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Aruba Central

Switch management

Sietze Reitsma, Systems Engineer

#ArubaAirheads

“Next Generation NMS innovations are Cloud based”

Sietze Reitsma, Aruba Systems Engineer

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TODAY'S ENVIRONMENTS HAVE CHANGED

External Factors

Mobility & IoT

Growing number of users, devices & things

Geography

Multiple business locations, sites or locales

Performance

Anywhere access via non-traditional devices

Organizational Challenges

Manpower & Budget

Leaner teams driven to do more with less

Insight

Limited visibility & control to avoid firefighting

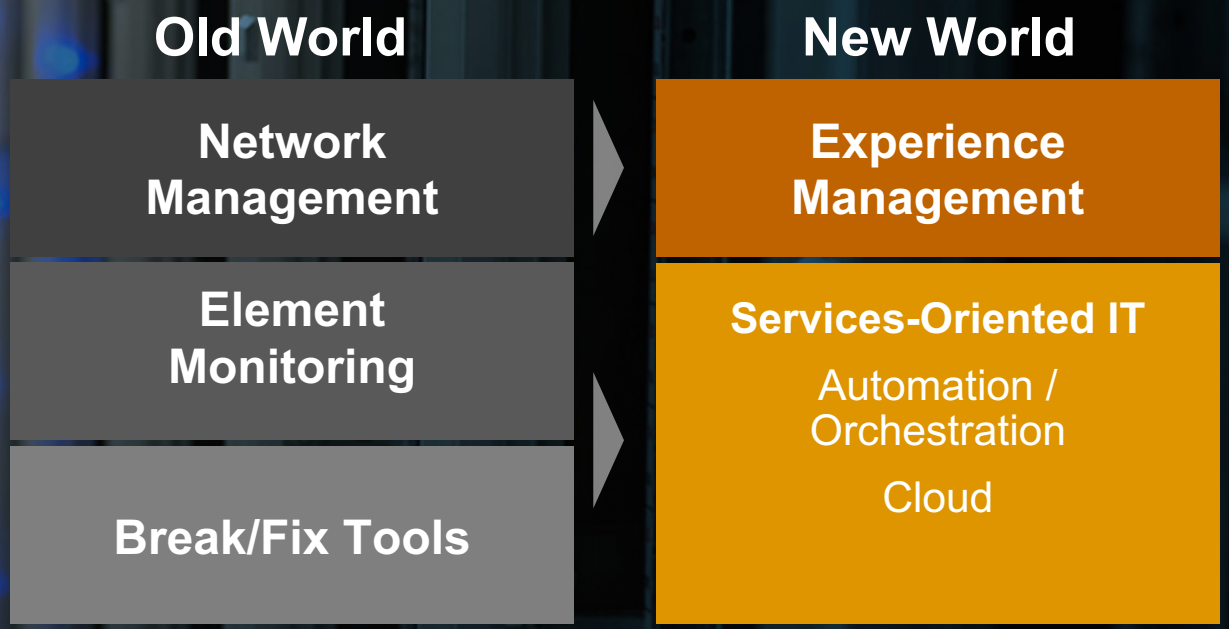
Flexibility

Inability to grow with emerging business needs

THE ROLE OF IT IS SHIFTING

By 2021, 40% of IT staff will hold multiple roles,
most of which will be business- rather than technology-related.

Gartner 2018 Predictions



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AUTOMATE EVERYTHING

SD-BRANCH

PROVISIONING

Automation that drives network infrastructure configuration.

POLICY

Automation that drives device identification, segmentation, and applied actions

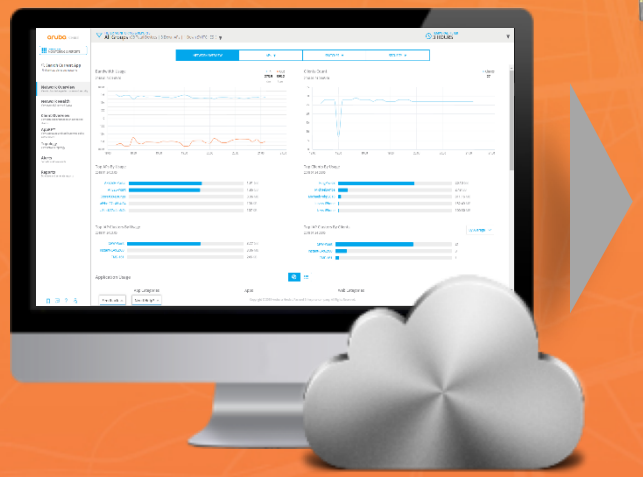
AI-OPS

Automation driven from telemetry collection and ML

Installer App	Device Insight	AI Insights to fine-tune RF
Group and device hierarchy	Dynamic Segmentation	Adaptive QoS for WAN
		AI Insights for SD-WAN

ARUBA CENTRAL CLOUD MANAGEMENT

Experience Driven Management



Wired and Wireless

Aruba-OS Switches

Branch Gateways

Instant Access Points

Value Added Services

Guest Wi-Fi

Presence Analytics

Connectivity Health

Extensibility via REST APIs

(Configuration, Monitoring, Alerts and Secure Access)

Redundant & Frequently Updated Scalable Architecture

Streamlined Provisioning & Workflow-Driven Usage Models

Built-In API Extensibility and Managed Services Mode

Planning & Deployment

Provisioning, Assessment and Visibility

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ZERO TOUCH PROVISIONING

2

Secure (https) account access via Aruba Central

3

Configuration sent to Instant AP or Switch

1

Plug in Instant AP or Switch

4

Network configured & operational

- Streamlined Deployment
- No Onsite Expertise
- Intelligent Workflow
- Business Grade Wi-Fi

