atmosphere '22
BELGIUM

Aruba EdgeConnect Fabric

Jan-Willem Keinke, Sales Engineer WAN-Edge

September 2022

aruba
a Hewlett Packard
Enterprise company

A Unified Approach: Aruba ESP
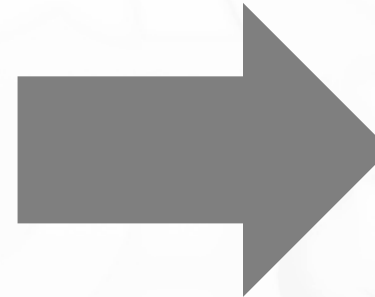
– Purpose-built for the intelligent edge
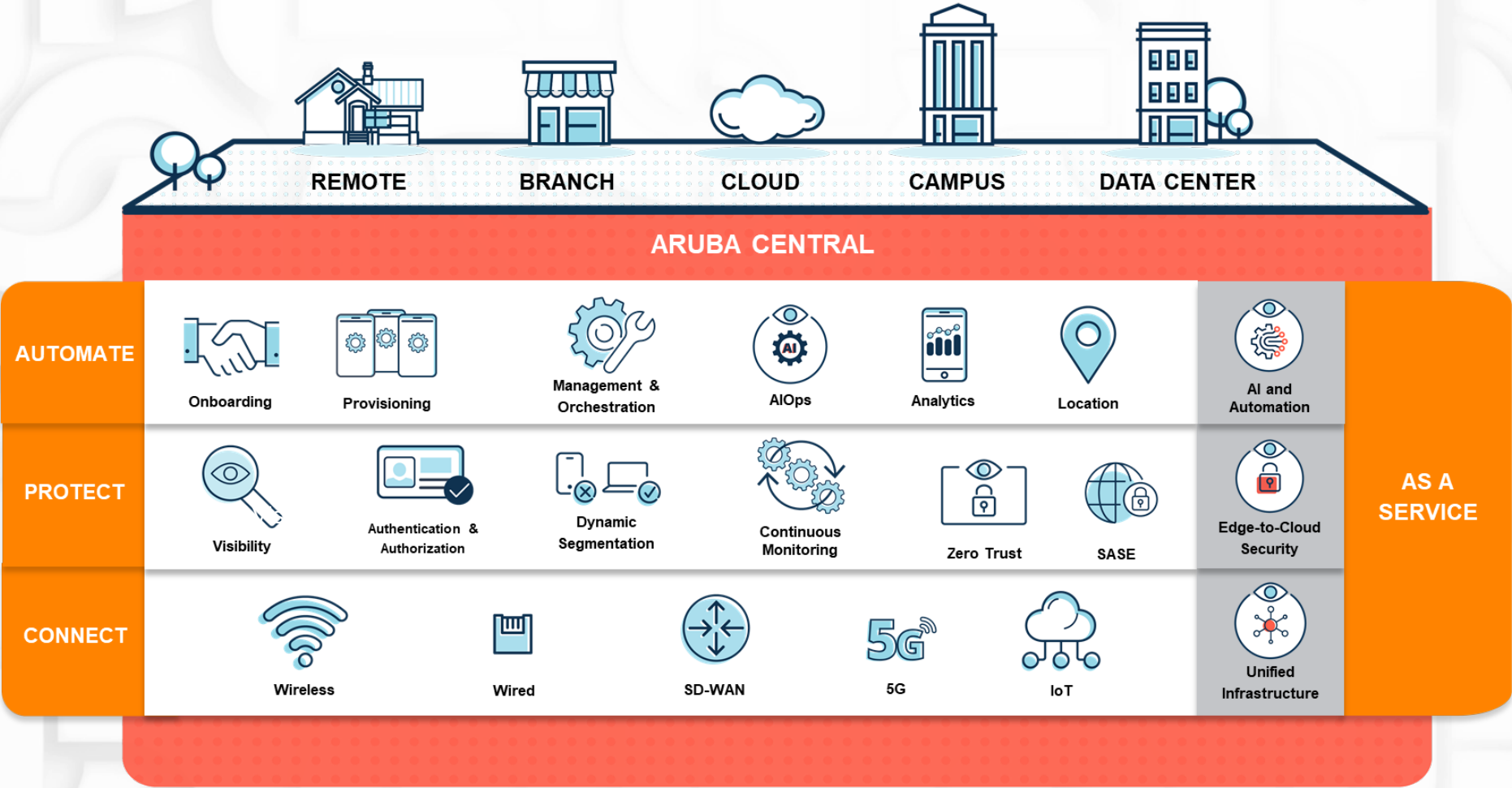
An Interconnected World in the Digital Era

