

atmosphere'23

BELGIUM



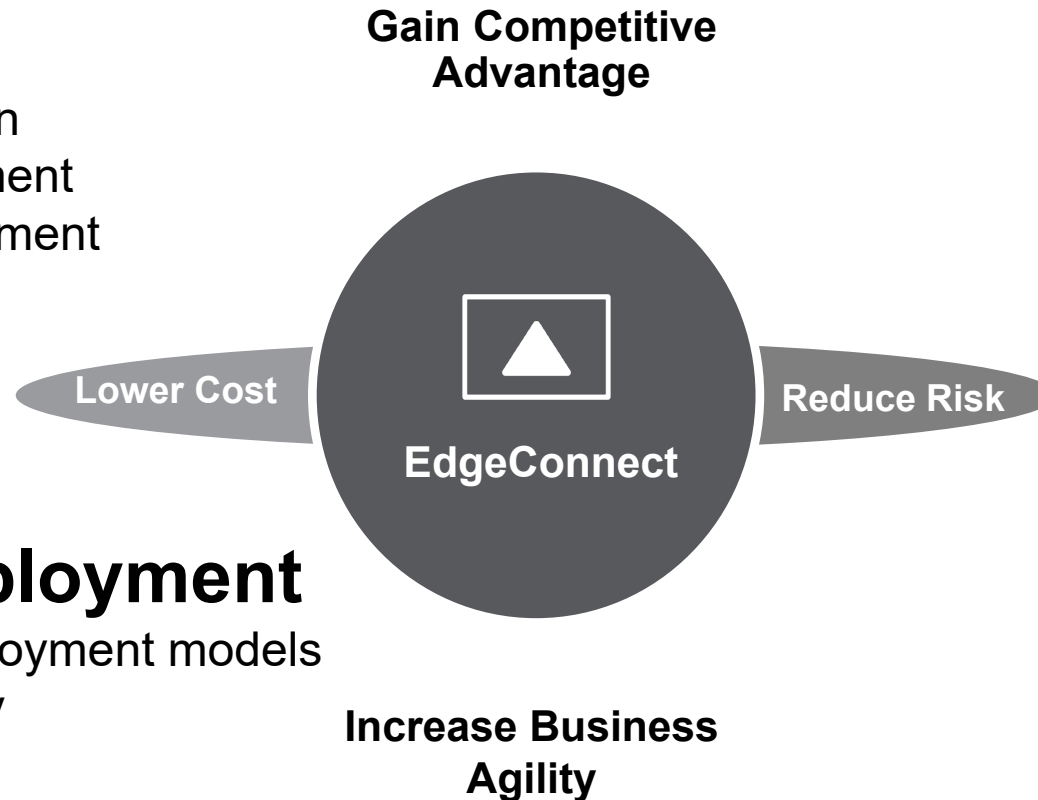
Building a secure Edge

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ADVANTAGES OF AN APPLICATION DRIVEN WAN

Savings

- WAN cost savings
- Automation savings
- Cloud security integration
- Eliminate branch equipment
- Simplified edge management



