



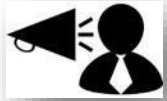
Hewlett Packard
Enterprise

SASE Technical Solutions Overview



Jerry Wesley – National Channel SE
March 11th, 2024

—Before we begin...



- Listen by computer audio or dial-in



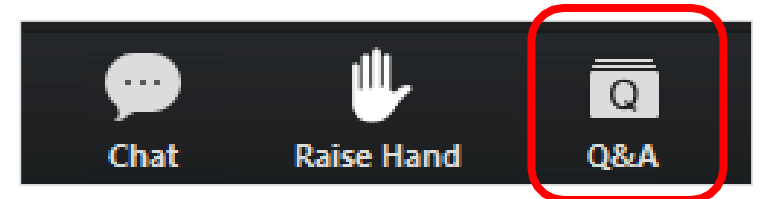
- All lines are muted during the webinar



- Ask *questions by selecting “Q&A”* and to report any webinar difficulties



- Webinar is being recorded & will be emailed to all attendees



Partner Technical Webinar Series



New HPE Aruba Networking Secure Access Service Edge (SASE)

Session 1: SASE Technical Solutions Overview

Monday, March 11th at 9 AM PT / 12 PM ET

Session 2: HPE Aruba Networking Security SSE

Monday, April 1st at 9 AM PT / 12 PM ET

Session 3: Security Service Edge (SSE) Demo

Monday, May 6th at 9 AM PT / 12 PM ET

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Why SASE (Secure Access Service Edge)

SASE Overview

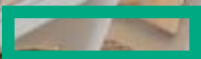
SASE Integration (SD-WAN + Security Service Edge)

Demo



The image shows the interior of the Oculus at the World Trade Center. The architecture is characterized by a series of white, rib-like structures that form a large, open atrium. A long, narrow skylight runs down the center of the ceiling, providing natural light. People are seen walking on the ground floor and on upper levels. The overall atmosphere is bright and modern.

**The Enterprise Edge is Undergoing
the Most Significant Transformation
in History**



The Way People Work Has Evolved, and so Has The Location of Their Data



Hybrid and Remote Work has revolutionized the need for new connectivity solutions.



Applications and **Private Data** that are readily accessible from anywhere need new **security and access** mechanisms.





**Hewlett Packard
Enterprise**

Security First Unified SASE

Secure Access Services Edge

SD-WAN and SSE come together



Where do businesses plan to start their SASE strategy?

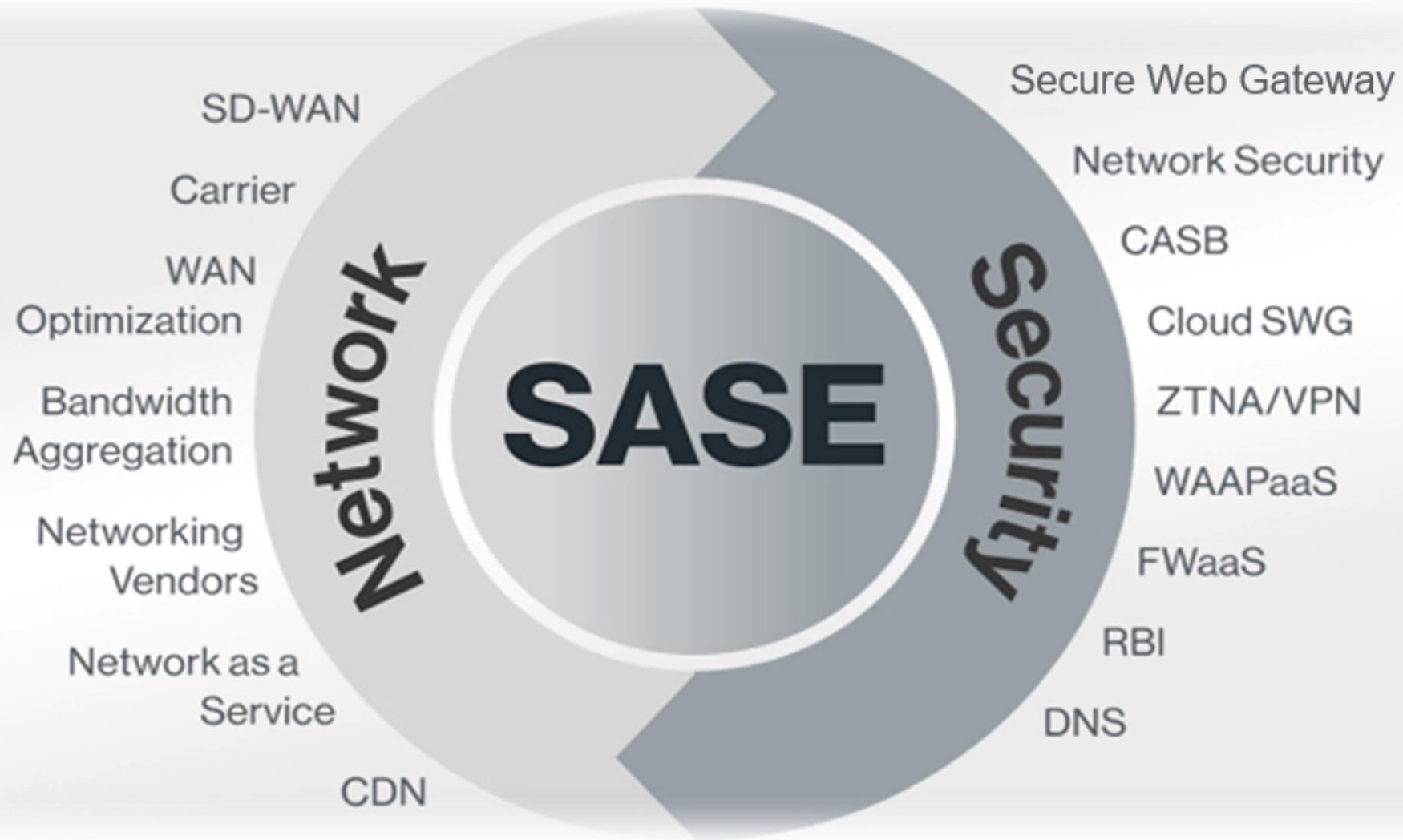
67%
SSE Platform
ZTNA, CASB, SWG



33%
WAN Edge Services
WAN Optimization,
SD-WAN, SaaS Acceleration

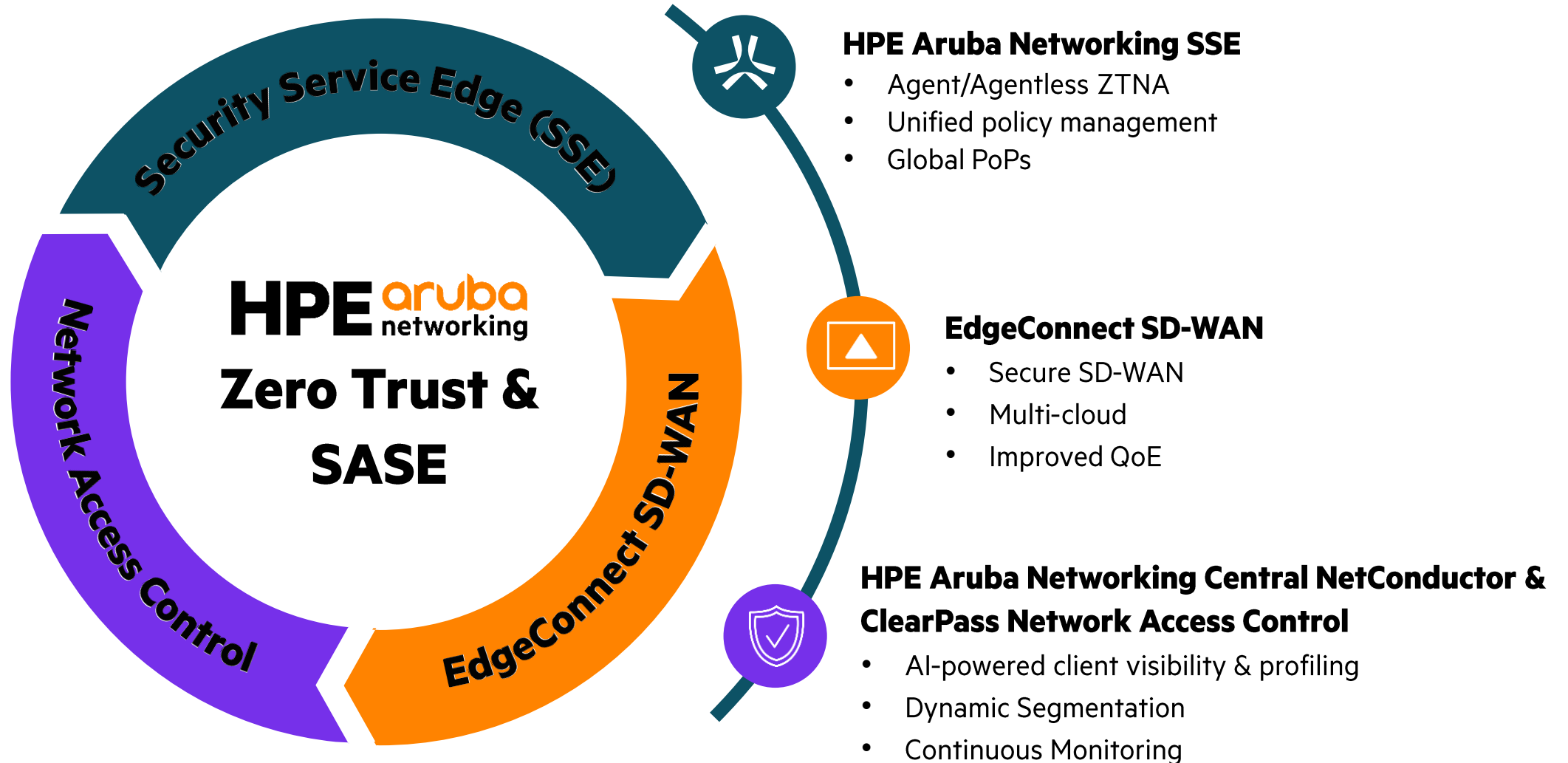
SSE is a 70 B + TAM ..
95% of orgs still have VPN
65% of customers will purchase SSE in the next 24 months
47% of those will begin with ZTNA

