

**HPE Innovation Day**

# **BUILDING SECURE AI NETWORKS OF THE FUTURE**

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Business Development AI Powered Networking | EMEA



**Hewlett Packard  
Enterprise**





# AI runs on DATA

**150B**

**edge devices** will be connected worldwide by 2025<sup>1</sup>

**50%**

of data will be **created** and **processed** outside the traditional data center or cloud<sup>2</sup>

**76%**

of enterprises report that their data capabilities cannot keep up with their business demands<sup>3</sup>

1 Source: <https://techinformed.com/iot-in-2023-and-beyond/>

2 Source: Total data volume worldwide 2010-2025 – Statista

3 ESG: Being a data first leader continues to matter - ESG - August 2023

# Delivering on our strategy

## HPE GreenLake cloud

**Aruba Central (NetOps) | Morpheus (DevOps) | OpsRamp (IT Ops) | AIOps | Security | Marketplace  
Data Protection Ops | Sustainability Insight Center | Consumption Analytics (FinOps)**

### HPE Hybrid Cloud

HPE Proliant Servers  
HPE Aletra Storage  
HPE Private Cloud  
HPE VM Essentials  
Backup & Recovery  
HPE Zerto Disaster Recovery

### HPE AI

100% Fanless Direct Liquid Cooling System Architecture  
HPE Proliant XD Servers  
HPE Cray XD & EX Systems  
Private Cloud AI for Enterprise  
AI Software