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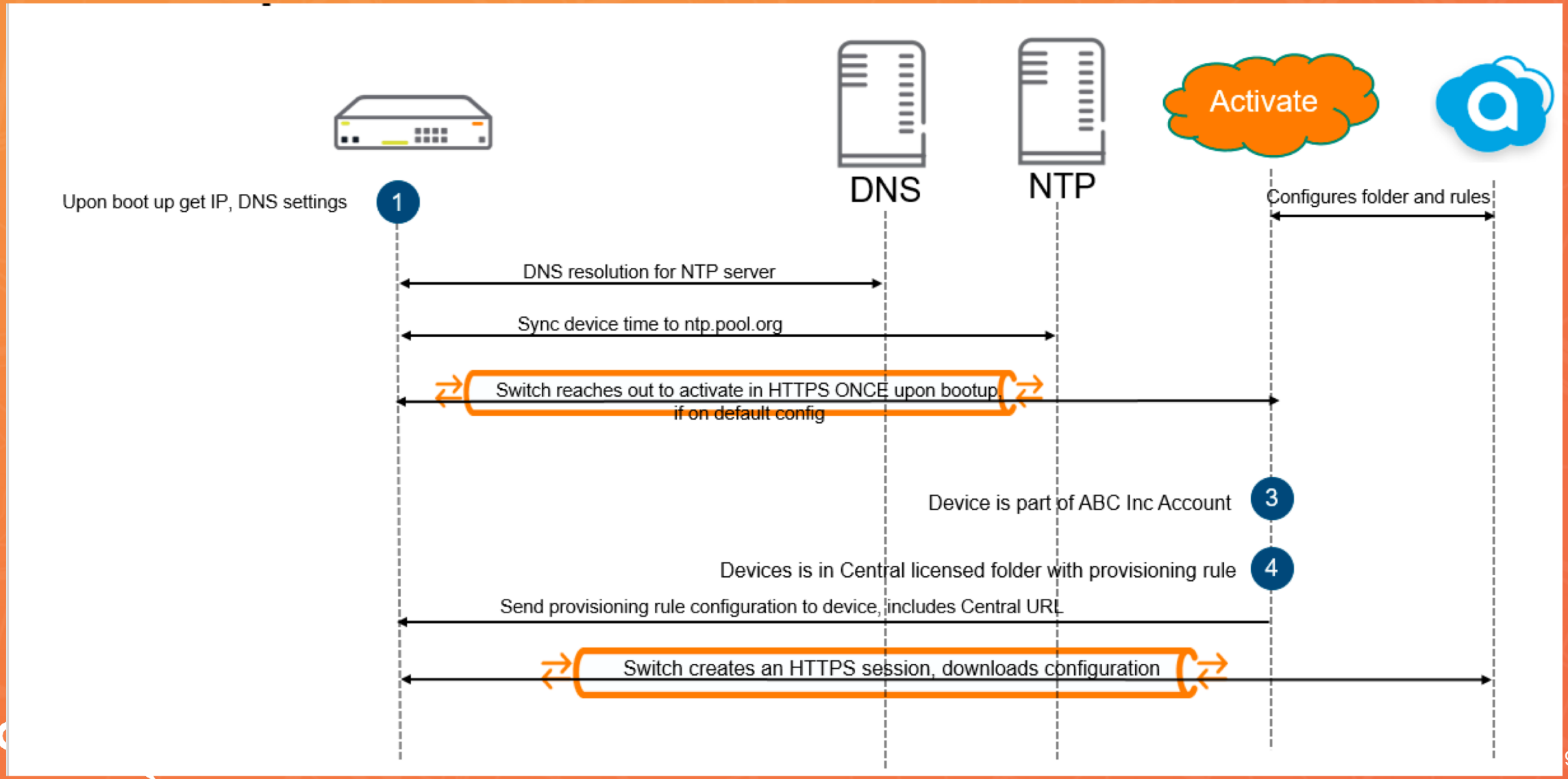
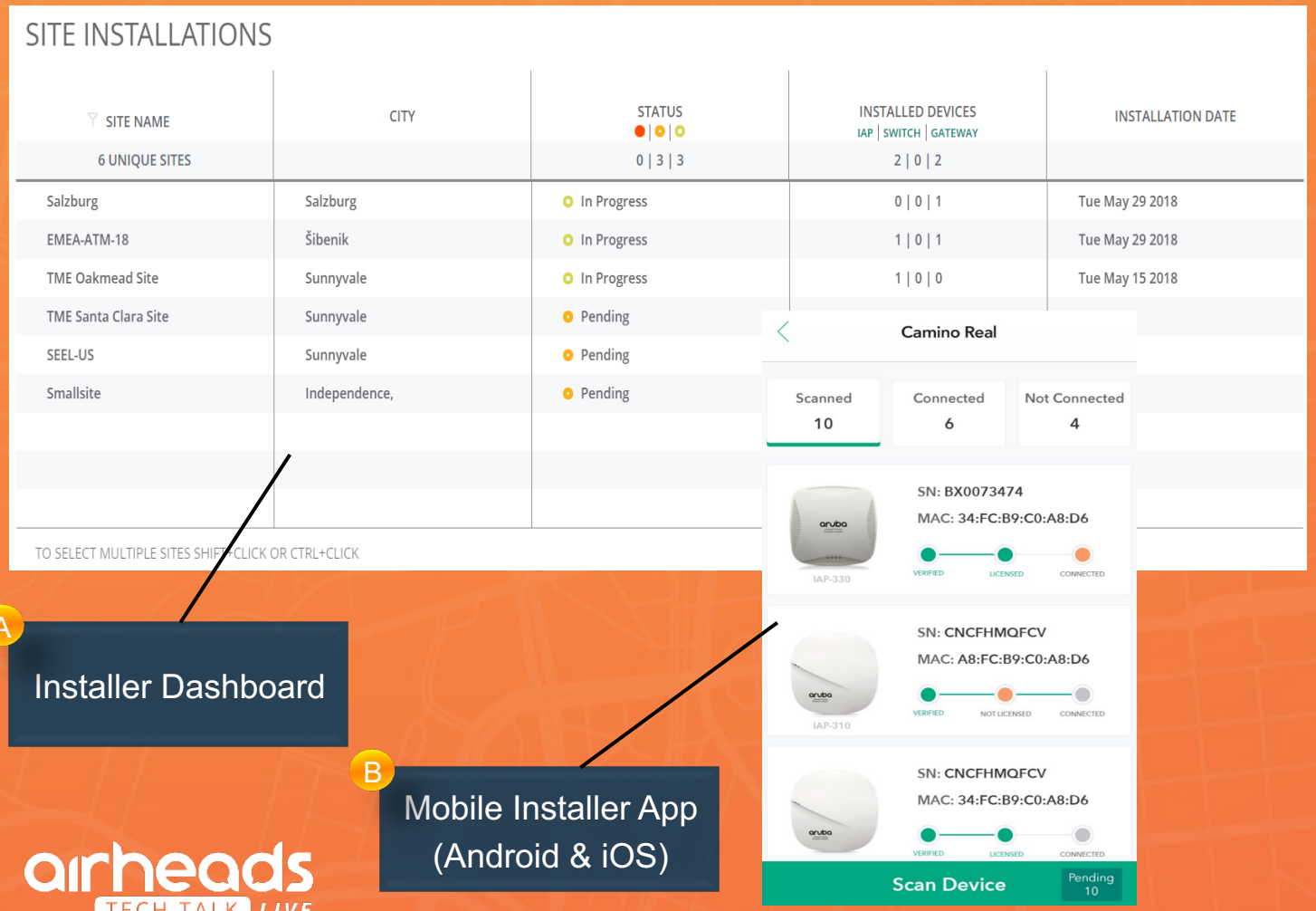
ZTP


DNS
NTP
Activate
Upon boot up get IP, DNS settings
1
Configures folder and rules
DNS resolution for NTP server
Sync device time to ntp.pool.org
Switch reaches out to activate in HTTPS ONCE upon bootup if on default config
Device is part of ABC Inc Account
3
Devices is in Central licensed folder with provisioning rule
4
Send provisioning rule configuration to device, includes Central URL
Switch creates an HTTPS session, downloads configuration

DEVICE ONBOARDING (w/MOBILE APP)



A Installer Dashboard

B Mobile Installer App (Android & iOS)