– New opportunities…new challenges… innovation

Digital Transformation

Cloud-First IT Architecture

The Mobile Worker/WFA

WAN Transformation

Security Transformation
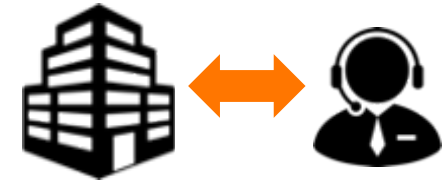
Three Key Enterprise Networking Trends to Watch

85%

Of organizations will embrace a cloud-first principle by 2025[1]

51.9B

connected IoT devices by 2025, up from 44.7B in 2021[2]

52.5%

Of employees will work from home at least part time post-COVID[3]

1. Gartner 2021
2. IDC, The Future of the Connected Edge, March 2022
3. IDC, Future of Enterprise Networking: Emergence of the New Normal, Feb. 2021
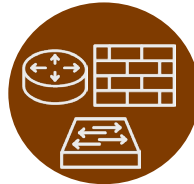
Challenges driving SD-WAN/WAN Edge adoption?

Increased Demand for Application Performance
Inconsistent SaaS application performance, expensive backhauling

Managing Multicloud Connectivity
Struggling to keep up with connectivity to public clouds, cloud-delivered security services and IoT

Branch Infrastructure Sprawl
Routers, FWs, WAN Optimization, Multiple operating systems

Total Lack of Automation
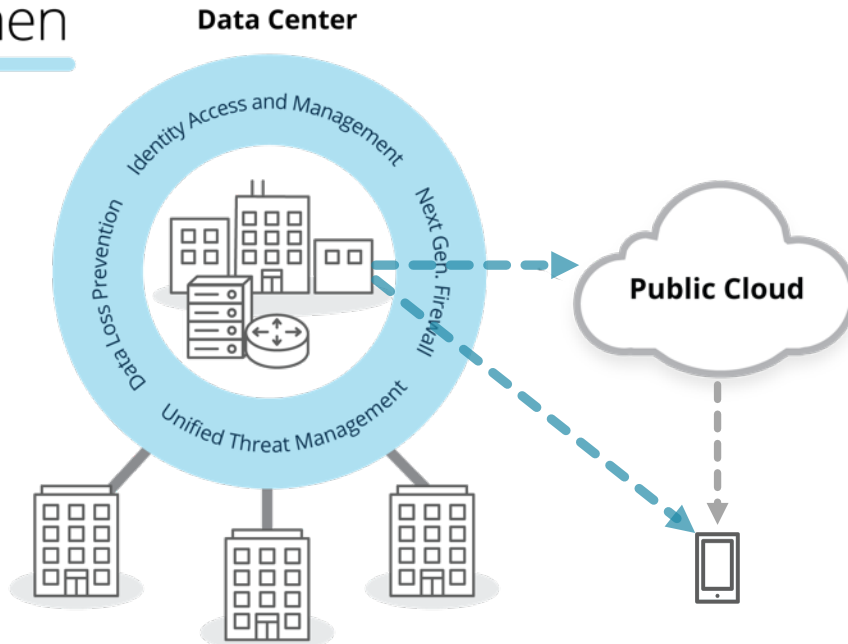Manual configurations and device-by-device changes, delays

Consistent Edge-to-Cloud Security
Limiting lateral movement of viruses, end-to-end segmentation, best-of-breed SASE architecture, and IoT protection

The Cloud Compels Security Transformation

Then — Data Center

Identity Access and Management · Next Gen. Firewall · Data Loss Prevention · Unified Threat Management

Public Cloud

The enterprise security perimeter is dissolving

Now

Secure Web Gateway · Cloud Access Security Broker · Firewall-as-a-Service · DNS · Threat Prevention/Detection · ZTNA

aws · RingCentral · Office 365 · salesforce · YouTube · Dropbox · SAP · workday

As apps move to the cloud, security must follow

IoT Device Explosion Drives Need to Go Beyond SASE

Branch Office
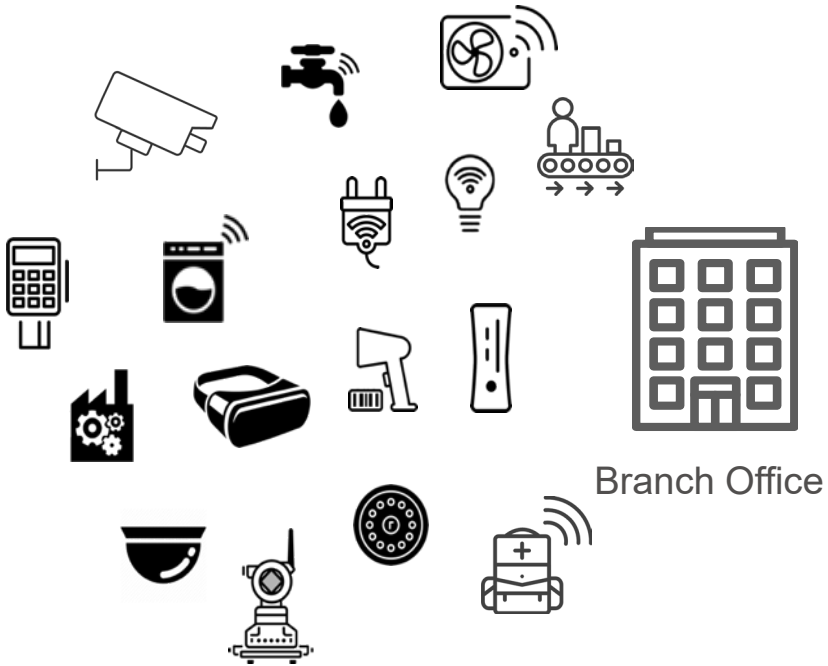
VLAN sprawl: Security applied on a per-VLAN basis doesn't scale