### HPE Networking

Wired & Wireless Access, P5G, Indoor Location, SASE, WAN, Security, Data Center

EDGE | DATA CENTER | COLO | PUBLIC CLOUD

# The Network provides the

## AI Data Highway



Remote



Access



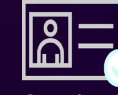
Visibility



Home



Authentication



Micro-Segmentation



Branch



SSE



Campus



5G

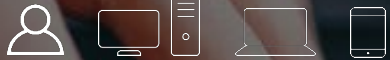


Factory

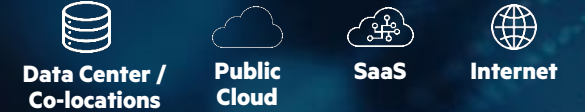


Continues Monitoring

### People and Things



### Data and Apps



Data Center / Co-locations

Public Cloud

SaaS

Internet

CONNECTING  
SECURELY

# Why IOT matters and what are common use cases

## Technology needed to support IOT

- Connectivity
- Security
- Automation

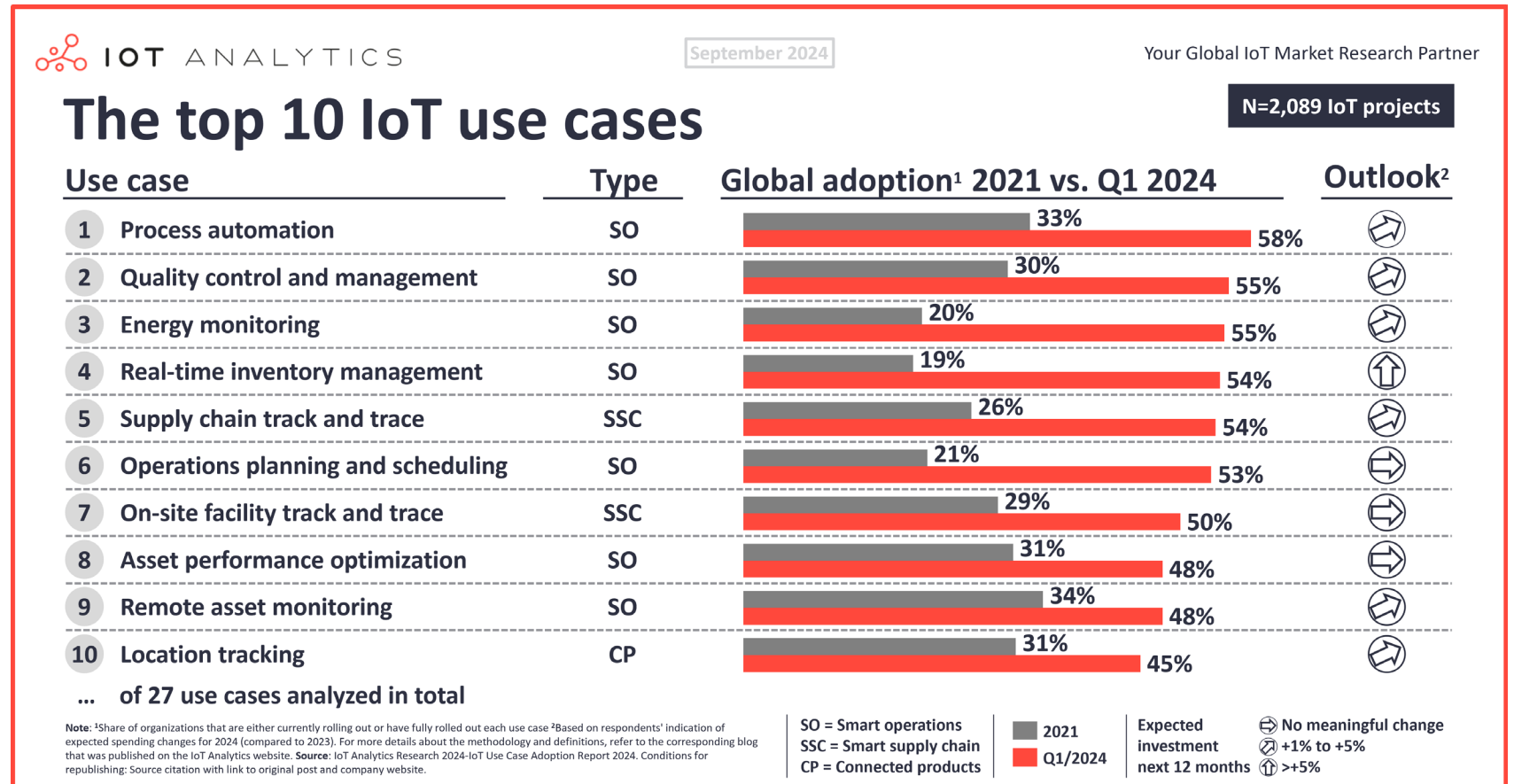
2025 - 2033

**20%**

Wi-Fi CAGR

Largely driven by IoT<sup>2</sup>

Source: <https://iot-analytics.com/top-10-iot-use-cases/>  
 2 Wi-Fi market size [Mordor intelligence](#)





## IOT growing in Importance

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- “I’d like 100 GPUs, a lossless, low latency interconnect network and 100 TB of storage please
- ...Oh, and I’m filling my data lake with IoT telemetry”



# IOT present unique security challenges

# 15B+

IoT devices will connect to enterprise infrastructure by 2029<sup>1</sup>

## Securing them

# 80%

IT organizations report they've found IoT devices on their networks that they did not install, secure, or manage<sup>2</sup>

# 24h

Line of business owners or facilities management typically want their devices on the network within 24 hours of request. This explains why some will put devices on the network and fail to inform IT of their actions<sup>2</sup>

<sup>1</sup> Costello, K. (2021, February 8). "Gartner Predicts the Future of Cloud and Edge Infrastructure." Smarter With Gartner. <https://www.gartner.com/smarterwithgartner/gartner-predicts-the-future-of-cloud-and-edge-infrastructure/>

<sup>2</sup> Zimmerman, T. (2021, February 16). Segmentation or Isolation: Implementing Best Practices for Connecting 'All' Devices. Gartner. <https://www.gartner.com/en/documents/3969768/segmentation-or-isolation-implementing-best-practices-fo>



## Finding them

## Knowing what they are





# Future of network operations

Empowering IT teams for an accelerated, AI-driven future

## Accelerating GenAI for Networking



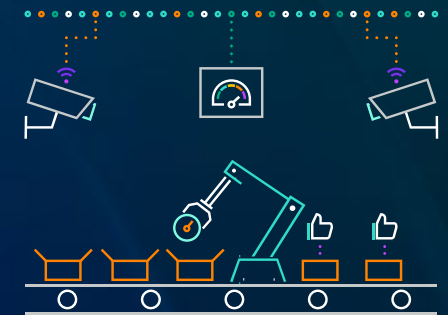
By 2026, 60% of network operations personnel will rely on **Generative AI** for Day 2 management, up from less than 5% in early 2024<sup>1</sup>

## Network as a Zero Trust security solution



46% ITDMs say **cybersecurity concerns** impact their organizations' willingness to invest in innovative technologies<sup>2</sup>

## Growing significance of DEM



**Digital Experience Monitoring** becomes a strategic investment area, with deployments expected to rise from 60% to **90%** in 2027<sup>3</sup>

