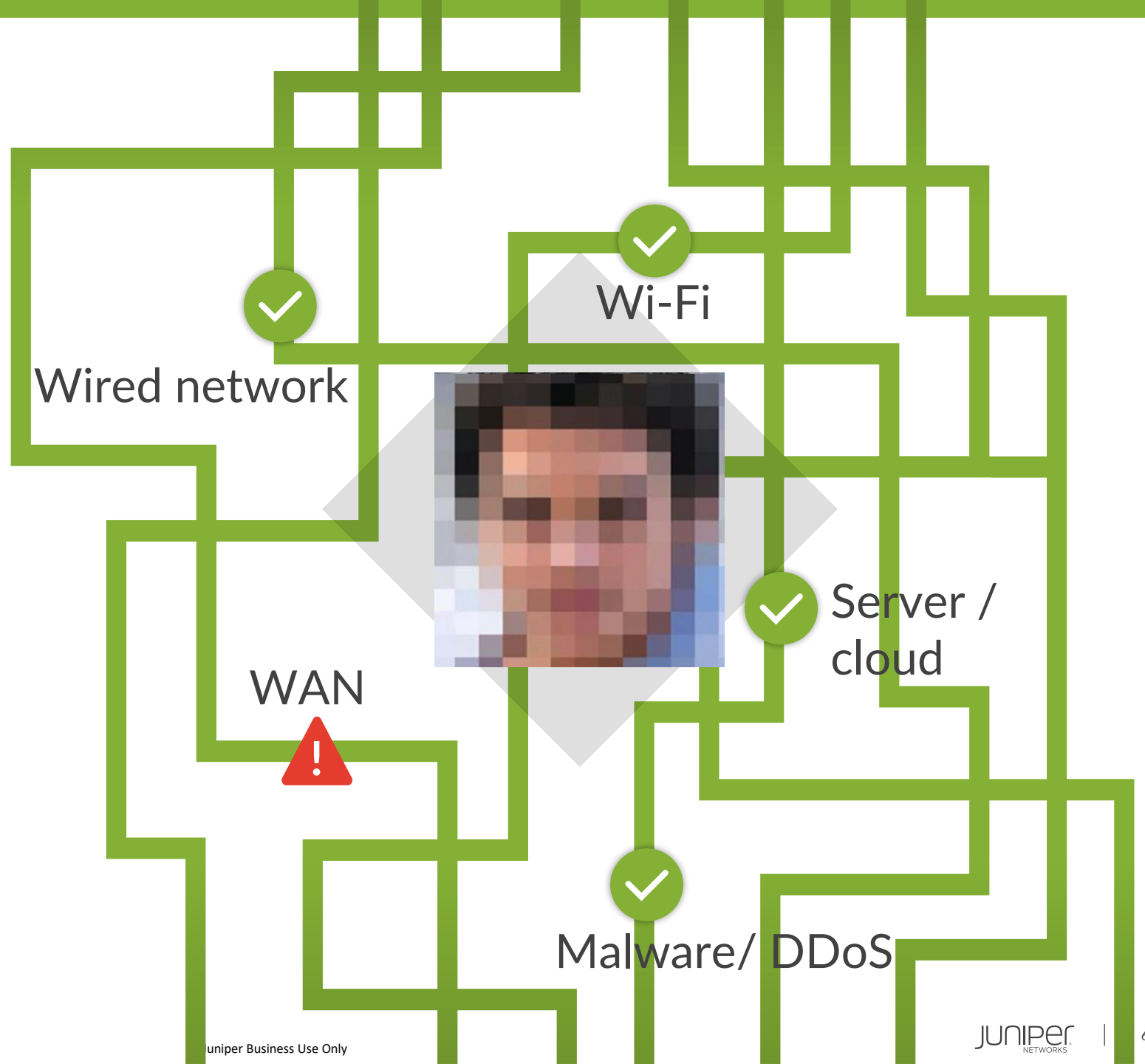
SD-WAN Edge

TO CLOUD





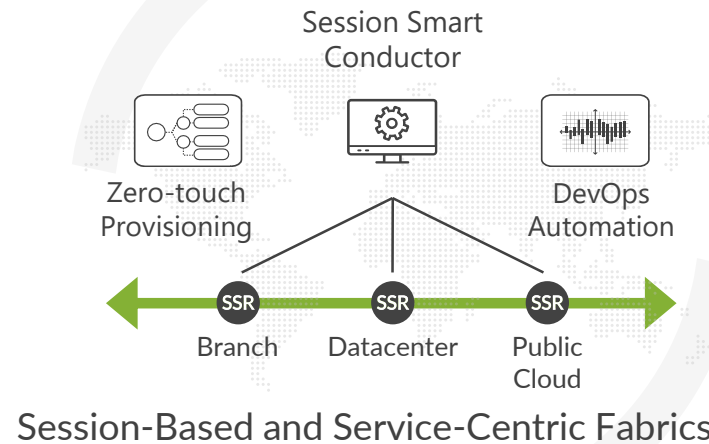
What was wrong with Bob's video call?



