Aruba 8400 Switch Series

For Game Changing Business Agility

Customer presentation
June 2017

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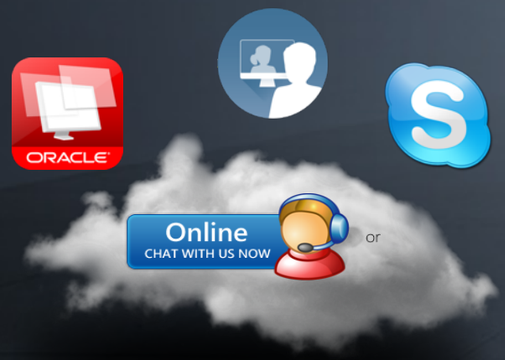
LINE OF BUSINESS TECHNOLOGY ADOPTION IMPACTS ON IT

MOBILE AND CLOUD

More business and mobile apps are business critical, prioritization and segmentation required



IOT

Growth in connections, different protocols, new traffic patterns, more exposure

DATA

Too many data sources, integration challenges, difficult to gain insights

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OLD INFRASTRUCTURE WON'T CUT IT

PROPRIETARY	INFLEXIBLE	MONOLITHIC	HARD-CODED	MANUAL

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MODERN DESIGN PHILOSOPHY:
ARUBA'S HERITAGE AND VISION

BORN IN THE MOBILE-CLOUD AND IOT ERA

SOFTWARE-DEFINED, API-FIRST

OPEN, MULTI-VENDOR

SECURITY DRIVEN

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EXTENDING THE MOBILE FIRST ARCHITECTURE TO AGGREGATION AND CORE

Aruba 8400

Optimized form factor and cost, carrier class availability, 10/25/40/100 GbE

ArubaOS-CX

Programmable next-gen OS for switching, with massive Open Source leverage, and analytics to automate troubleshooting

Network Analytics Engine

Tightly integrated to policy management, analytics and management services

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GAME CHANGING INNOVATION
MODERNIZING CAMPUS CORE AND AGGREGATION

Aruba 8400 and ArubaOS-CX

ArubaOS-CX: next-gen OS with open source leverage and API-centric

Network Analytics Engine

Programmability for simple automation and integration

19.2 Tbps system with high speed, high density interfaces, carrier-class HA

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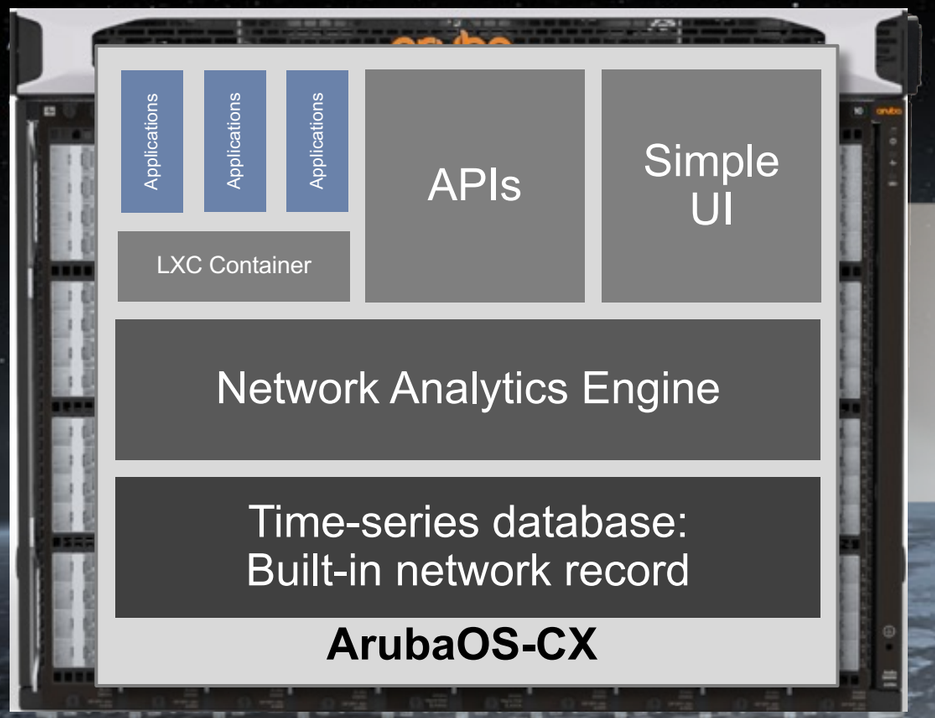
ARUBAOS-CX MEETS THE CHALLENGE WITH INNOVATION



