aruba
a Hewlett Packard Enterprise company

TECH TALK

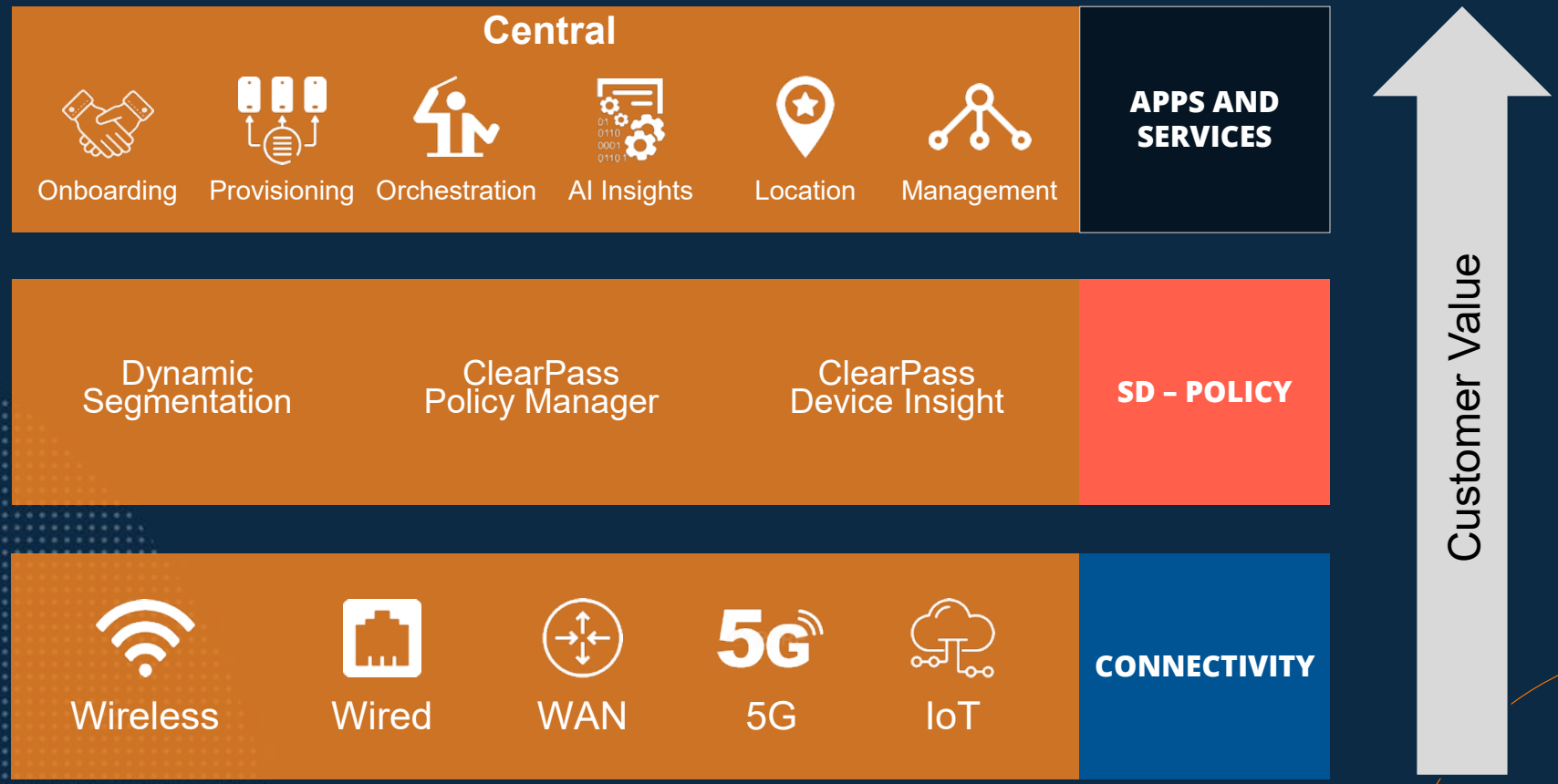
Aruba Solutions For Futuristic Workplaces

Networking Challenges / Requirements at the IT/ITES

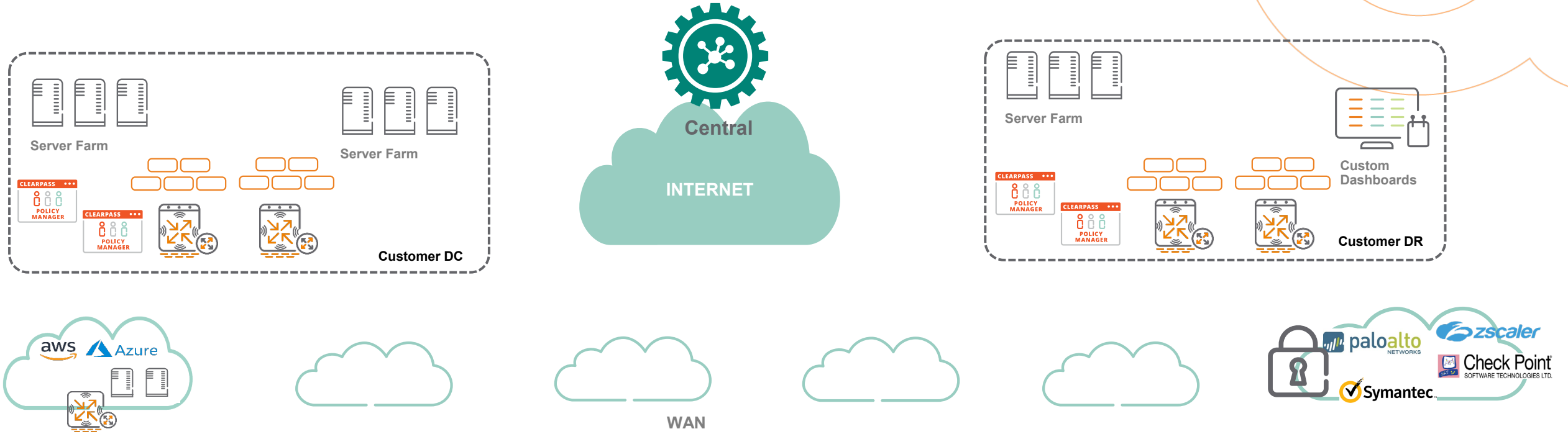
- *No centralized network management and monitoring capabilities*
- *High Real Estate costs - Monitor real estate utilization and optimize the spaces*
- *Borderless ODCs – Network follows the users and seamless application access*
- *All wireless offices !*
- *Application aware infrastructure and prioritize business critical applications*
- *Day 0 and Day N automation*
- *Reduce MTTR*
- *How to monitor QOE of employees ?*
- *Contact tracing solutions*