100x Faster Deployment

- Simple and flexible deployment models
- Comprehensive visibility

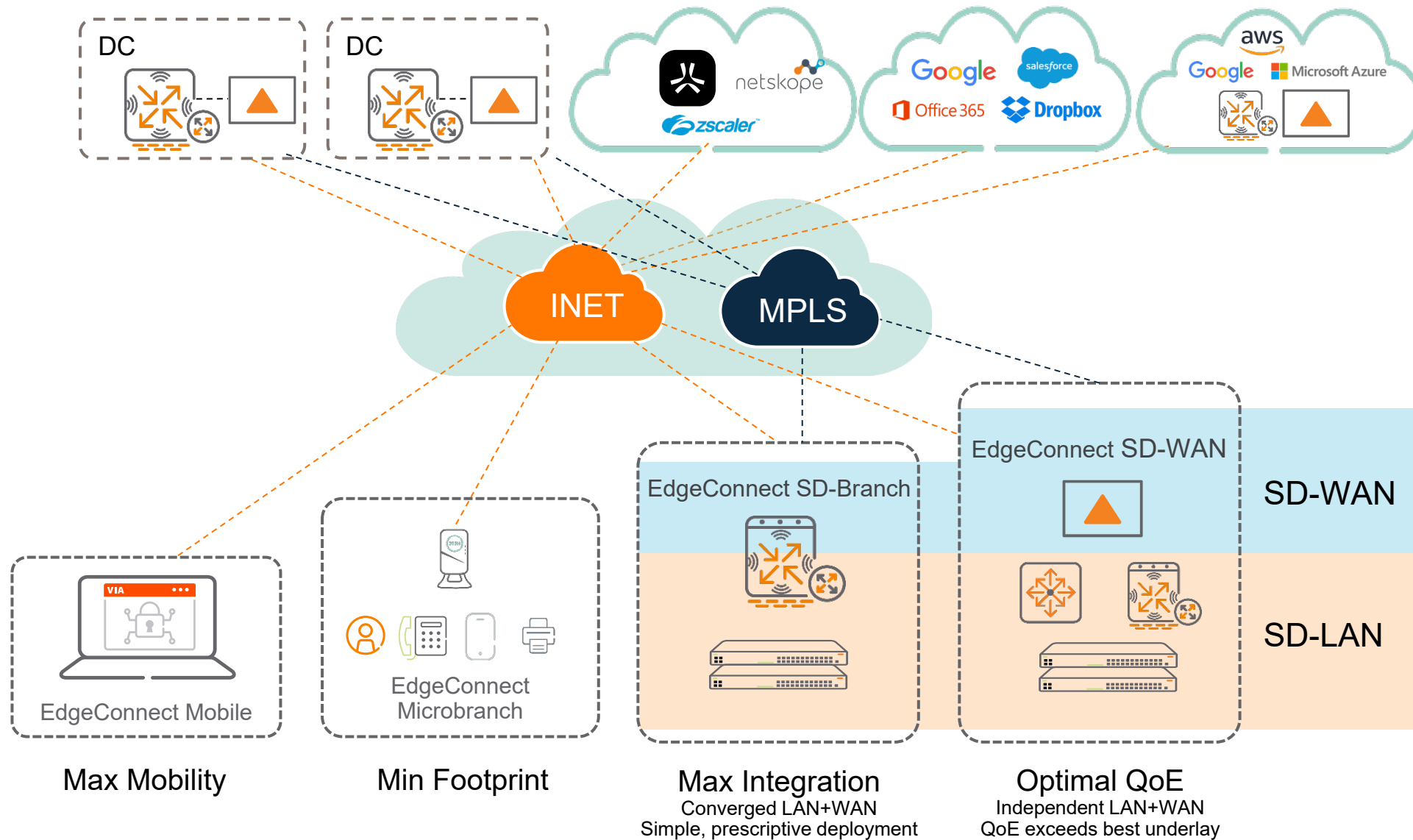
Performance

- Sub second session failover
- 10 x faster applications
- Performance Improvement for SaaS/IaaS
- Add / remove branches instantly
- Uptime during blackouts

Security

- Segment your apps
- Automated policies
- UTM features
- ZBF within VRFs
- Cloud Security Integration

