

April 22, 2020 - Aruba Partner Day

FY20 Aruba Korea NPI Updates

JungMoo Park
Aruba Korea Category Manager

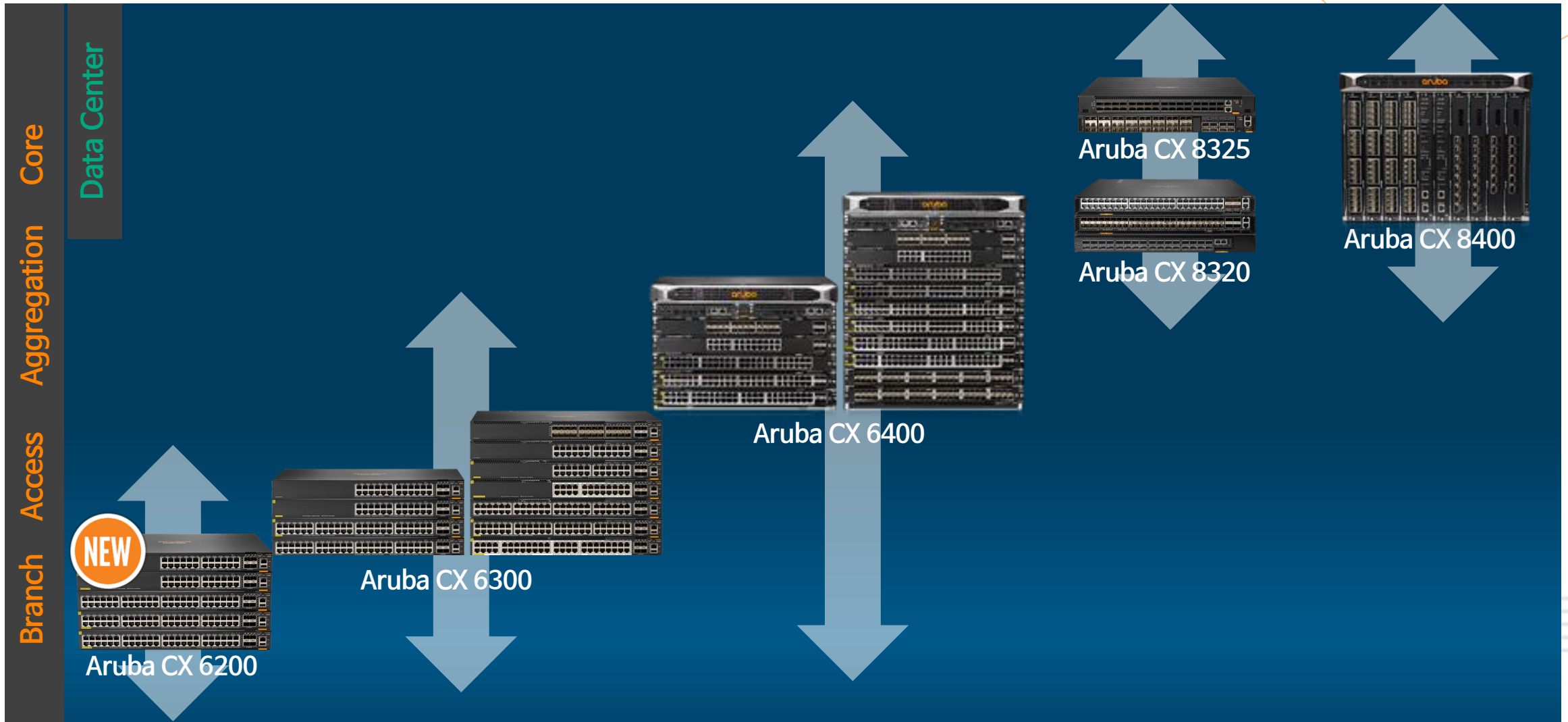
aruba

a Hewlett Packard
Enterprise company

ARUBA CX Switching

Access Switch - CX 6200 series

ARUBA CX SWITCHING PORTFOLIO



Resiliency, Scale, Performance

ARUBA CX 6200

중소규모 기업 및 브랜치용 차세대 액세스 스위치



8 member
Stacking

740W
30W PoE

단순한 배포 및 설치

매니지먼트, 구성, 모니터링, 자동화를 위한 클라우드 관리형 또는 on-premises 형태 관리 선택

더 빨라진 트러블슈팅

내장된 분석 엔진을 통해 엔드유저 및 IoT 연결된 Edge단의 문제를 빠르게 분석 및 해결

유연한 성장

하나의 스택으로 최대 384포트까지 구성 PoE 및 10GbE 연결 구성까지 옵션으로 선택

IoT 대비 스위치

사용자와 단말의 정책을 자동화하여 간단하고 안전하게 Micro Segmentation

Aruba CX 6200 Series Switches

Coming soon!

NEW

캠퍼스와 브랜치, 중소기업을 위한 스택킹 가능 액세스 스위치

– 하드웨어

– 모델

- 24p w/ 4x SFP/SFP+
- 24p 370W PoE w/ 4x SFP/SFP+
- 48p w/ 4x SFP/SFP+
- 48p 370W PoE w/ 4x SFP/SFP+
- 48p 740W PoE w/ 4x SFP/SFP+

– 기능

- 고정 1/10G 업 링크
- 내장 파워 서플라이 및 고정 Fan
- 최대 740W의 PoE 용량, IEEE 802.3at (포트당 최대 30W PoE)

– 소프트웨어

- AOS-CX Layer 3 기능
- 최대 8대까지 VSF 스택킹
- Static, RIP**, 그리고 Access OSPF
- Dynamic Segmentation
- NetEdit, NAE, CX Mobile App
- Aruba Central support**



SKU	Description
JL724A	Aruba 6200F 24G 4SFP+ Switch
JL725A	Aruba 6200F 24G Class4 PoE 4SFP+ 370W Switch
JL726A	Aruba 6200F 48G 4SFP+ Switch
JL727A	Aruba 6200F 48G Class4 PoE 4SFP+ 370W Switch
JL728A	Aruba 6200F 48G Class4 PoE 4SFP+ 740W Switch



**Support after GA

ARUBA CX 6200 UPGRADE BENEFITS

기능		Legacy HP 2920	Existing Aruba 2930F	Aruba CX 6200	업그레이드 이점
Platform	배포 모델	Access	Access	Access	엣지 액세스부터 데이터센터까지 단일 운영체제 모델로 간소화
	운영 체제	AOS-Switch	AOS-Switch	클라우드 네이티브 AOS-CX	
	마이크로서비스 기반 아키텍처	No	No	Yes	
	ASIC	Aruba Gen5	Aruba Gen6	Aruba Gen7 with VOQ	
	Network State & Time Series Database	No	No	Yes	
Connectivity	10G ports	최대 4	4	4	엔터프라이즈 수준의 액세스
	Stacking	Backplane (4)	VSF (8)	VSF (8)	
	Always-on PoE	No	No	Yes	
Segmentation	Aruba Dynamic Segmentation	Yes	Yes	Yes	통합 역할기반 보안
Analytics and Automation	완전한 프로그래밍	No	No	Complete REST APIs	Enhanced visibility and analytics at edge access for simplified operations and troubleshooting
	분산처리 분석 시스템	No	No	스위치 내 NAE 분석 기능 내장	
	고급 구성 관리	No	No	NetEdit	
	인스톨 및 스택킹 간소화	No	No	CX Mobile App	
Licensing and Warranty	라이선스 또는 구독 모델	별도의 소프트웨어 라이선스 또는 서브스크립션 불필요			별도의 숨겨진 TCO 없음
	Warranty	Limited Lifetime Warranty - https://www.arubanetworks.com/assets/support/networking-warranty-summary.pdf			



ARUBA CX 6200 VS 6300 COMPARISON

Feature		Aruba CX 6200F	Aruba CX 6300F	Aruba CX 6300M
Platform	배포 모델	Access	Access Aggregation	Access Aggregation and Core
Network services	라우팅	Layer 3, OSPF (single area) static routing, IGMP/MLD Snooping	Advanced Layer 2/3 Route-only Ports, L3 lags, OSPF, BGP + EVPN, PBR, PIM-SM, PIM-DM	Advanced Layer 2/3 Route-only Ports, L3 lags, OSPF, BGP + EVPN, PBR, PIM-SM, PIM-DM
	확장성	VLAN: 2K	VLAN: 4K	VLAN: 4K
Scale Performance Flexibility	스위치 용량	176 Gbps	880 Gbps	880 Gbps
	Smart Rate 멀티기가비트	No	No	48
	10G 포트	4	4	28
	25G/50G 포트	No	4 1/10/25/50 combo ports	4 1/10/25/50 combo ports
	최대 PoE	740W	720W	2880W
	고용량 PoE (60W)	No	No	Yes
High Availability	핫스왑 PSU + fan	No	No	Yes
	스태킹 (VSF)	(8)	(10)	(10)
	Always-on PoE 및 Quick PoE	Yes	Yes	Yes
Security with Segmentation	Aruba Dynamic Segmentation	Yes	Yes	Yes
	VXLAN	No	with MP-BGP EVPN	with MP-BGP EVPN
Analytics and Automation	완전 프로그래밍	Complete REST APIs	Complete REST APIs	Complete REST APIs
	분산 분석시스템	NAE	NAE	NAE
	고급 구성 관리	NetEdit	NetEdit	NetEdit
Licensing and Warranty	라이선스 및 서브크립션	별도의 소프트웨어 라이선스 또는 서브스크립션 불필요		
	Warranty	Limited Lifetime Warranty - https://www.arubanetworks.com/assets/support/networking-warranty-summary.pdf		