What Is SASE



HPE Aruba Networking Approach to Zero Trust and SASE

Apply zero trust security controls to protect users and applications, no matter where they connect



EdgeConnect Security First SD-WAN



HPE Aruba Networking EdgeConnect SD-WAN Key Use Cases

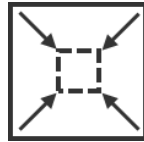
Combine advanced SD-WAN capabilities with built-in application-aware next-gen firewall

Support cloud-first organizations



- Build unified SASE or tightly integrate with multiple cloud-security vendors
- Intelligently steer traffic to the cloud and eliminate the need for backhauling traffic
- Deploy EdgeConnect to any cloud providers (Azure, AWS...)

Replace branch firewalls & routers



- Consolidate branch network and security functions
- Built-in next-generation firewall with IDS/IPS, DDoS protection and role-based segmentation
- Protect data in transit with IPsec tunnels
- Full support for OSPF and BGP
- Easily deploy security policies with zero-touch provisioning

Improve app performance



- Prioritize mission-critical applications with business intent overlays
- Run high quality voice and video over broadband internet
- Get the highest quality of experience with path conditioning, SaaS and WAN optimization capabilities

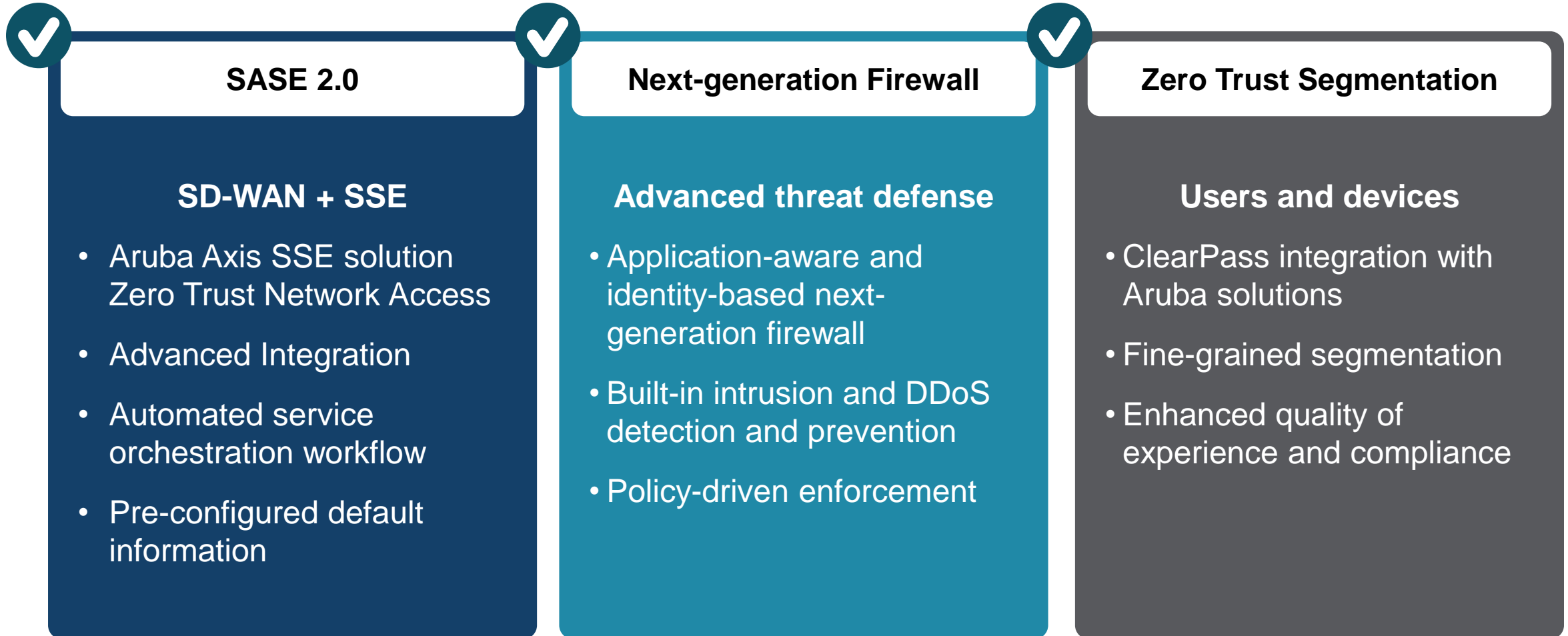
Secure IoT devices



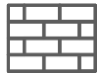
- Implement zero-trust network segmentation to complement SASE
- Ensure that users and IoT devices can only reach network destinations consistent with their role
- Go beyond what is defined by SASE

Delivering SASE 2.0 With Advanced Security

End-to-end, network-wide, identity-based security policy enforcement



Secure SD-WAN with EdgeConnect Enterprise



Next-generation firewall



DPI, Anti-spoofing, Attack detection & protection, Secure syslog



IDS/IPS



Application & user identity awareness
with ClearPass Integration



DDoS detection and prevention



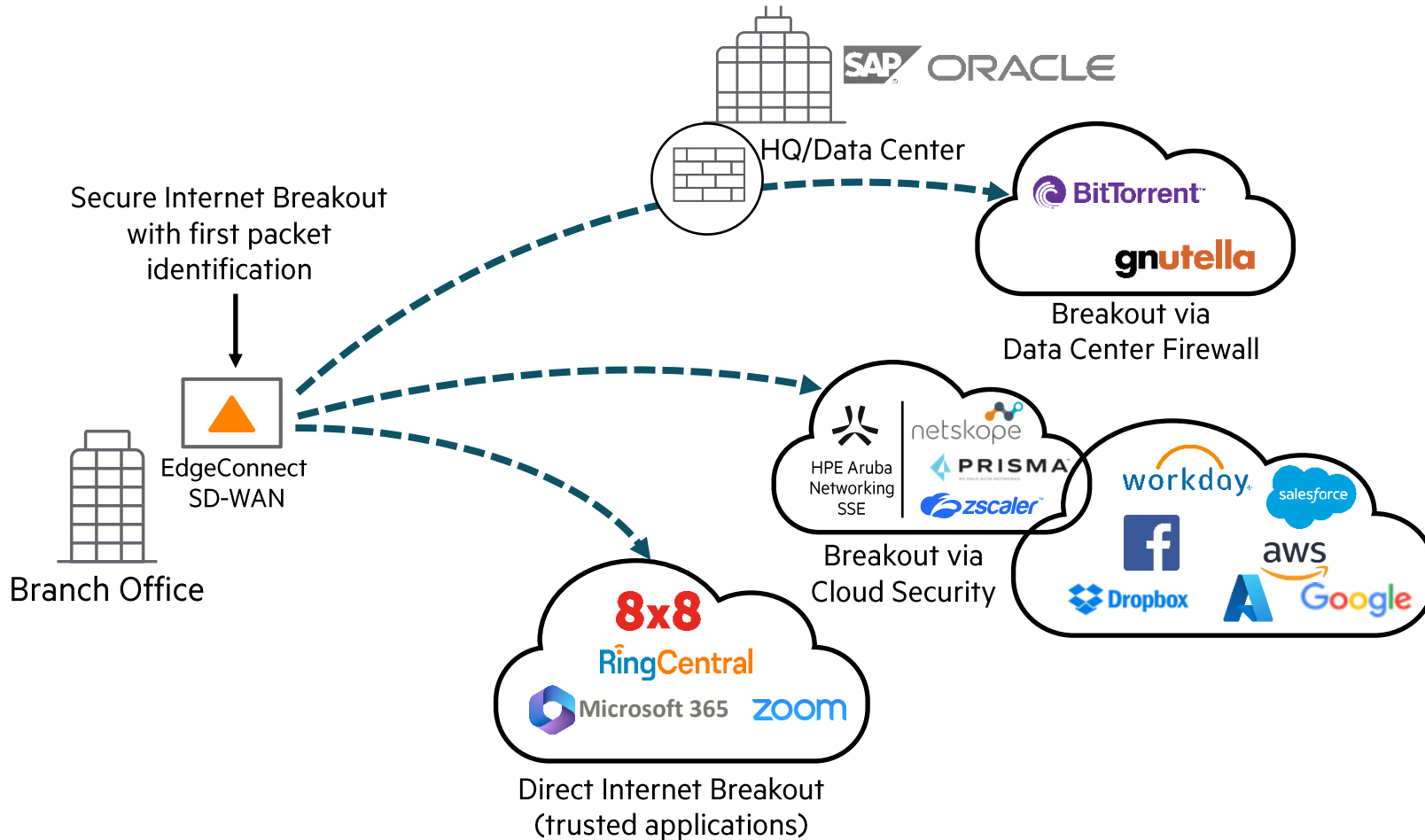
Automated SASE integration

Simplify WAN Operations

- Consolidate network and security equipment
- Replace firewalls in branches
- Minimize appliance sprawl
- Reduce WAN complexity
- Reduce cost of managing dedicated branch firewall
- Less service, support and maintenance costs