Admin configures installer details and allowed sites

Installer receives SMS on allowed sites and credentials

Installer scans devices and adds to assigned network

Site status and types of installed devices provided in dashboard

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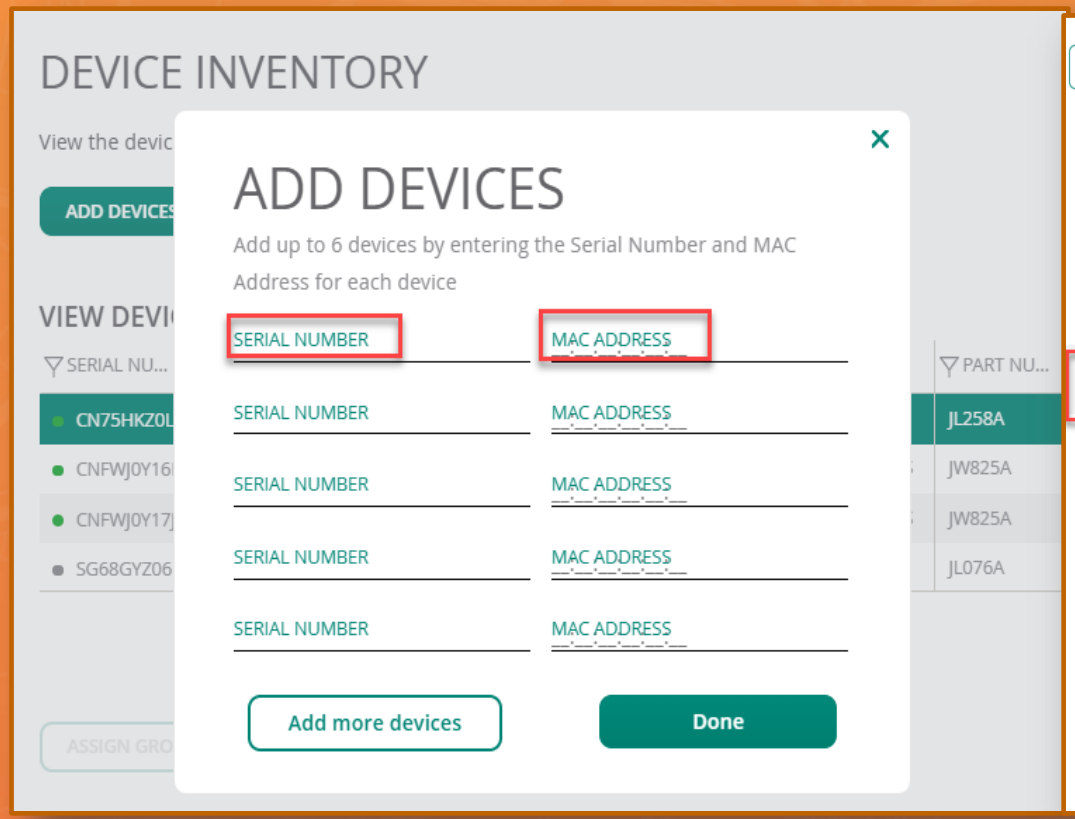
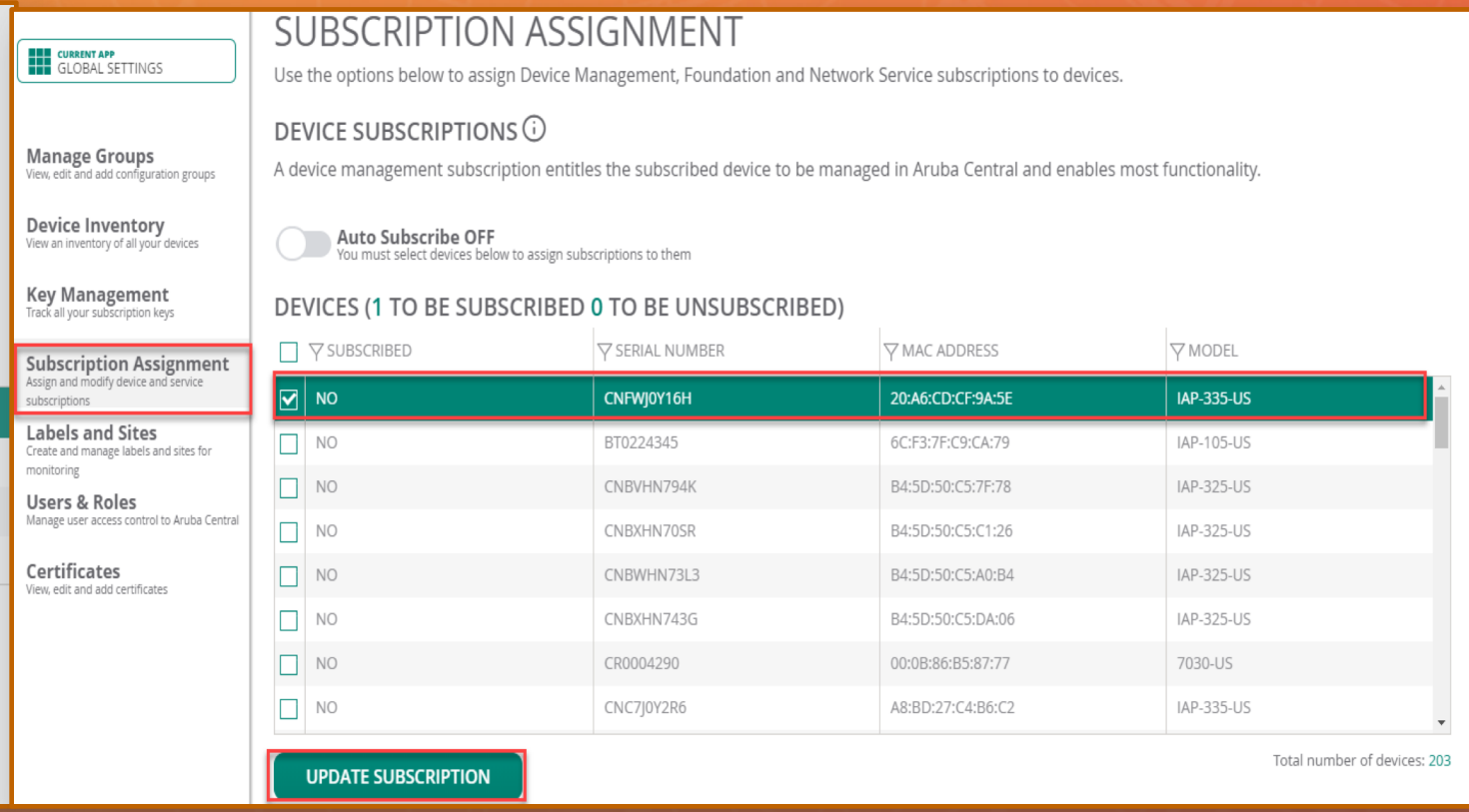
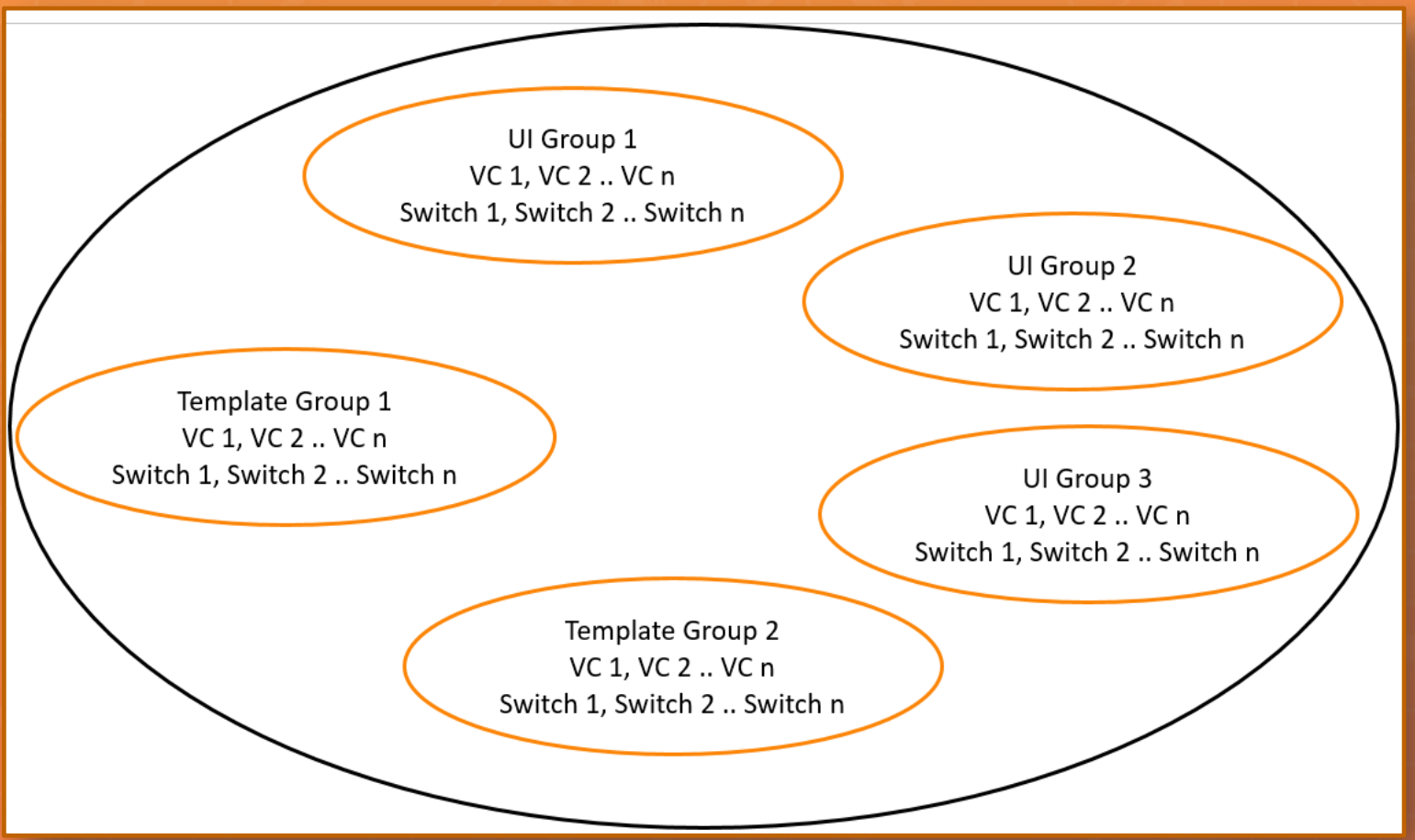
Add device manually