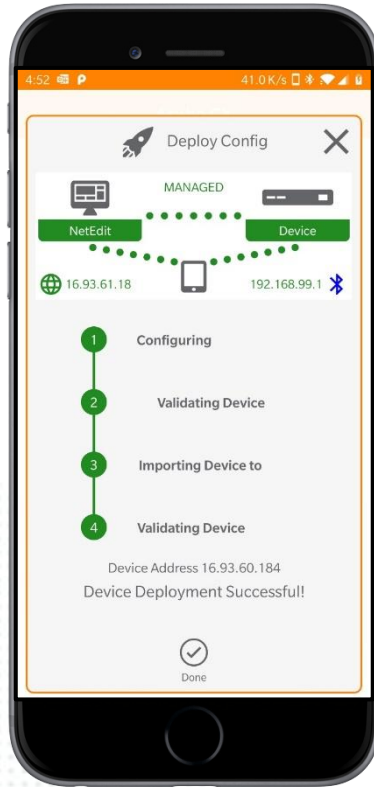


ARUBA CX 6200 Competitive Comparison

Feature	Aruba 2930F	Aruba 6200F	Cisco 9200L	Extreme X440-G2	Huawei E5720-SI
Routing	Static, RIP routing, OSPF (single area), PIM-SM	Static, RIP**, OSPF (single area), Dynamic Segmentation (including SW-SW)	Essentials: <ul style="list-style-type: none"> Static & RIP routing, EIGRP Stub, OSPF - 1000 routes, PBR, PIM Advantage: <ul style="list-style-type: none"> EIGRP, IS-IS, OSPF 	Base SW: <ul style="list-style-type: none"> Static, RIP Advance SW license: <ul style="list-style-type: none"> OSPF 	Static route, RIPv1/2, RIPng, OSPF, OSPFv3, ECMP, IS-IS, IS-ISv6, BGP, BGP4+, VRRP, and VRRP6
Stacking	VSF 스택킹, 최대 8대	VSF 스택킹, 최대 8대	Backplane 스택킹, 최대 8 대	Backplane 스택킹, 최대 8대	Backplane 스택킹, 최대 9대
Switch Variants	고정형	고정형	고정 업링크 및 모듈형 PSUs	고정형	고정 업링크 및 고정/모듈형 PSU
Ports and HW Features	<ul style="list-style-type: none"> 8, 12, 24, 48 port Gigabit 4x SFP/SFP+ variants PoE (.af, .at) Fans (8 /12 포트 제외) 	<ul style="list-style-type: none"> 24, 48 port Gigabit, 4x SFP+ PoE (.af, .at) 고정 Fan 	<ul style="list-style-type: none"> 24, 48포트 Gigabit 4x SFP & SFP+ 24, 48 port 멀티기가 w/ 4x SFP+ 및 2x SFP28 PoE (.af, .at) 고정 Fan MACsec 128 	<ul style="list-style-type: none"> 12, 24, 48 port Gigabit 4x SFP (SFP+ with license) PoE (.af, .at) Fans 	<ul style="list-style-type: none"> 24, 48 port Gigabit 4x 1G/SFP combo 4x SFP/SFP+ combo 4x SFP+ PoE (.af, .at) Fans
Power Systems	125W(8포트), 139W(12 포트), 370W 또는 740W PoE 전원	370W 또는 740W PoE 전원	최대 1440W PoE 전원	최대 740W PoE 전원	<ul style="list-style-type: none"> 고정: 최대 740W PoE 모듈: 최대 1440W PoE
Console Ports	RJ-45 & micro-USB	USB-C, 블루투스	RJ-45, mini USB	RJ-45	RJ-45, mini USB
Network Management	Activate/Central, AirWave 8, ClearPass, IMC	NAE, NetEdit, CX Mobile App, Central**	Cisco DNA Center	ExtremeManagement, ExtremeControl, Extreme Cloud, ExtremeLocation	Agile Controller, eSight/eDesk
Warranty	Limited Lifetime	Limited Lifetime Warranty (5 years after product ES)	Enhanced Limited Lifetime (5 years after product ES)	Lifetime (5 years after product ES)	Limited Lifetime (3 years)

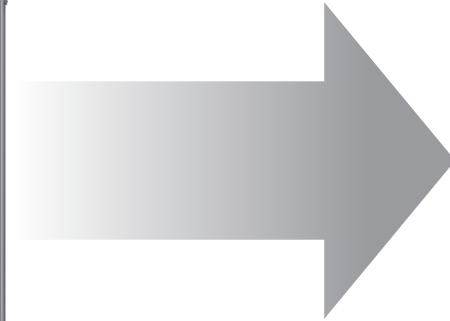
AOS-CX Mobile App and NetEdit2.0

Modernizing the Operator experience



CX-Mobile App

Quickly deploy provision and update switches



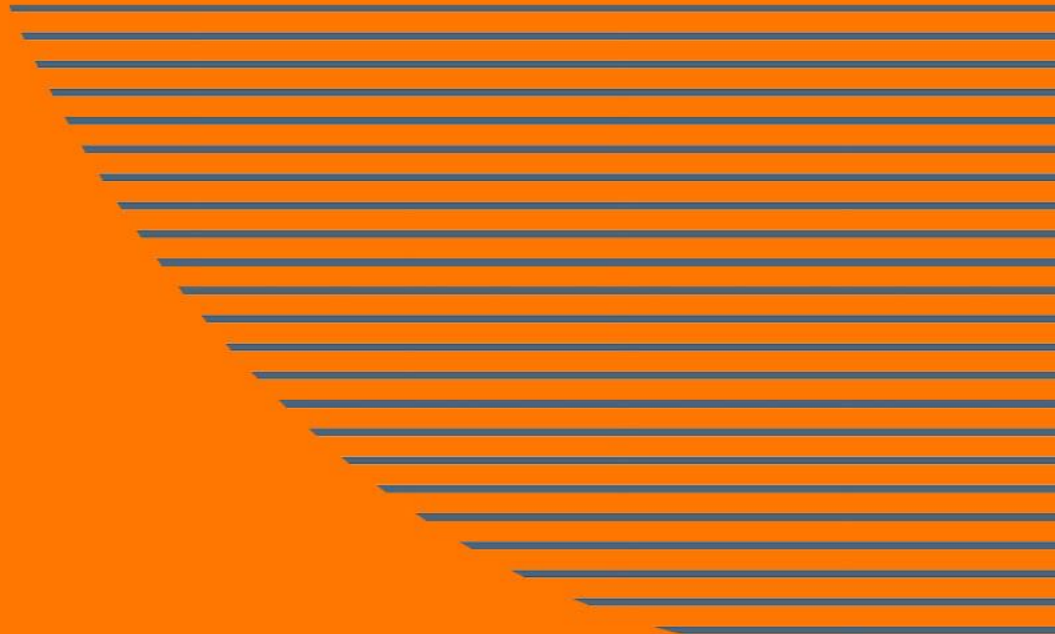
NetEdit 2.0

Modern operator experience with actionable insights



ARUBA Wi-Fi 6 Portfolio

From Indoor to Outdoor &
Remote



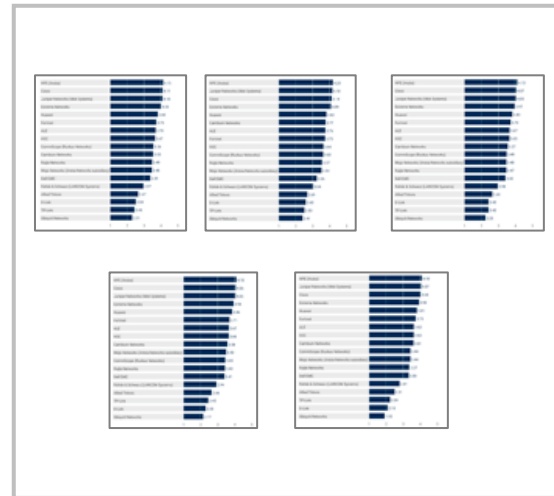
ARUBA SWEEPS INDUSTRY RANKINGS

Gartner® Magic Quadrant

Figure 1. Magic Quadrant for the Wired and Wireless LAN Access Infrastructure



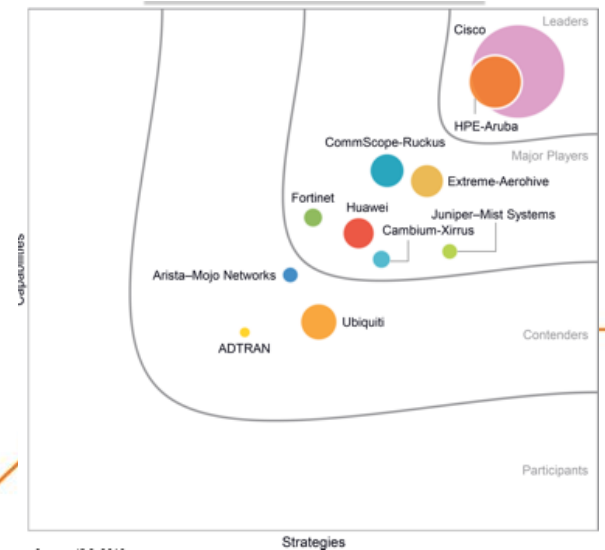
Gartner® Critical Capabilities



FORRESTER® New Wave



IDC Analyze the Future MarketScape



WI-FI 6 인증 완료된 실내용 액세스포인트 포트폴리오



ARUBA 500
SERIES

ARUBA 510
SERIES

ARUBA 530
SERIES

ARUBA 550
SERIES

AI
POWERED

SLA-GRADE
ASSURANCE

CLOUD OR
ON-PREMISES

ARUBA AIR PASS
READY



RELIABILITY

TRUST

INTEROPERABILITY



ARUBA Wi-Fi 6

리모트 및 실외용 액세스포인트 포트폴리오



500H Series
멀티기가비트
리모트
Wi-Fi 6



518 Series
멀티기가비트
산업용
Wi-Fi 6



570 Series
멀티기가비트
실외용
Wi-Fi 6



570EX Series
멀티기가비트
위험지역(방폭인증)
Coming Soon



387 Series
멀티기가비트
포인트-투-포인트
802.11ad

HAZARDOUS LOCATION AP COMING SUMMER 2020

NEW Wi-Fi 6 실외 및 산업용 액세스포인트

High performance Wi-Fi 6 Access Point for Outdoor and Ruggedize Environment
(AP-57x/AP-518)

주요 기능:

- **고 성능 및 고 밀도 Connectivity**

듀얼 라디오, 5 GHz 4x4, 2.4 GHz 2x2

2.5 Gbps 및 1 Gbps copper 업링크

802.3at POE 전원 입력

모든 WiFi6 기능 지원 (OFDMA-DL/UL, MU-MIMO-DL, BSS, Green AP)