Challenges:

- IT/Security teams lack visibility into devices on the network, e.g., factory controllers, medical equipment

- Current toolset fails to adequately address visibility and IoT use cases

- Volume, variety and the innovation of "things" means manual approaches cannot keep pace

- SASE-style solutions require an endpoint agent, which IoT devices cannot support

Solution: Zero Trust dynamic segmentation …automate with context using ClearPass

What is SSE?

Security Services Edge

- A new Gartner category and Magic Quadrant, introduced February 15, 2022

- Secure Access Service Edge (SASE) framework has evolved with the two major segments represented by
  - WAN Edge (SD-WAN) and
  - New Secure Service Edge (SSE) Magic Quadrant

- SSE includes
  - Secure Web Gateway (SWG)
  - Cloud Access Security Broker (CASB)
  - Zero Trust Network Access (ZTNA)
  - Other cloud-delivered security functions, e.g., FWaaS, RBI, SD-WAN integration
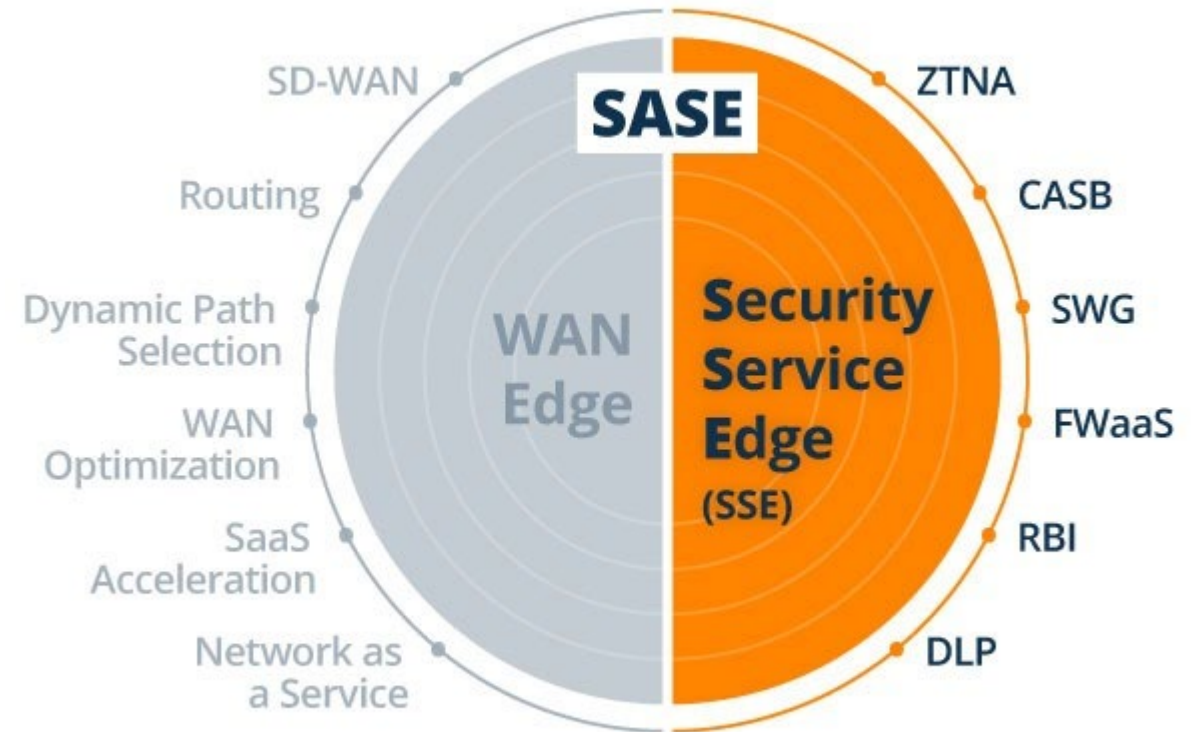
> "Security service edge (SSE) secures access to the web, cloud services and private applications. Capabilities include access control, threat protection, data security, security monitoring, and acceptable-use control enforced by network-based and API-based integration. SSE is primarily delivered as a cloud-based service and may include on premises or agent-based components." *