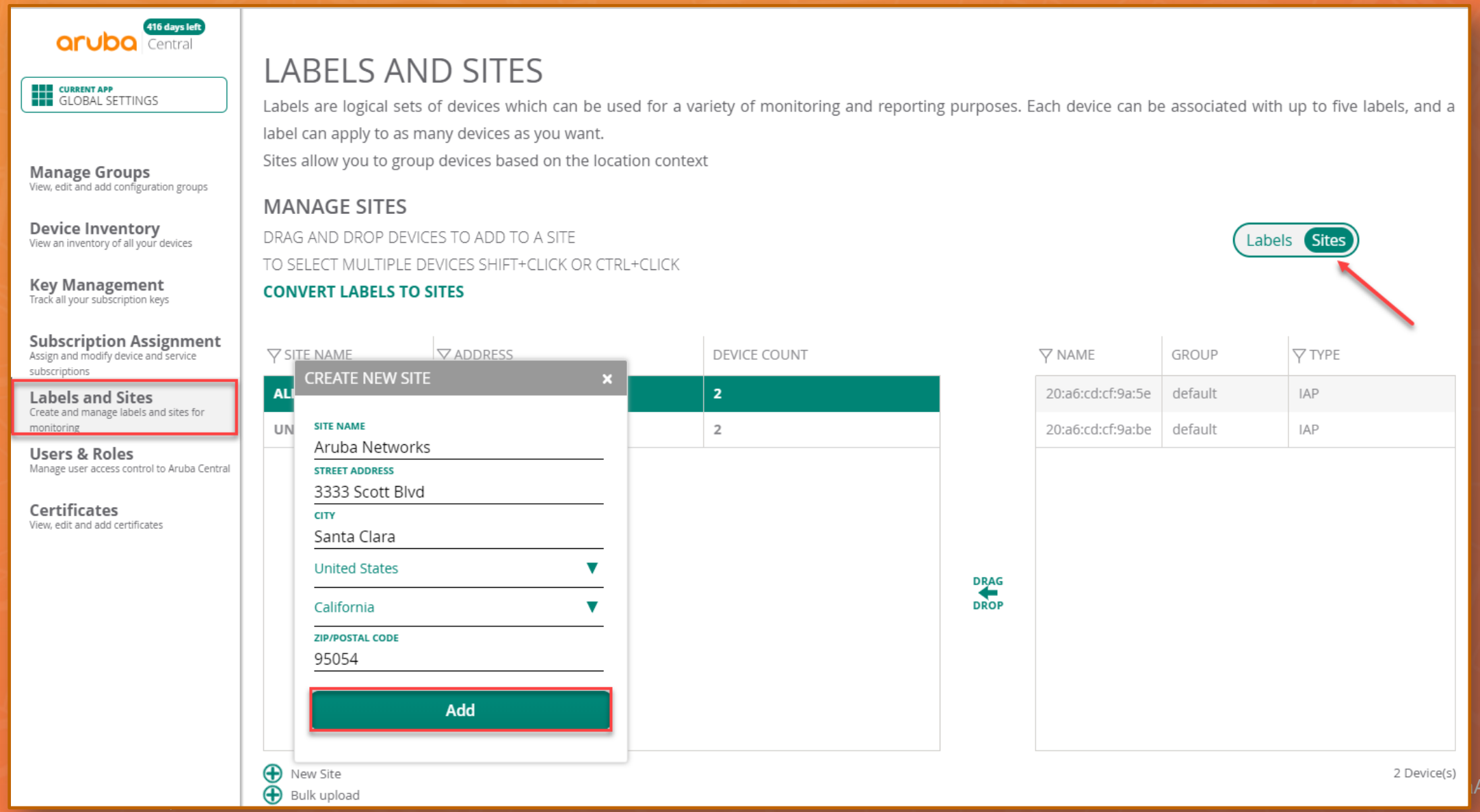
Understand and create UI Group and Template Group.