Aruba & Dropbox case study

THE ARUBA
Edge Services Platform Architecture



Aruba ESP – High Level Design



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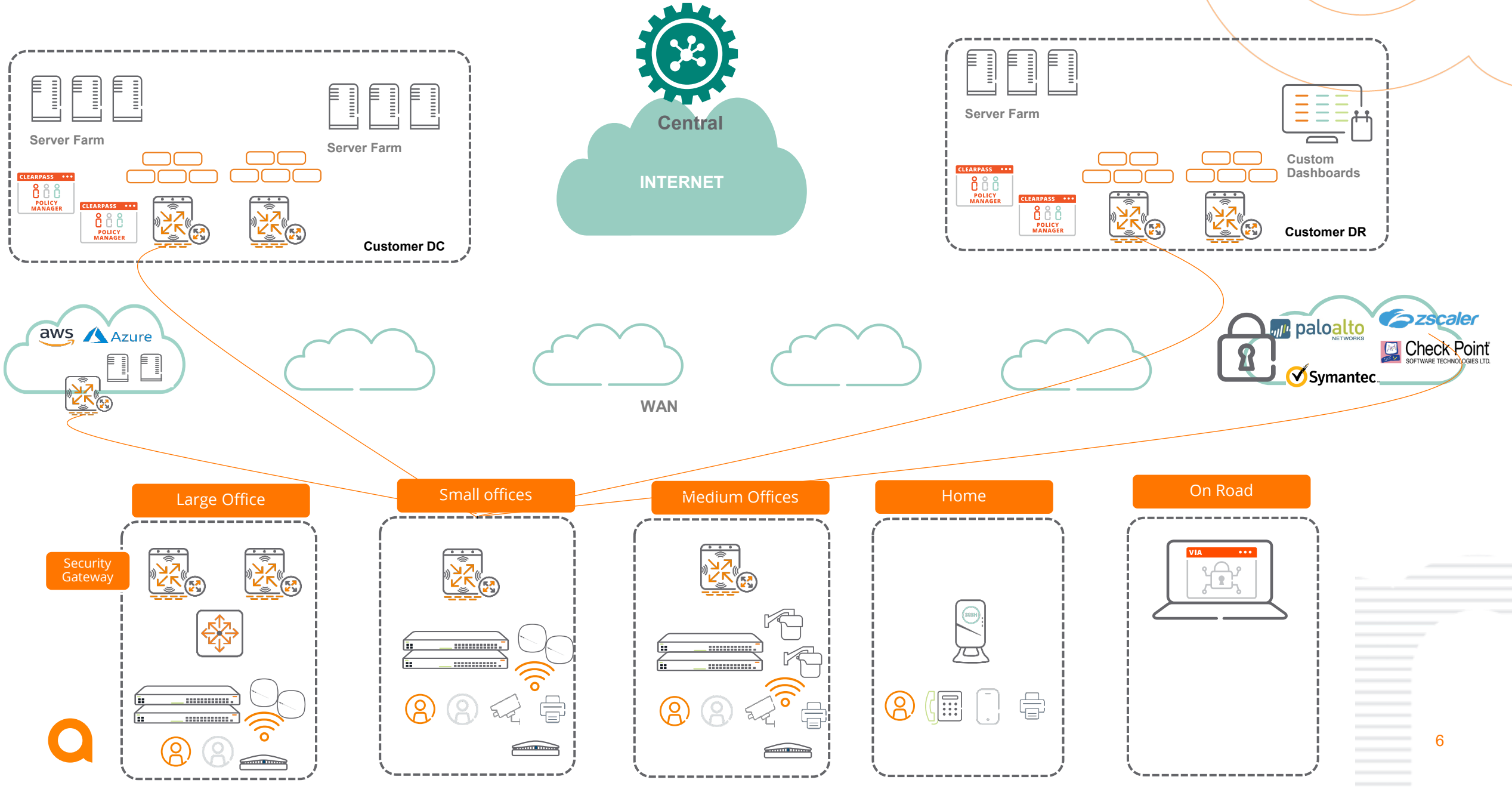
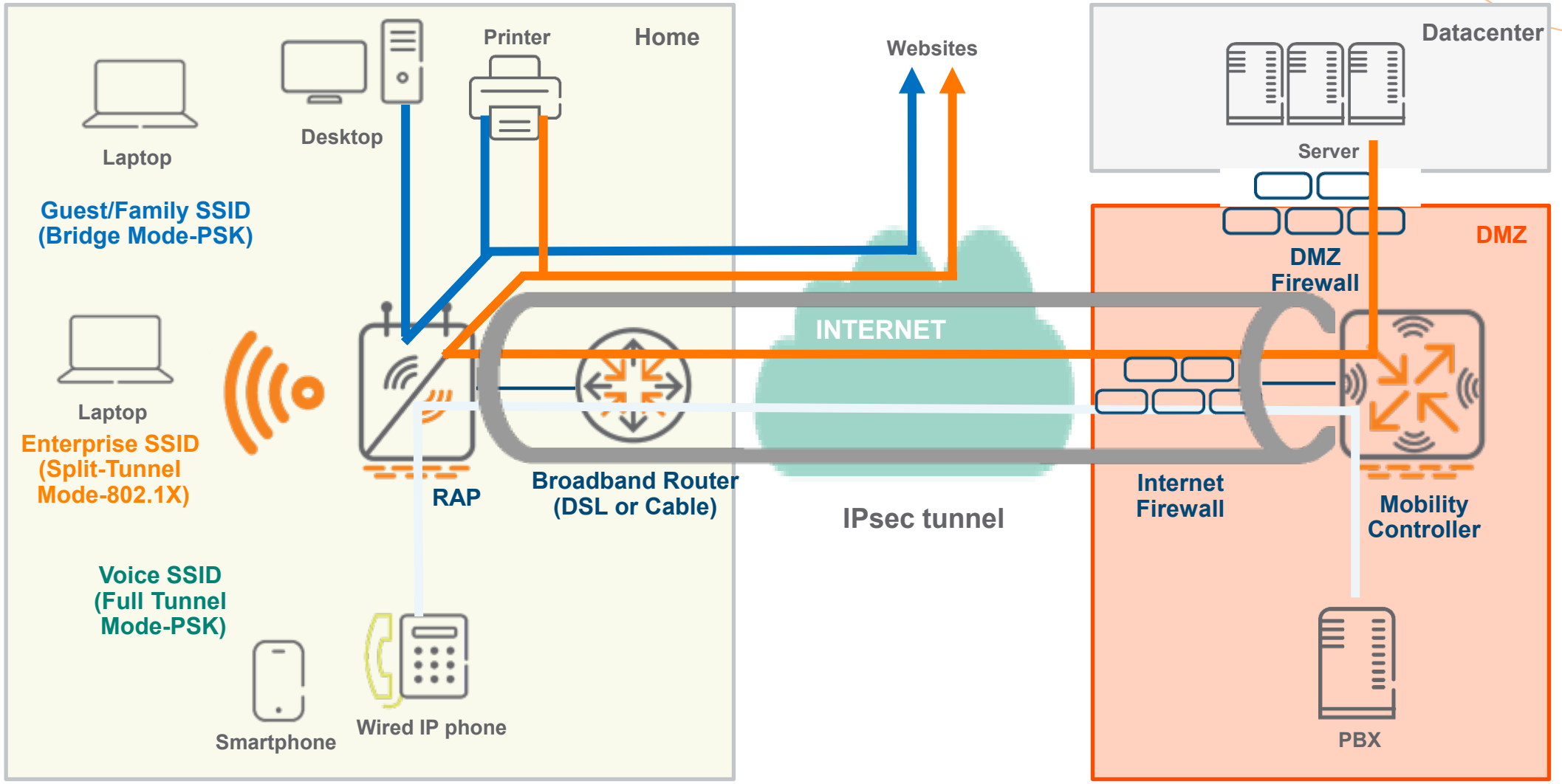
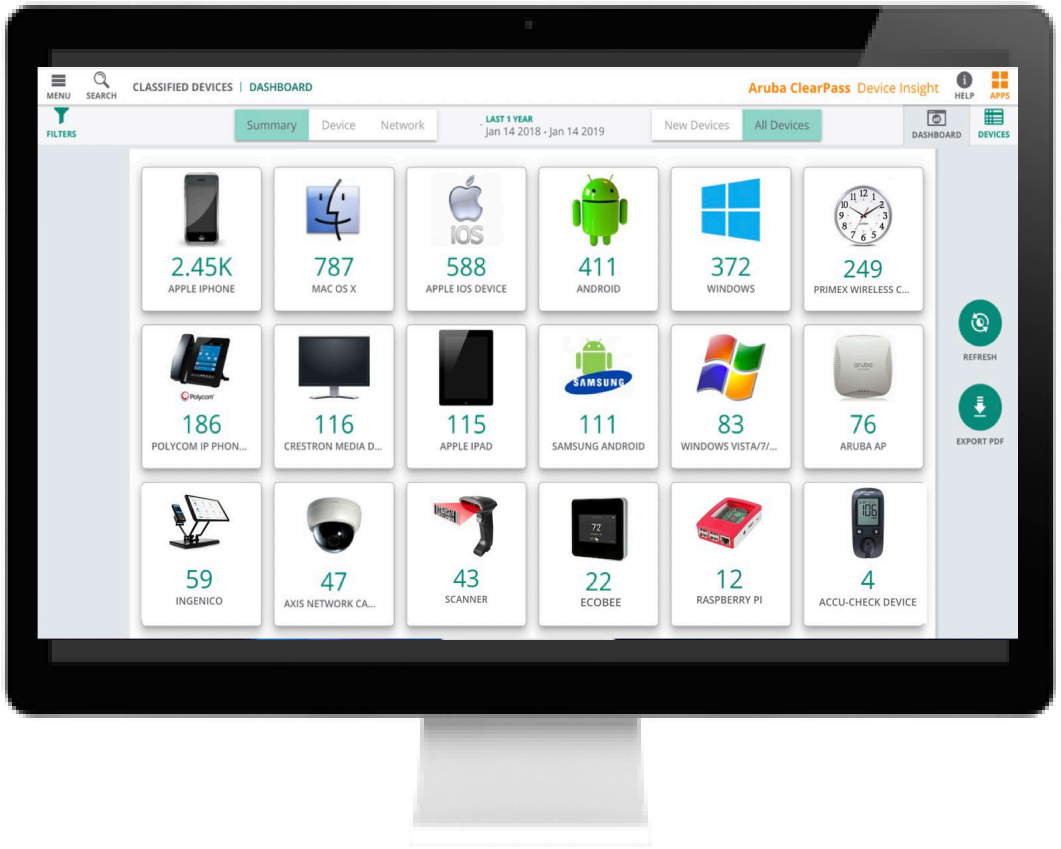