<sup>1</sup>Gartner: Prepare for Generative AI in Network Operations , Mar 2024

<sup>2</sup>The innovation vs. risk conundrum. Hewlett Packard Enterprise. 2023

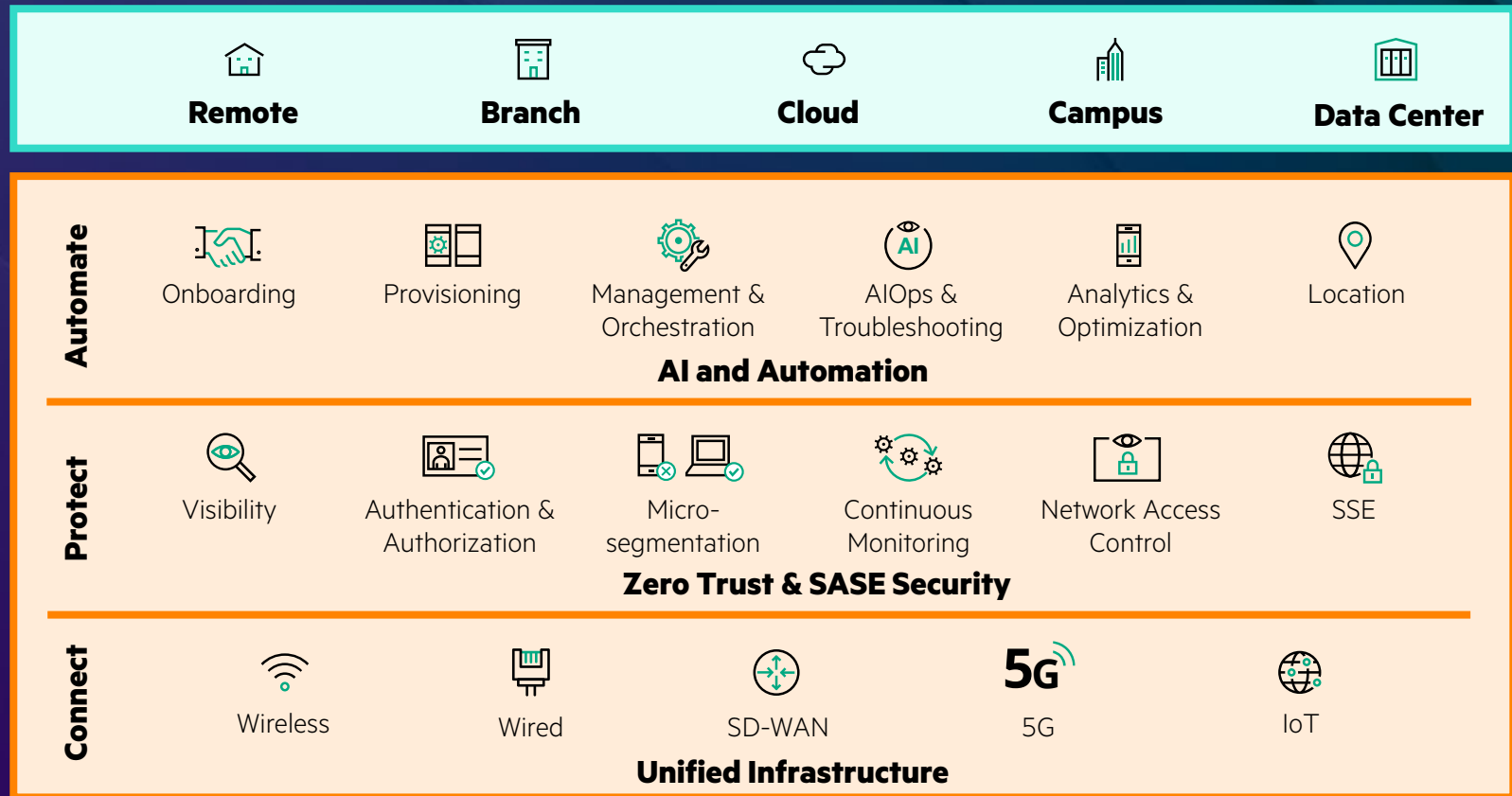
<sup>3</sup>Gartner Market Guide for Digital Experience Monitoring, Nov 2023