- **심플 & 보안**

무선의 모든 트래픽을 암호화하고 보안하는 WPA3 및 Enhanced open 지원

자격증명, 암호키, 부트코드를 안전하게 저장하는 TPM 내장

역할 기반의 보안 접근 정책 적용의 Dynamic Segmentation 지원

- **Ready for IOT**

BLE5 및 802.15.4 radio (Zigbee)로 IoT 센서를 간단하게 관리

IoT센서의 배터리 수명을 늘리기 위해 IoT 단말의 sleep/wake up 타임을 조정하는 Target Wake Time (TWT)

Software

AOS8.7

WW reference List Price

AP-575/577

\$2095

AP-574

\$1695

AP-518

\$1595



AP575



AP574



AP577

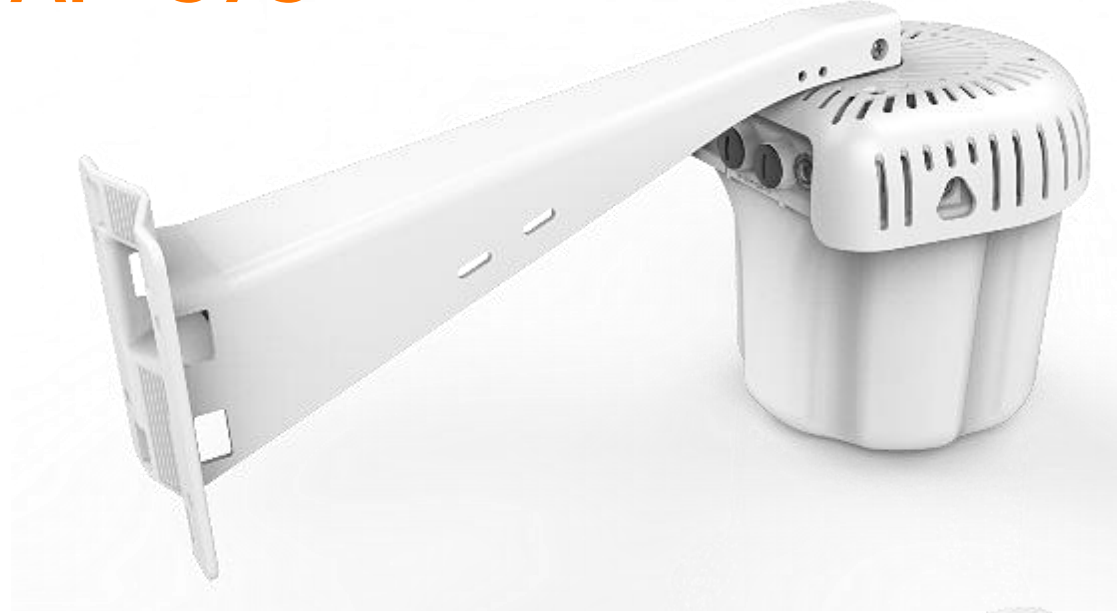


AP518

SKU	Description
R4H17A	AP-575 (RW) 802.11ax Integrated Omni Antenna Outdoor AP
R4H22A	AP-577 (RW) 802.11ax Integrated Directional Antenna Outdoor AP
R4H12A	AP-574 (RW) 802.11ax Integrated Directional Antenna Outdoor AP
R4H10A	AP-518 (RW) 802.11ax Ruggedize AP

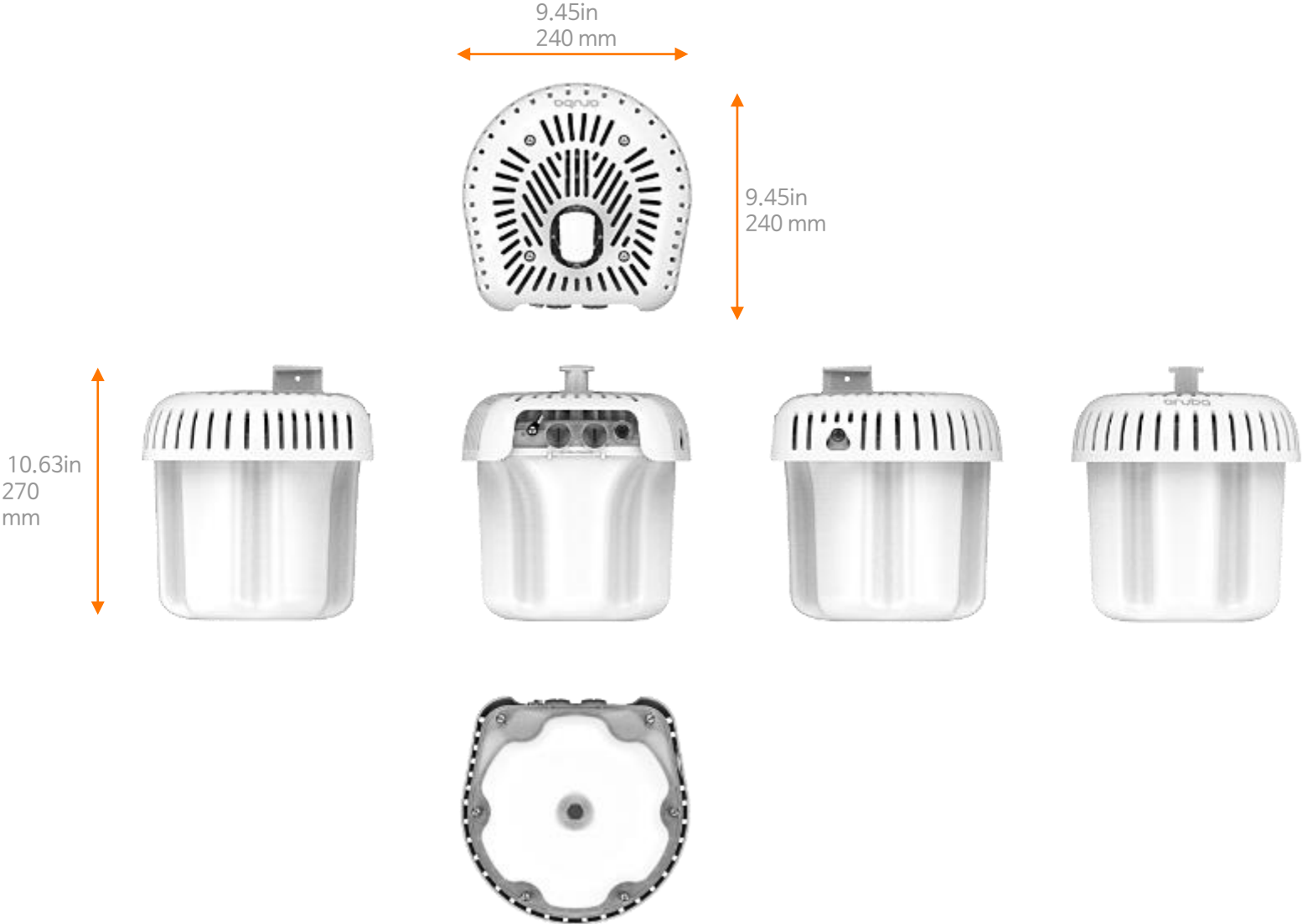


AP-575

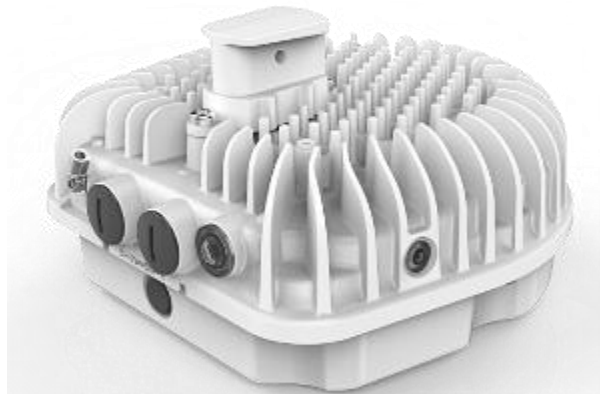
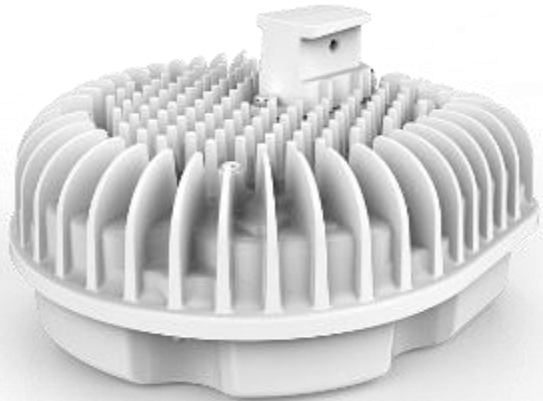


- 무선 인터페이스:
 - 5GHz: 최대 4.8Gbps (4SS/HE160)
 - 4SS/VHT160 802.11ax with OFDMA, TxBF and MU MIMO
 - 2.4GHz: 최대 575Mbps (2SS/HE40)
 - 2SS/VHT40 802.11ax with OFDMA, TxBF and MU MIMO
 - BLE 및 15.4 radio 내장
 - Meridian 위치 서비스
 - 무선 콘솔 액세스
- Integrated Omni-Directional Antennas
 - 5dBi @ 5Ghz
 - 3.4dBi @ 2.4Ghz
 - 6dBi @ BLE/Zigbee
- 물리 인터페이스:
 - 1 x 2.5 Gb 멀티기가비트 이더넷 인터페이스
 - 1 x 1 Gb 이더넷 인터페이스
 - 리셋 버튼
- 크기 및 무게
 - 240mm x 240mm x 270mm
 - 2.5kg