- Insights
- Programmability
- Manageability
- Usability
- Performance

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MODERN NETWORK FOR DIGITAL BUSINESS

Built for the Network Operator with Evolving Autonomy

Sensors

Integrated w/other sensors for maximum intelligence

Assurance

Network and application assurance w/ rules based monitoring and correlation with network changes

Robust Platform

High performance carrier class system

Insights and Visibility

Real time visibility. Historic visibility with time series database

Micro Services Delivery and Integration with Systems

Automated connectivity with other management, security and workflow systems

Automation based on Policy

Powerful, yet simple tools to automate all network operator functions

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TROUBLESHOOTING BUSINESS APPS

BEFORE

Manual step-by-step "show commands"

Result: needle in a haystack investigation

AFTER

Policy-based active monitoring, automatic correlation to events, integrated into ClearPass, AirWave, and Central for easy closed loop remediation and management

Results: preventive and faster resolution

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VISIBILITY INTO IOT

BEFORE

Slow, manual export or mirror data to off-box tools

Results: delayed or fuzzy visibility

AFTER

On-box, real-time and historical data, filtered by rules, integrated into AirWave, Niara, and ClearPass for security, management, and enforcement

Result: instant visibility to “things” correlated with their behaviors for more control and insights

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DIFFICULT TO GAIN INSIGHTS

BEFORE

Manually configured data integrations, large, unfiltered data sets

Result: latency in extracting and processing network data, unused data sitting in data lakes

AFTER

Rules-based live streaming of data, granular and segmented telemetry, integrated into Clarity, Niara, and Rasa for comprehensive analytics

Result: less to analyze, quality of info, faster insights

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DEALING WITH FRAGILE NETWORKS

BEFORE

Closed systems, hard-coded configs, broken integrations, untested config changes

Result: high error rate, frequent breakages, hard to roll back

AFTER

Easy integration via rest-based APIs, maintain integration thru changes, test/verify configs in virtualized environment, easy rollback, closed loop management with Airwave and Central

Result: reduce risk of downtime and performance issues

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GAME CHANGING NETWORK AGILITY OPERATING THROUGH CHANGE AND COMPLEXITY

Faster and Advanced Visibility

On-box, time series database for event and correlation history

Real-time access to network insights

Faster Time to Detect, Diagnose, and Resolve

Rules-based, real-time monitoring and notifications

Intelligent notifications with automatic correlation to config changes

Easier Automation and Integration

Business policy-based automation to simplify network functions

Easily programmable with modern tools and languages (e.g. Python)

Improved Network Assurance

Carrier-grade reliability to support growing traffic demands

Eliminate bottlenecks with multi-terabit performance and high speed, high port density

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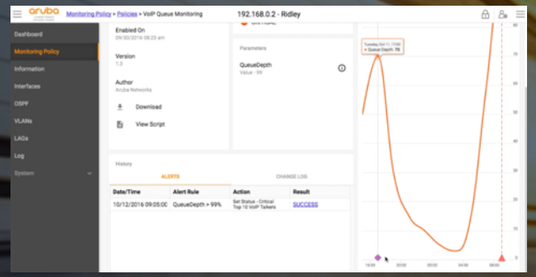
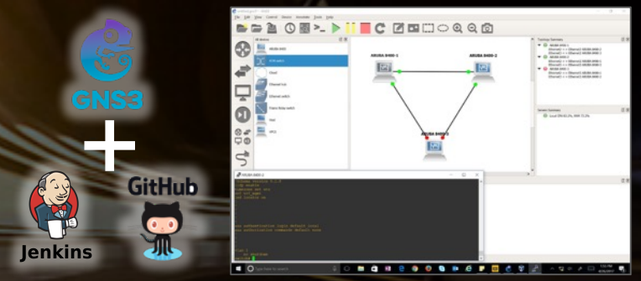
BEYOND NETWORK ASSURANCE TO NEW BUSINESS VALUE