# Security-first, AI-powered networking

Delivering distinctive experiences and innovative business results

Powered by  
**HPE Aruba  
Networking  
Central**



HPE GreenLake for Networking

# Unified Infrastructure provides telemetry data to HPE Aruba Networking Central



**4.7+**  
Million  
devices



**1.5+**  
Billion  
clients

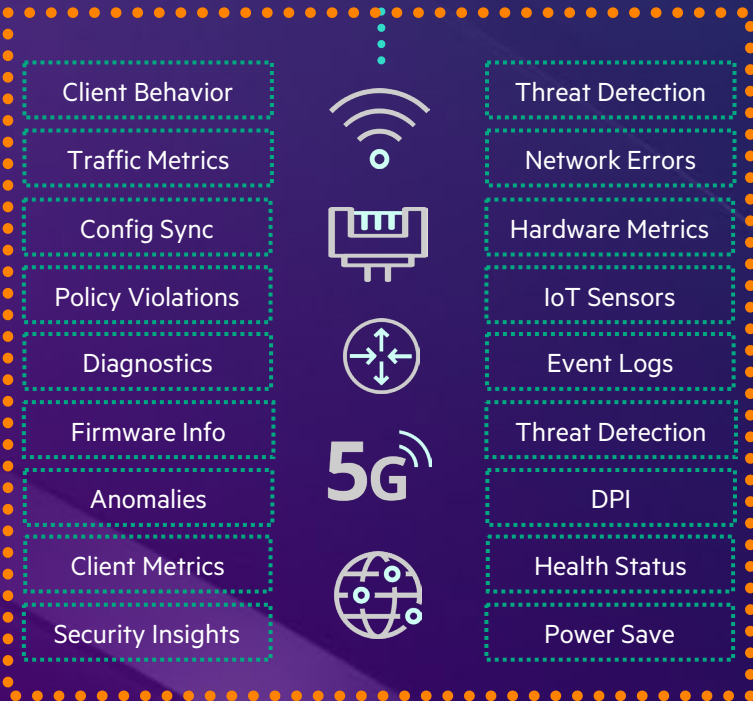


**30+**  
industry  
verticals

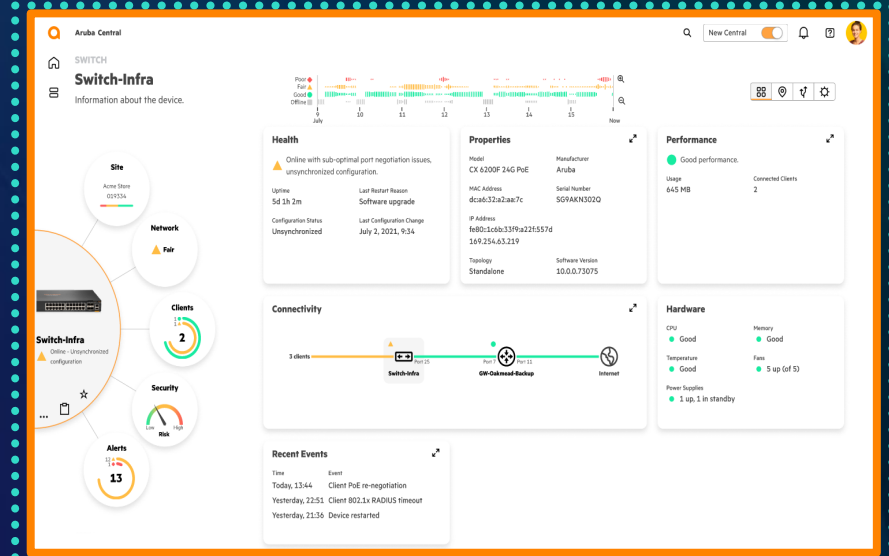


**200K+**  
customers  
across AMS, EMEA,  
APJC

## AI-powered, operator-centric experience



Telemetry Data from  
Unified Infrastructure





# Central by the numbers

Cloud-native, microservices based AI-powered management platform for wired, wireless and SD-WAN

## Industry-leading data lake



**4.7+**  
**Million**  
devices



**1.5+**  
**Billion**  
clients



**30+**  
**industry**  
verticals



**200K+**  
**customers** across  
AMS, EMEA, APJC

## How does data lake help?

- UNCOVER INSIGHTS AND TRENDS
- RECEIVE OPTIMIZATION TIPS
- POWER AND TRAIN ML/AI MODELS



# WORKING SMARTER WITH AI

**UNCOVER INSIGHTS  
AND TRENDS**

**RECEIVE  
OPTIMIZATION TIPS**

**POWER AND TRAIN  
ML/AI MODELS**



**NETWORKING  
FOR AI**



**AI FOR  
NETWORKING**





# AI FOR NETWORKING

**AI SEARCH**

**NETWORK INSIGHTS**

**AI ASSIST**

**CLIENT INSIGHTS**

**INCIDENT DETECTION**

**GenAI**

Large language models (LLMs)

**Classification AI**

Clustering, correlation, regressions...

# Gen AI powered search

Enhanced with enterprise-grade LLMs for improved operator experience

AI  
SEARCH



How do I create a Port Profile on AOS-CX using Aruba Central?

**Summary:**

### Configuring Port Profiles on AOS-CX using Aruba Central

Port Profiles enable group level configuration of interface-specific commands on AOS-CX devices. Aruba Central's **Port Profiles** page allows you to manage these profiles - create, apply, clone, modify, and delete. They can be configured on interface ranges, list of interfaces, wild cards, MCLAG, split, sub-interface, and management interfaces. Please note, the configuration should be complete when applying a profile to an interface. The new profile will overwrite the existing configuration.