AP-575 - 6-sided view



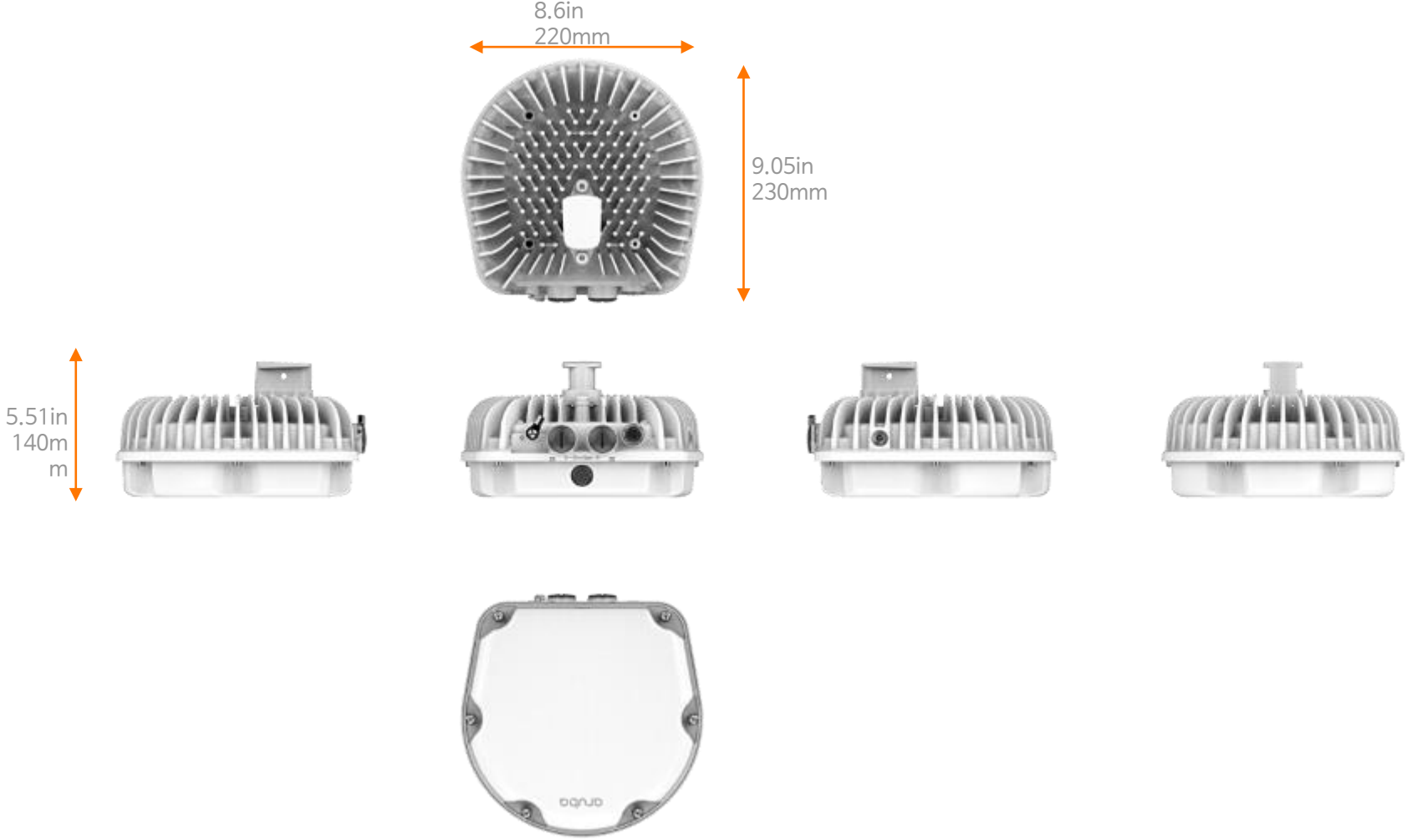
AP-577



- 무선 인터페이스:
 - 5GHz: 최대 4.8Gbps (4SS/HE160)
 - 4SS/VHT160 802.11ax with OFDMA, TxBF and MU MIMO
 - 2.4GHz: 최대 575Mbps (2SS/HE40)
 - 2SS/VHT40 802.11ax with OFDMA, TxBF and MU MIMO
 - BLE 및 15.4 radio 내장
 - Meridian 위치 서비스
 - 무선 콘솔 액세스
- Integrated Directional Antennas
 - 5.6dBi @ 5Ghz
 - 6.8dBi @ 2.4Ghz
 - 8.4dBi @ BLE/Zigbee
- 물리 인터페이스:
 - 1 x 2.5 Gb 멀티기가비트 이더넷 인터페이스
 - 1 x 1 Gb 이더넷 인터페이스
 - 리셋 버튼
- 크기 및 무게
 - 230mm x 220mm x 140mm
 - 2.1kg



AP-577 - 6-sided view



AP-574



- 무선 인터페이스:
 - 5GHz: 최대 4.8Gbps (4SS/HE160)
 - 4SS/VHT160 802.11ax with OFDMA, TxBF and MU MIMO
 - 2.4GHz: 최대 575Mbps (2SS/HE40)
 - 2SS/VHT40 802.11ax with OFDMA, TxBF and MU MIMO
 - BLE 및 15.4 radio 내장
 - Meridian 위치 서비스
 - 무선 콘솔 액세스
- Connectorized (N-female)
 - 4 x 5GHz (5G0-3)
 - 2 x 2.4GHz (2G0-1)
 - 4.2dBi @ BLE/Zigbee (integrated)
- 물리 인터페이스:
 - 1 x 2.5 Gb 멀티기가비트 이더넷 인터페이스
 - 1 x 1 Gb 이더넷 인터페이스
 - 리셋 버튼
- 크기 및 무게
 - 240mm x 240mm x 190mm
 - 2.7kg

AP-574 - 6-sided view

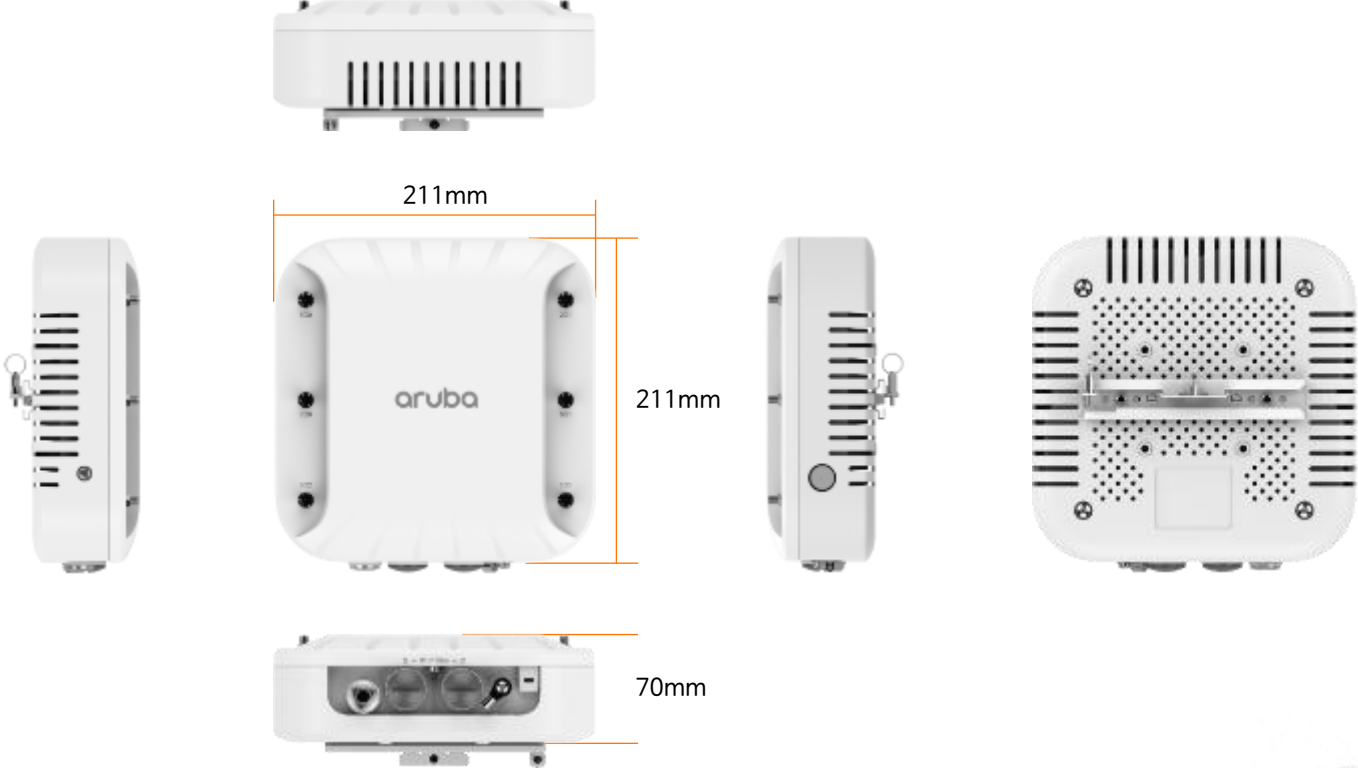


AP-518



- 무선 인터페이스:
 - 5GHz: 최대 4.8Gbps (4SS/HE160)
 - 4SS/VHT160 802.11ax with OFDMA, TxBF and MU MIMO
 - 2.4GHz: 최대 575Mbps (2SS/HE40)
 - 2SS/VHT40 802.11ax with OFDMA, TxBF and MU MIMO
 - BLE 및 15.4 radio 내장
 - Meridian 위치 서비스
 - 무선 콘솔 액세스
- Connectorized (RP-SMA)
 - 4 x 5GHz (5G0-3)
 - 2 x 2.4GHz (2G0-1)
 - 4.2dBi @ BLE/Zigbee (integrated)
- 물리 인터페이스:
 - 1 x 2.5 Gb 멀티기가비트 이더넷 인터페이스
 - 1 x 1 Gb 이더넷 인터페이스
 - 리셋 버튼
- 크기 및 무게
 - 211mm x 211mm x 70mm
 - 1.5kg

AP-518 - 6-sided views



NEW Wi-Fi 6 원격 및 호텔용 액세스포인트

High performance Wi-Fi 6 Access Point for Remote or Hospitality
(AP-505H)

- 주요 기능:

- **고 성능 Connectivity**

무선: 듀얼 2x2 802.11ax

유선: 1포트 업링크 (Smart Rate-2.5GbE), 4포트 다운링크 (1 GbE)