Architecting a SASE Solution with EdgeConnect SD-WAN

SD-WAN and cloud security for cloud-first enterprises



Steer apps intelligently

- Intelligent breakout of SaaS and trusted internet-bound traffic directly to the cloud

Improve SaaS performance

- Avoid backhauling traffic to the data center and improve SaaS application performance

Implement consistent security policies

- Eliminate application security and performance tradeoffs

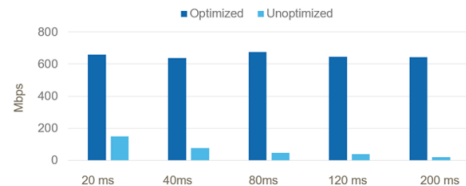


Boost, Accelerate Application Performance

consumption model: “ON TAP”

TCP Protocol Acceleration

Accelerate applications over distance overcoming latency impact



Data Reduction

Eliminate overhead of redundant packets traversing the WAN



Any Application

Warehousing App
Custom App 1
Custom App 2

Epic, Microsoft Dynamics, SAP, workday, PERFORCE

Applied Anywhere

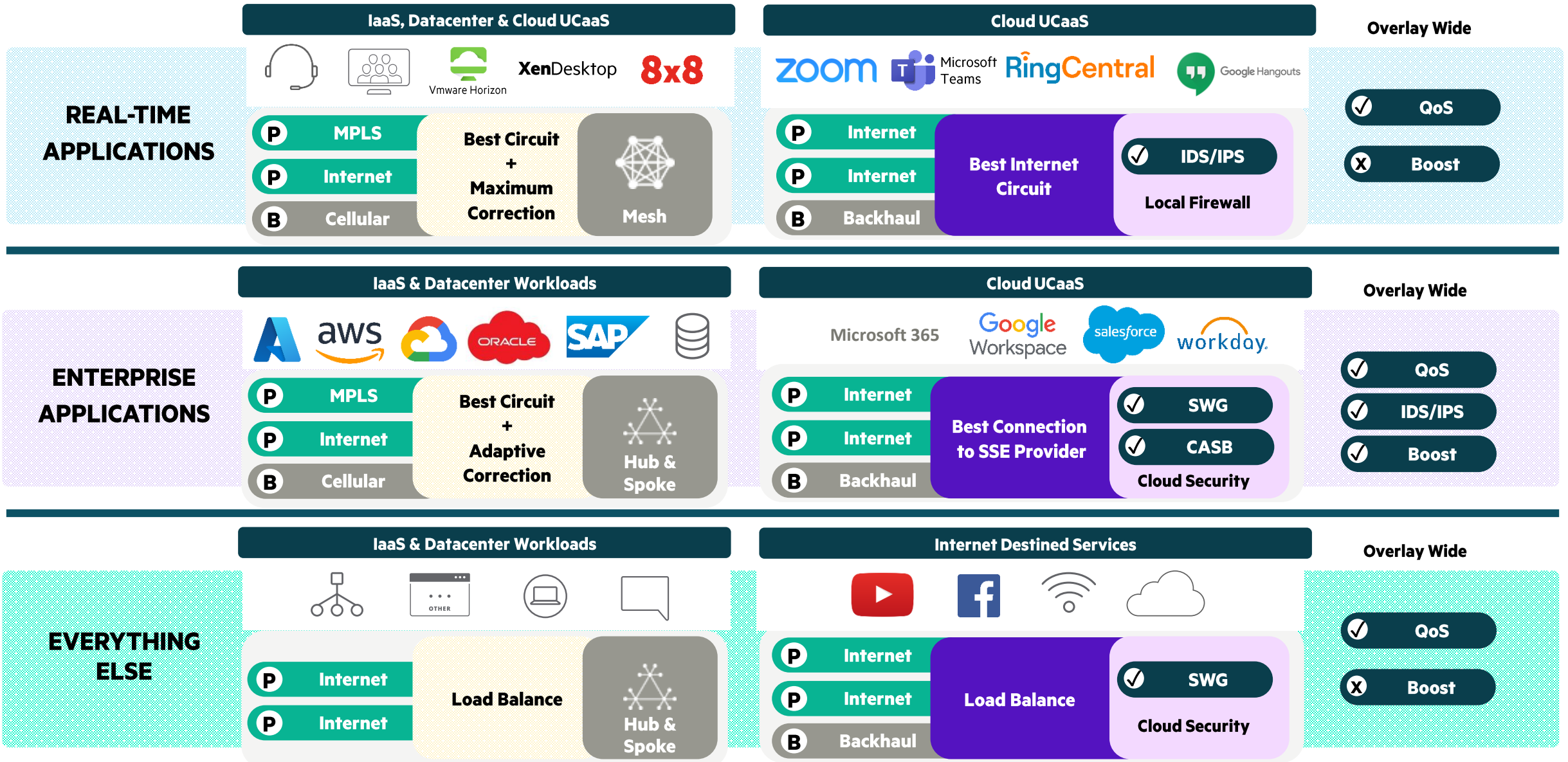
aws, Azure, Google Cloud, ORACLE

WAN Optimization where and when you need it.
No CAPEX and lower OPEX: only pay for what's needed

Optimization can be applied towards ANY application where an EdgeConnect appliance is in place between the client and server.

Workloads can be optimized in the branch, datacenter or cloud for mission critical applications, large datasets and custom applications.

SD-WAN Business-Driven Policies with SSE for a Total SASE Solution

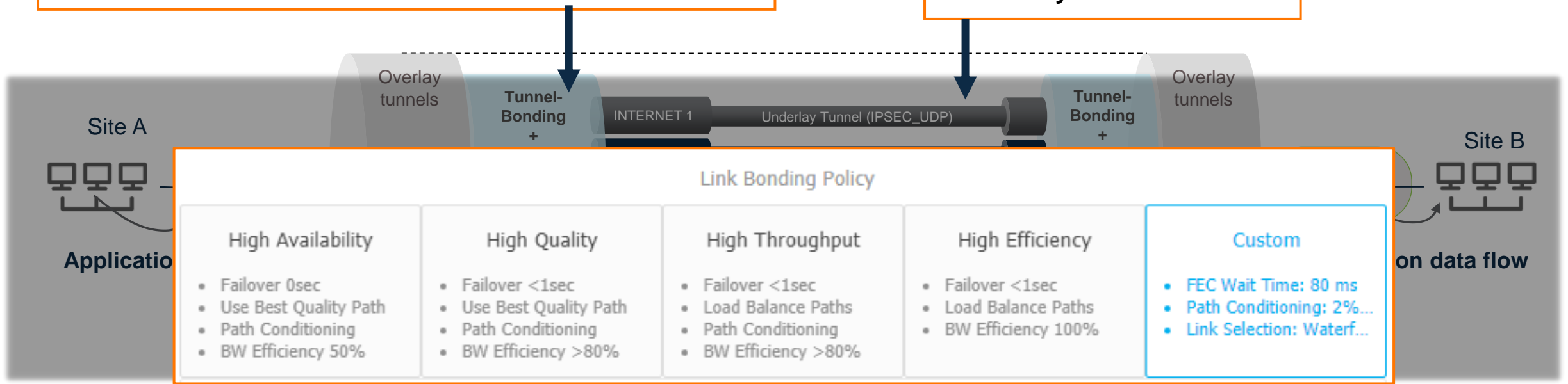


LINK BONDING & DYNAMIC PATH CONTROL

Tunnel bonding technique for efficient load balancing and seamless failover

- PER PACKET load-balancing
- Constant monitoring (packet loss/latency/jitter/congestion)