#### Creating a Port Profile

1. Launch the **Aruba Central** app, and set the filter to a group that contains at least one switch.
2. Navigate to **Devices > Switches** under the **Manage** section.
3. Click on the **Config** icon to access the switch configuration dashboard.
4. Navigate to **Interfaces > Port Profiles**. Here you'll see a list of existing port profiles.
5. Click on the + sign in the Port Profiles table to create a new profile.
6. Provide a **Name** and a **Description** for your profile.
7. Configure in
8. Click **Save** to

**Important Co**

- The parent g
- Overlapping
- When creati
- Before assign
- Post applica

Show more

Aruba Central

Q devices running 10.4

### Search Results

Search Scope  
Catania

Devices Documentation

2 Items

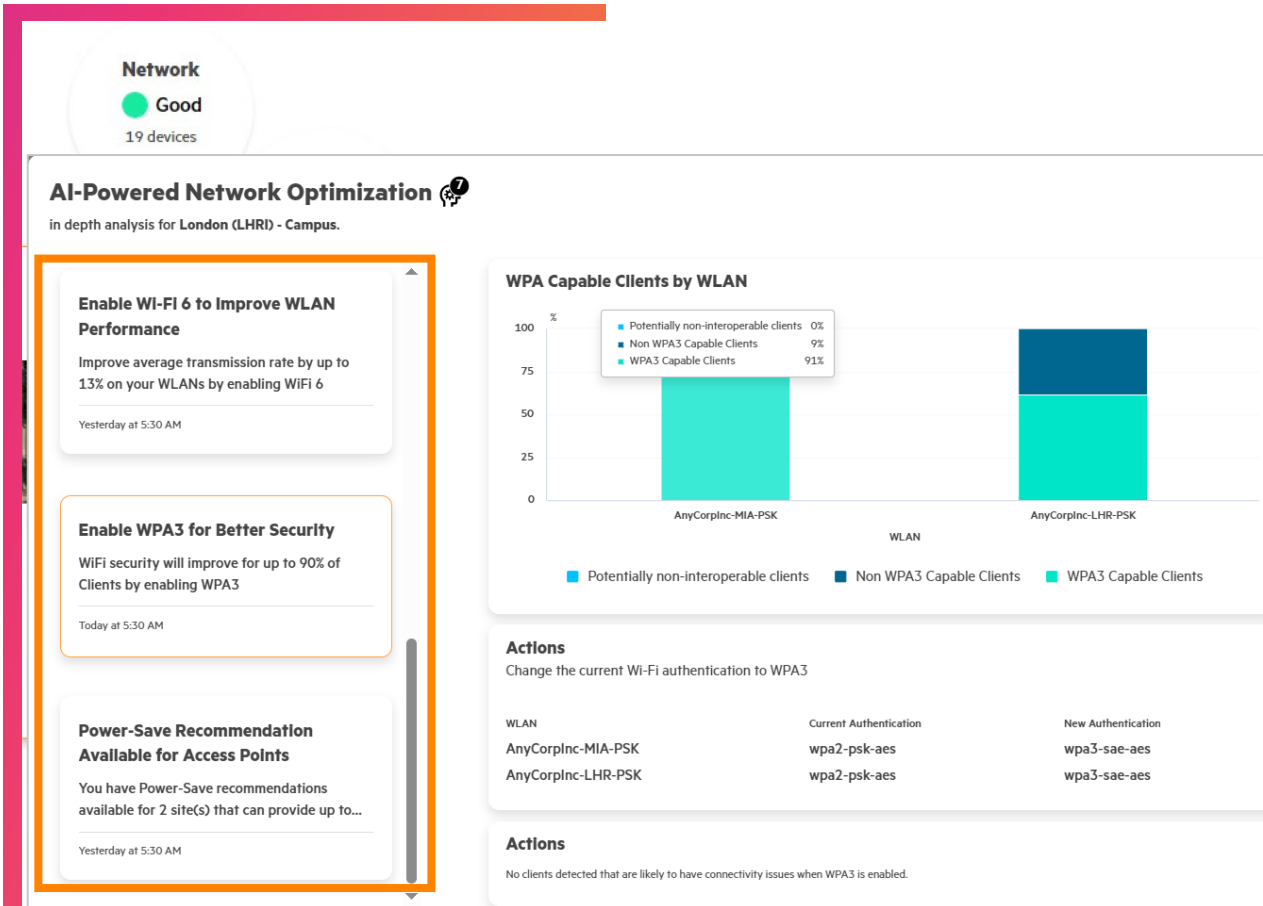
Name	Type	MAC address	IP Address	Model	Serial Number
GW-Catania-02-MB ONLINE	Gateway Cluster	20:4c:03:d3:11:f8	9.9.9.1	A9004	CNMHKL8032
AP-Catania-01-LR ONLINE - Last seen -	Access Point Standalone	90:4c:81:c0:53:14	10.1.50.3	AP-345	CNFYK510L2

- Trained and tuned on **multiple proprietary LLMs**, purpose-built for networking
- Pre-conditioned with 3 million network questions for improved performance and accuracy
- **Sub-second summarization** of latest 30k pages of VRDs and tech pub documents
- **Uncompromised security** with no external API interfaces, and no PII/CII shared beyond customer instance
- Foundation for conversational **Co-Pilot**