POE in: 802.3bt class 6 (또는 이하), POE out: 1 또는 2 포트, 최대 포함 30W까지

USB host 인터페이스

모든 WiFi6 기능 지원 (OFDMA-DL/UL, MU-MIMO-DL, BSS, Green AP)

- **심플 & 보안**

무선의 모든 트래픽을 암호화하고 보안하는 WPA3 및 Enhanced open 지원

역할 기반의 보안 접근 정책 적용의 Dynamic Segmentation 지원

- **IOT Ready**

BLE5 및 802.15.4 radio (Zigbee)로 IoT 센서를 간단하게 관리

Software

AOS8.7

WW Reference List Price

AP-505H

\$695



AP-505H

SKU	Description
R3V46A	AP-505H (RW) / 802.11ax Unified Hospitality AP with 1+4 Ethernet, PSE, USB

ARUBA Wi-Fi COMPLETE PORTFOLIO



550 Series
Extreme Density
Wi-Fi 6



530 Series
Very High Density
Wi-Fi 6



510 Series
High Density
Wi-Fi 6



500 Series
Mid Density
Wi-Fi 6



500H Series
Hospitality/Remote
Wi-Fi 6



518 Series
Ruggedized
Wi-Fi 6



570 Series
Outdoor
Wi-Fi 6



340/330/320/310/300 Series
Very High to Mid Density Wi-Fi 5
Indoor Ceiling/Wall Mount



303H/203R Series
Mid Density Wi-Fi 5
Wall, Hospitality and Remote



370/360 Series
Very High to Mid Density
Omni/Directional



370EX Series
Hazardous
Location



387 Series
Point to Point
802.11ad



Central & SD-Branch

New License Structure

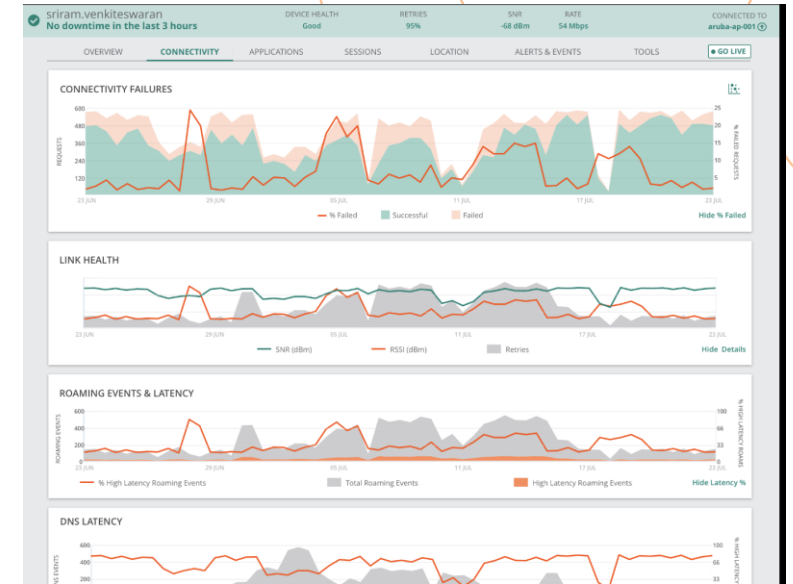


NEW Central 2.5.1 features

GA
May 20

유선

- AOS-CX (Onboarding, 모니터링 및 템플릿 구성)
- PVOS: 802.1X, Mgmt VLAN Config
- 패킷 캡처



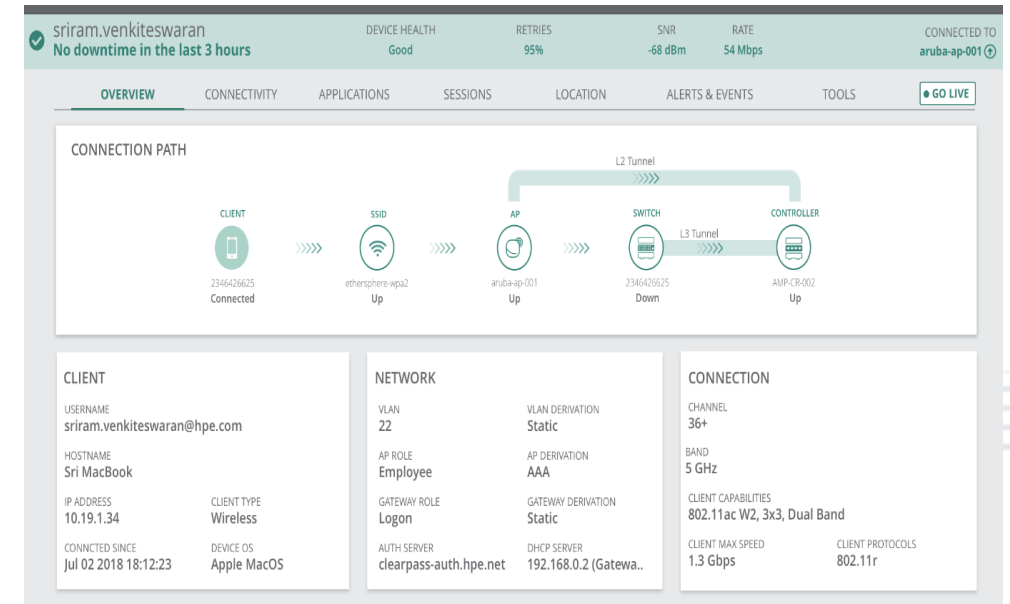
CLIENTS FILTER MONITORING site-name-001 NAV HISTORY 8 STEPS CLIENT LIST site-name0829... 3 HOURS New Tab

2.9TB (2.66TB | 247GB)

WIRELESS ACCESS POINT SWITCH GATEWAY

8412 FAILED 1025 OFFLINE 9658 BLACKLISTED 3218 WIRED 2108 FAILED 9900 OFFLINE 7128 BLACKLISTED

CLIENT NAME	STATUS	REASON / HEALTH	TIME LAST SINCE	CONNECTED TO AP SWITCH	LINK SSID PORT	IAP	ROLE	GATEWAY
Nick's Ipad	Failed	DHCP	Jul 20 23:30	AP-002	HP - Guest	NA	NA	NA
Scott	Failed	Captiveportal	Jul 20 23:30	AP-002	HP - Employee	NA	NA	NA
Jay's Desktop	Failed	DHCP	Jul 20 23:30	SW-001	PORT 0/0/1	NA	NA	NA
FCF8AE010010	Failed	Association	Jul 20 23:30	AP-002	HP - Guest	NA	NA	NA
80001COMMA	Failed	DHCP	Jul 20 23:30	SW-002	PORT 0/0/2	NA	NA	NA
Rocky Jay 22	Failed	Dot 1x	Jul 20 23:30	NA	HP - Employee	NA	NA	NA
SID's PC	Connect...	POOR	Jul 20 23:30	AP-002	NA	Employee	Employee	Employee
F1081RAY	Connect...	FAIR	Jul 20 23:30	SW-003	PORT 0/0/3	NA	NA	NA
Senthil's Android	Connect...	GOOD	Jul 20 23:30	AP-002	HP - Guest	Guest	Guest	Guest
FCF8AE010010	Offline	NA	Jul 20 23:15	AP-002	HP - Guest	Guest	Guest	Guest
Sid - Android	Offline	NA	Jul 20 23:15	AP-002	HP - Employee	Guest	Guest	Guest
F5772HEEP	Offline	NA	Jul 20 23:15	AP-002	NA	NA	NA	NA
Senthil's Kali Li...	Blacklist...	NA	Jul 20 23:30					



NEW Central 2.5.1 features

SD-Branch:

- UTM (IDS/IPS Visibility)
- 메쉬 라우팅 토폴로지 개선
- 새로운 플랫폼 - 9004-LTE & 9012
- SaaS - Network Wide Dashboard
- Azure Virtual Wan & AWS Branch as a Service
- 진단 워크플로우

The screenshot shows the 'INTRUSION PREVENTION' configuration page in Aruba Central. The left sidebar includes 'MANAGE' (OVERVIEW, CLIENTS, GUESTS, APPLICATIONS), 'SECURITY' (NETWORK SERVICES, DEVICES), and 'ANALYZE' (ALERTS & EVENTS, AUDIT TRAIL). The main content area has tabs for 'GENERAL', 'POLICIES', and 'SIEM'. Under 'GENERAL', there are sections for 'TRAFFIC INSPECTION' (with 'Enable traffic inspection' checked), 'Inspection' (Mode: IDS/IPS, Fail strategy: Bypass), and 'Ruleset' (Version: 2.3.4, 'UPDATE TO' button, and 'Automatically update ruleset every day at 11:00' checked). A 'Troubleshooting' section has 'Enable packet capture' unchecked. 'CANCEL' and 'SAVE' buttons are at the bottom right.