Faster Network, Application, and Security Insights

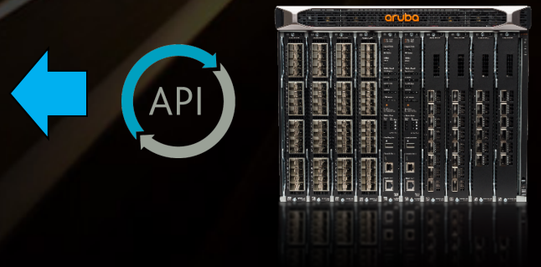


Automated Workflows and Integrations



Simple Programmability and Performance Capacity for Growth

3rd Party Tools



Aruba Mobile First Platform

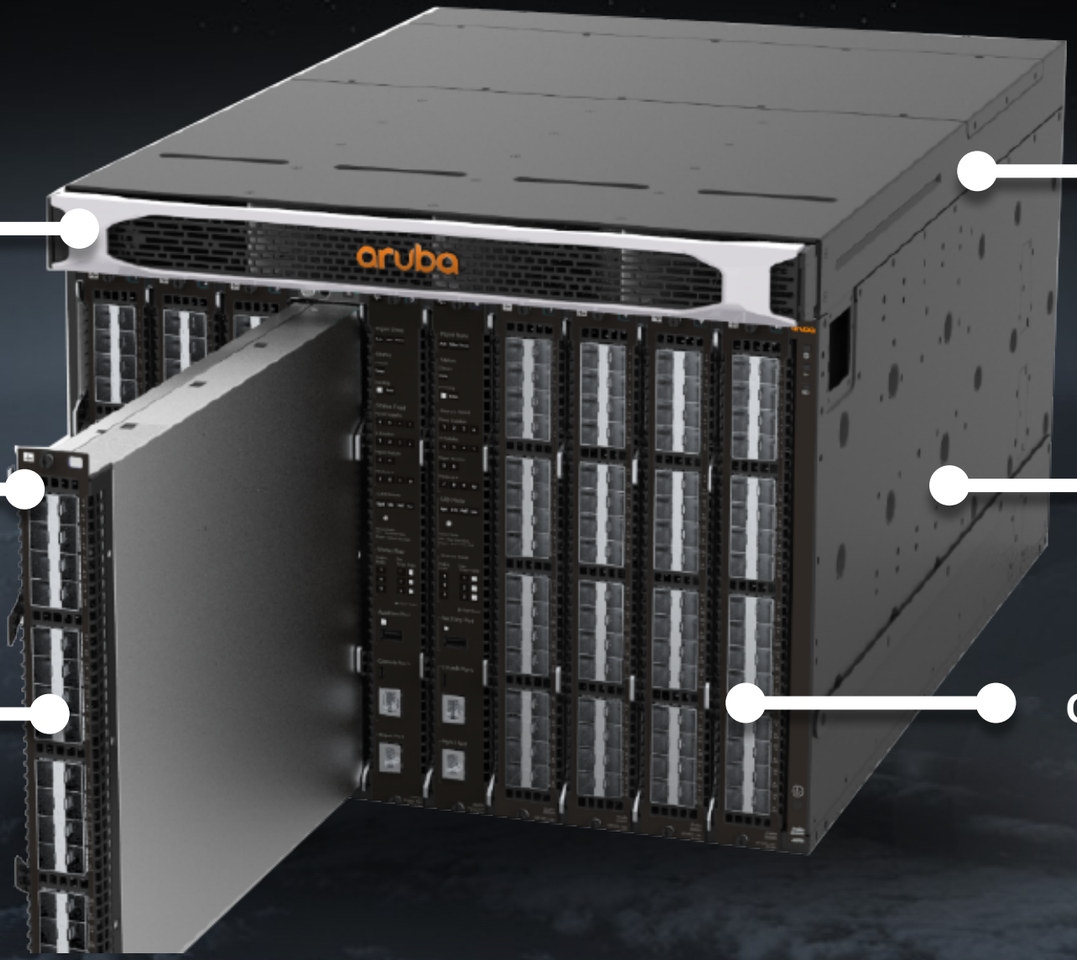
ARUBA 8400 SWITCH SERIES

High performance 19.2Tbps switching w/ up to 1.2Tbps per slot

High speed connection

32-port 10GbE w/ MACsec
8-port 40GbE module
6-port 40/100G module

Convenient bundles simplify ordering



Dual redundant management modules for hitless failover

OOBM, console management ports

Status LEDs for fans, power supplies and modules

Redundant Power supplies

N+N for hot swappable, redundant power supplies

Energy efficient 80 Plus Gold certification

Compact 8 slot chassis (8U)