# AI-powered recommendations

Free up valuable IT cycles and reduce risk with proactive optimization insights



- **Custom, actionable recommendations** at a global/per-site basis
- AI/ML models trained and re-trained **weekly** on **data from anonymized peer groups** with similar environments
- **Examples –**
  - Firmware recommendations
  - 802.11ax recommendations for Wi-Fi performance
  - AP power save recommendations to support sustainability efforts
  - WPA3 insights for improved security posture and **more!**



# AI-driven assurance and alerts

## Accelerate troubleshooting across skill levels



### Alerts

Severity: Any (21) Critical (21) Major (0) Minor (0) Info (0) Status: Any (21) Active (12) Active and Acknowledged (0) Cleared (9)

Search:  Filter:

12 items

Name	Status	First Occurred	Last Occurred	Occurrences	Category
MAC Authentication Server Timeout Critical - No response from the MAC Authentication Server was detected during the...	Active	05/05/2024, 4:30:00...	05/06/2024, 11:05:00...	224	Authentic...
802.1X Authentication Server Timeout Critical - No response from the 802.1X Authentication Server was detected during the...	Active	05/01/2024, 7:15:00...	05/06/2024, 11:05:00...	1428	Authentic...

**Summary**

No response from the MAC Authentication Server was detected during the Authentication Process

First Occurred: May 5, 2024 4:30 PM

Last Occurred: May 6, 2024 11:05 AM

Occurrences: 224

**Root Causes**

- MAC Authentication Server Timeout or No Response

**Recommendation**

- Check Health Status of the Authentication Server

**Events**

Occurred	Category	Source	Event
Today at 11:04 AM	Client	00:24:9b:7d:cb:6b	Client Mac Authentication Failure
Today at 11:04 AM	Client	00:24:9b:7d:cb:6b	Client Connected
Today at 11:04 AM	Client	00:24:9b:7d:cb:6b	Client Disconnected
Today at 11:04 AM	Client	00:24:9b:7d:ff:d5	Client Mac Authentication Failure
Today at 11:04 AM	Client	00:24:9b:7d:ff:d5	Client Connected

49 more

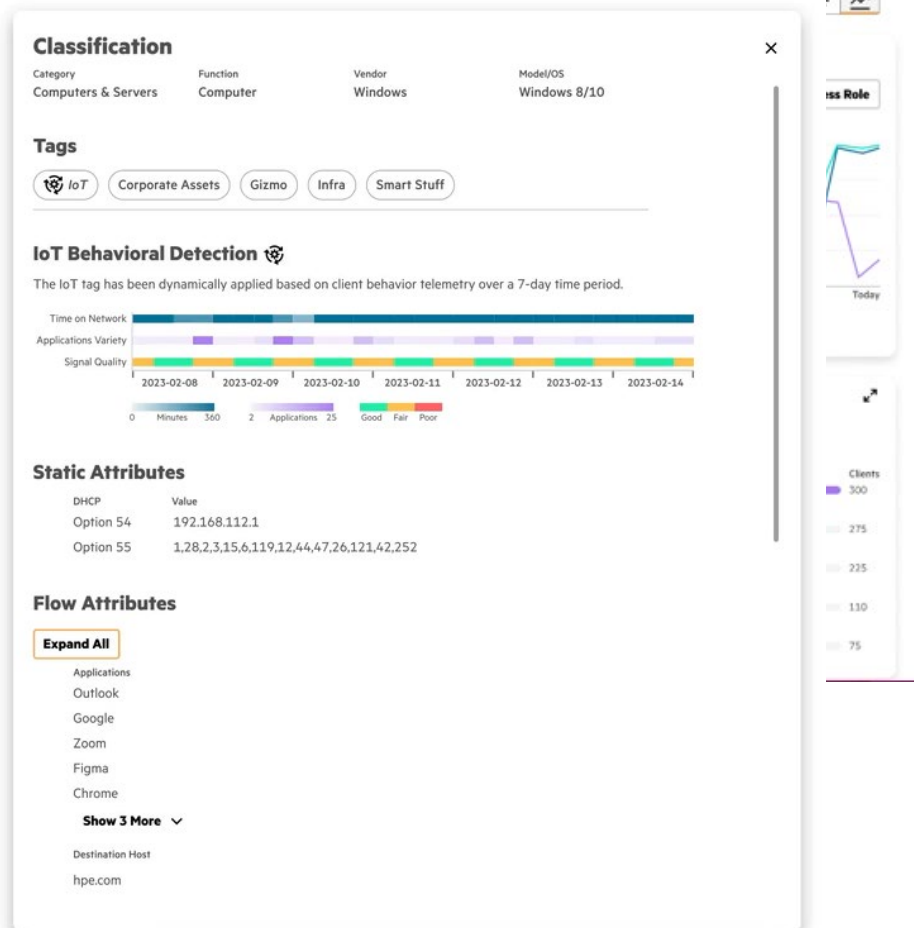
- **Event-to-insight in <5 minutes** with near real-time alerts, speeding up MTTR
- **Full-stack correlation** with precise root-cause, recommendation and impact
- Reduced alert fatigue with consolidated list of triggered events
- Assurance indicators for device health and client experience for quick diagnosis