The screenshot shows the 'POLICIES' configuration page in Aruba Central. The left sidebar is the same as the previous screenshot. The main content area shows a 'POLICY' named 'IDS Strict' which is 'Enabled'. Below it is a table of 'RULES (234)'. The table has columns for SIGNATURE, SID, CATEGORY, PROTOCOL, ACTION, SOURCE, DESTINATION, and DIRECTION. The first few rows are:

SIGNATURE	SID	CATEGORY	PROTOCOL	ACTION	SOURCE	DESTINATION	DIRECTION
ET GAMES MINECRAFT Server response outbound	2021702	Potential Corporate Privacy Violation	TCP	Drop	any	any	->
SUBCATA TCPLv4 invalid checksum	2200074	Generic Protocol Command Decode	TCP	Drop	any	any	->
ET DROP Dshield Block Listed Source group 1	3402000	Misc Attack	TCP	Drop	any	any	->
ET SCAN Spivicious Scan	2008578	Attempted Information Leak	UDP	Drop	any	any	->

The screenshot shows the 'CLOUD CONNECT' configuration page in Aruba Central. The left sidebar is the same. The main content area has tabs for 'ACCOUNTS' and 'DEPLOYMENT'. Under 'DEPLOYMENT', there is a section for 'BRANCH GROUPS TO HUBS CONNECTIONS' with instructions: '1. Select a Branch Group' and '2. Confirm to an appropriate Cloud Hub'. Below this is a list of 'BRANCH GROUP' buttons: 'North America', 'North America - Mexico', 'North America - Canada', and 'South America - Brazil'. To the right is a 'CLOUD HUBS' table with columns for CONNECTIONS, CLOUD PROVIDER, ACCOUNT, REGION, and HUB. The first few rows are:

CONNECTIONS	CLOUD PROVIDER	ACCOUNT	REGION	HUB
<input checked="" type="checkbox"/>	Azure	3A338BFE-EA3C-48E8-B54F-28F3D5814B90	North America - East	Us-East US
<input type="checkbox"/>		5A91879C1-76A5-472A-A729-7F9CEFD477D8	North America - West	Us-West US
<input type="checkbox"/>		3A338BFE-EA3C-48E8-B54F-28F3D5814B90	North America - Central	Us-Central US
<input checked="" type="checkbox"/>		5CA2B75C1-74A5-472A-A729-7F9CEFD477F9	Canada - Quebec	Us-Canada Central
<input checked="" type="checkbox"/>		5CA2B75C1-74A5-472A-A729-7F9CEFD477F9	Canada - British Columbia	Us-Canada East






NEW SD-Branch 9000 Series Gateways

주요 기능:

- SD-WAN 및 보안 전용 네트워크 어플라이언스
- Aruba Central을 통한 관리로, 간단하게 사용 및 클라우드 기반의 네트워크 운영과 보안을 제공하는 플랫폼
- 기존 SD-WAN 어플라이언스에 비해 최대 80배의 접속 클라이언트 수와 최대 10배의 Throughput을 제공
- 위협 방어 기능 제공 (IPS/IDS)
- 2020년 5월부터 가능
- Target Customers
 - All Enterprises with distributed networks, branches, multi-sites.
 - Eg: Retail banks, Hotels, Clinics, Retail Stores

Model	GA	Software	WW List Price
9004	Sept 2019	Central 2.5	\$1,350
9012	Feb 2020	Central 2.5	\$2,395
9004-LTE	Q2 CY20	Central 2.5.1	TBA

9004	9004-LTE	9012
		
데스크톱 (Fanless)	데스크톱 (Fanless)	1RU
4x 1Gb ports 1x USB 3.0 port Power 25W max (with USB)	4x 1Gb ports 1x USB 3.0 port 30W Power adapter	12x 100/1000Base-T Ethernet with 6x PoE+ 2x USB 3.0 Power: 160W max (with 120W PoE+)
	LTE Module 내장 (CAT12) Quectel EM12-G module 2x dipole antennas included LTE speeds: 600/150Mbps	

9004 supports Controller mode AOS 8.5 or later

9012 supports Controller mode AOS 8.7 or later

9004-LTE to be advised



NEW SD-Branch 9004-LTE Branch Gateway

- 9004/9012와 함께 SD-WAN 및 보안 기능의 네트워크 어플라이언스
- Aruba Central을 통한 관리
- 고 성능 및 안정성
- IoT Ready
- 고급 위협 방어 기능을 제공 (+IPS/IDS) - GA May 2020

9000 Models	GA	Software	WW Ref Price
9004	Available Now!	Central 2.5	\$1,350
9012	Available Now!	Central 2.5	\$2,395
9004-LTE	July 2020	Central 2.5.1	\$1,750

Aruba 9004-LTE Series Gateway SKUs

R3V90A	Aruba 9004 (RW) 4-Port GbE Branch Gateway, 2K Clients - 32 APs with LTE
R3V95A	Aruba 9004 (RW) TAA 4-Port GbE Branch Gateway, 2K Clients - 32 APs with LTE

Accessories

R3W17A	Aruba 9004-LTE-MNT-19 9004-LTE Series 19-inch Rack Mount Kit
R4Y91A	90xx-LTE Antenna Extender Kit-20ft
R4Y92A	Aruba 90xx-LTE Antenna Extender Kit-40ft
R4Y93A	Aruba 90xx-LTE Outdoor Ant Ext Kit-35ft
R4Y94A	Aruba 90xx-LTE Spare Internal Antenna
R4Y95A	Aruba 90xx-LTE SIM Tray with Ejector Pin



Features	9004/9004-LTE
폼 팩터	데스크톱(Fanless) 2 Optional Mount Rack Tray
100/1000BASE-T	4
블루투스 5	Yes
USB 3.0 Type-A	1
시스템 상태 LED	Yes
콘솔 포트	micro USB, RJ45
9004-LTE	
다운링크/업링크 속도	600/150 Mbps
Connectors	2xSMA connectors for Main and Diversity Antenna 1xSMA connector for GPS Antenna

NEW SD-Branch - 고급 위협 대응 기능

Aruba는 각 브랜치 보안 기능을 확대하기 위해서 고유한 ID기반의 공격을 탐지하고 침입을 차단하면서 Zero Trust 네트워크 보안을 제공합니다.

-  애플리케이션-사용자 인식 방화벽
-  Deep Packet Inspection
-  웹 콘텐츠 & URL 필터링
-  App & URL 평판 조사
-  클라우드 보안 연동
-  침입 탐지 & 방지 시스템 (IDS/IPS)

GW Subscriptions All Models

GW FOUNDATION

- WAN, 라우팅, HA, QoS Security
- PEF, 역할기반 접근정책, L7 Firewall
- 웹 콘텐츠 필터링
- Dynamic Segmentation
- IPSEC VPN, Client VPN

GW FOUNDATION BASE

- GW Foundation
- 75 클라이언트 제한 (7005, 7008, 9004, 9012)

GW ADVANCED

GW Foundation
+ SaaS Express,
stay tuned for more..

GA

Software

May 2020

Central 2.5.1

NEW!

For 90xx Series only

GW FOUNDATION SECURITY

- GW Foundation and/+
- IDS/IPS - 전체 패킷 검사, 시그니처 및 패턴 기반
- 안티 바이러스(악성코드)
- 시큐리티 대시보드
- CPDI로의 API
- SIEM(Splunk)연동

GW FOUNDATION BASE SECURITY

- GW Foundation Security
- 75 클라이언트 제한 (9004, 9012)

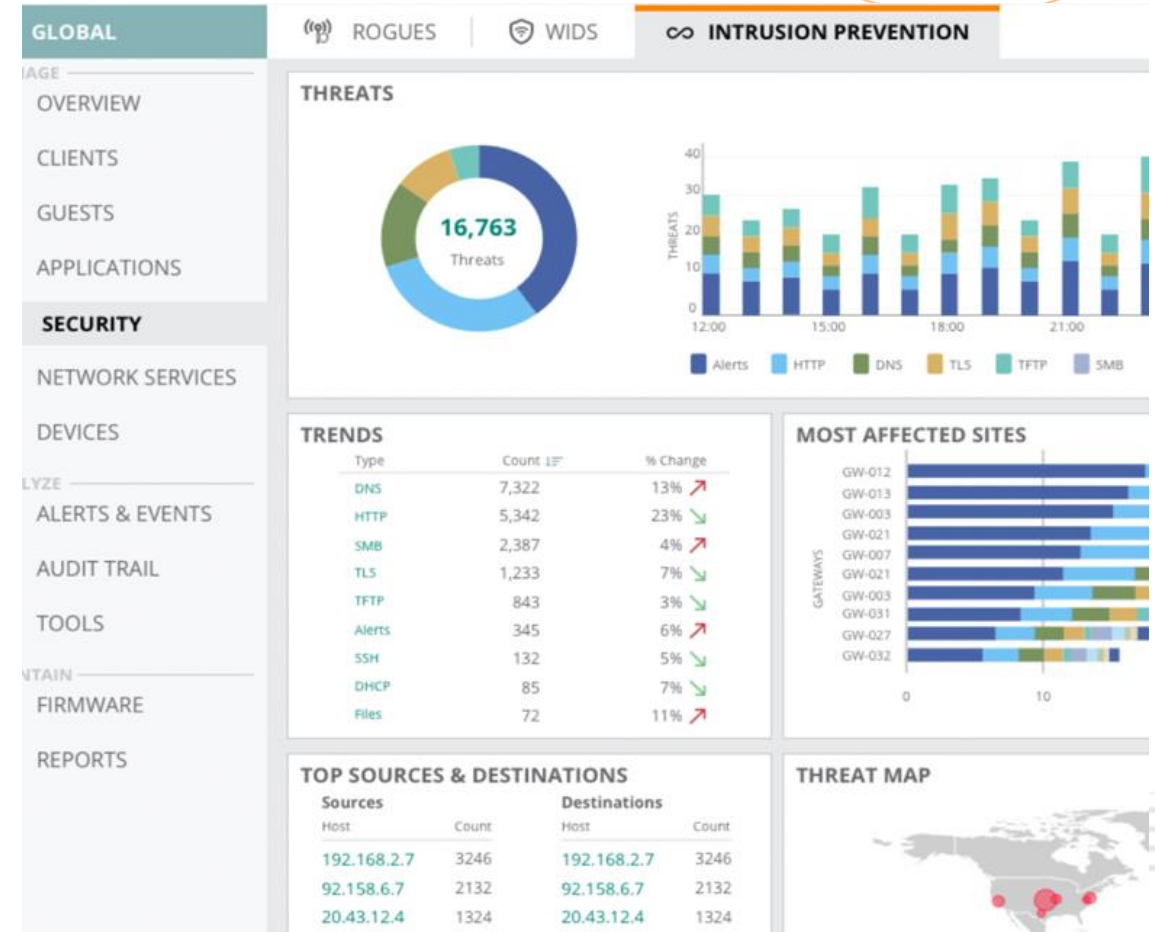
GW ADVANCED SECURITY

GW Foundation Security
+ SaaS Express



IDS/IPS Threat Intel Categories

- Malware Command and Control Server
- Known Infected Bot
- Known Spam Source
- Drop site for logs or stolen credentials
- Spyware Reporting Server
- Questionable Gaming Site
- Drive by Source
- POLICY Chat Server
- POLICY Tor Node
- Known compromised or Hostile
- P2P Node
- Proxy Host
- IP Check Services
- Known Good Public Utility
- Target of a DDoS
- Host Performing Scanning
- SSH or other brute forcer
- Fake AV and AS Products
- Domain or IP Related to a Dynamic DNS Entry or Request Undesirable but not illegal
- Abused or free TLD Related
- Self Signed SSL or other suspicious encryption
- Blackhole or Sinkhole systems
- GoToMyPC and similar remote access services
- Distributed CnC Nodes
- Domain or SEO Parked VPN Server
- Observed serving executables
- Known CnC for Mobile specific Family
- Spyware CnC specific to mobile devices
- Observed Skype Bootstrap or Super node
- Bitcoin Mining and related
- DDoS Source



5G Positioning with Air Pass

The background features a vibrant orange color with a dark blue, wavy, abstract shape on the right side. A thin white curved line separates the orange area from the dark blue area. In the top-left corner, there is a small section with a light orange dotted pattern.