Extend Enterprise connectivity to Home



Endpoint Visibility

ClearPass Device Insight



Reduces Risk by Eliminating Blind Spots
through DPI-based discovery and profiling of devices

Automatically Clusters Devices and Recommends Classification
using advanced machine learning and crowdsourcing intelligence

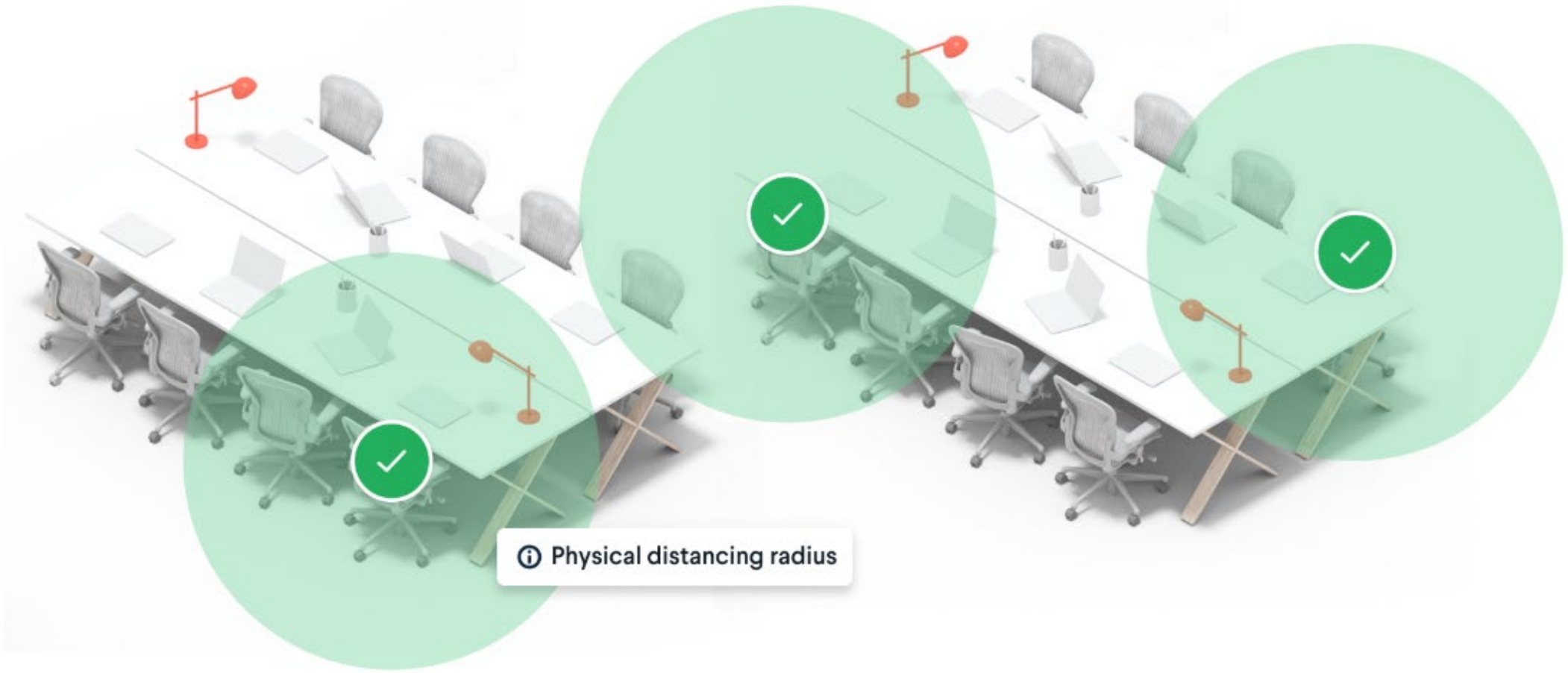
Enriches Visibility
with vulnerabilities / posture assessment and risk score