Gartner, "Magic Quadrant for Security Service Edge," February 15, 2022

Gartner

Delivering Best-of-Breed SASE and Zero Trust

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

Best-of-Breed SASE

Freedom of choice

- Native integration with leading SSE vendors
- Automated service orchestration workflow
- Pre-configured default information

Next-generation Firewall

Advanced threat defense

- Application-aware and identity-based next-generation firewall
- Built-in intrusion and DDoS detection and prevention
- Policy-driven enforcement

Zero Trust Segmentation

Users and devices

- ClearPass integration with Aruba solutions
- Fine-grained segmentation
- Enhanced quality of experience and compliance

EdgeConnect Secure WAN Edge

EdgeConnect Enterprise

- **Advanced SD-WAN with Business Intent Overlays**
- **Max network and app performance**

EdgeConnect SD-Branch

- **Integrated management for Wired, Wi-Fi, Security and SD-WAN**
- **End-to-end user-centric security**

EdgeConnect Microbranch
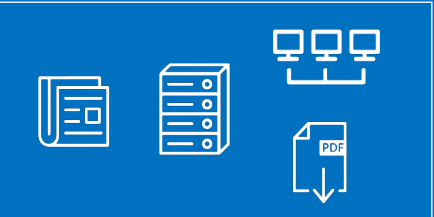
- **Small office / work from home "branch of one"**
- **SD-WAN features including cloud-delivered security**

EdgeConnect Mobile

- **Work from anywhere on laptops, phones or tablets**
- **Role-based security taken to a VPN client!**

Business Driven SD-WAN Policy's

Apps, IaaS, PaaS	Circuits	Bonding + SLA	Topology	SaaS, Cloud, Internet Apps	Internet Policy & Firewall	Overlay Defaults

Real Time Overlay

	MPLS	**High Availability**	Mesh	WebEx, ZOOM Video Communications, Skype, Ring Central, 8x8	**Best Circuit + Local Firewall**	**FW Zone:** Real Time
	Internet	Loss: 1%			Local Firewall, Datacenter (Backup)	**QoS:** Real Time
	LTE (Backup)	Latency: 400ms Jitter: 200ms				**Boost:** Disabled

Enterprise Apps Overlay

amazon web services, SAP, Azure, ORACLE	MPLS	**High Quality**	Hub & Spoke	Office 365, box, salesforce, workday, slack	**Best Circuit + Cloud Firewall**	**FW Zone:** Restrict
	Internet	Loss: 2%			zscaler, Datacenter (Backup)	**QoS:** Enterprise
	LTE (Backup)	Latency: 600ms Jitter: 300ms				**Boost:** Enabled

Default Overlay

	MPLS	**High Efficiency**	Hub & Spoke	Facebook, YouTube	**Load Balance + Cloud Firewall**	**FW Zone:** Default
	Internet	Loss: 5%			CloudGuard, Datacenter (Backup)	**QoS:** Best Effort
	LTE (Backup)	Latency: 800 ms Jitter: 500 ms				**Boost:** Disabled

A COMPLETELY AUTOMATED APPROACH

Standardize, Templatize & Automate Provisioning

Aruba Orchestrator

Aruba EdgeConnect Enterprise
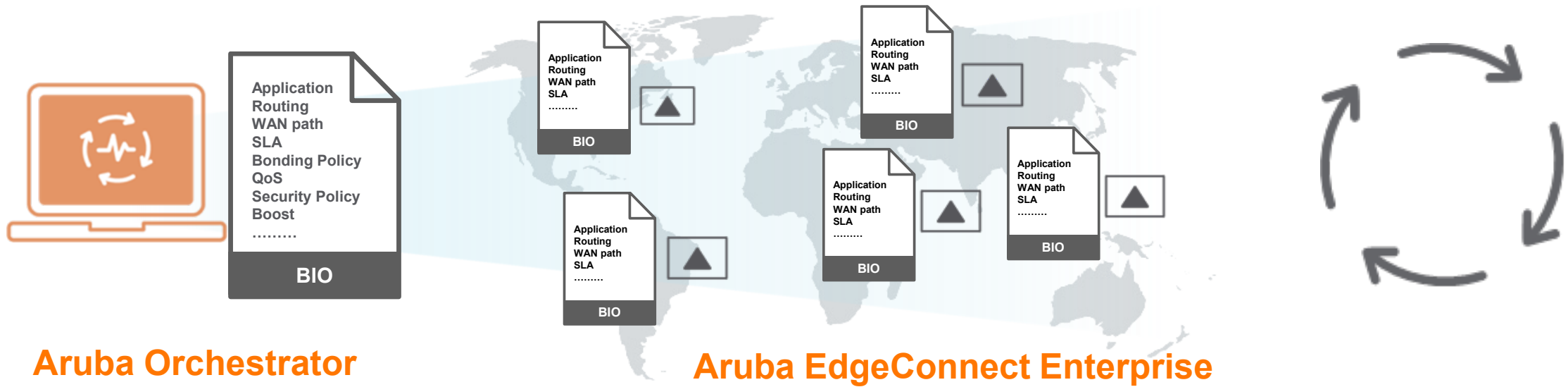
1 Create Business Intent Overlay (BIO)