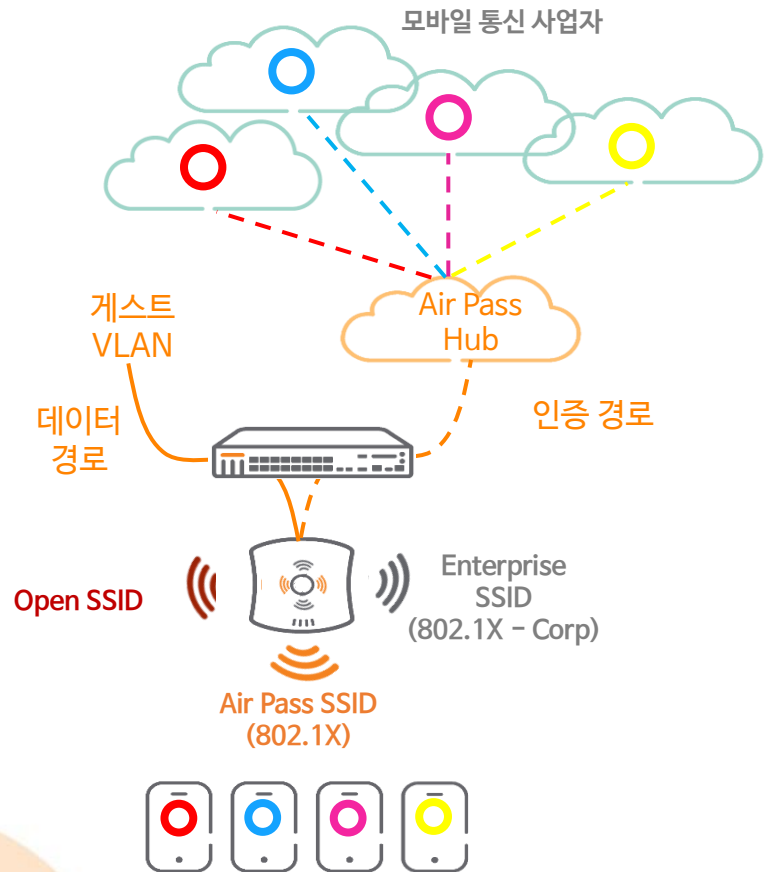
5G, 건물 내 커버리지 문제 확대

- 낮은 투과율 유리, 에너지 효율 건물 자재, 그리고 발전하는 건축 기술은 내부 이동통신 신호에 많은 시스템 문제를 야기합니다.
- 5G는 더 높은 주파수 대역을 사용하기 때문에 이 문제를 더욱 더 증폭시키고 있습니다.
- 우리가 이미 사용하고 경험하듯이 Wi-Fi가 실내 환경에서 훨씬 좋습니다.



Aruba Air Pass 소개

이동통신 가입자를 자동으로 Aruba Wi-Fi with Passpoint®로 연결



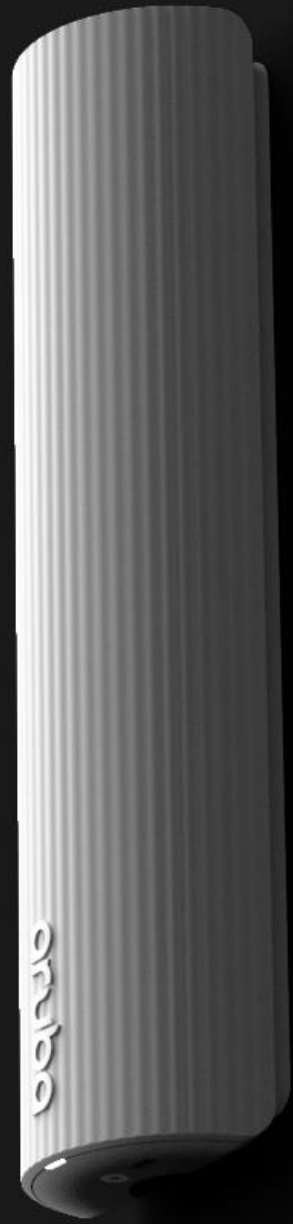
- 주요 북미 통신사의 SIM을 이용하여 모바일에서 끊김 없는 로밍 제공
- 모바일 유저를 위한 높은 대역폭 오프로드 뿐만 아니라 항상 Wi-Fi Calling과 SMS 서비스를 가능케 함
- Zero-trust 프레임워크와 방문객, BYOD 및 다른 사용자들을 위한 간단한 단말 온보딩
- 숨겨져 있던 트래픽의 가시화와 함께 분석과 보안을 향상
- WPA2 & WPA3-Enterprise 802.1X를 통해 안전하고 항상 암호화된 네트워크 접근 제공
- 기존 Aruba 인프라 장비와 Wi-Fi 클라이언트 단말 에코 시스템과의 호환성
- 5G ready



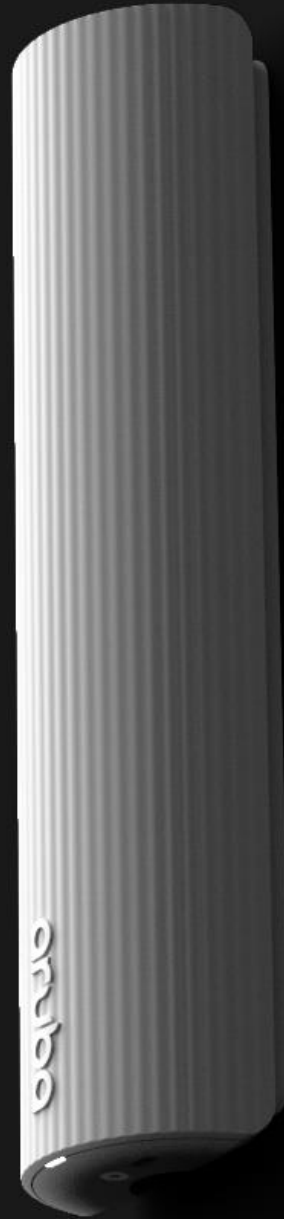
UXI NPI

with New G-Sensor





G-Series Sensor







2J006

Med Room



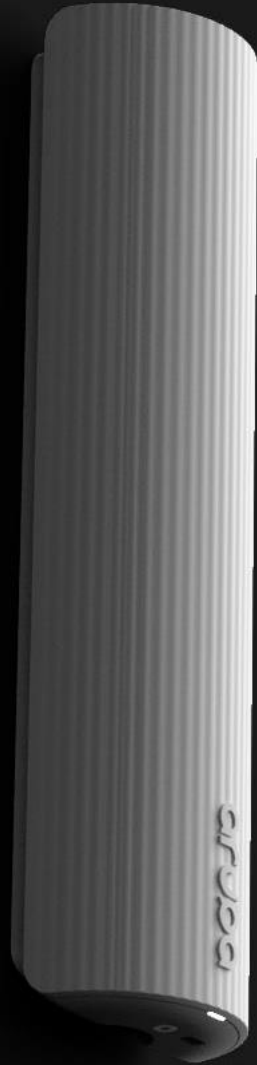


UX-G5E

Wi-Fi + Ethernet

Perfect for
Greenfield deployment
Campuses

유선 이더넷 연결 권장
유니버설 AC Power Supply 옵션



UX-G5C

Wi-Fi + Ethernet
+ Cellular

Perfect for
Rapid, flexible deployment
Branches

유선 이더넷 연결 선택사항
유니버설 AC Power Supply 포함
Last gasp power included

UX-G5E

Wi-Fi + Ethernet

GLOBAL LAUNCH

May



UX-G5C

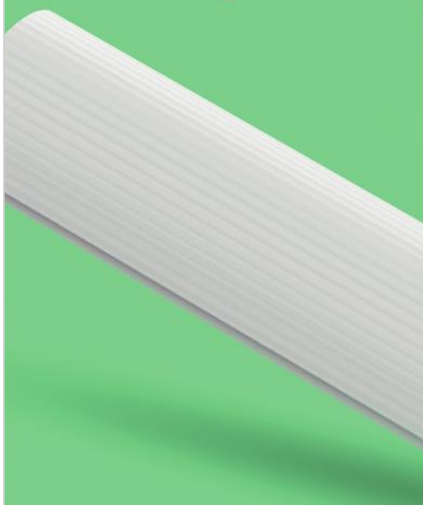
Wi-Fi + Ethernet
+ Cellular

GLOBAL LAUNCH

May

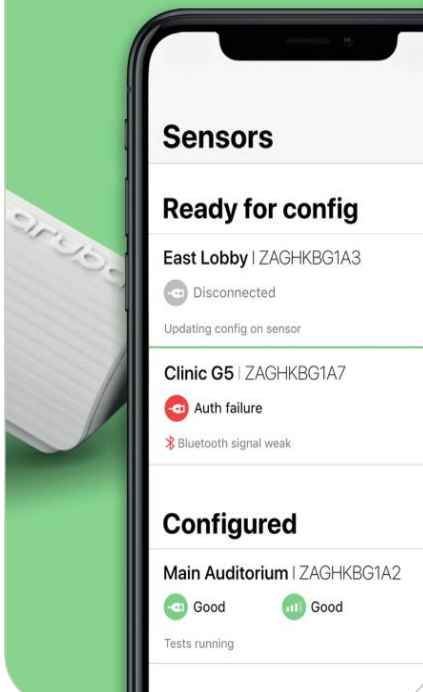
UXI App for G-Series Sensor

aruba
User Experience
Insight



Install & Troubleshoot
UX-G5E, UX-G5C

Find nearby
sensors



Sensors

Ready for config

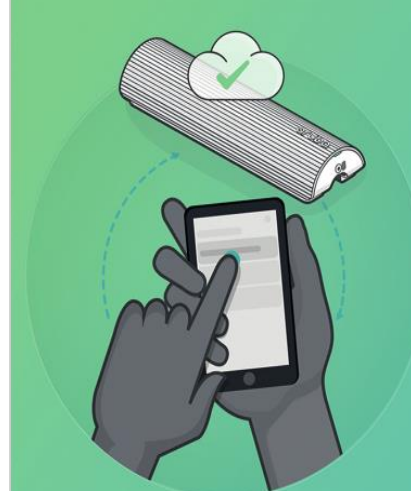
East Lobby | ZAGHKBG1A3
Disconnected
Updating config on sensor