Groups are mutually exclusive configuration containers

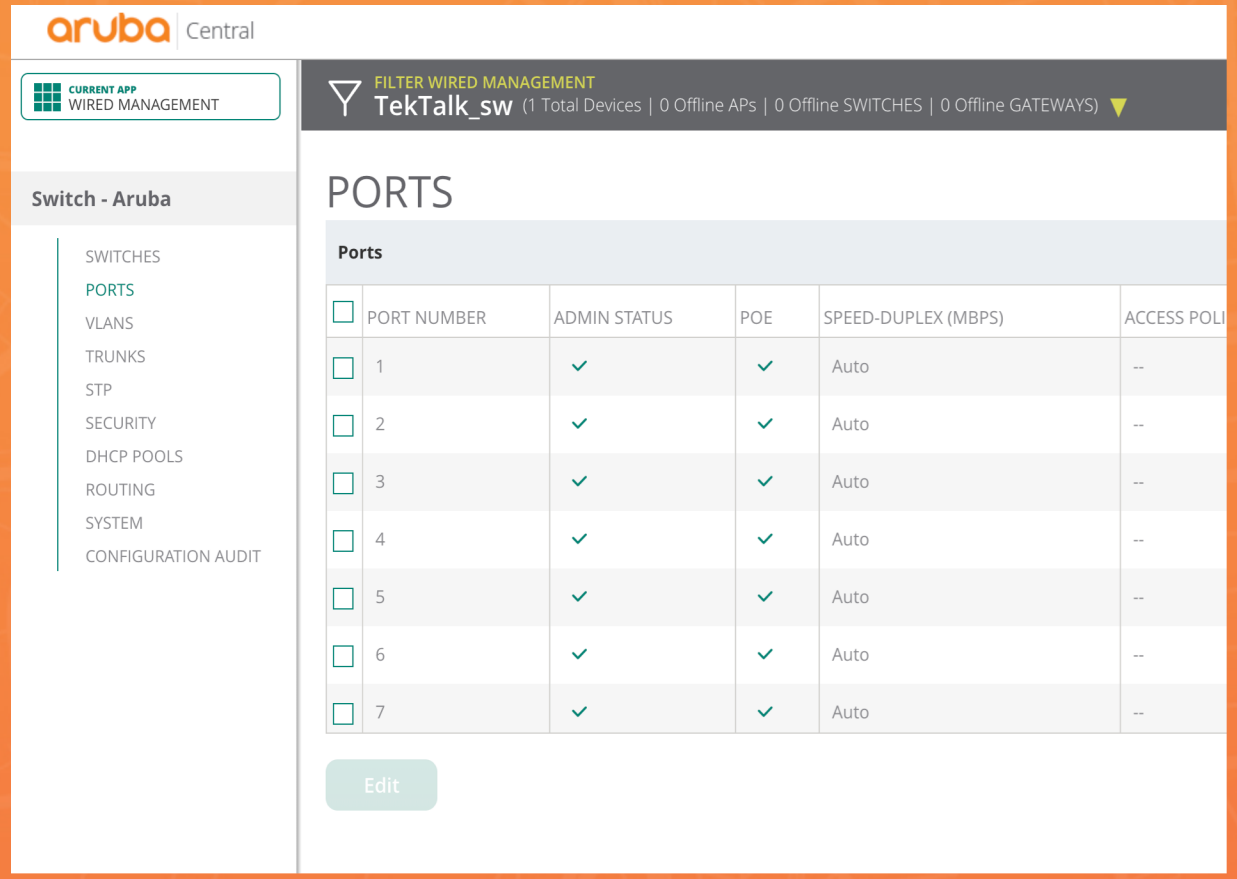


- Central defines a **Group** as a collection of devices which share common configuration settings.
- There can be several groups in Central.
- A Group can contain one device or hundreds of devices.