# AI-powered client profiling

Enhance endpoint visibility for Zero Trust networking

CLIENT  
INSIGHTS

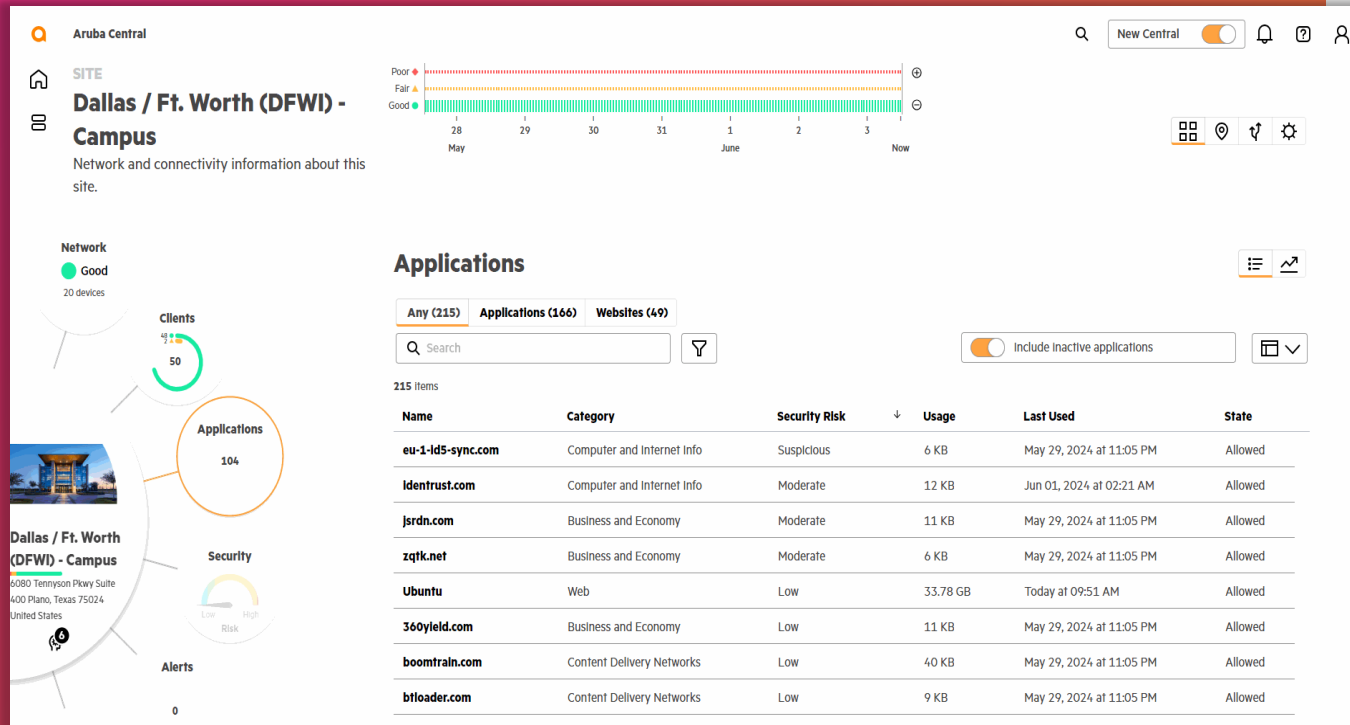


- Only solution with AI-powered IoT profiling and **behavior analysis** for segmentation accuracy
- **Traffic flow visibility** for high classification efficacy and enhanced protection
- Advanced filtering and custom group tagging aid in policy creation and enforcement