HPE Aruba's secure edge portfolio



Integration opportunities

Converged management

Aruba Central
w/ EdgeConnect site view

Silver Peak Orchestrator
w/Aruba WAN view

Cross portfolio security

Clear Pass: Role based policy

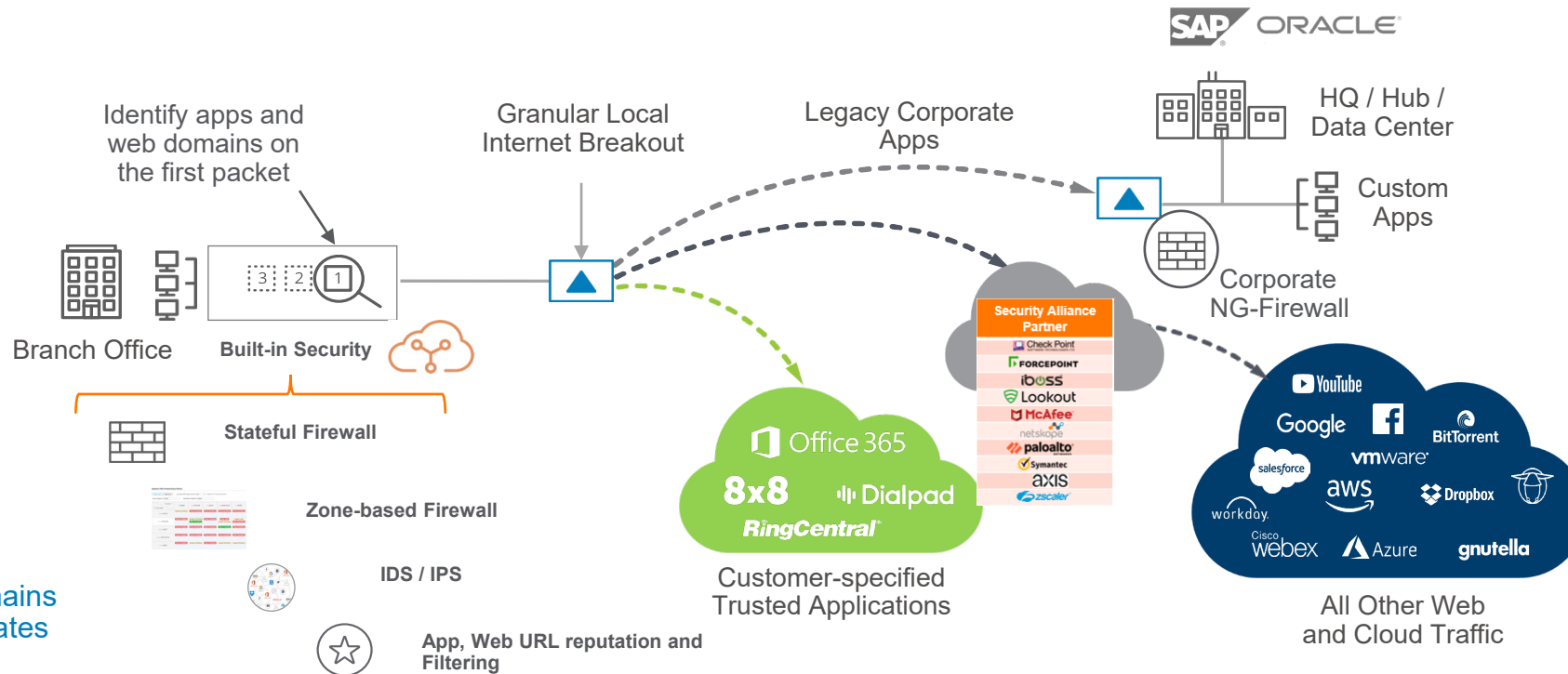
Dynamic segmentation

Unified threat management

Cloud security partners

Secure, adaptive internet breakout

– First-packet iQ™ enables application visibility and control



10,000+ Apps
300 Million+ Web Domains
Automated Daily Updates

Steer Apps Intelligently

Granular, intelligent breakout of SaaS and trusted internet-bound traffic directly from the branch

Improve App Response Time

Avoid added latency through direct access to where the app resides

Reduce Backhaul

Backhaul only untrusted traffic to corporate FW

Save Valuable WAN Bandwidth

Avoid consumption of expensive MPLS circuits where not necessary

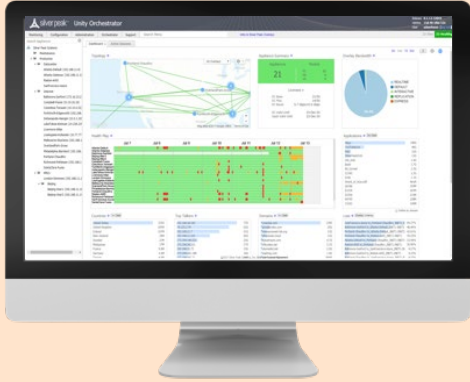


EdgeConnect Orchestrator

Your SD-WAN control center



What is EdgeConnect Orchestrator?



EdgeConnect Orchestrator

Orchestrate application policies across thousands of appliances, through a single pane of glass, driven by simple business intent policies.

Align **application policies** (QoS, security) with **business intent**

Secure, centralized visibility, control and administration of SD-WAN across thousands of sites

Extensive analytics, application & network performance measurements, & troubleshooting.

Automates & simplifies lifecycle management of SD-WAN

Orchestrates **end-to-end service chains** through partner APIs.