Link bonding :
UT ranking
UT dynamic selection



Advanced Traffic Controls

Path Conditioning

- Quality:
- Loss
 - Latency
 - Jitter
 - MOS

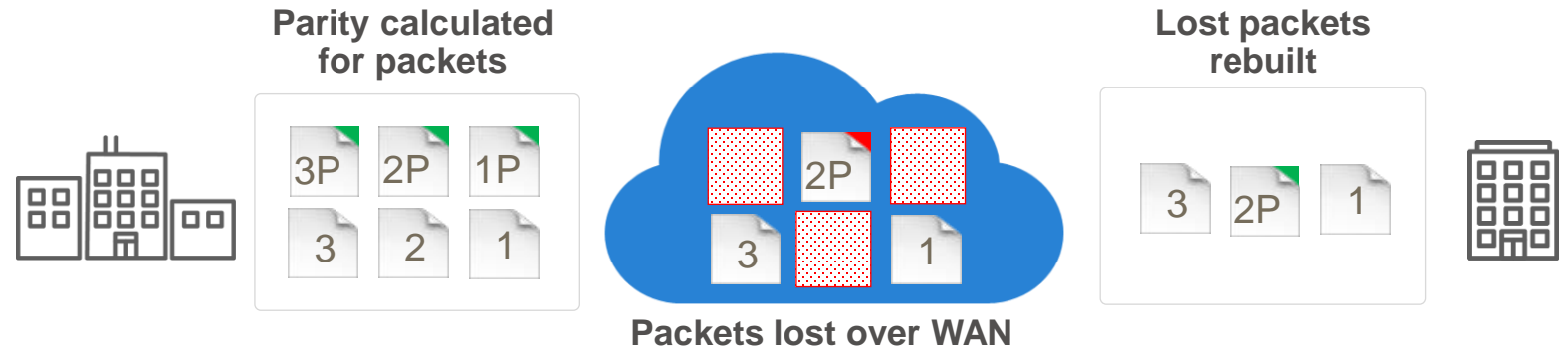
Load-balance

PATH CONDITIONING

Advanced network and application performance capabilities

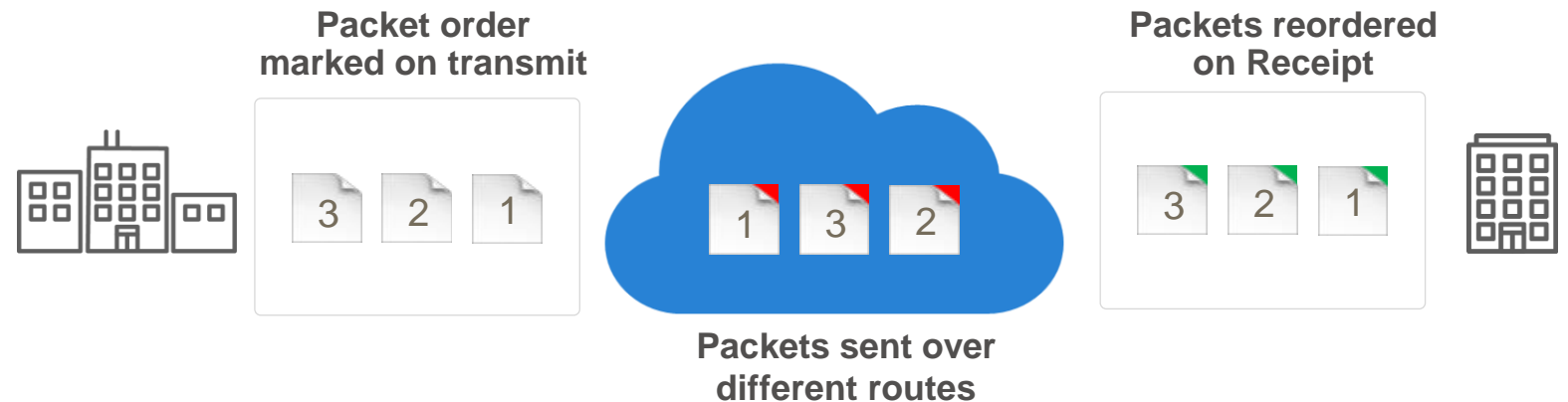
Forward Error Correction (FEC)

Packets lost in transmit across the WAN are rebuilt



Packet Order Correction (POC)

Packets delivered out-of-order across the WAN are reordered into the correct order

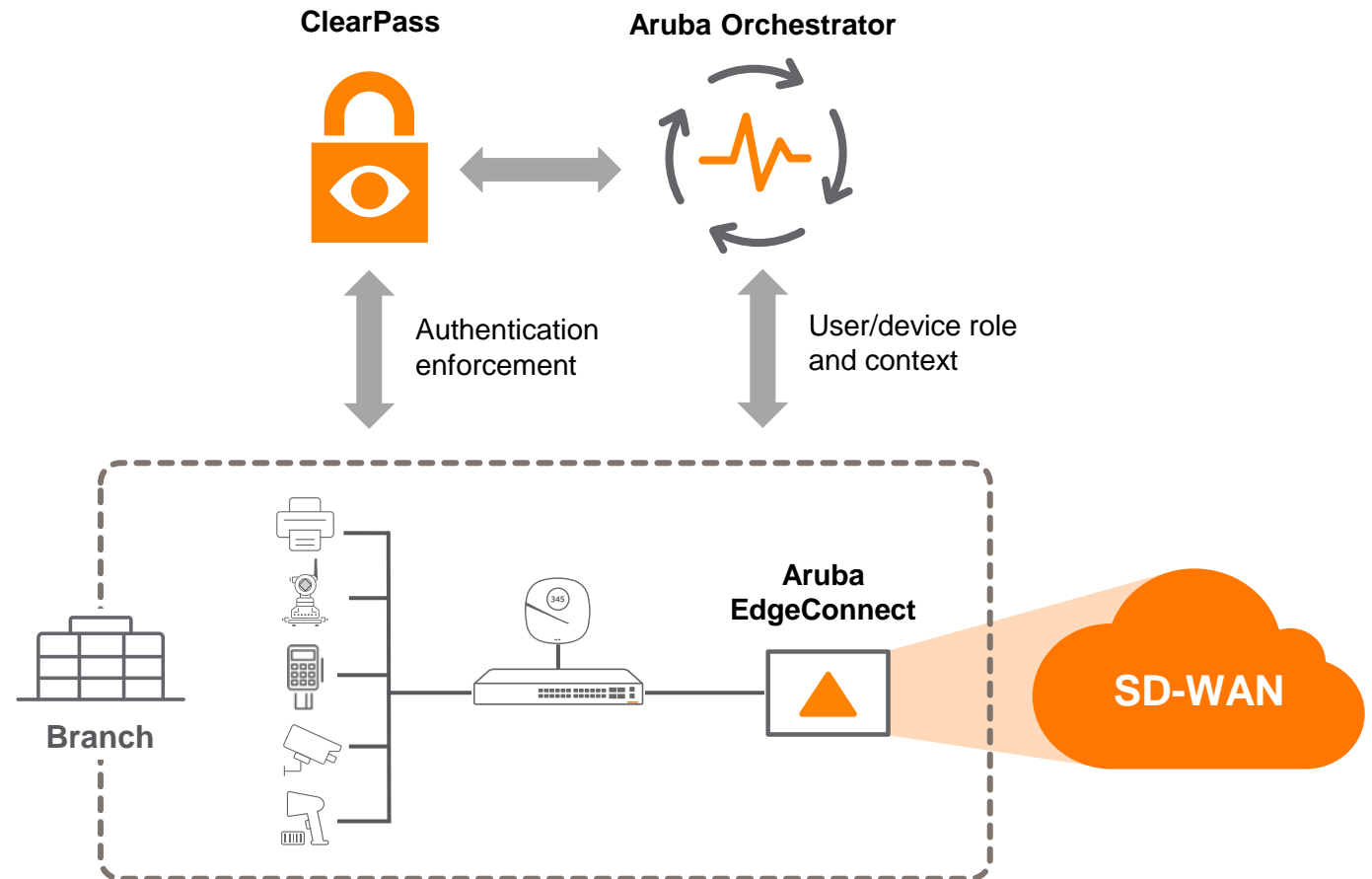


CLEARPASS INTEGRATION

Role Based Segmentation

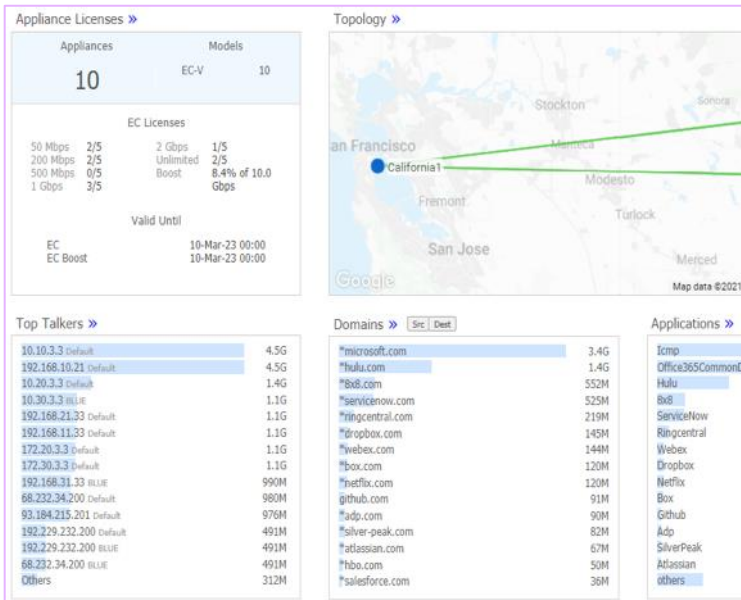
Single platform automates enterprise-wide context-aware, role-based policy

- **Visibility and automation**
- **Control**
- **Response**
- **360 Security integrations**
- **Leverage multiple identity stores**



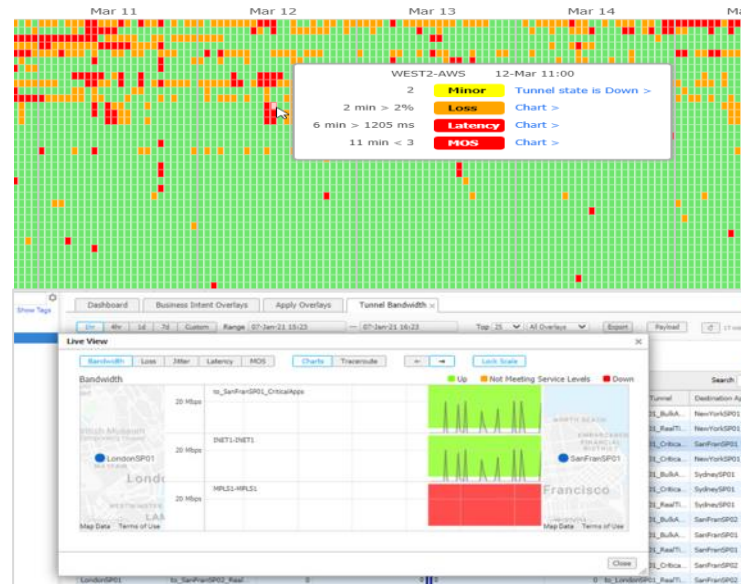
Application and Network Visibility

Dashboard



Comprehensive dashboard highlights key network and application attributes, and places focus on critical issues