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ARUBA 8400 SWITCH SERIES

Redundant Fabric for high speed, high performance networking	Redundant management for hitless failover	Multi-Chassis LAG for High Availability	Advanced Layer 3 with industry standard MACsec	High hardware scale, including full Internet routing	High speed, line rate 10/40/100 GbE
On premise management with AirWave support	N+N redundant, hot swappable power supplies	Up to 512 10GbE, 128 40GbE and 96 100GbE with VSF	REST for distributed or centralized orchestration	Database-driven OS architecture for HA, fault tolerance and easy rollback	Virtual Switching Framework (VSF) with 2-chassis

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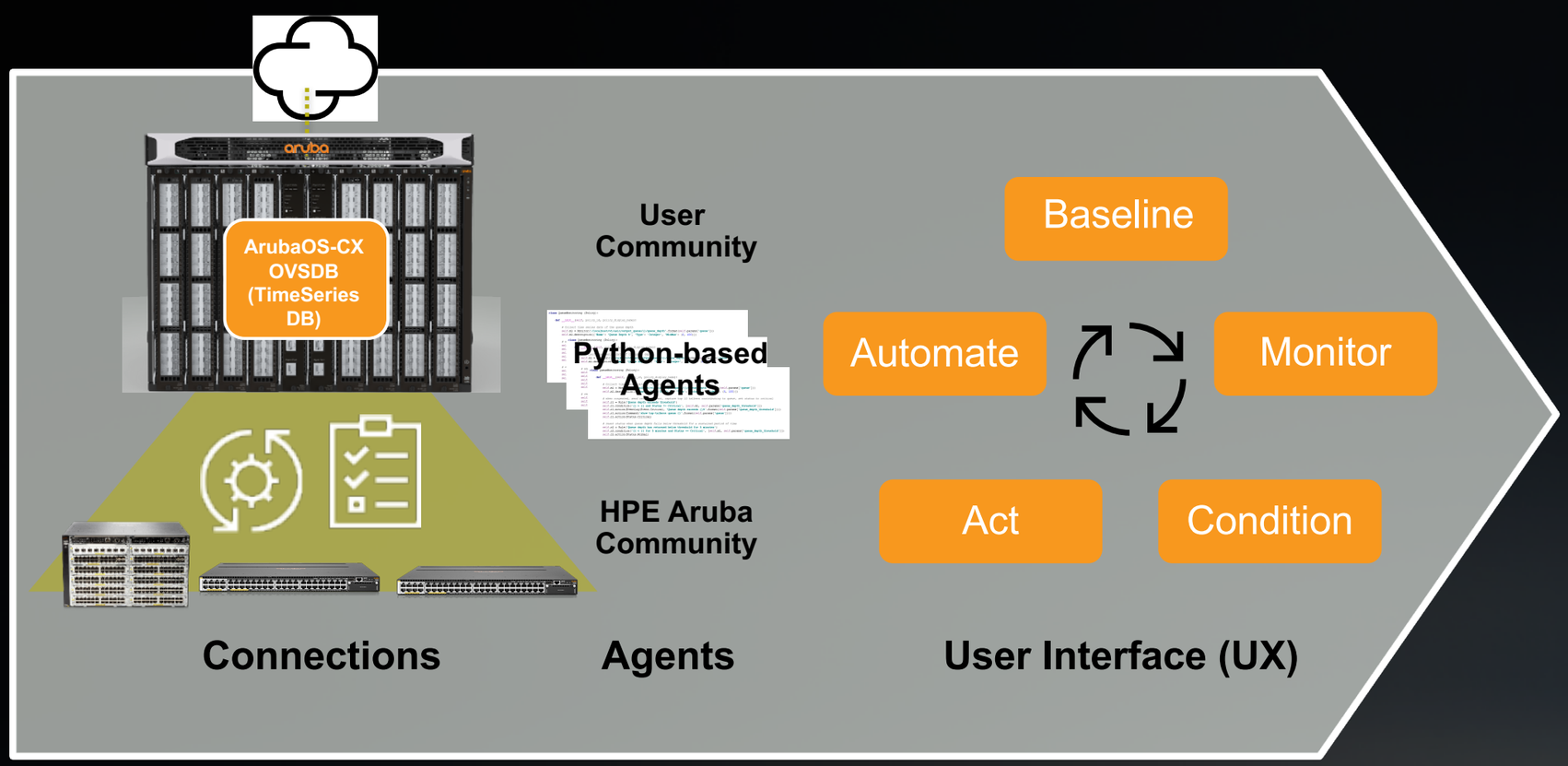
ARUBA NETWORK ANALYTICS ENGINE
AI FOR NETWORKING