Business Intent Based Overlays

<div> Dashboard Zscaler Internet Access Business Intent Overlays × </div>									
Business Intent Overlays ? Apply Overlays Regions Hubs View Overlay Stats Interface Labels									
Priority	Overlay	Region	SD-WAN Traffic to Internal Subnets				Breakout Traffic to Internet & Cloud Services		
			Topology	Hubs +	Primary Interfaces	Backup Interfaces	QoS & Security +	Policy Order	Primary Interfaces
1	GUEST	Global	Regional Hub & Spoke		High Quality Waterfall: Overall Quality			1 Zscaler Cloud	INETA
=	Match Traffic	Regions ▶						2 Break out	INETB
×	GUEST								INETC
									Waterfall: Fixed Order
2	REALTIME	Global	Regional Hub & Spoke		1 TRANSIT1 2 INETA 2 INETB 2 INETC 6 INETA v6 6 INETB v6	2 LTEA 2 LTEB 2 SAT1 If Pri & Sec Down		Branch CENTRAL1-Azure	INETA
=	Match Traffic	Regions ▶						1 Backhaul	INETB
×	REALTIME				High Availability Waterfall: Overall Quality			2 Break out	INETC
									Waterfall: MOS
3	BATCH	Global	Regional Hub & Spoke		2 INETA 2 INETB 2 INETC	2 LTEA 2 LTEB 2 SAT1 If Pri & Sec Down		Branch CENTRAL1-Azure	INETA
=	Match Traffic	Regions ▶			High Quality Waterfall: Overall Quality			1 Prisma	INETB
×	BESTEFFORT							2 Backhaul	INETC
								3 Break out	Balanced
4	RECREATIONAL	Global	Regional Hub & Spoke		2 INETA 2 INETB 2 INETC	2 LTEA 2 LTEB 2 SAT1 If Pri & Sec Down		Branch CENTRAL1-Azure	INETA
=	Match Traffic	Regions ▶			High Quality Waterfall: Overall Quality			1 Break out	INETB
×	RECREATIONAL							2 Backhaul	INETC
									Waterfall: Auto
5	BUSINESS	Global	Regional Hub & Spoke		1 TRANSIT1 2 INETA 2 INETB 2 INETC 6 INETA v6 6 INETB v6	2 LTEA 2 LTEB 2 SAT1 If Pri & Sec Down		Branch CENTRAL1-Azure	INETA
=	Match Traffic	Regions ▶			High Quality Waterfall: Overall Quality			1 Break out	INETB
×	BUSINESS							2 Backhaul	INETC
								3 Zscaler Cloud	Waterfall: Auto

Search tags, appliances

Show Tags

Dashboard x Business Intent Overlays Access Lists Flows Topology

84 Appliances

- 6 -- HUB -- 13
- 1 -- APJ & AUS -- 4
- 4 -- EMEA -- 9
 - Hamburg-Pady
 - Ripponden-Collier
 - Edinburgh-Moir 2
 - Edinburgh1-Moir
 - Edinburgh2-Moir
 - Pamplin 3
 - Dublin-Pamplin
 - Sussex2-Pamplin
 - WRH-TEST-Pamplin2
 - Reading-Cook 2
 - Reading1-Cook
 - Reading2-Cook
- 1 -- US CENTRAL -- 20
- 1 -- US EAST -- 25
- 1 -- US WEST -- 12
- MAINTENANCE 1
 - silverpeak 123706
 - OFFLINE 0

Appliance Licenses

Appliances	Models	
84	EC-XS	28
	EC-V	42
	EC-US	14

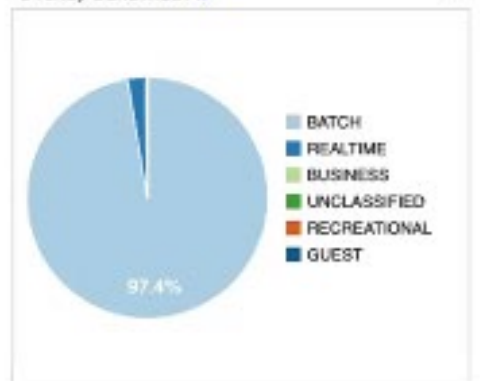
EC Licenses			
Base	39/50	1 Gbps	3/100
Plus	13/50	2 Gbps	3/100
50 Mbps	7/100	Unlimited	5/110
200 Mbps	17/100	Boost	56.1% of 10.0 Gbps
500 Mbps	10/100		

Valid Until	
EC	01-Aug-23 08:00
EC Boost	01-Aug-23 08:00

Topology



Overlay Bandwidth



Top Talkers

10.100.0.199 Default	41G
192.168.14.24 Default	41G
10.41.71.253 Default	3.4G
192.168.11.85 Default	2.5G
10.50.21.245 Default	1.4G
192.168.11.167 Default	1.2G
192.168.11.120 Default	1.1G
14.73.173.170 Default	1.1G
40.97.120.66 Default	951M
192.168.17.7 Default	937M
192.168.23.102 Powers	937M
89.164.9.116 Default	929M
52.96.91.66 Default	814M
54.153.79.12 Default	769M
192.168.23.106 Powers	715M