Create sites for monitoring

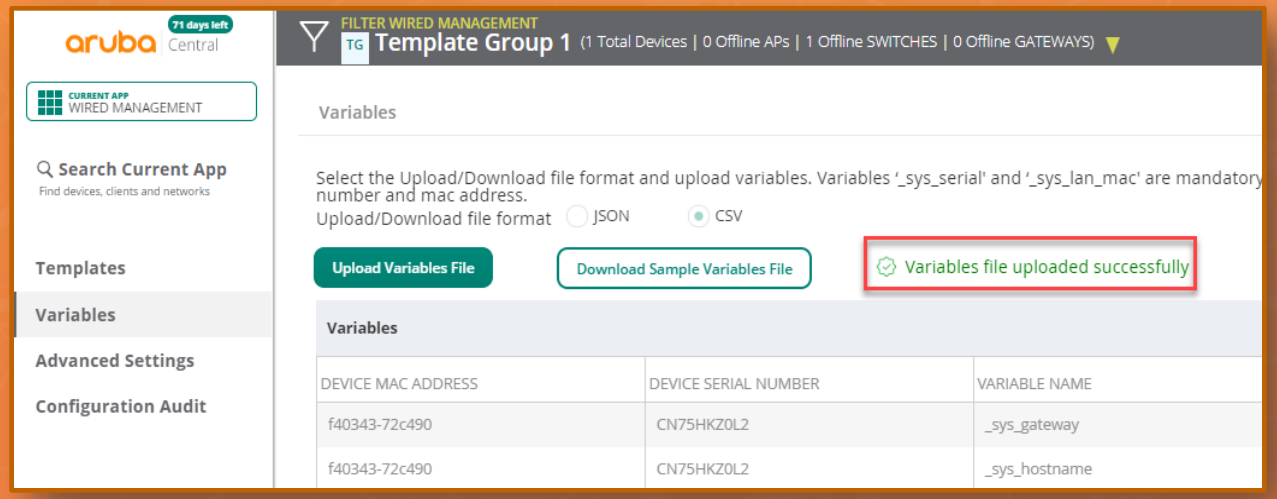


GUI vs Templates



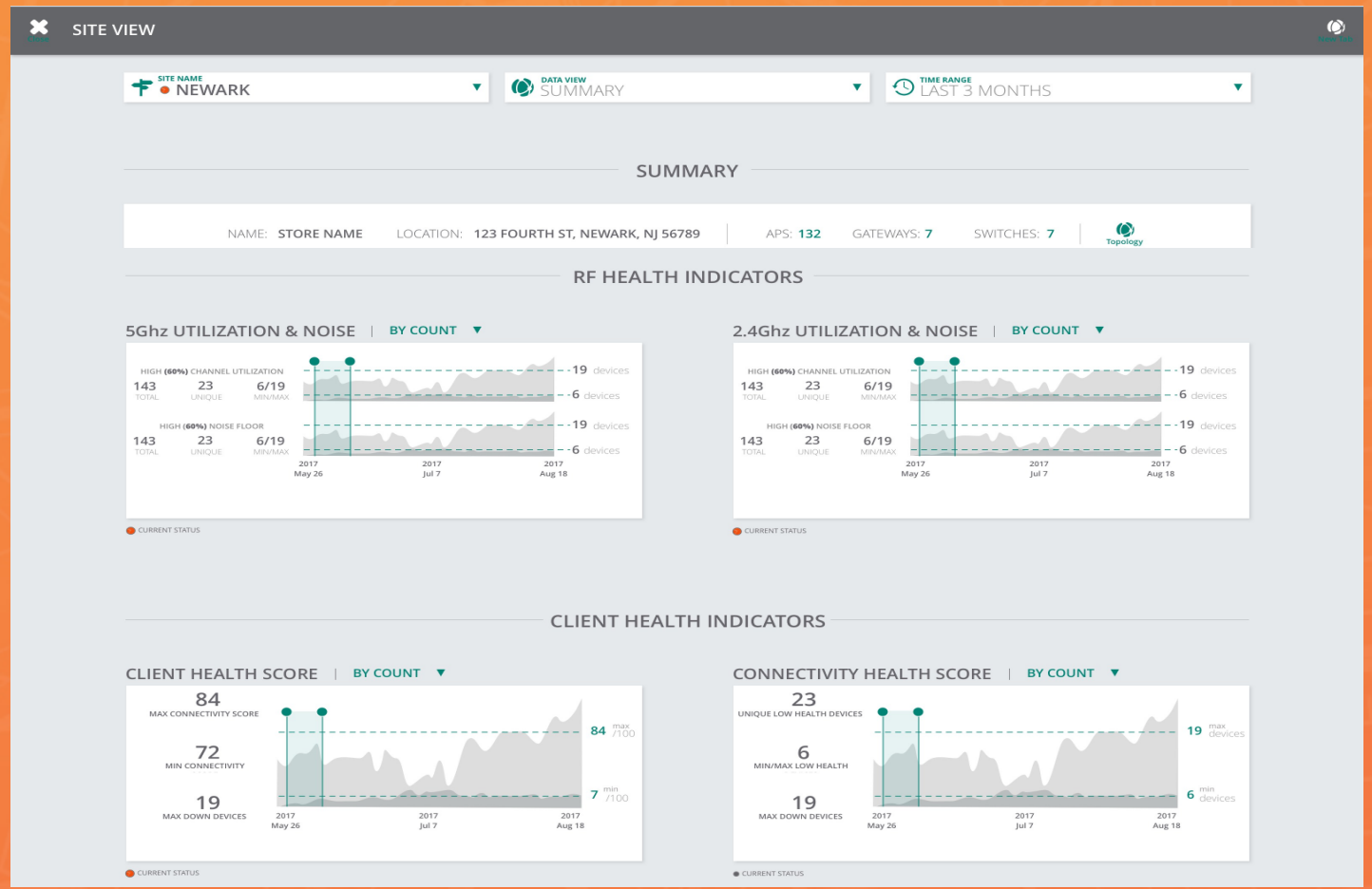
- %_sys_template_header%
- hostname "%_sys_hostname%"
- %_sys_module_command%
- %if _sys_use_dhcp = 0%
- ip default-gateway %gw%
- ip dns server-address priority 1 %dns%
- %endif%
- no cwmp enable
- include-credentials
- interface 1
- %port.1.status%
- name "IAP-1"
- exit
- vlan **X**
-

Golden template with variables




```
{
  "Serial number of switch": {
    "_sys_lan_mac": "MAC address of Switch",
    "_sys_serial": "Serial number of switch",
                "_sys_hostname": "HOL-POD-X-SW",
                "_sys_snmpv3_engineid": "",
                "_sys_use_dhcp": "0",
                "gw": "172.30.Y.1",
                "dns": "1.1.1.1",
                "static.ip.mask": "172.30.Z.9 255.255.255.224",
     "port.1.status": "enable",
                "port.2.status": "enable",
                ".....",
                "port.9.status": "disable",
                "port.10.status": "disable"
    }
}
```