2 Push and Maintain Policies Globally

3 Continuously Monitored and Updated

Adaptive internet breakout

Steer apps intelligently

- Intelligent breakout of SaaS and trusted internet-bound traffic directly from the branch

Transform security model at your own pace

- Application-driven steering enables security transformation

Implement consistent network-wide security policies

- Eliminate tradeoffs between application security and performance

Adaptive internet breakout

Branch

HQ / hub / data center

Cloud-hosted security service

SAP ORACLE

Check Point SOFTWARE TECHNOLOGIES LTD
netskope PRISMA
zscaler

Breakout via data center firewall

BitTorrent gnutella

Office 365
8x8 RingCentral
zoom

Direct internet breakout
(e.g. customer specified trusted applications)

salesforce
aws Google
workday Microsoft Azure
Dropbox

Breakout via cloud security

Improve app response time

- Avoid added latency by utilizing the shortest network path to apps

Reduce backhaul

- Backhaul only untrusted traffic to corporate FW

Save valuable WAN bandwidth

- Avoid consumption of expensive MPLS circuits where not necessary

Aruba ClearPass Integration

Visibility, control, response

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

- **Visibility and automation:**
  - Built-in discovery, profiling and dashboards
  - Multi-vendor wired, wireless and VPN

- **Control:**
  - Access control of users/devices

- **Response:**
  - Adaptive response and dynamic segmentation

- **360 Security integrations:**
  - Ecosystem of 150+ security partners

- **Leverage multiple identity stores:**
  - Support for AD, LDAP, SQL, Internal dB, BYOD, third party integration

ClearPass   Aruba Orchestrator

Authentication enforcement   User/device role and context

Branch   EdgeConnect Enterprise   SD-WAN
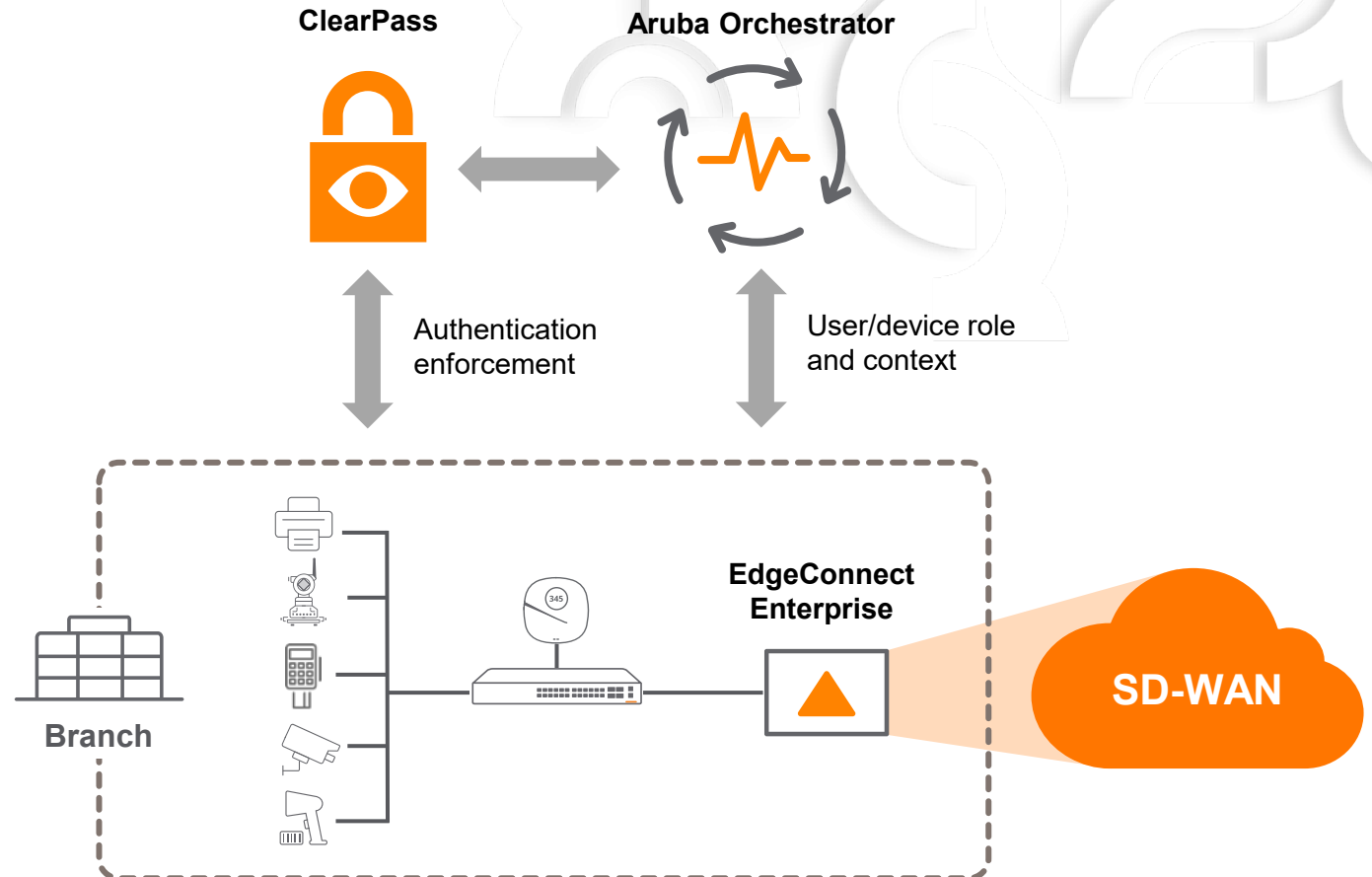
Aruba Edgeconnect Unified Fabric