Session Smart Routing: A Focus on User Experiences

Session visibility and application insights

Superior richness and granularity of service and session insights including continuous optimization of network performance and user experience.



Breakthrough economics and scale

Tunnel-less architecture enables:

- ~75% reduction in headend cost
- ~50% reduction in bandwidth costs
- Proven scalability to 10,000+ edges.
- Faster deployment

Zero-trust security baked in

Zero-trust fabric that simplifies access control, segmentation and directionality with Secure Vector Routing.

Network agility

Cloud application are deployed faster with greater resilience to network issues

The trouble with tunnels

1

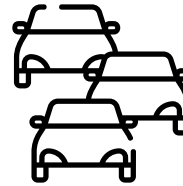
A one-lane highway



Tunnels look like a singular network flow to router, with performance that's tied to a single path for long periods. That means there's no way to route to better pathways when congestion strikes.

2

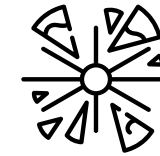
Application rush hour



Tunnels cause about 30% additional bandwidth to be consumed per packet sent, reducing available network capacity and slowing application performance to a crawl.

3

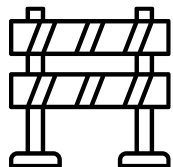
Caution: Fragmentation ahead



Tunnels increase packet size, causing packets to be split up and reassembled, which increases transmission time, chews up router power, and creates complication due to fragment loss.

4

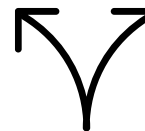
Road construction slowdowns



Long tunnel setup times and slow negotiation for security keys create serious delays after failovers that can cause internal applications to reset.

5

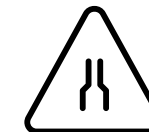
The security bypass



Tunnels create bi-directional open doors between networks that sidestep the usual network security protocols, creating provisioning complications and requiring additional action to manage risks.