Ensures Secure Access
via seamless integration with ClearPass Policy Manager

Employees Experience & ZTNA

Desk Booking and Seamless Access across enterprise

Dynamic segmentation to ensure seamless access and Robin for Desk booking

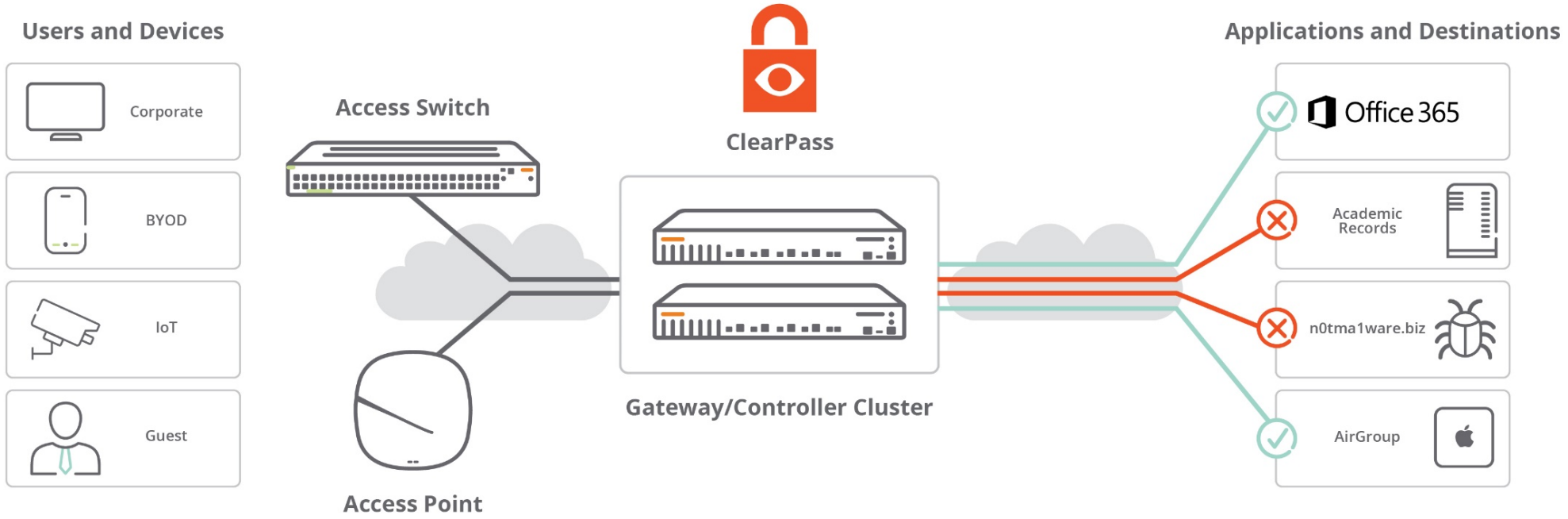


User can pre-book their desks before arrival using Robin application

Robin

Flexible and Secure Network Segmentation

Aruba Dynamic Segmentation



AUTOMATED

Save time and reduce misconfigurations

SEGMENTED

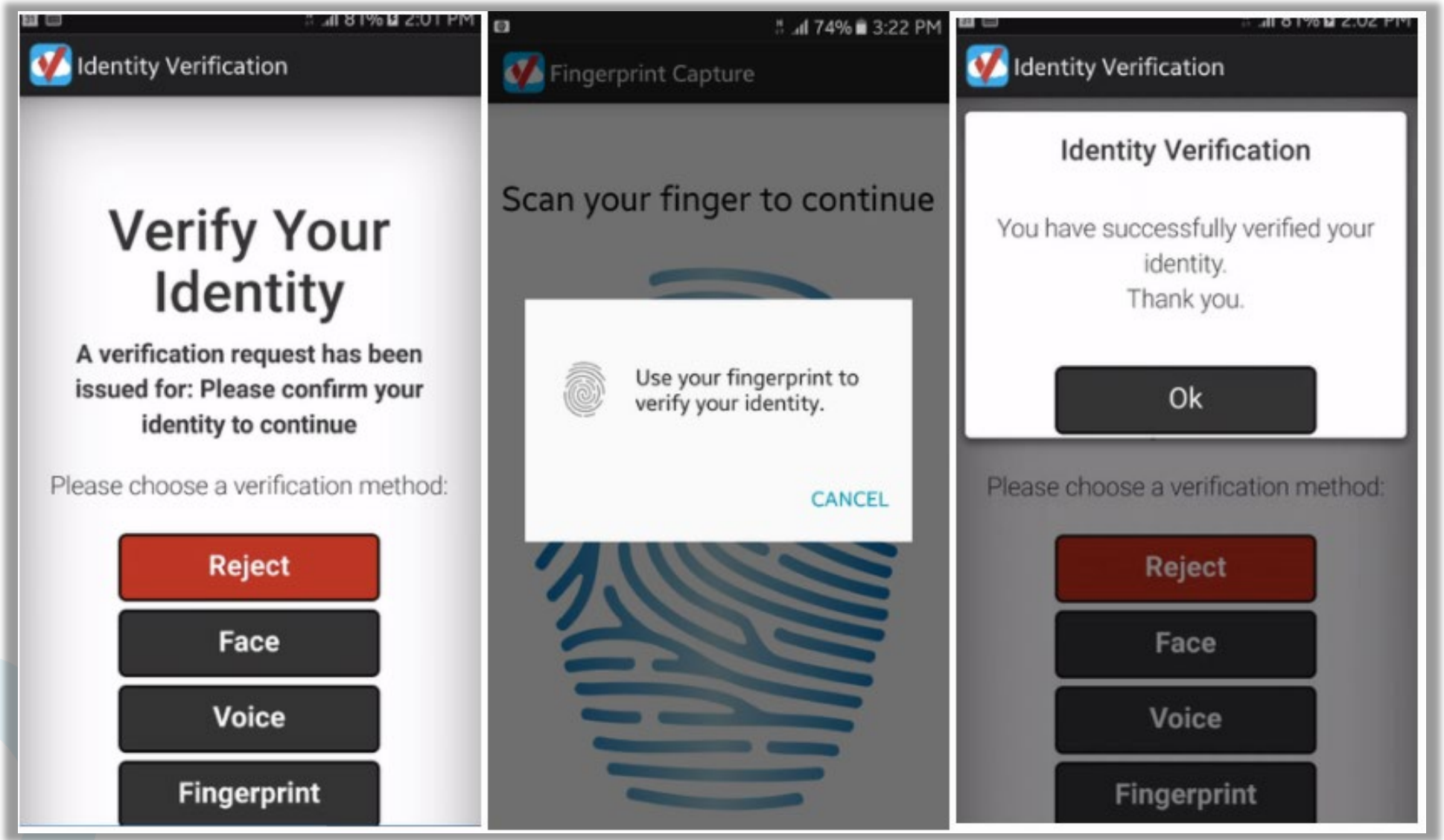
Improve traffic separation and security posture