SITE HEALTH MONITORING

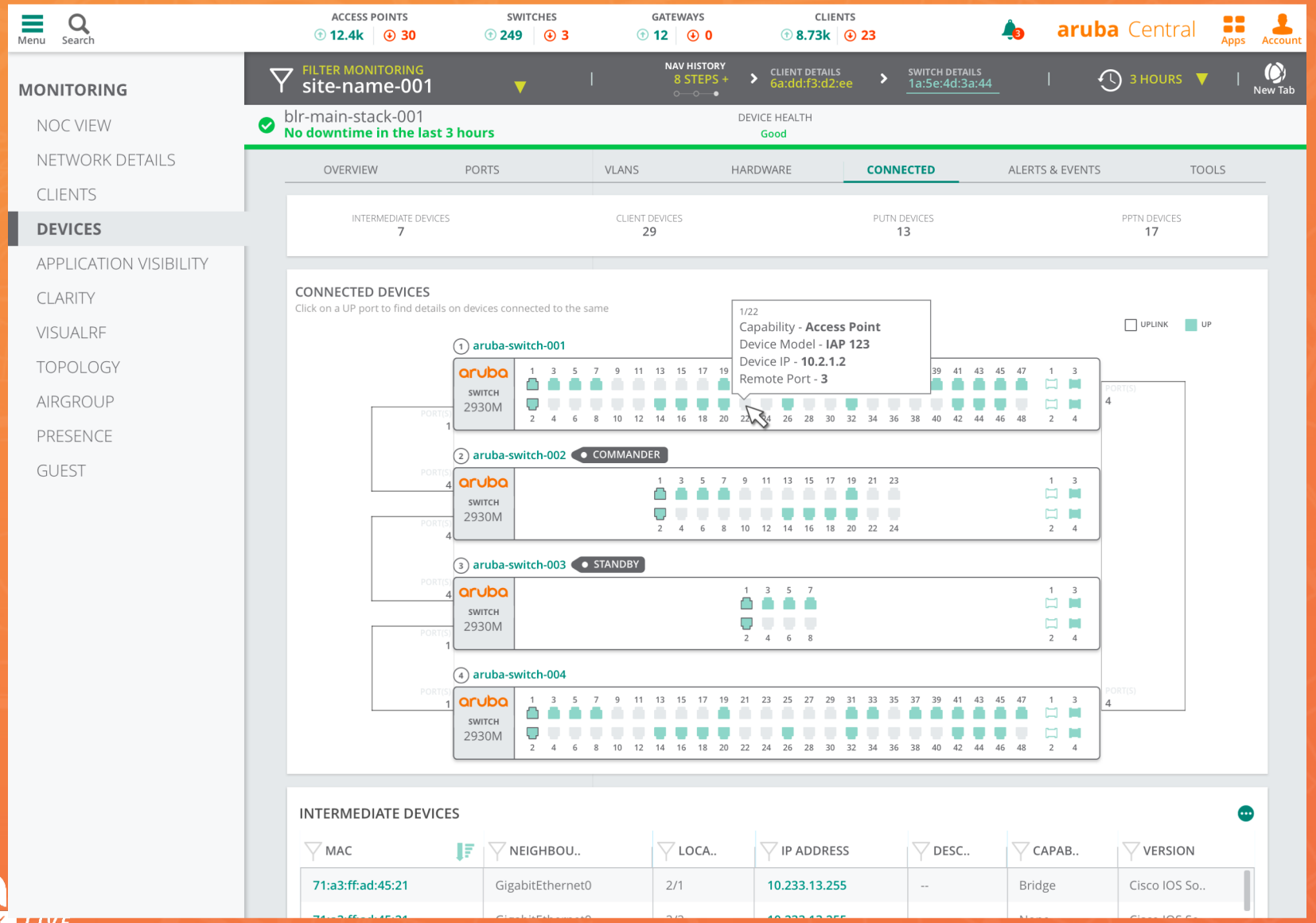


System Health – Connectivity, CPU & Memory Utilization

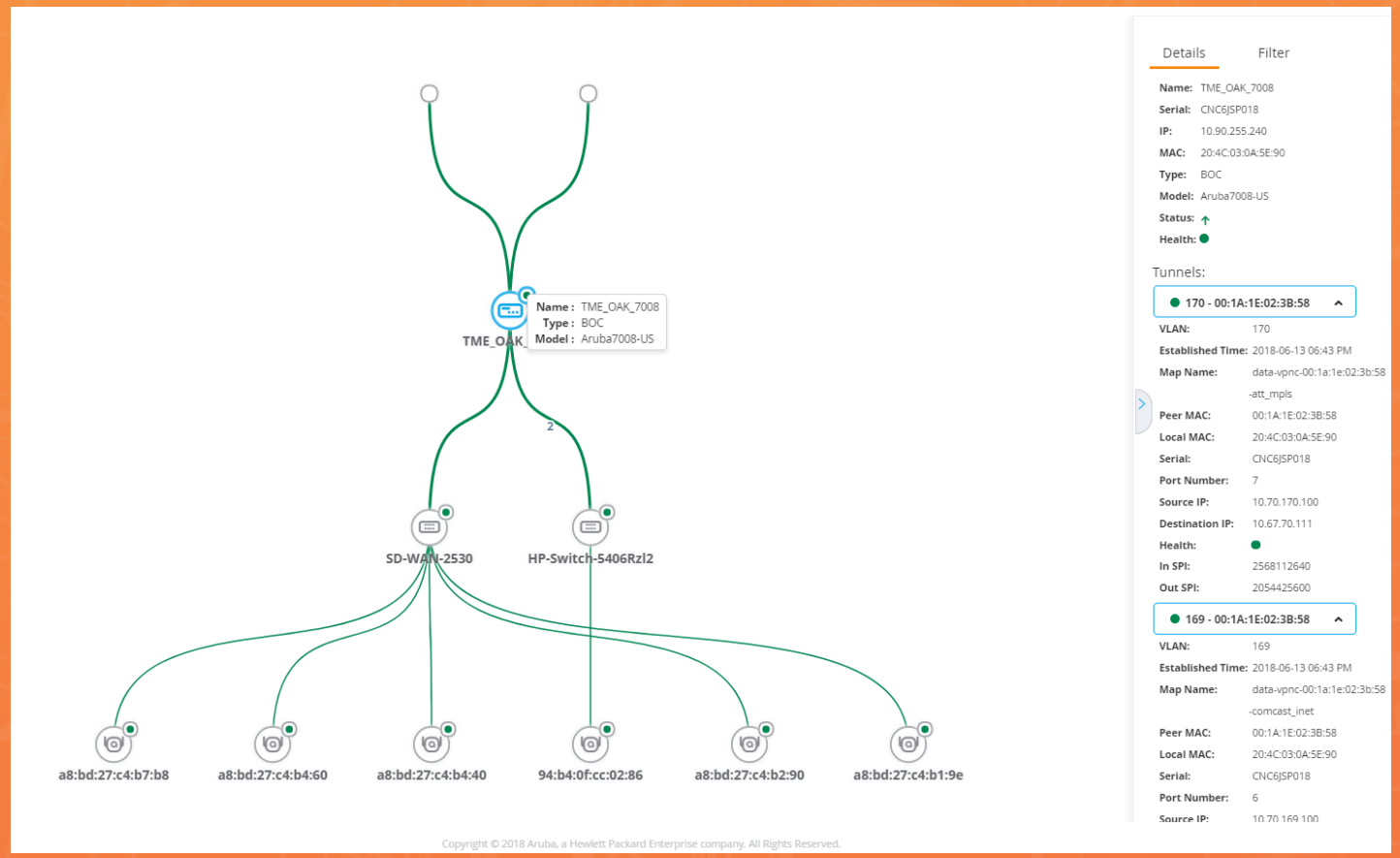
RF Health – Channel Utilization and Noise Floor