Domains

ffivestuple.net	51G
fdropcam.com	5.8G
figooglevideo.com	3.0G
ffoffice365.com	2.2G
falv-cdn.net	929M
fsilverpeak.cloud	559M
fgvtl.com	355M
fscalethree.net	345M
fskmalhd.net	269M
fmicrosoft.com	237M
fyding.com	164M
fnai.com	152M
fwindows.net	86M
fcloudfront.net	65M
dns.google	60M

Applications

Doku_amb	41G
Nest_AwareVideo	5.8G
Youtube	3.6G
Office365Exchange	2.2G
Synlog	1.4G
Https	1.3G
Rtp	941M
Temp	938M
Netflow	872M
ldp:11131	856M
PingPlotter-Comp	525M
SilverPeakOrch	423M
Akamaihd	269M
Http	239M
others	2.0G

Countries

United States	16G
United Kingdom	235M
Singapore	84M
Japan	42M
Germany	21M
Hong Kong	16M
Australia	12M
Netherlands	11M
Canada	6.5M
Denmark	2.2M
France	1.4M
Belgium	1.2M
Ireland	436K
Taiwan Province of China	63K
India	48K

Health Map



Ports

443 TCP (Microsoft-Exchange)	41G
61609 TCP	24G
61649 TCP	17G
443 TCP (Https)	11G
0 ICMP	4.4G
443 UDP (Https)	2.8G
514 UDP (Syslog)	2.8G
11131 UDP	1.6G
61660 TCP	1.1G
554 TCP (Rtp)	941M
51905 TCP	937M
2055 UDP (Netflow)	783M
49143 TCP	719M

Security policy matrix

Security Policies ?

Matrix View Table View ☐ Merge ☒ Replace

To Zones ⇄ ↓ From Zones	To Default	To POS	To WAN	To Guest_Wifi	To InternetBreakout	To Business_Overlay
From Default	Allow All	Allow: Everything Deny: Everything	Allow: Everything Deny: Everything	Allow: Everything	Allow: Everything Deny: Everything	Allow: Everything
From POS	Deny All	Allow All	Allow: Everything	Allow: ACL Printer Deny: Everything	Deny All	Allow: Everything
From WAN	Deny All	Deny: Vnc Allow: Everything	Allow All	Allow: Everything	Deny All	Deny All
From Guest_Wifi	Deny All	Deny All	Allow: Everything	Allow All	Deny: Social_Network Deny: Games 1 more rule ...	Deny All
From InternetBreakout	Deny All	Deny All	Deny All	Deny All	Allow All	Deny All
From Business_Overlay	Deny All	Allow: ACL_BusinessCritical Deny: Vnc	Deny All	Deny All	Deny All	Allow All