Bringing it all together

Aruba Central Summary View with EdgeConnect Enterprise
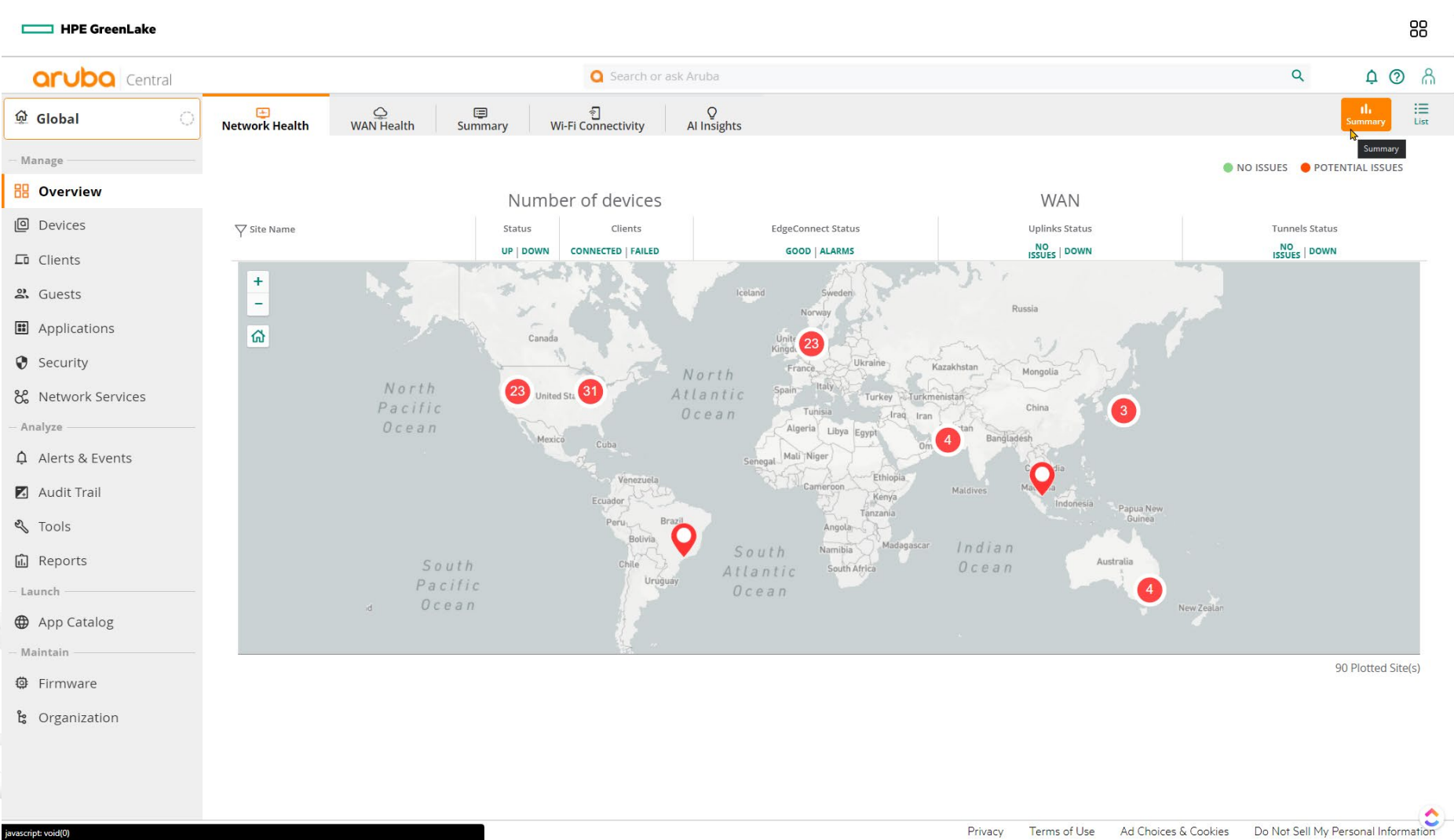