CENTRALIZED

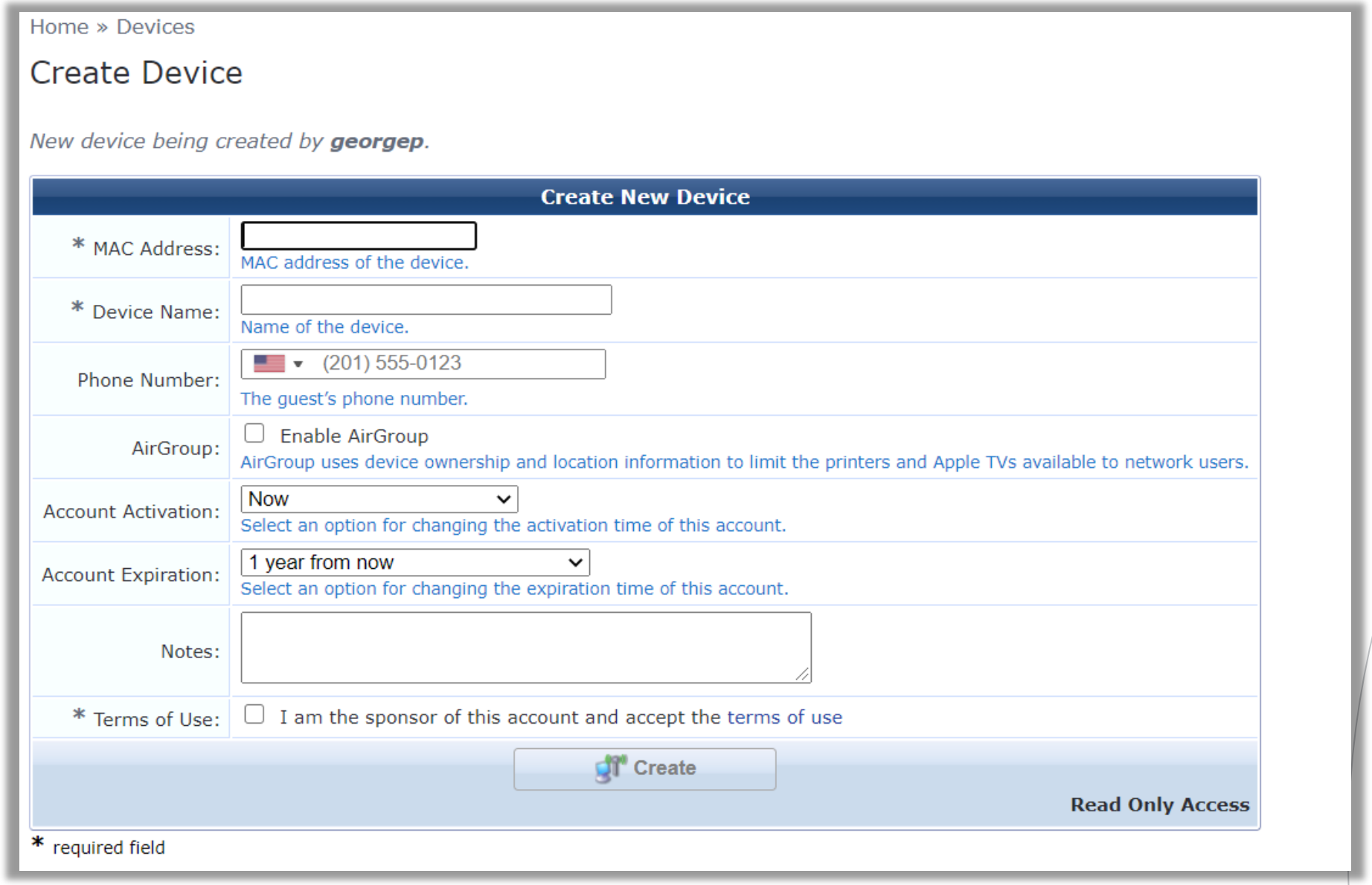
Enhance visibility and management

ClearPass and MFA

Strong security with a simplified user experience

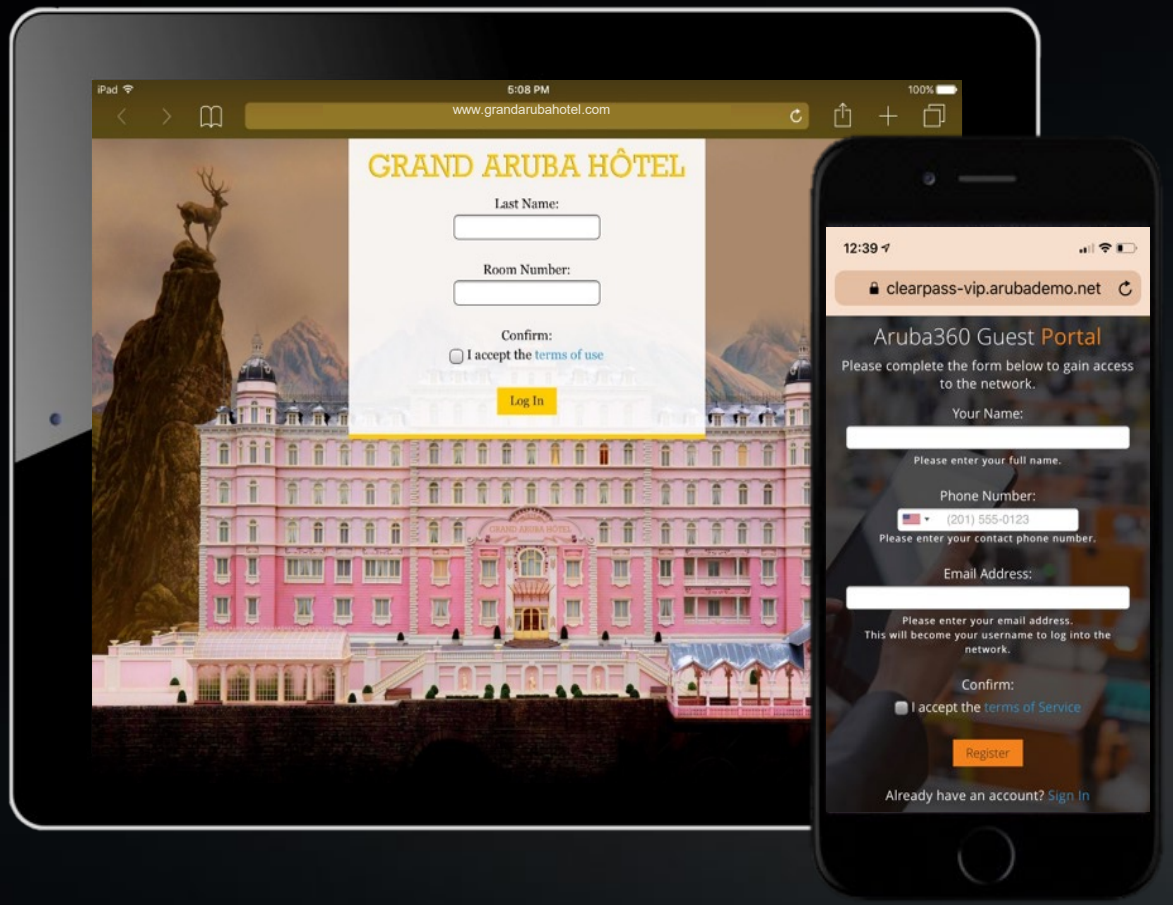


ClearPass and Device Registration



CLEARPASS GUEST ACCESS

HELPING CUSTOMERS BUILD CUSTOMIZED, SECURE GUEST EXPERIENCES



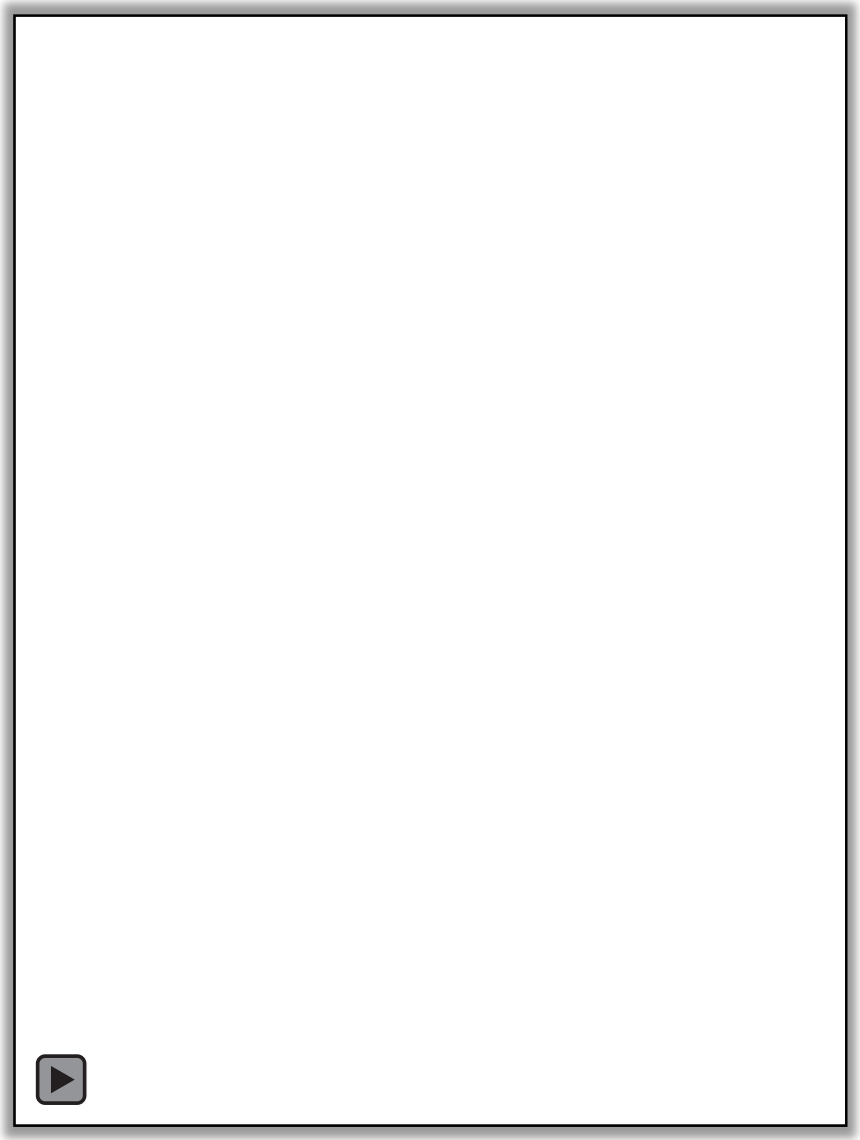
Fully customizable and brandable guest access capabilities