Real-time Health Map



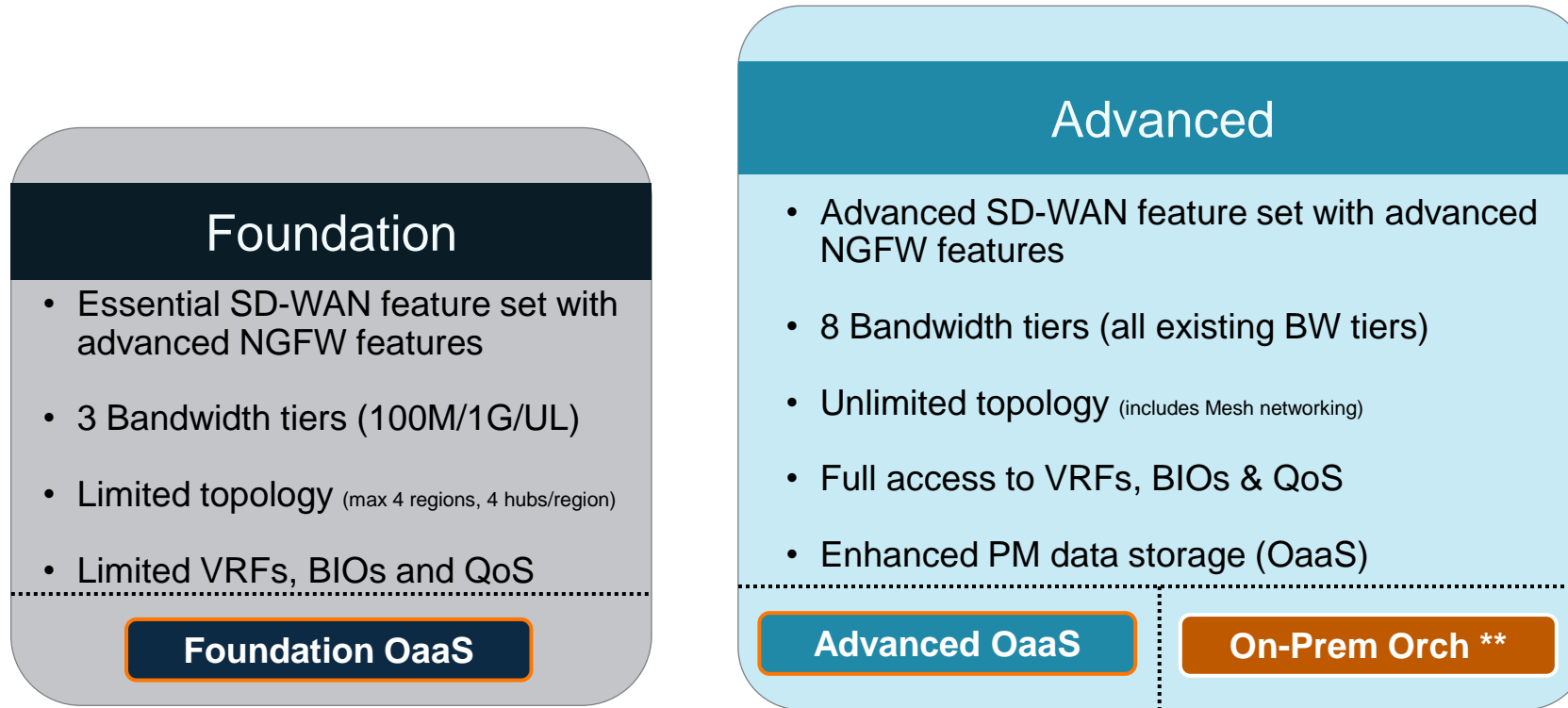
Network health is visualized in real-time and correlated across all locations. Alarms, network health and configuration issues are all easily diagnosed

Connection Level Visibility

Application	Proto.	Se.	IP1	Port1	IP2	Port2	Inbound Bytes	Outbound Bytes	St.	Inb
ulu	tcp	D..	192.168.11..	39020	www.hulu...	443	1.8M	65K	15..	ThirdParty_Zsc
ulu	tcp	D..	192.168.11..	38872	www.hulu...	443	2.6M	50K	15..	ThirdParty_Zsc
ulu	tcp	D..	192.168.11..	35272	www.hulu...	443	2.1M	47K	15..	ThirdParty_Zsc
ulu	tcp	D..	192.168.11..	35374	www.hulu...	443	1.6M	26K	15..	ThirdParty_Zsc
ulu	tcp	D..	192.168.11..	34984	www.hulu...	443	1.2M	20K	15..	ThirdParty_Zsc
ulu	tcp	D..	192.168.11..	35766	www.hulu...	443	806K	17K	15..	ThirdParty_Zsc
ulu	tcp	D..	192.168.11..	49716	www.hulu...	443	358K	10K	15..	ThirdParty_Zsc
ulu	tcp	D..	192.168.11..	49822	www.hulu...	443	178K	6K	15..	ThirdParty_Zsc
pple	tcp	D..	192.168.11..	54962	www.apple...	443	75K	4K	15..	ThirdParty_Zsc
food	tcp	D..	192.168.11..	58374	www.icloud...	443	58K	3K	15..	ThirdParty_Zsc
etflix	tcp	D..	192.168.11..	36184	www.netflix...	443	56K	3K	15..	ThirdParty_Zsc
potfy	tcp	D..	192.168.11..	43286	www.spotify...	443	49K	3K	15..	ThirdParty_Zsc
acebook	tcp	D..	192.168.11..	40564	www.facebook...	443	40K	3K	15..	ThirdParty_Zsc
ypeForBusine...	tcp	D..	192.168.11..	33354	www.skype...	443	8K	2K	15..	ThirdParty_Zsc
ncoursolutions	tcp	D..	192.168.11..	35682	www.concu...	443	7K	5K	15..	ThirdParty_Zsc
bo	tcp	D..	192.168.11..	44272	www.hbo.c...	443	7K	2K	15..	ThirdParty_Zsc
office365Comm...	tcp	B..	192.168.31..	50500	www.micro...	443	5K	1K	15..	Passthrough_LT
ypeForBusine...	tcp	D..	192.168.11..	33288	skype.com	443	5K	3K	15..	ThirdParty_Zsc
otp-dhcp	udp	D..	172.30.0.20	68	172.30.0.1	67	4K	6K	15..	Passthrough_MF
otp-dhcp	udp	D..	172.20.0.1	67	172.20.0.10	68	4K	0	15..	pass-through
lesforce	tcp	D..	10.10.3.3	60090	salesforce.c...	80	2K	420	15..	Passthrough_IN

Flow level statistics give total visibility into every connection on the network providing total visibility and control of applications and users

Tiered Subscription Licensing Options (40% to 60% lower costs)



Common SD-WAN/Security Capabilities

- Unlimited #ECs
- First Packet iQ
- Advanced Routing (BGP, OSPF)
- Path Conditioning
- Zero Trust Segmentation
- ZTP
- EdgeHA
- DDoS defense
- 1-7Y terms*
- Integrated NGFW (L3-L7)
- Automated SSE Orch

Axis Security Next Generation SSE



Key Differentiators



Unified access
platform

Provides one UI for all
SSE features



Simplify policy and
inspect all traffic

Simple to operate &
Streamlined policy
management



Multi-cloud backbone
with smart routing

Leverage Azure, AWS,
Google and Oracle
Clouds



Agent or agentless
Zero Trust access

Full VPN replacement
with advanced SSE

Axis Security SSE Solution

ZTNA

Zero Trust Network Access

Provide private access to applications on-prem, cloud, or private cloud.

(VPN Replacement)

CASB

Cloud Access Security Broker

Access private SaaS applications & Data Loss Prevention.

(control/block upload/download from Box, SharePoint, Facebook, Salesforce etc.)



SWG

Secure Web Gateway

Secure & protect against malicious online threats.