Aruba Central View of EdgeConnect Enterprise Alarms
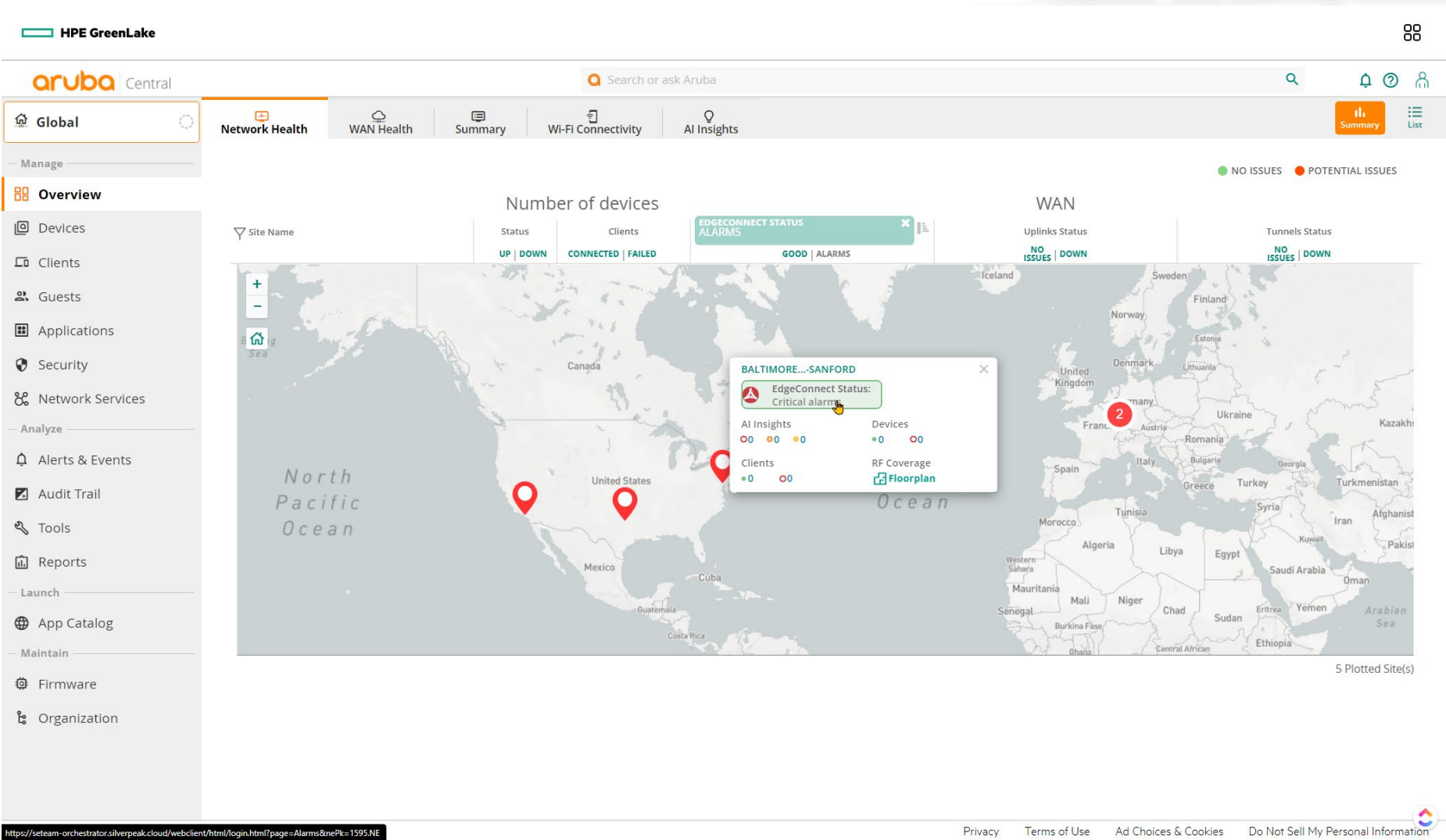
Aruba EdgeConnect SD-WAN Fabric

Coming soon!