Health Scores – Clients and Connectivity

Physical Stack monitoring



SITE TOPOLOGY & OPERATIONAL HEALTH

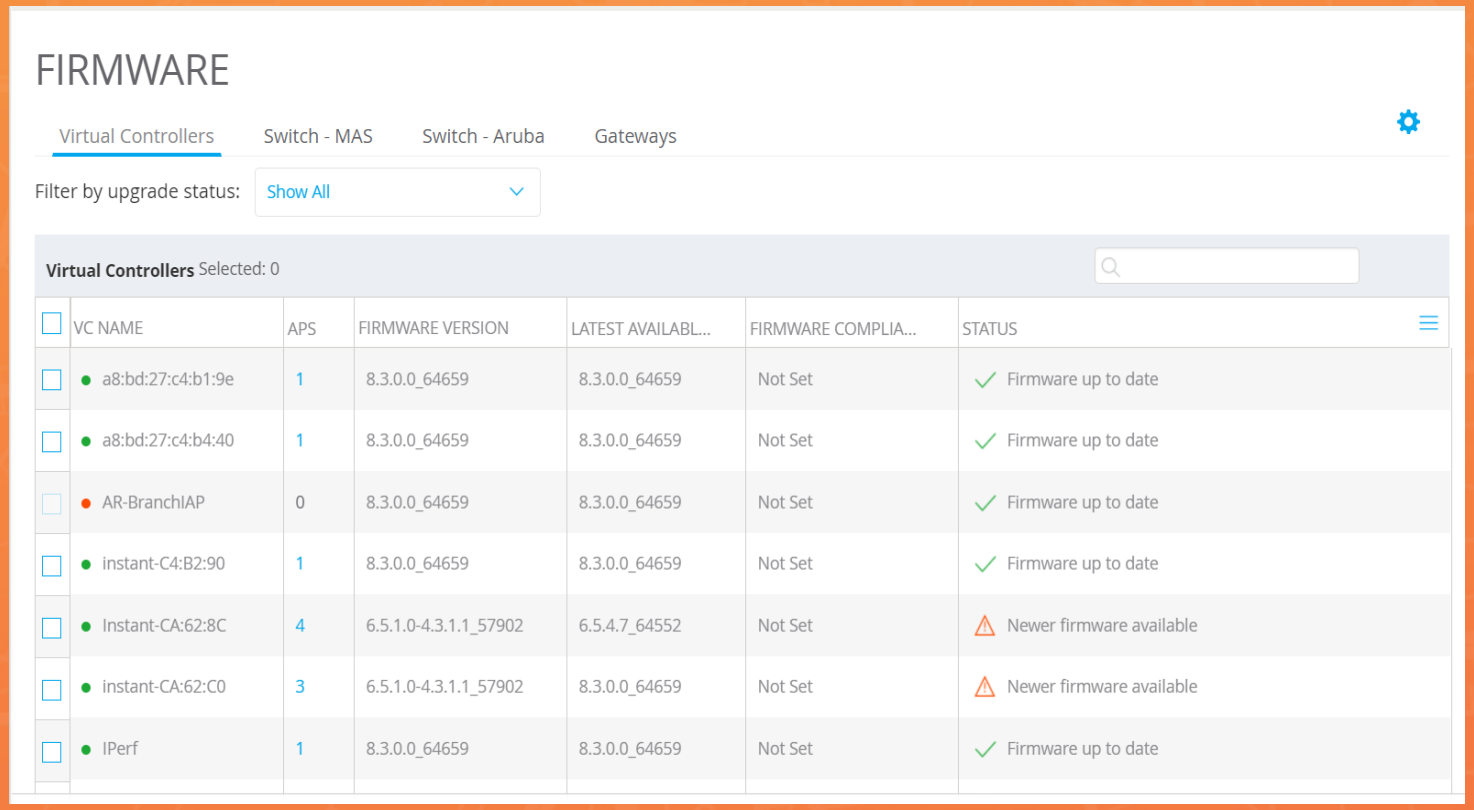


Health Status of Targeted Devices and Links

Multiple Views – Tree & Planetary with VLAN Overlays

Detailed Status of Connected Devices and Links

FIRMWARE UPGRADES & COMPLIANCE

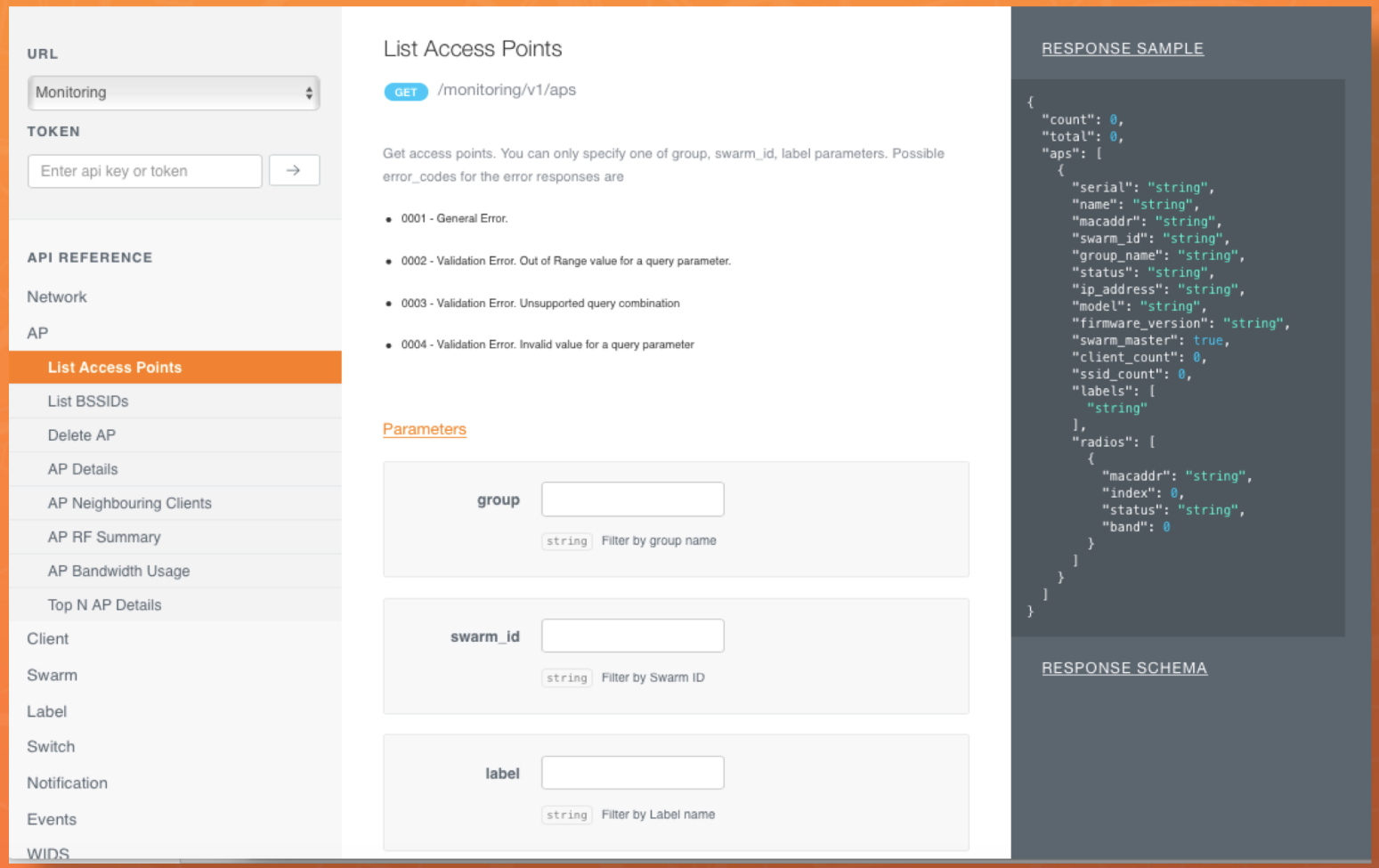


Manage Compliance Status Across Entire Infrastructure

Coverage for Wired, Wireless and WAN

Displays Current, Latest Available and Compliance Status

API BASED EXTENSIBILITY

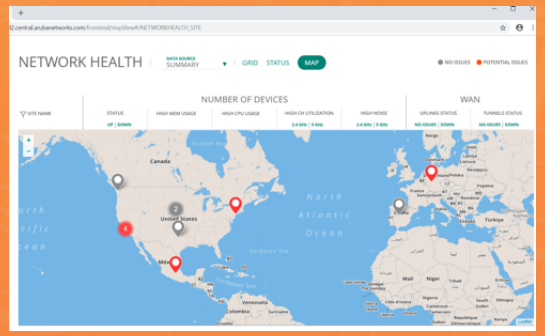


Every feature and function of UI available via API's

Complete lifecycle coverage from provisioning to logging & reporting

Secure gateway access, with OAuth authentication

ARUBA SD-BRANCH
CLOUD MANAGED FULL-STACK SOLUTION

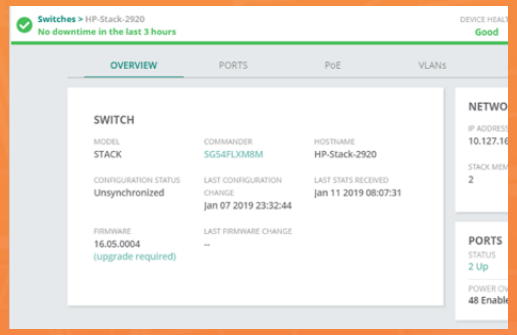


Single Pane of Glass

Zero-touch Provisioning

One touch, hierarchical config changes across thousands of sites

End-to-end visibility across Wireless, Wired, WAN



Client, Gateway, WAN Health Scores

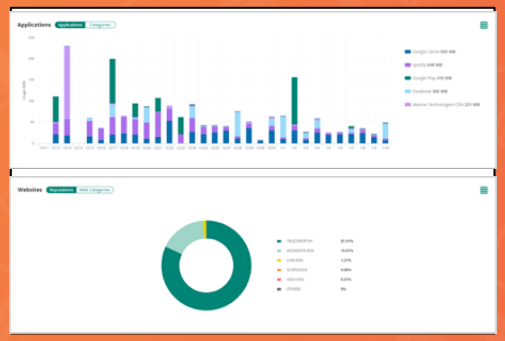
Easy troubleshooting & RCA

Site Topology, Context Based Correlation

True Enterprise SD-WAN

Dynamic Path Selection and Policy Based Routing

SLAs with fine-grained context awareness



Role-Based Policies, Application Visibility, Access Control

Layer-7 Firewall, Web Content Classification

Prioritize business critical applications for QoS

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Thank You