(URL filtering, DNS control, SSL inspection, Malware protection)

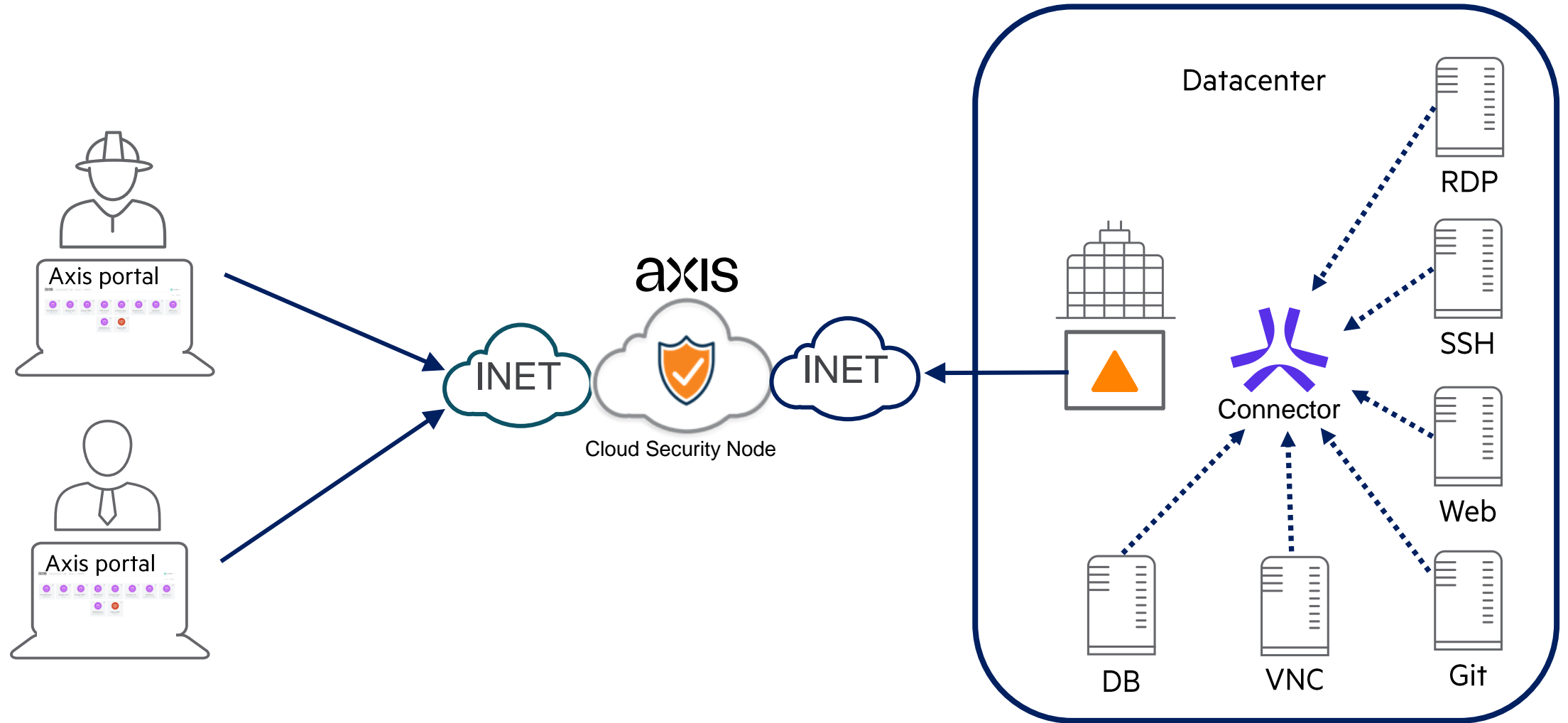
DEM

Digital Experience Monitoring

Monitor user performance and troubleshoot user access issues.

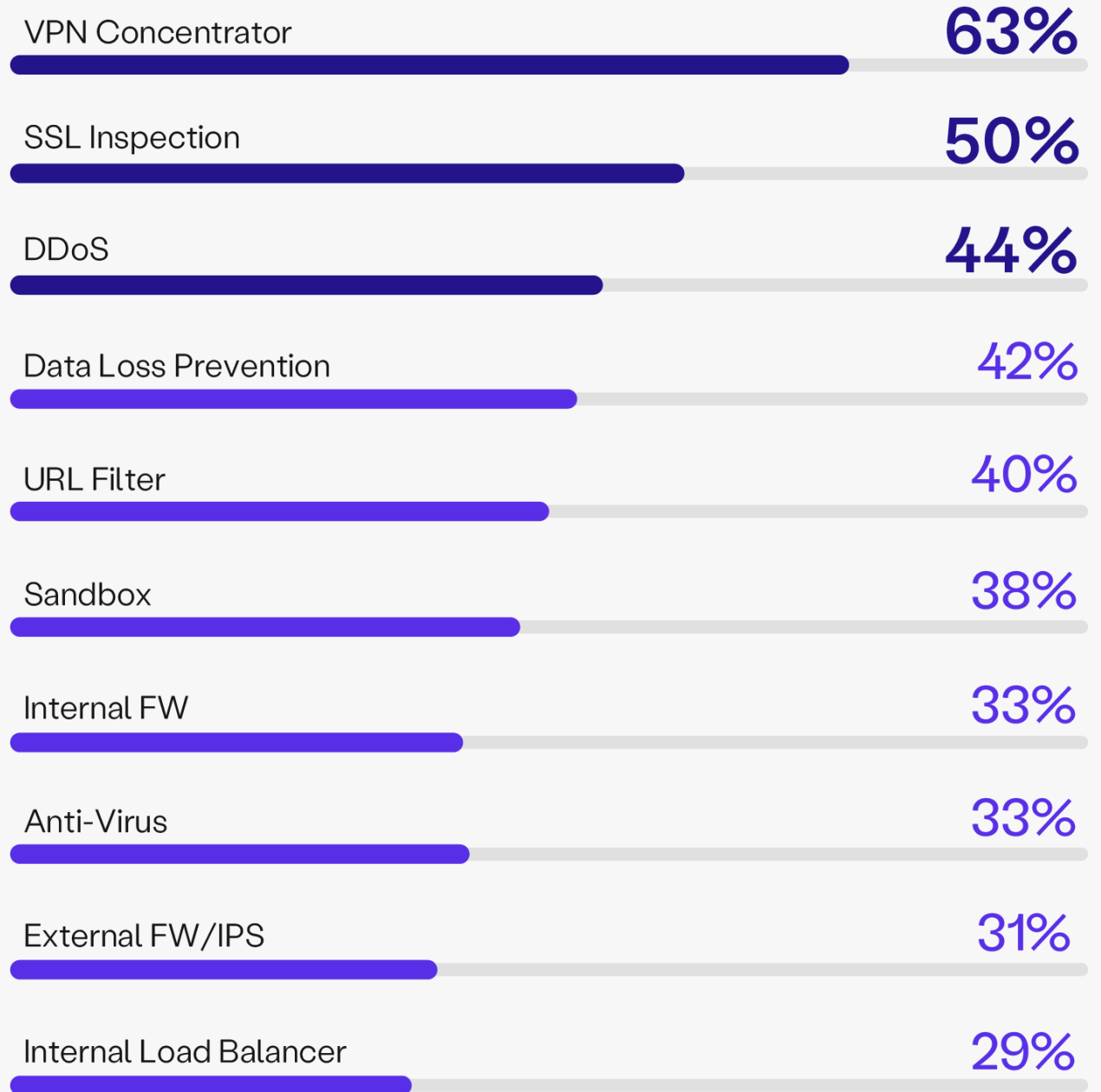
(network operations for private & public traffic)

The Power of Agentless Secure Zero Trust Access



REDUCE INFRASTRUCTURE COSTS

SSE CAN REPLACE THESE APPLIANCES



Axis Security vs VPN capabilities

Capability	Axis SSE Solution	Axis	VPN
Policy: Granular Access	Granular policy access to specific applications Device Posture Checks (i.e. personal firewall and disk encryption check) Conditions (i.e. destinations, time of day, location, and IP address range)	Yes	No
Continuous Enforcement	Continuous authentication throughout the session and not only at initial login	Yes	No
3d party Limited Access	Admins restrict access for contractors, temporary employees, BYOD devices Different access to different users and groups using device posture and conditions	Yes	No
Network Isolation	Restricts access to individual applications – NOT the whole networks	Yes	No
Application Isolation	Applications are published on the via the platform Applications are NOT exposed directly to the internet VPN exposes your access point public IP (Easily scanned; Vulnerable to DDoS)	Yes	No
Visibility: Insights into User Activity	The platform tracks all user activity to provide detailed views of network and application behavior, including URL history, SSH commands and file downloads.	Yes	No
Auto scaling	Scales automatically as traffic increases without network reconfiguration	Yes	No

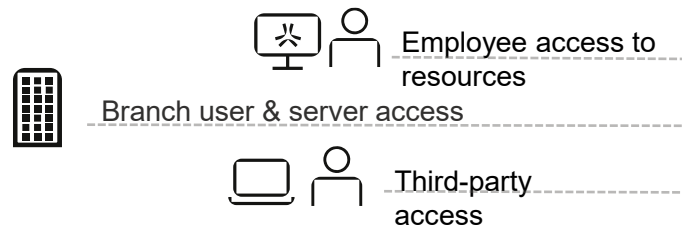


START SMALL – ADOPT ZTNA

	ZTNA 1.0	Axis
Keep Users Off The Network	+	+
Reduce attack surface of infrastructure	+	+
DDoS proof Private Apps	+	+
Application Discovery	+	+
Agentless Web, SSH, RDP, Git, DB, VNC Access	-	+
Full SSE Inspection/ Continuous Authorization / Visibility	-	+
Per app segments, User group pairing	-	+
Any Port / Protocol (P2P / VOIP, AS400, etc.)	-	+
Server Initiated Flows / Push Patching	-	+
Multi-cloud PoP resilience	-	+
Smart Routing for ZTNA Connectors	-	+
IPsec Tunnels for ZTNA	-	+
Local Edge Private POP	-	+