Simplifies provisioning, managing, securing, and operating WAN infrastructure across locations of any size

Data Center

aws

Azure

zscaler netskope

Check Point
SOFTWARE TECHNOLOGIES LTD.

paloalto
NETWORKS

Aruba
Central

One
Policy

One
Orchestrator

Enterprise

No Peering needed

Mobile

Microbranch

SD-Branch

SD-WAN

SD-LAN

Max Mobility

Min Footprint

Max Integration

Optimal QoE
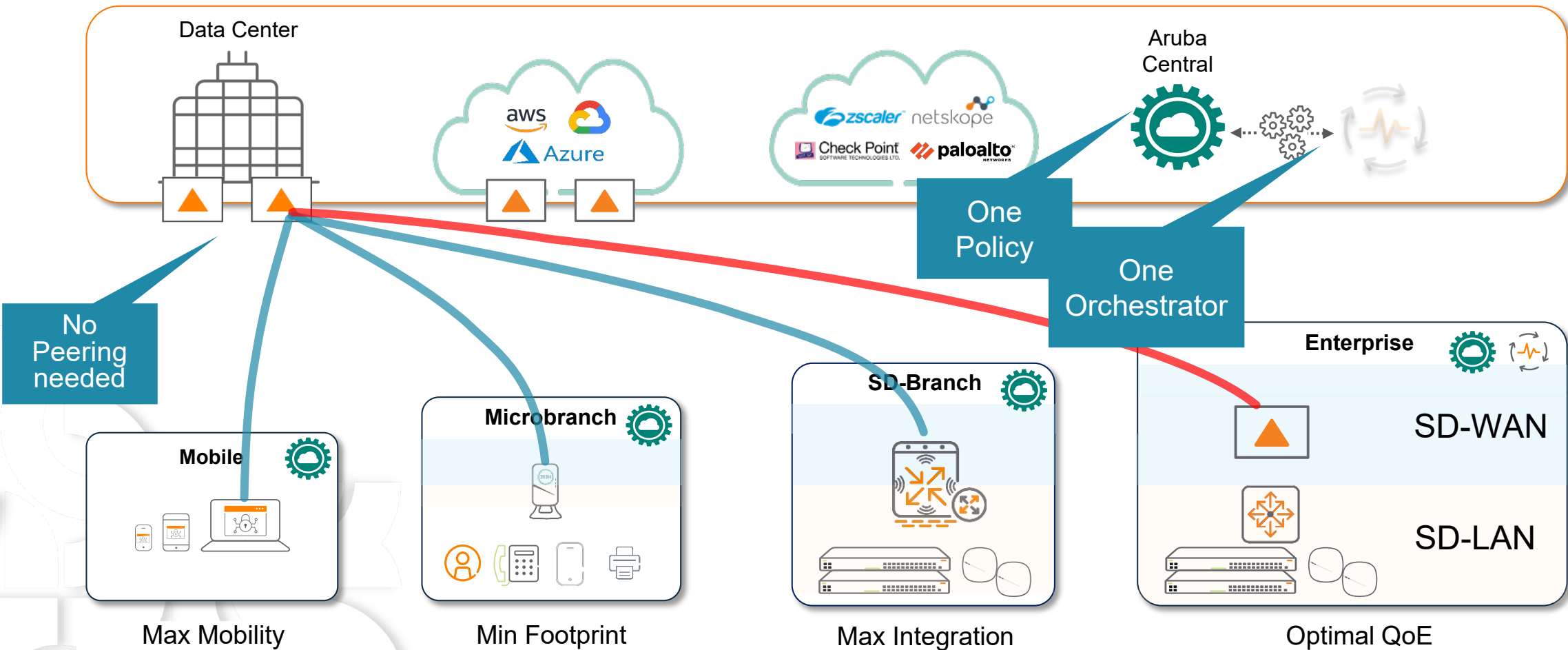
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LEVERAGE ARUBA'S EMBEDDED CAPABILITIES FOR STRONGER SECURITY FROM THE START

IMPLEMENT ZERO TRUST BEST PRACTICES ON THE NETWORK WITH VISIBILITY AND CONTROL

ACCLERATE YOUR WAN TRANSFORMATION AND ADOPT SASE AT YOUR OWN PACE

LEVERAGE A COMMON SECURITY FRAMEWORK AND SECURITY ECOSYSTEM OF 150+ VENDORS

WWW.ARUBANETWORKS.COM/SECURITY

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Thank you !

jwk@hpe.com
+31 6 2171 0039

September 2022

aruba
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Enterprise company

EdgeConnect Enterprise - Architecture

Aruba Orchestrator

Centralized policy orchestration, monitoring and reporting

EdgeConnect Enterprise

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

Aruba Boost WAN Optimization

On-demand WAN Optimization (Optional)

Aruba IPS/IDS

Advance Security (Optional)