Integrations with key property management, billing and visitor management systems

Provides a platform to reach customers and capture valuable end-user information

ClearPass & Envoy Integration

Automatic Guest Wi-Fi with a WOW factor !



CLEARPASS POLICY MANAGER
AUTOMATES SECURE ACCESS

ClearPass Device Insight
ENHANCED DISCOVERY / PROFILING

Bi-Directional
Data Exchange

ClearPass Policy Manager
AUTOMATED SEGMENTATION AND ENFORCEMENT

Internet of Things (IoT)

BYOD and Corporate Owned

40%
Of the Global 500

paloalto NETWORKS servicenow
Carbon Black. Check Point SOFTWARE TECHNOLOGIES LTD.
CYLANCE okta

140+ Ecosystem Partners

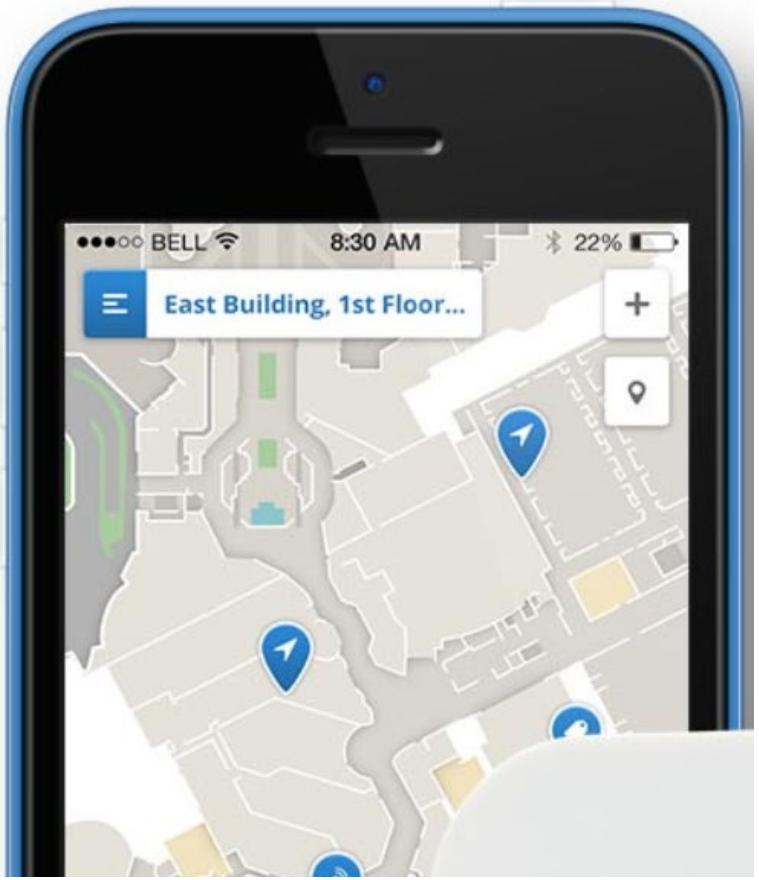
Multi-Vendor WLANs

Multi-Vendor Switching

Meeting Room Booking Solution

Robin + Aruba Meridian: indoor way finding

- Add indoor maps and way finding
- Book and navigate to conference rooms



Robust High Availability & Live Upgrades

Controller Clustering

Minimizing the failure domain to maintain business continuity

UNPLANNED

True seamless failover with zero interruption to user sessions

PLANNED

In-service upgrades mean no more maintenance windows

MAXIMUM SCALE

Manage up to 100,000 APs and aggregate hardware scaling

DYNAMIC LICENSES

Configuration hierarchy ensures flexible customization

Resiliency Enables Always-on Availability

Aruba VSX Live Upgrades

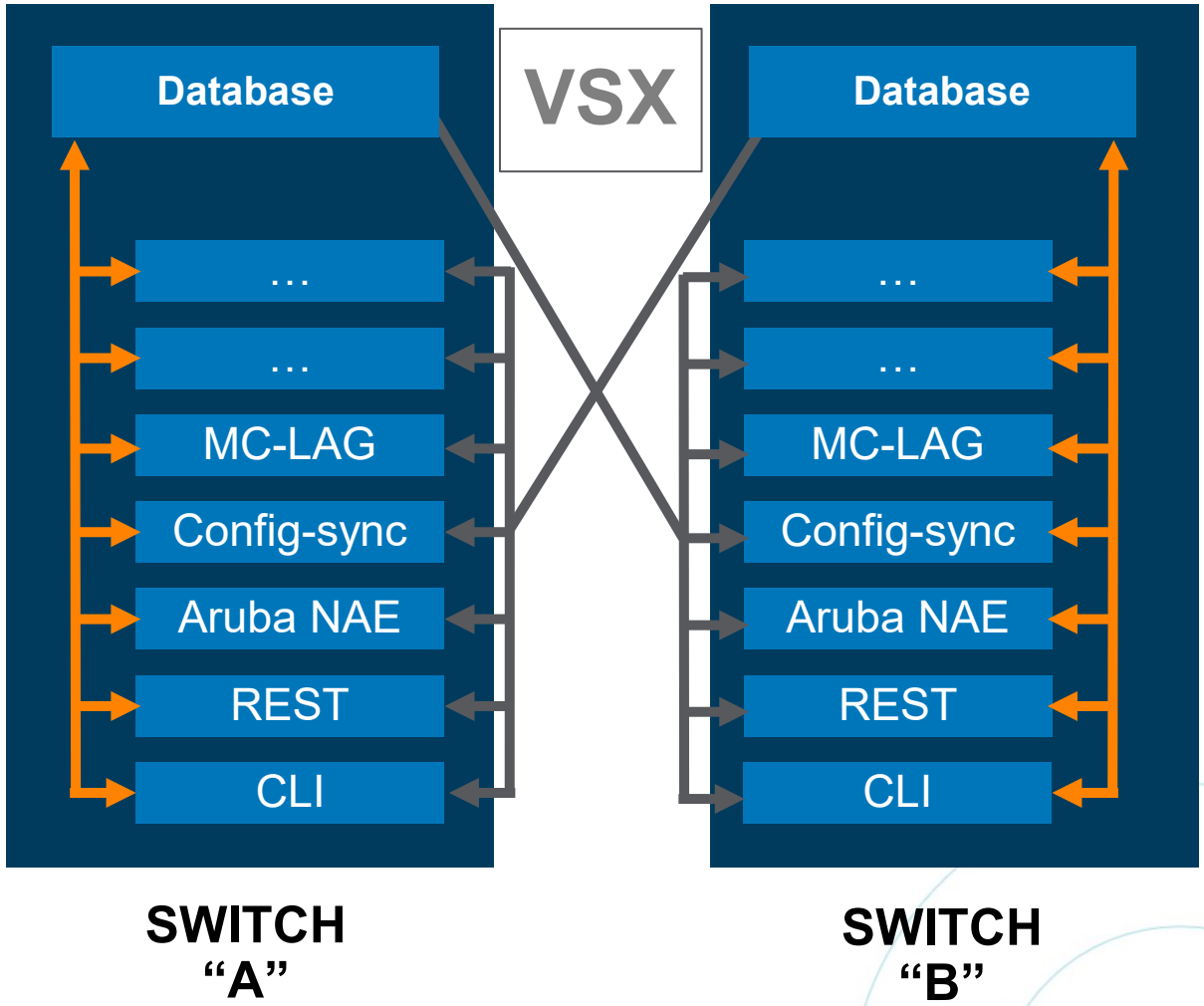
Orchestrated upgrades

Delivers on the promise of ISSU

No maintenance windows mandated

Gradual and planned traffic re-balancing