Mobile First Infrastructure

Aruba Network Analytics Engine

Solution

(*) AirWave support: requires future planned software update to AirWave

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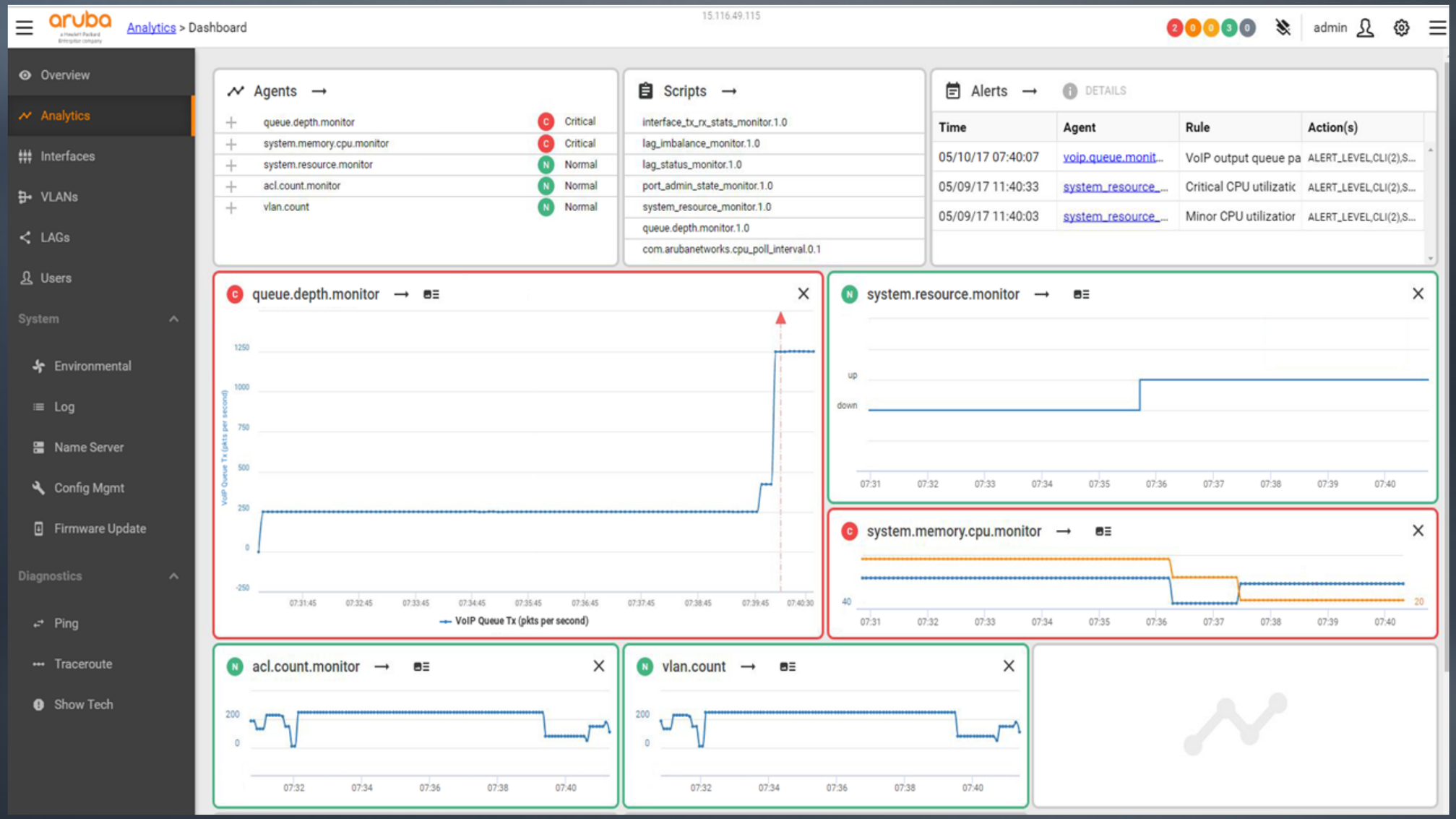
ARUBA NETWORK ANALYTICS ENGINE AT WORK