Edit Rules: Guest_Wifi to InternetBreakout

Add Rule

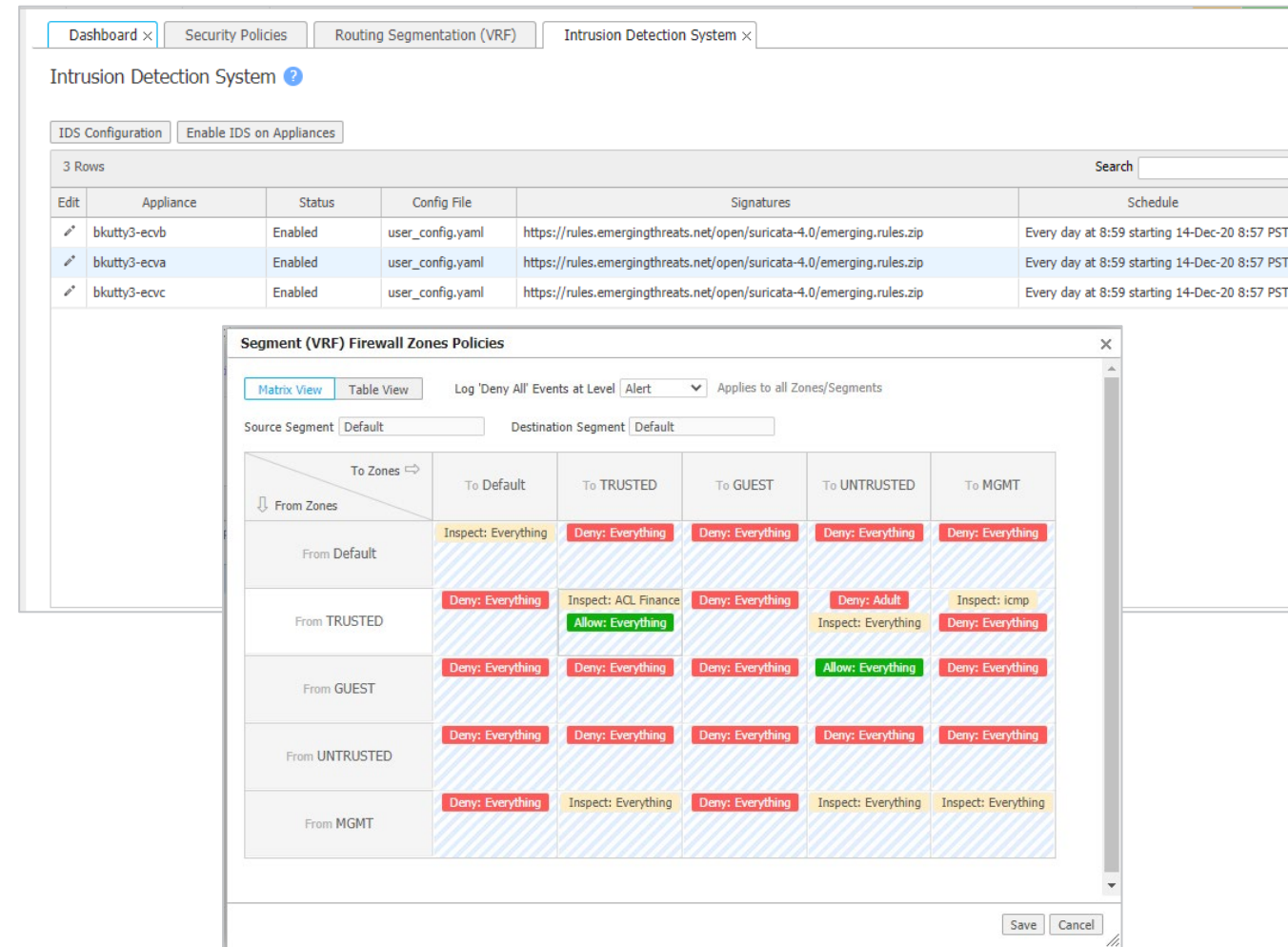
4 Rows

Search

Priority ▲	Match Criteria	Action	Enabled	Tag	Comment	
1001	Application group Social_Network	deny	<input checked="" type="checkbox"/>			✕
1002	Application group Games	deny	<input checked="" type="checkbox"/>			✕
1004	ACL Internet_Traffic	allow	<input checked="" type="checkbox"/>			✕
65535	Match Everything	deny	<input checked="" type="checkbox"/>			✕

EdgeConnect SD-WAN IDS Highlights

- Built-in signature-based intrusion detection
- Utilizes common Aruba UTM framework
 - Automated threat feeds (from Aruba Central)
 - Threat logging to centralized collector/SIEM
 - Threat logging to Central (future)
- Integrated with zone-based firewall enabling application-level selection for inspection
 - Allow, Deny, Allow & Inspect
 - e.g., “inspect all flows on Internet link”
- Add-on “Advanced Security” license



Summary: Benefits of SD-WAN

- Complete control and visibility of WAN infrastructure
- Route application traffic, not packets, based on:
 - Business importance
 - Security requirements
- Built in Firewall, end-to-end segmentation and IPS/IDS security
- Automated integration with Cloud infrastructures and Secure Service Edge providers

Best-of-breed SASE architecture

Secure SD-WAN

- SaaS Acceleration
- WAN Optimization
- Tunnel Bonding
- Zero-Touch Provisioning
- Data Encryption
- Next-generation Firewall
- Granular Segmentation
- IDS/IPS and DDoS Protection



Security Service Edge (SSE)

- Zero Trust Network Access
- Cloud Access Security Broker
- Secure Web Gateway
- Firewall as a Service
- Remote Browser Isolation
- Data Loss Prevention
- Sandboxing

The background features a complex, abstract design. It consists of large, overlapping organic shapes in shades of red and purple. These shapes are layered, creating a sense of depth. Within these colored areas, there are various patterns: some have fine horizontal lines, others have a dense dot pattern, and some are solid. The overall effect is a vibrant, modern, and textured backdrop.

Demo



Thank you.