Dual Control-Plane equals Software Redundancy



Application Aware Infrastructure

Rich Application and UCC Visibility

Enhanced with unique Microsoft and Apple features

Microsoft and Apple Apps

Prioritize Office365, Skype for Business, Teams, Facetime

Seamless Cellular Experience

Optimize for Wi-Fi Calling, support Hotspot 2.0, and use advanced cellular filtering

BYOD Device Optimization

Easily fingerprint iOS, MacOS, Windows, and Android devices

Application Aware QOS- Air Slice

- SLA- Grade Application Assurance For Latency Sensitive Applications
- Air Slice Allocates Wi-Fi 6 Radio Resources Based On Application Intelligence From PEF
- Air Slice Complements ClientMatch And Air Match As Part of Aruba's RF Optimization Technologies

Applications List
Skype For Business
Amazon Web Services
Office 365
FaceTime
GoTo Meeting
Slack
Cisco WebEx
Zoom
DropBox
GitHub
Custom Applications

Topology

```
wlan access-list session Airslicetme
 index 0
 rule 10.70.254.126 255.255.255.255 10.70.254.30 255.255.255.255 match 6 any 7001 permit markapp custom1
```

unity Priority Traffic : VR Flow

Background Traffic : TCP Flow

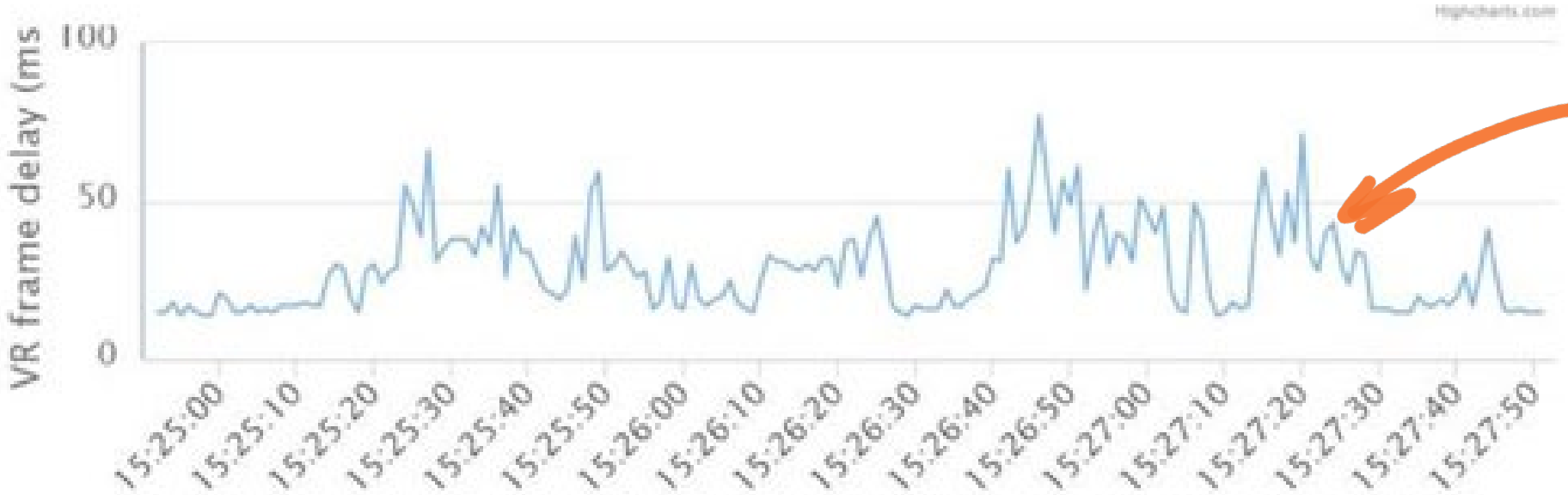
Test Results

	Air Slice Disabled	Air Slice Enabled
VR Flow	Frame Delay : 60-70 MS Throughput : 110 Mbps	Frame Delay : 35 MS Throughput : 165 Mbps
TCP Flow	Avg. Throughput : 320 Mbps	Avg. Throughput : 270 Mbps

Configuration Details

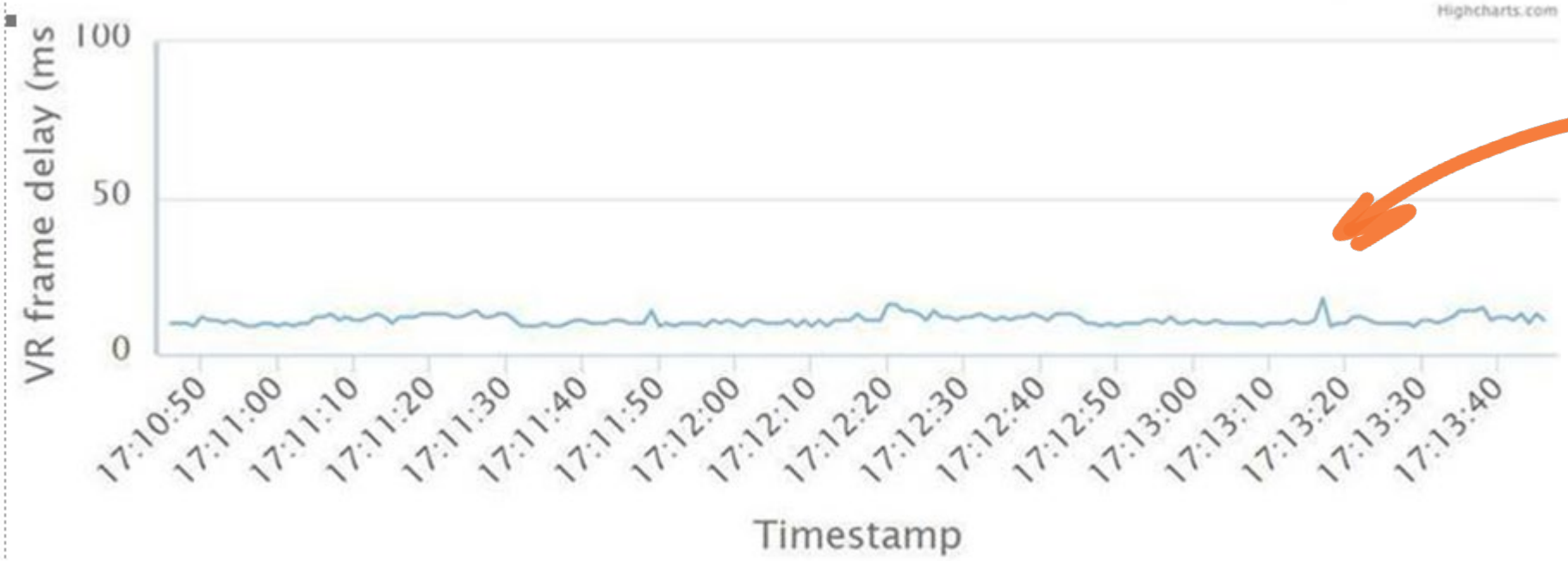
- ✓ HE Enabled
- ✓ Channel Width 40 MHz
- ✓ IAP