MONITOR POLICY ACCESSIBILITY

Easy to Access

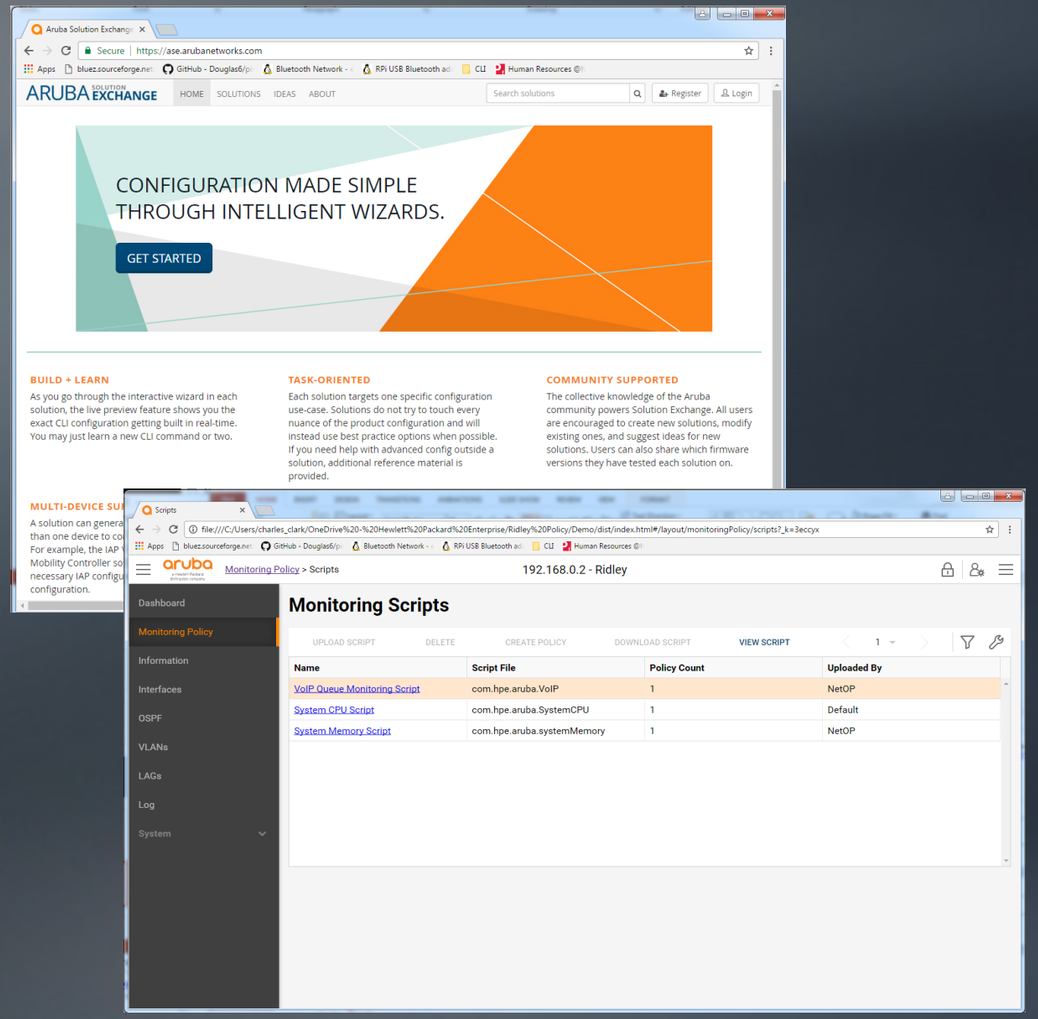
- Aruba Solution Exchange hub for policies
- Links to useful resources, tutorials and help
- Monitoring Policies pre-loaded on 8400

Easy to Use

- Users can modify existing Monitor Policy scripts.
- Switch GUI to upload scripts and activate policies; pre-loaded & pre-activated.
- REST interface to also manage scripts and policies

Ramping Up

- Submit requests for scripts like feature requests in the ramp up period.
- Training tools