6

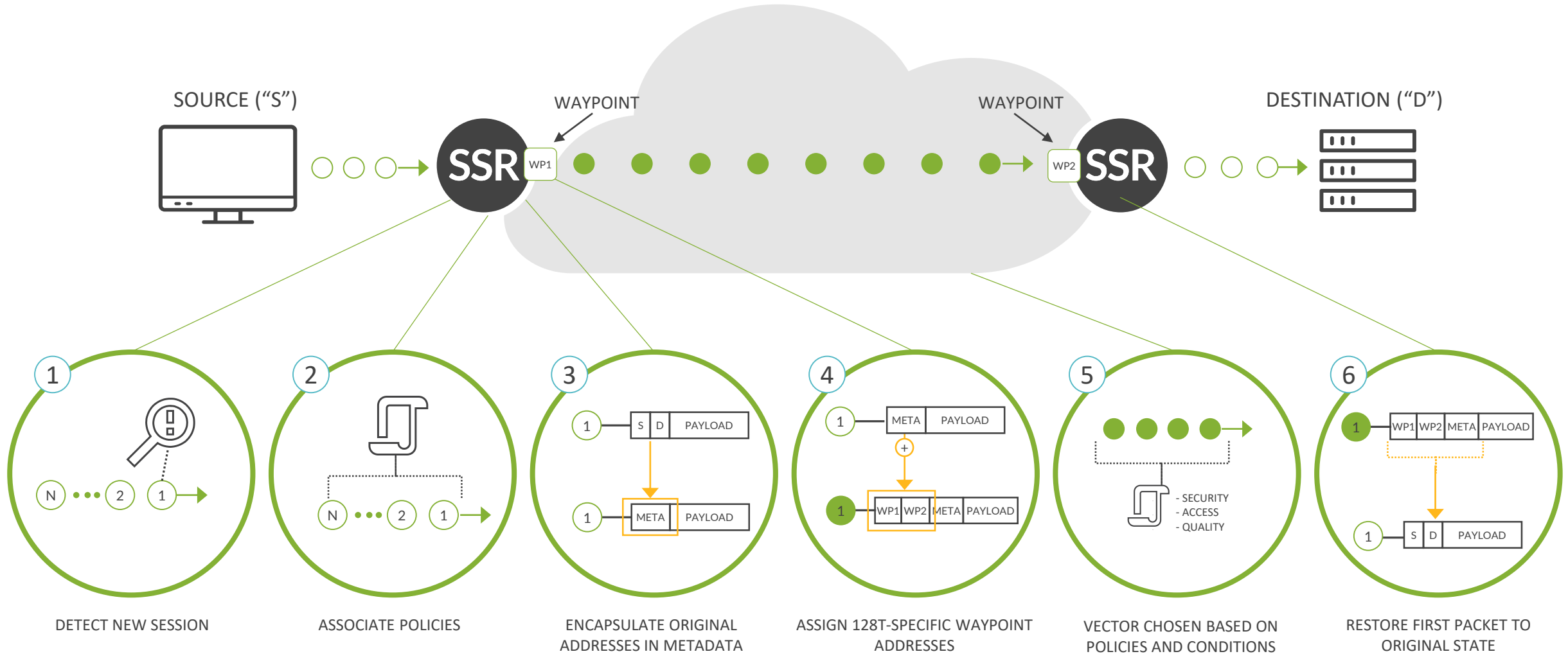
The tunnel bottleneck



Today's tunnel best practices call for a data center hub with branch spokes backhauling all traffic to a central location. This creates a pinch point that greatly increases latency and wastes valuable bandwidth.

Under the Hood

Session Detection, First Packet Processing, Waypoint Routing



Customer Profile: National Auto Parts Chain Gets Reliable Voice Services



the company

Industry: Automotive Retail

Employees: 70,000

Stores: 5,000

Market Cap: US\$11.0B

the challenge

A dropped call is a lost sale (if not a lost customer).

Wide-ranging variability in WAN service quality and reliability across the US.

Reliable and cost-effective sub-second fail-over needed to all locations (e.g. over any connection)

the solution

SSR enabled AT&T services to deliver UCaaS through a single virtual network.

Seamless multi-path routing with three levels of reliability (MPLS, Broadband, and LTE)

Tunnel-free solution preserves call quality with high availability and dynamic failover.

the results

- Increased call retention (\$6M+)
- 40% lower cost than alternative SD-WAN solutions
- Increased productivity with instant change management across 5000 sites
- Deployment of 65+ stores/day
- 99.99%+ store availability
- 100% data platform availability
- 90% reduction in tickets

Customer Profile: Services Firm Reliably Delivers Crucial Analytics to OilFields



the company

Industry: Oilfield Services

Employees: 1000,000

Market Cap: US\$40.0B

the challenge

Data analytics and AI-driven automation required to improve production rates, avoid hazards, minimize downtime, and reduce OPEX across oilfield and gas well operations.

Sub-optimal WAN connections (eg VSAT and 4G)

the solution

SSR improves utilization, performance and resiliency with packet shaping and traffic prioritization

Multi-path session redundancy ensure fast performance for delay-sensitive oilfield control data and continuous availability in the event of link failures or network outages.

the results

- Up to 10x increase in WAN capacity
- Up to 2x improvement in TCP transmission rates
- Seamless link failover for continuous connectivity
- “128 Technology lets us boost our networking capacity up to 900%. The solution gives us the bandwidth we need to remotely monitor and control our assets, which helps us dramatically improve oilfield operations.”

Manager of Field Operations

128T + Juniper: The Perfect Marriage



A Common Vision

SSR delivers unique capabilities to AI-driven enterprise; Client-to-cloud Alops is now a reality!

World-class Team

Juniper's global sales/partners/support/marketing now combined with great SSR technology



Rich Heritage

Juniper's rich routing heritage and broad product line + the next evolution in routing technology

RELENTLESS EXECUTION: INTEGRATION IN < 6 WEEKS



Marvis Virtual
Network Assistant

Marvis WAN Assistant

- Why is my application experience bad?
- What is wrong with WAN?