# Avoid application security vulnerabilities

Track security risk of applications and websites in a unified manner

INCIDENT  
DETECTION



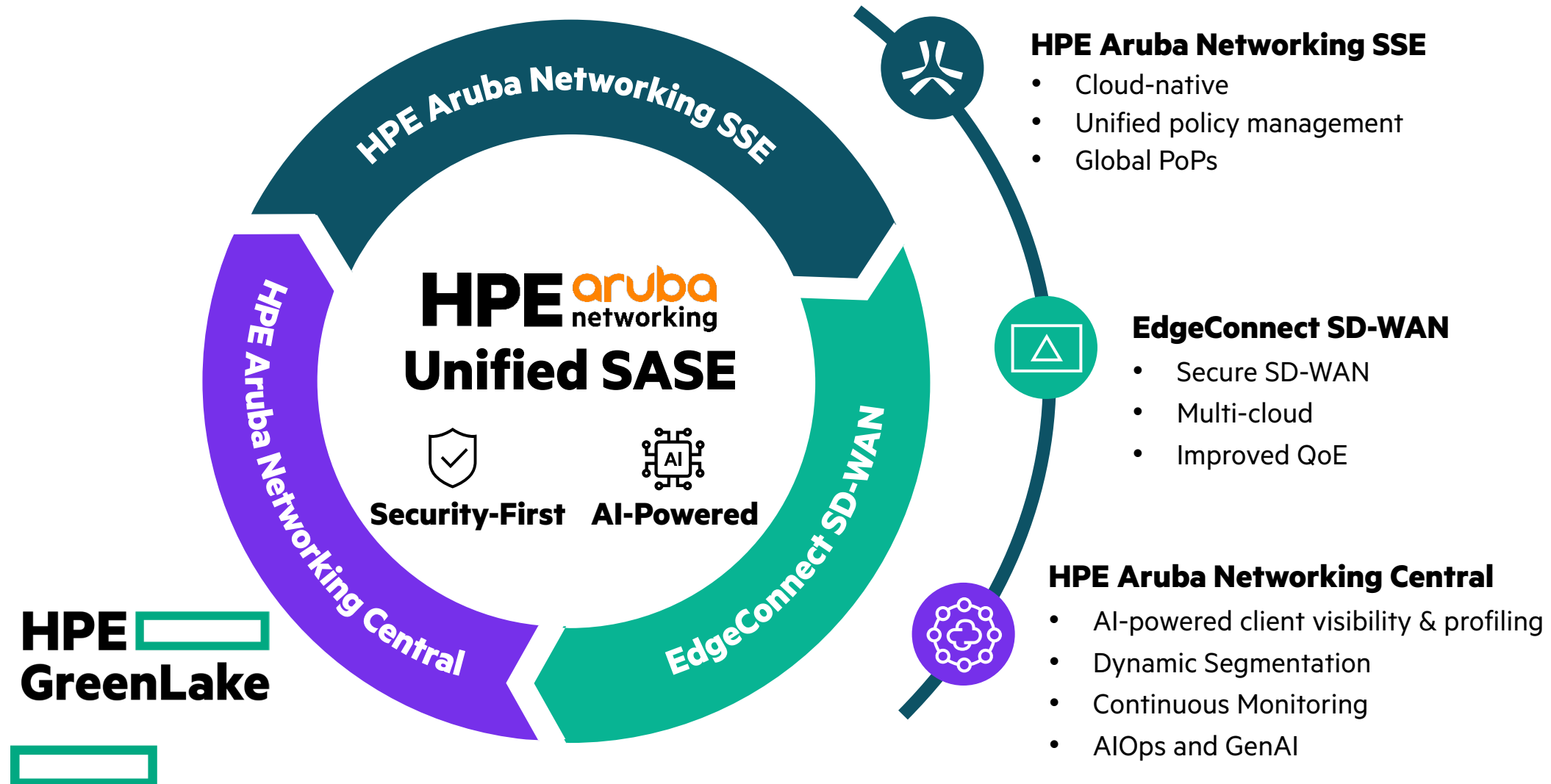
- **Unified platform for integrated security analytics** – captures application usage , real-time risk , permissions and TLS attributes
- Security Risk: Determined using multiple factors like site history, age, rank, location, networks, links, real-time performance, and other contextual and behavioral trends
- Easily identify **anomalous behavior** by drilling down into users accessing malicious sites and detailing their application usage.
- Extensive set of filters for contextual security insights. Examples :
  - Is the high-risk application access seen on a specific SSID ?
  - Or on a specific client category ?
  - Does it impact a specific Role ?

Powered by BrightCloud  
Threat Intelligence



# HPE Aruba Networking approach to Zero Trust and SASE

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



# Experience HPE Aruba Networking New Central

DEMO!



- AI Powered Insights
- Network Operator centric
- Wireless
- Switching
- Security

AND MUCH MORE!

The screenshot displays the Aruba Central Network Overview dashboard. The interface is clean and modern, with a white background and a blue header. The main content area is divided into several sections:

- Sites:** A list of sites with their health status indicated by colored bars. Sites include HPE-SPAIN, Remote-Edge-To-Cloud, Singapore CIC, Santa Clara Outlet, ANC-Singapore, AUS-HQ, HPE-JAPAN, MBS-GOVWARE, MicroBranch-Edge-To-Cloud, and SG-VIVO City Branch.
- Insights:** Recommendations for optimizing performance, such as Switch Firmware Recommendation Available, Gateway Firmware Recommendation, and Gateway WAN Uplinks Have Higher Latency.
- Alerts:** Top active alerts reported on sites, including Switch Disconnected and AP Radio Noise Floor.
- Device Inventory:** Device distribution and activities, showing 53 devices, with a breakdown of Access Points, Switches, and Gateways.
- Licenses:** License consumption across managed devices, showing Foundation, Advanced, and Other license types.
- Device Health:** Device type and its health, with a 'COMING SOON' placeholder.
- Watch List:** Watched entities health status, with a 'COMING SOON' placeholder.





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