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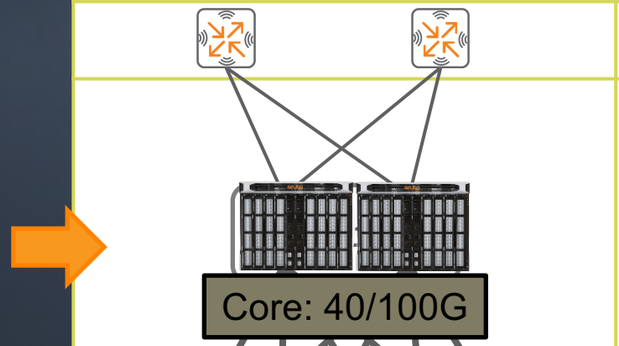
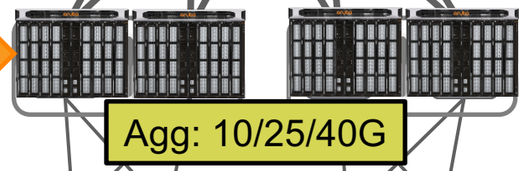
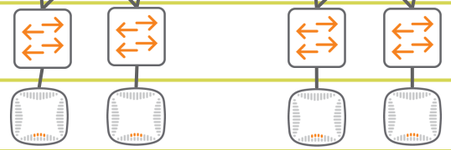
DEPLOYING THE ARUBA 8400: CAMPUS L3 CORE AND AGGREGATION

Network Component / Layer		Network Hardware	Network Protocols
AIRWAVE NETWORK MANAGEMENT, CLEARPASS ACCESS MANAGEMENT	Network Control Plane	AIRWAVE NETWORK MANAGEMENT, CLEARPASS ACCESS MANAGEMENT	
	Controller	Aruba Mobility Controller	
	Core Solution Building	ARP > 128K (up to 512K) IPv4,v6 > 256K (up to 1M), 64K ACLs > 64K Multicast > 64K 3-4 Buildings (6-8 Agg Switches)	OSPF, BGP (Internet), MLAG, ACL (policy routing), et al
	Aggregation Solution 2-4 ports/LAG	ARP > 64K (128K LPV) IPv4,v6 > 128K, 32K ACLs > 64K (256K) 24-48 Access (96-192x10G)	OSPF, MLAG, VRF, ACLs (user policy aggregation), et al
	Access Switch	Aruba 5400R, 3810, 2930	
	AP	Aruba AP 320, AP 330	

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“In K-12 districts like ours, greater network automation and programmability means less need for us to devote time and valuable resources to maintenance and management. With the new Aruba 8400 core switches’ monitoring and analytics capabilities, we can automate troubleshooting to resolve issues quickly and ensure a reliable, secure network experience for our users. The Aruba 8400 allows us to reduce manual ‘touches’, so our IT team can focus on other critical activities.”

Thomas Brawley, Director of Technology Services for Tomball Independent School District

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AVAILABILITY

Aruba 8400, ArubaOS-CX

CQ3 2017

Chassis configurable with management, fabric, interface, fan and power modules

AUTOMATED AND INTELLIGENT NETWORKING
FULLY INTEGRATED ARCHITECTURE

Faster detection, diagnosis, and resolution

Easy automation, control, integration

Unmatched network assurance

Immediate visibility into what's happening

Policy Management

User and Entity Behavioral Analytics

Cloud Networking

Network Management

Access

Location Analytics

Core

Network Controls

Aruba 8400

Location-Based Services

API API API API API API

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Backup

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ARUBA 8400 ORDERING INFORMATION

GA DATE: August 7, 2017		
Product Number	**CPL Product Name**	**Product Name**
	Modules	
JL363A	Aruba 8400X 32p 10G SFP/SFP+ Msec Mod	Aruba 8400X 32-port 10GbE SFP/SFP+ with MACsec Advanced Module
JL365A	Aruba 8400X 8p 40G QSFP+ Adv Mod	Aruba 8400X 8-port 40GbE QSFP+ Advanced Module
JL366A	Aruba 8400X 6p 40G/100G QSFP28 Adv Mod	Aruba 8400X 6-port 40GbE/100GbE QSFP28 Advanced Module
JL367A	Aruba 8400X 7.2Tbps Fab Mod	Aruba 8400X 7.2Tbps Fabric Module
JL368A	Aruba 8400 Mgmt Mod	Aruba 8400 Management Module
	Accessories	
JL369A	Aruba X731 Fan Tray	Aruba X731 Fan Tray
JL370A	Aruba 8400 Fan for X731 Fan Tray	Aruba 8400 Fan for X731 Fan Tray
JL371A	Aruba 8400 1 Fan Tray and 6 Fans Bundle	Aruba 8400 1 Fan Tray and 6 Fans Bundle
JL372A	Aruba X382 54VDC 2750W AC PS	Aruba X382 54VDC 2750W AC Power Supply
JL373A	Aruba X464 4-post Rack Kit	Aruba X464 4-post Rack Rail Kit
JL374A	Aruba X462 2-post Rack Kit	Aruba X462 2-post Rack Rail Kit
	Bundles	
JL375A	Aruba 8400 Base Cbl Mgr X462 Bndl	Aruba 8400 8-slot Chassis/3xFan Trays/18xFans/Cable Manager/X462 Bundle
JL376A	Aruba 8400 2 MM 3 PS 3 8400X FM 1 32P 1 6P	Includes a chassis, 1x Management Module, 3x PS, 2x 8400X Fabric Modules, 1x 32-port 10G Module, and 1x 6-port 40/100G Module