Marvis Actions for WAN

- Application Latency
- Congested WAN Circuit
- Negotiation Mismatch



WAN Assurance

User Service Levels across WAN with Proactive Anomaly Detection

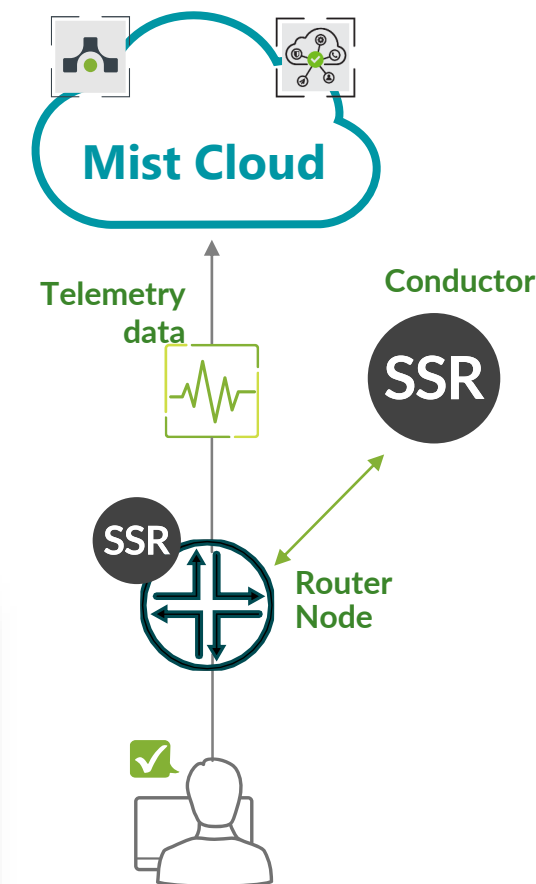
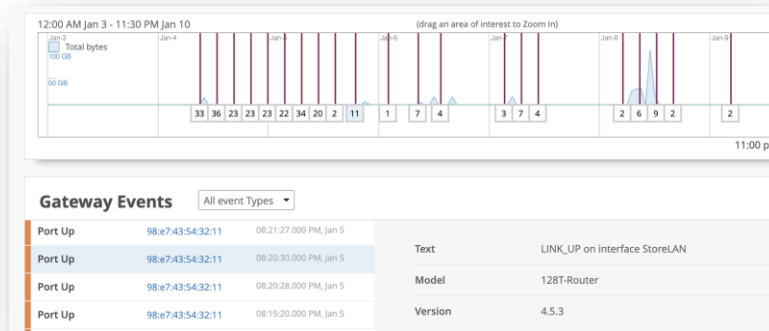
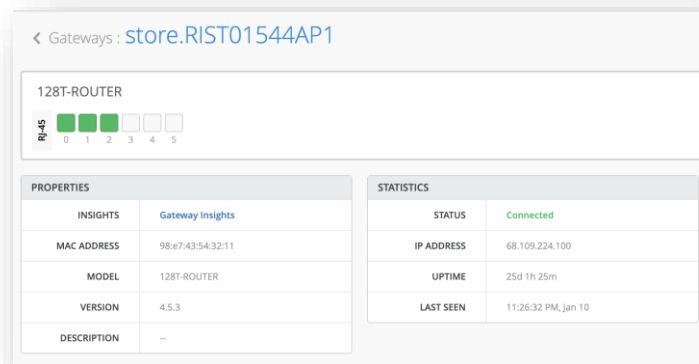
- Throughput
- Application
- Device Health