Results: Frame Delay



Air Slice Disabled

- Frame Delay >50 MS

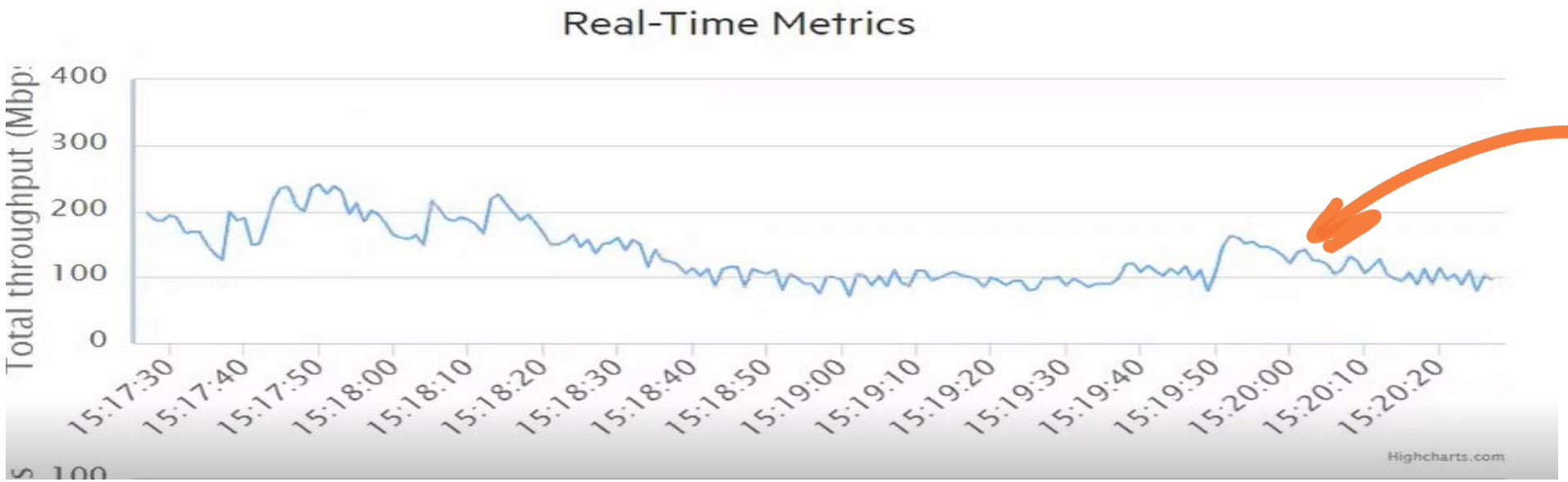


Air Slice Enabled

- Frame Delay < 50 MS

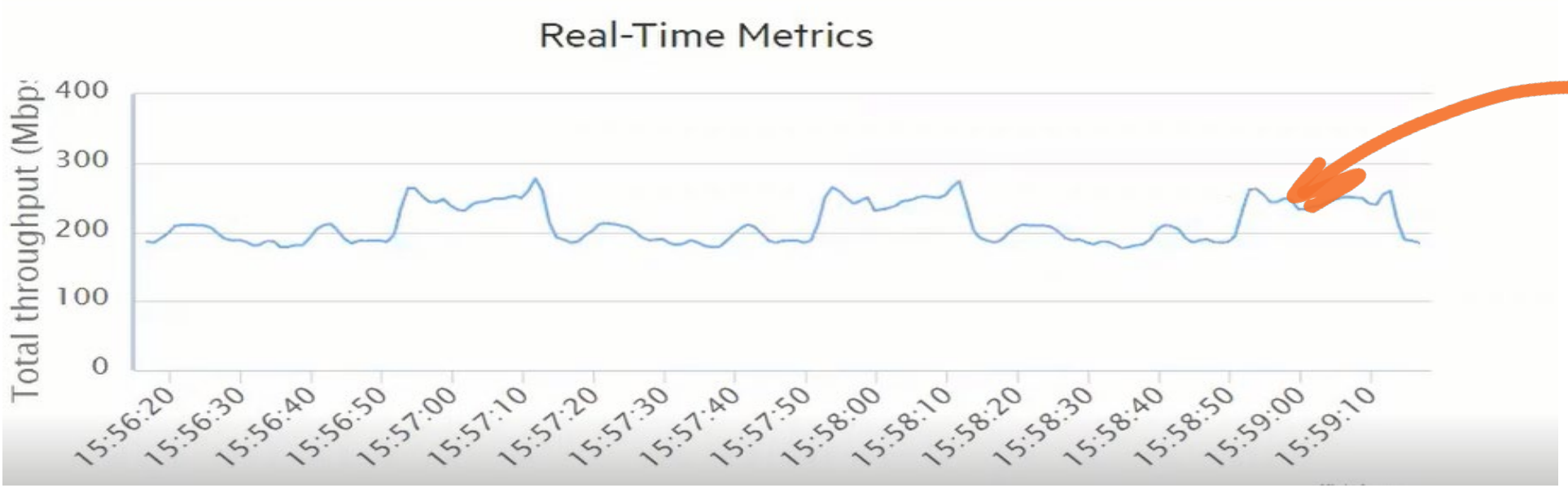
Results : Throughput

Air Slice Disabled



- VR Throughput getting throttled

Air Slice Enabled



- Met Throughput SLA

Day N Operations

AIOPS WITH
ARUBA EDGE SERVICES PLATFORM

AI Insights

Automated anomaly detection and network optimization

AI Search

Natural language queries

AI Assist

Automated trouble ticket generation

AI Driven Device Profiling

IoT visibility to drive access policies

Virtual IT Admin for Proactive Monitoring of Sites

End to End application monitoring and User experience monitoring without human intervention

Performance is OK

There’s an issue

Contact Tracing Solution

Contact & Location Tracing using BLE

During RTO

Users are issued Aruba Tags

Aruba 300/500 series APs sense tags in-building

Meridian cloud determines tag locations

Data streamed to visualization and rules engine SW

Near real time

User is sick and informs org

HR looks up user tag and queries contact tracing SW for potential user and location contacts

HR generates report listing dwell time at various AP/building locations for sick person. Enhanced cleaning can be focused on those areas.

Case Study

DOES YOUR NETWORK HAVE A

NOW IT CAN