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HOW TO ORDER THE ARUBA 8400

Select JL376A. This Aruba 8400 Bundle includes a chassis, 1x Management Module, 3x PS, 3x 8400X Fabric Modules, 1x 32-port 10G Module, and 1x 6-port 40/100G Module

1. **Add a Management Module (JL368A) when needing redundant management**
2. **Select Line Modules based on deployment**

Product Number	CPL Product Name	Product Name
JL376A	Aruba 8400 2 MM 3 PS 3 8400X FM	Includes a chassis, 1x Management Module, 3x PS, 3x 8400X Fabric Modules, 1x 32-port 10G Module, and 1x 6-port 40/100G Module
	Management Modules	
JL368A	Aruba 8400 Mgmt Mod	Aruba 8400 Management Module
	Line modules	
JL363A	Aruba 8400X 32p 10G SFP/SFP+ Msec Mod	Aruba 8400X 32-port 10GbE SFP/SFP+ with MACsec Advanced Module
JL365A	Aruba 8400X 8p 40G QSFP+ Adv Mod	Aruba 8400X 8-port 40GbE QSFP+ Advanced Module
JL366A	Aruba 8400X 6p 40G/100G QSFP28 Adv Mod	Aruba 8400X 6-port 40GbE/100GbE QSFP28 Advanced Module

SOFTWARE CAPABILITIES AT LAUNCH

Feature	Details
Use Cases/ Deployment Scenarios	Basic L2, L3 Distribution & Core
L2	VLAN, MSTP, PVST, MVRP, LAG, LACP, MLAG
L3	IPv4, IPv6, Route only ports, **VRF** (8), OSPFv2, OSPFv3, BGP, ECMP, VRRP, GRE. Route scale: 256k hosts, 128k IPv4 routes (64k IPv6)
Visibility & Analytics	**Network Analytics Engine** framework Full REST API support
Multicast	PIM-SM, IGMP
HA / clustering	Non-stop forwarding on MM, fabric failover,ISSU for compatible versions
QoS	VOQ; SP, WRED, CoPP
Management	Full REST, CLI, WebUI, read only SNMP. Airwave*, SNMP, AAA, DHCP, NTP, ssh,
Security	802.1X-2010, AAA servers (RADIUS, TACACS+), AAA services (Authentication, Authorization) , Trusted Infrastructure
Policy	Port-based ACL, Ingress, Egress ACL, Policy-map for QoS and mirroring, Deny Logging

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ARUBA CAMPUS SWITCH PORTFOLIO

Core

Aggregation

Access

Aruba 8400

Aruba 3810

Aruba 5400R

Aruba 2930F

Aruba 2930M

Aruba 2540

Aruba 2530

MORE DEMANDS ON IT AND THE NETWORK

More Pressure, Risk, Complexity

ORACLE®

"It's the end of the quarter and the ERP isn't responding fast enough for me to pull reports and close the books on time."-- **Finance**

"I have no idea what's on the network and don't know my risk exposure. We need to segment user and systems traffic from IoT traffic and know that it's secure. I can't drive compliance because I can't get enough data."-- **CISO**

Skype for Business

"My SfB is dropping calls. I need a better way to collaborate with dev teams at other sites."-- **Development**

"The IT operations budget is too high…too much spent on running the engine room. Seems IT isn't innovating enough."-- **CFO**

or

"Our agents need to be more responsive to live customer chats online. There's too much delay."—**VP of Customer Support**

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