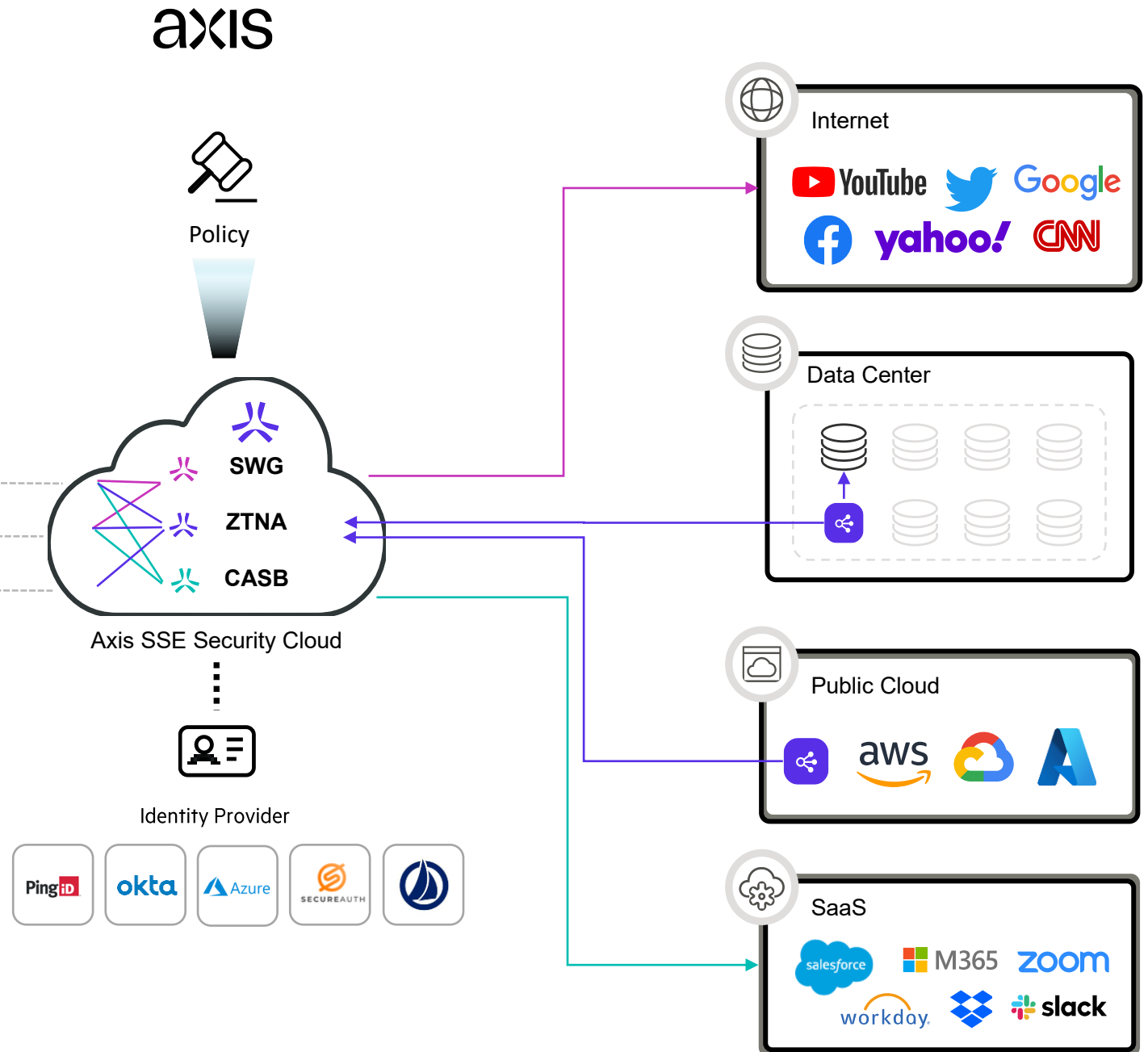
Axis In Motion

1. User requests access
2. Identity + MFA verified
3. Policy is evaluated for access
4. Cloud brokers connection
5. Cloud continuously authorizes session



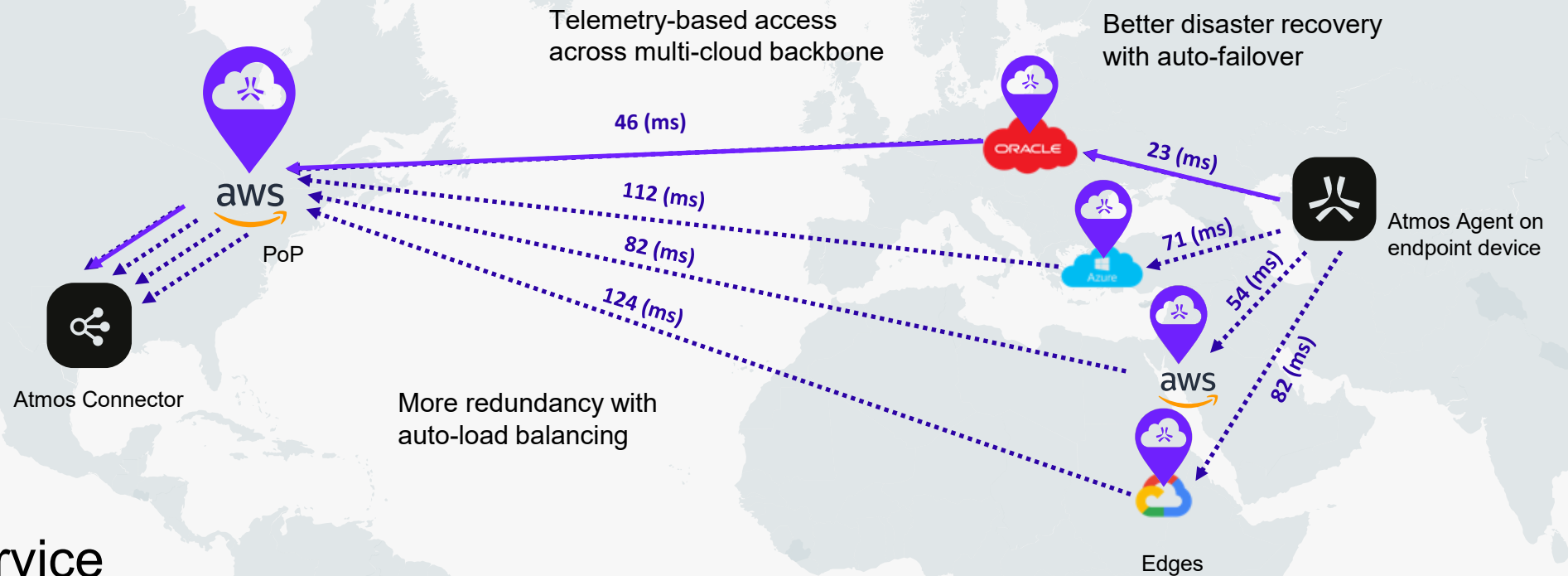
Benefits

- Single platform for ZTNA,SWG,CASB,DEM
- Agentless for Web/SSH/RDP/Git/DB access/VNC
- Visibility into all user traffic
- Flexible policy assignment
- Simple for Admins & Users
- SaaS application control



Distributed cloud architecture:

High reliability, availability, and scale



Network-as-a-Service

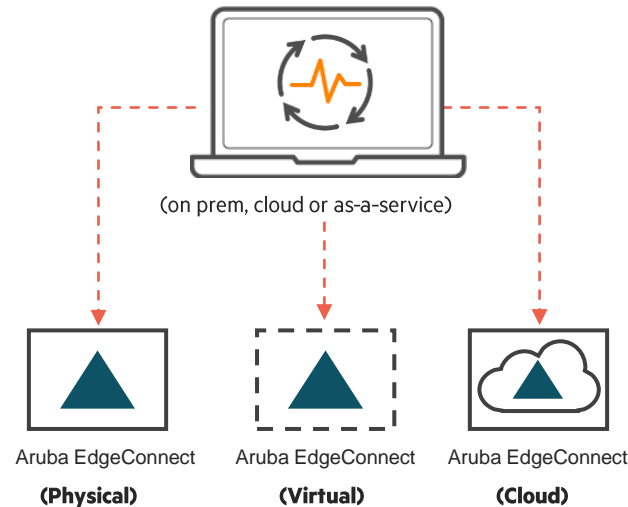
- Geo-proximity routing
- Smart routing based on latency
- Extremely high availability

The Aruba Networks Unified SASE Portfolio

Software Defined WAN (SD-WAN)



Secure Service Edge (SSE)



Aruba Orchestrator

Centralized policy orchestration, monitoring and reporting

Aruba EdgeConnect

Unified SD-WAN edge platform: NGFW, routing, security, SD-WAN and WAN Optimization



Aruba Advanced Security

Intrusion Detection and Prevention.



Aruba Boost WAN Optimization

On-demand WAN Optimization



Zero Trust Network Access (ZTNA)

Client or clientless endpoint access solution to securely provision access to network resources.



Secure Web Gateway (SWG)

Cloud based firewall to securely access, monitor and inspect all web traffic.