WAN Edge Events

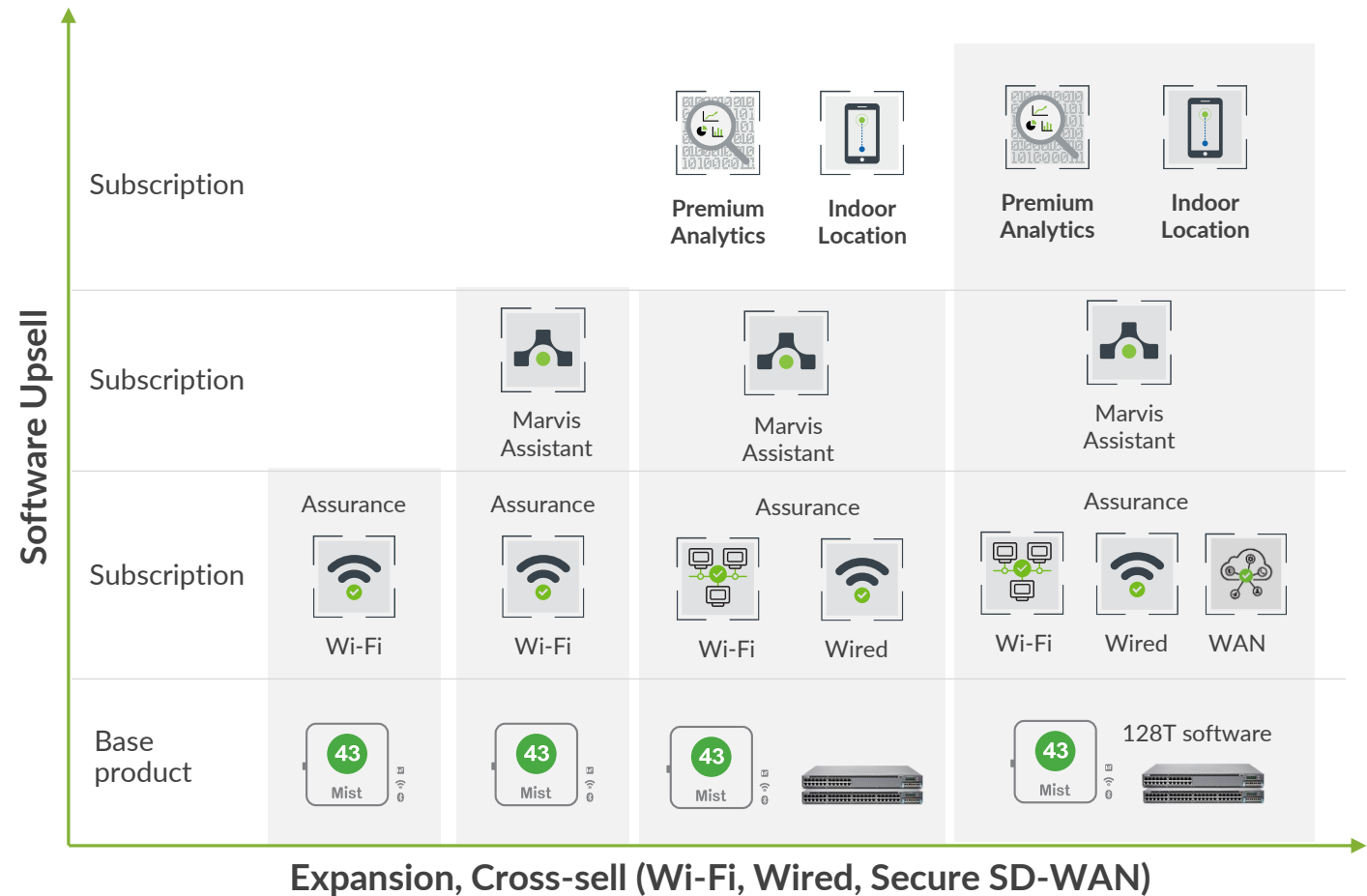
- Configuration Changes
- System Alerts

WAN Insights

- Bandwidth consumption
- Applications per flow, user and trends
- CPE Insights on Link status, traffic utilization



Customer Lifetime value: Expand; Upsell; Cross-Sell



Global Retailer (Fortune 50)



REAL RESULTS:

- Accelerated ability to add/change new applications and store types resulting in upfront WAN cost reduction of \$10+M and growing over 5 years
- Plug and play provisioning of ,000s APs (no pre-staging; plug and play)

WAN Edge – “Juniper has a differentiated vision, in this area, that may change the market...”



Juniper Networks

Juniper is a Visionary in this Magic Quadrant. Its offering is the Juniper SD-WAN, which includes its SRX edge appliances with Contrail Service Orchestration and an increasing focus on the Mist Marvis AI/ML engine to simplify Day 2 operations. Juniper is based in California, U.S., and Gartner estimates it has about 18,000 WAN edge customers and more than 3,000 SD-WAN customers. It operates globally, primarily through service providers, and addresses customers of all sizes and verticals. We expect Juniper to make future investments in intelligent, assistant-based autoconfiguration and assurance services for the proactive remedy and mitigation of WAN issues.

Strengths

- Its self-driving and WAN assurance capabilities for WAN edge are well-aligned to growing customer needs, and Juniper has a differentiated vision in this area that may change the market dynamics.
- Juniper has a comprehensive solution, including solid capabilities with SD-WAN, operations, and deployment flexibility, with strong security features.
- Juniper has a solid SD-branch solution that appeals to small footprint locations.

Cautions

- Juniper lacks cloud feature capabilities to simplify branch sites connecting to cloud workloads.
- Its solutions have limited application performance optimization capabilities.
- Juniper has had a poor track record in market execution, has suffered from a lack of market visibility and has shown limited sales execution, leading mostly through MNS providers.



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Q&A

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Simplicity