Cloud Access Security Broker (CASB)

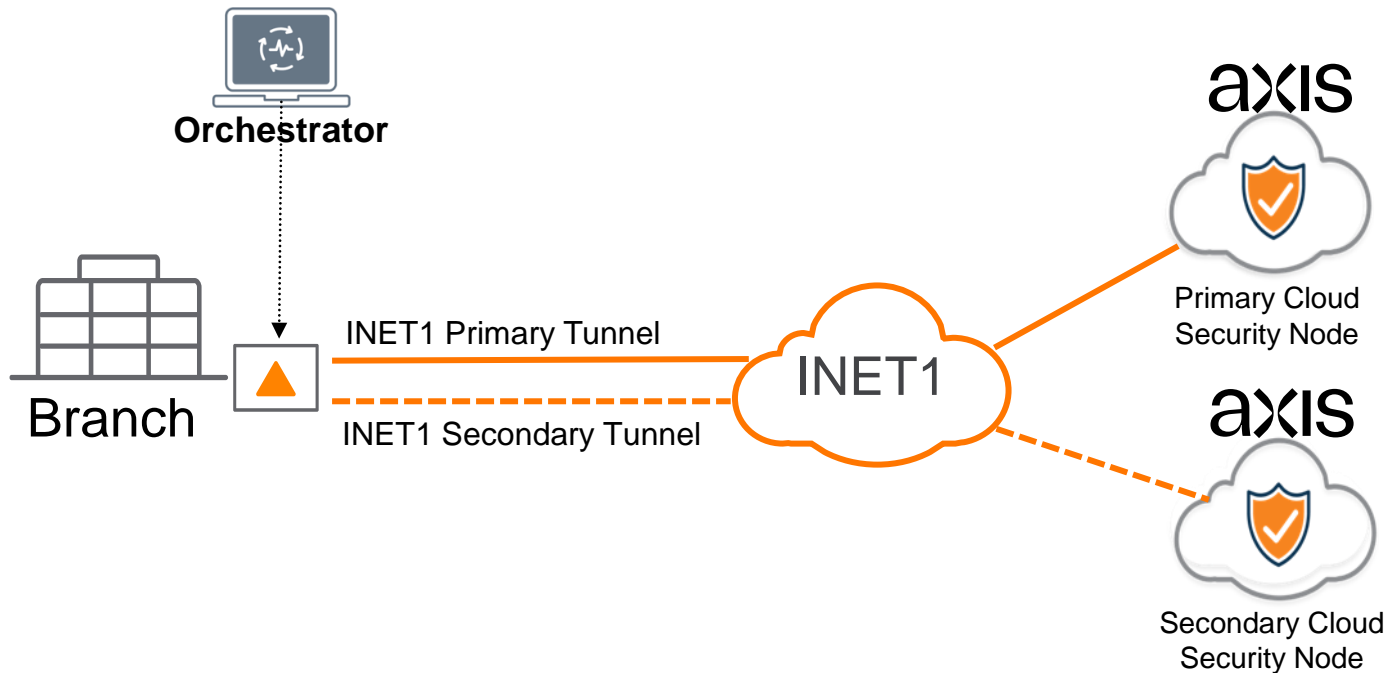
Cloud based security to manage, control and monitor user access to SaaS applications.



Digital Experience Monitoring

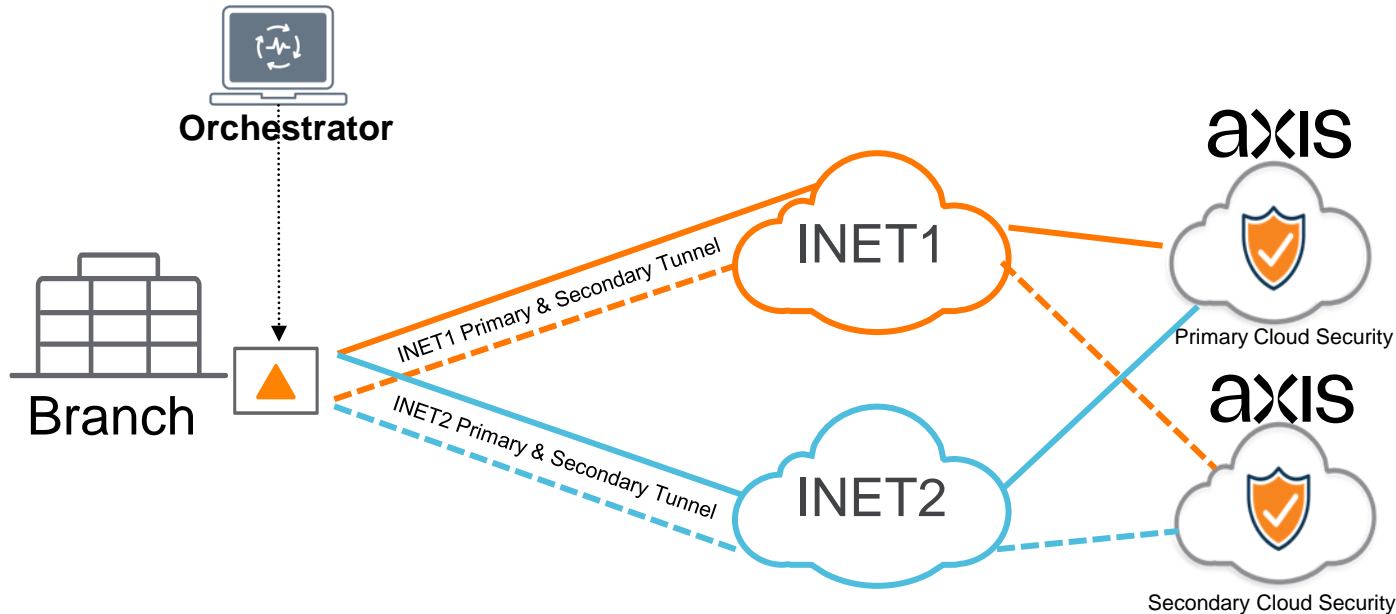
Cloud based security to manage, control and monitor user access to SaaS applications.

Tightly Integrate SASE with Axis Security & Others



- Service orchestration to SSE solutions. Continued Best of Breed approach, now with Axis as a single vendor complete SASE Architecture
- Simple drag-and-drop policy orchestration in the overlays
- Automatically associate sites with proximity-based cloud security services

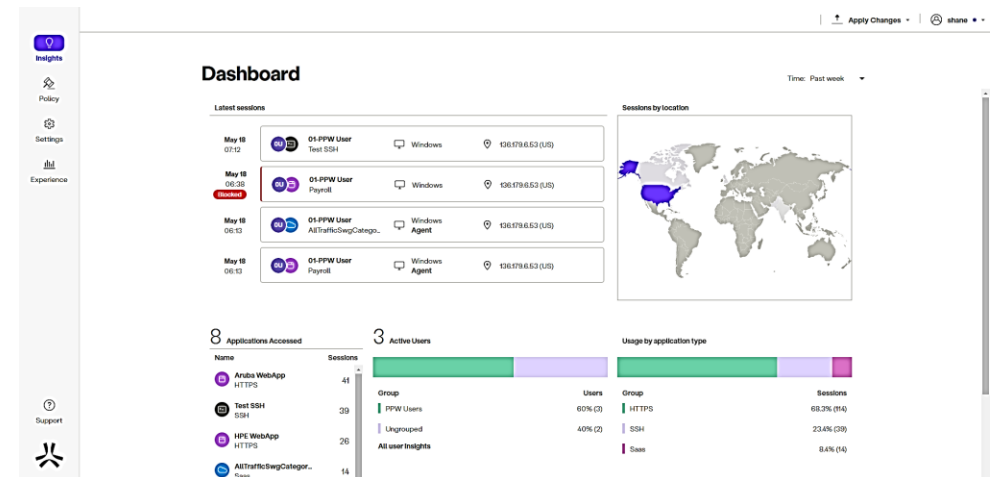
EdgeConnect & Axis with High Availability



- Ability to leverage multiple transports for scalability and high availability
- Pre-defined load balancing policies per BIO
- IPSLA monitoring and failover policies across primary and secondary tunnels

ZTNA Agentless Demo

- ZTNA
- Single policy for all SSE components



Zero Trust Network Access – Interactive Agentless Demo



User: demo

Pass: Aruba123

<https://axis-atmospherelab27.axisportal.io/apps>

Summary



Three Components of the Unified SASE Journey



Secure Remote User Access with Zero Trust Network Access (ZTNA)
Replacing Legacy VPN Access



Cloud First Security with Secure Web Gateway (SWG) and Cloud Access Security Broker (CASB)



Network Modernization Replacing Routers and Firewalls with SD-WAN



SSE Accreditation is here!



For engineers:

APS-SSE: Aruba Product Specialist - Security Service Edge

This course teaches participants to install, configure, verify, and maintain the HPE Aruba Networking Security Service Edge product.

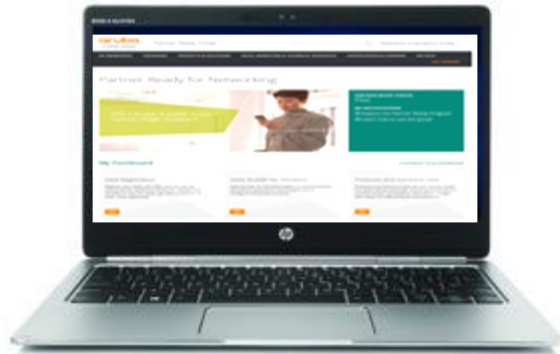
For Sales:

In this 40-minute course you will learn about the components of the HPE Aruba Networking SSE offering and what sets us ahead of our competition. You will also learn about the key customer personas, how to identify and qualify opportunities.

Questions



Partner Resources



Partner Ready for Networking portal
<https://partner.hpe.com/aruba>



Arubapedia for Partners
<https://afp.arubanetworks.com>



My Learning / The Learning Center
www.mylearninghpe.com



Channel SE(CSE)
Regional channel support



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