Clinic G5 | ZAGHKBG1A7
Auth failure
Bluetooth signal weak

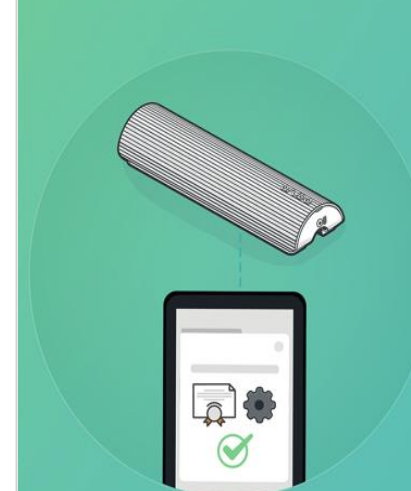
Configured

Main Auditorium | ZAGHKBG1A2
Good Good
Tests running

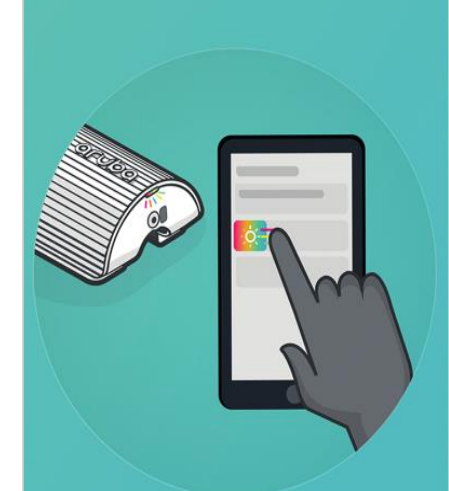
Troubleshoot
sensor connectivity



Auto-configure
via Bluetooth



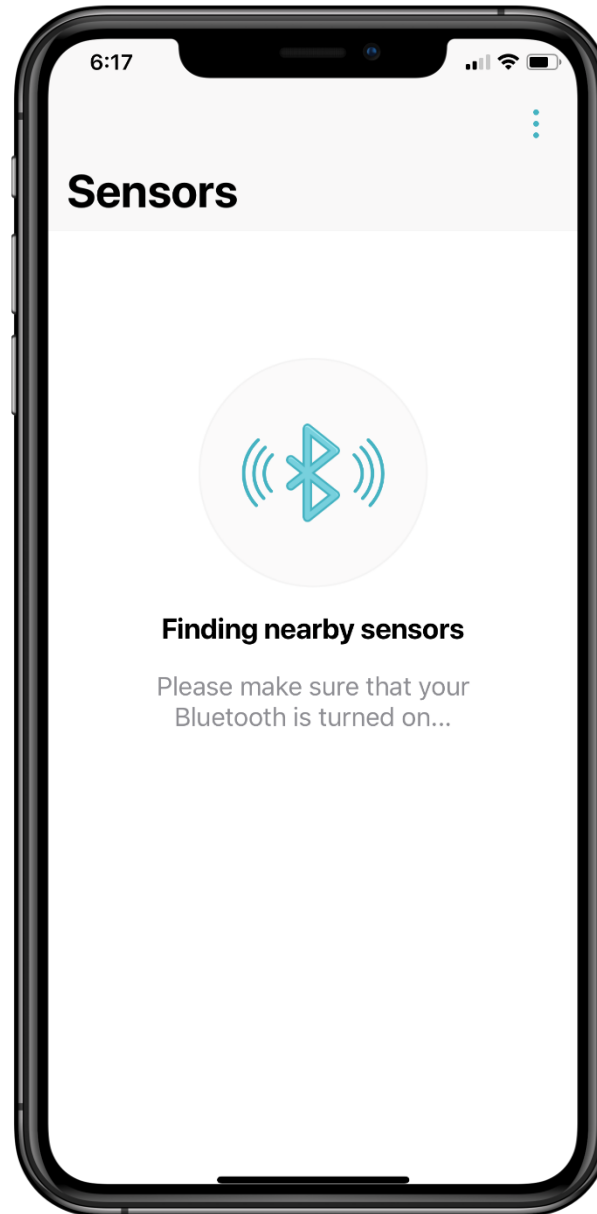
Identify via
LED color



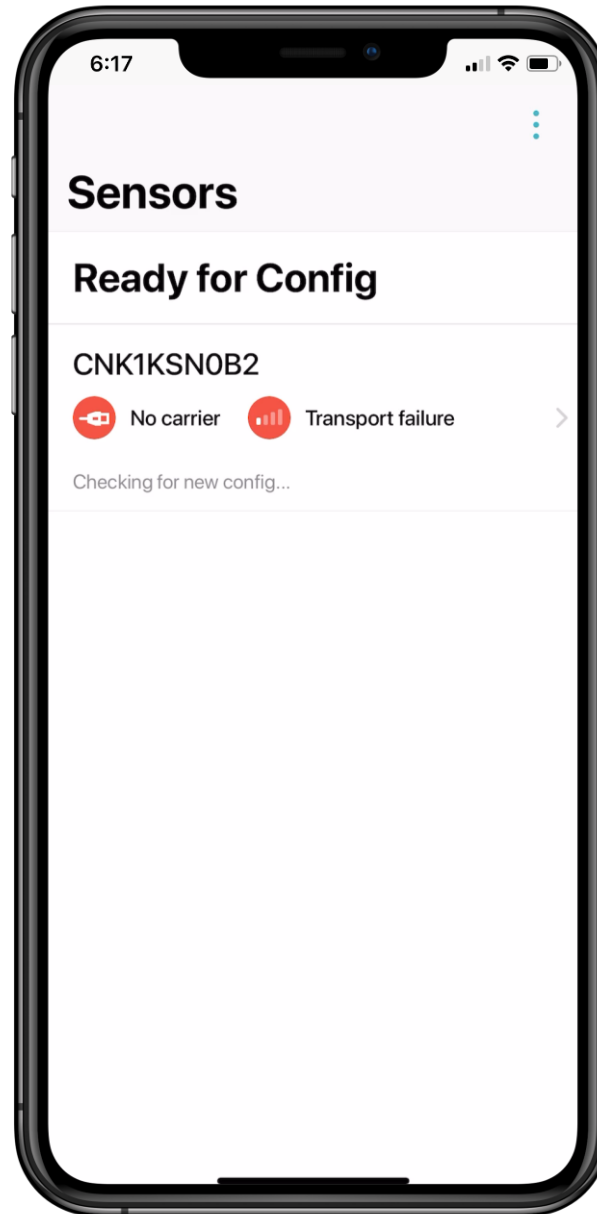
iOS 버전 제공; Android 버전은 추후 제공



UXI App demo



UXI App demo



UXI SKU

New SKUs are global simplifying logistics



Hardware SKUs

R3R67A	Aruba User Experience Insight G-Series sensor (Ethernet + Wi-Fi AC)
R3S69A	Aruba User Experience Insight G-Series sensor (Ethernet + Wi-Fi AC + Cellular)
Q9X65A	Aruba UXI Sensor (US, Canada)
Q9X66A	Aruba UXI Sensor (APJ Other, EMEA)
Q9X67A	Aruba UXI Sensor (APJ Australia, New Zealand, Taiwan, Latin America)
Q9X68A	Aruba UXI Sensor (Japan)

Subscriptions SKUs

Cloud	R4W97AA	E Aruba 1 Year User Experience Insight Cloud Subscription E-STU
	R4W98AA	E Aruba 3 Year User Experience Insight Cloud Subscription E-STU
	R4W99AA	E Aruba 5 Year User Experience Insight Cloud Subscription E-STU
Cellular	R4X00AA	E Aruba 1 Year User Experience Insight LTE Subscription E-STU
	R4X01AA	E Aruba 3 Year User Experience Insight LTE Subscription E-STU
	R4X02AA	E Aruba 5 Year User Experience Insight LTE Subscription E-STU



Cloud subscriptions

New Subscription Model (F5C, G5C)

Sensor



Cloud subscription

Subscription



Cellular subscription

알람 및 온보딩만 가능
패킷 캡처 및 테스트 결과
업로드 불가

Cloud subscriptions

New Subscription Model (G5E)

Sensor



Subscription

Cloud subscription



Pricing

R3R67A	Aruba User Experience Insight G-Series sensor (Ethernet + Wi-Fi AC)	\$599
R3S69A	Aruba User Experience Insight G-Series sensor (Ethernet + Wi-Fi AC + Cellular)	\$789
Q9X65A	Aruba UXI Sensor (US, Canada)	\$790
Q9X66A	Aruba UXI Sensor (APJ Other, EMEA)	\$790
Q9X67A	Aruba UXI Sensor (APJ Australia, New Zealand, Taiwan, Latin America)	\$790
Q9X68A	Aruba UXI Sensor (Japan)	\$790

Cloud

R4W97AA	E Aruba 1 Year User Experience Insight Cloud Subscription E-STU	\$799
R4W98AA	E Aruba 3 Year User Experience Insight Cloud Subscription E-STU	\$1598
R4W99AA	E Aruba 5 Year User Experience Insight Cloud Subscription E-STU	\$2397

Cellular

R4X00AA	E Aruba 1 Year User Experience Insight LTE Subscription E-STU	\$99
R4X01AA	E Aruba 3 Year User Experience Insight LTE Subscription E-STU	\$297
R4X02AA	E Aruba 5 Year User Experience Insight LTE Subscription E-STU	\$495



aruba

a Hewlett Packard
Enterprise company

Thank you

jung-moo.park@hpe.com

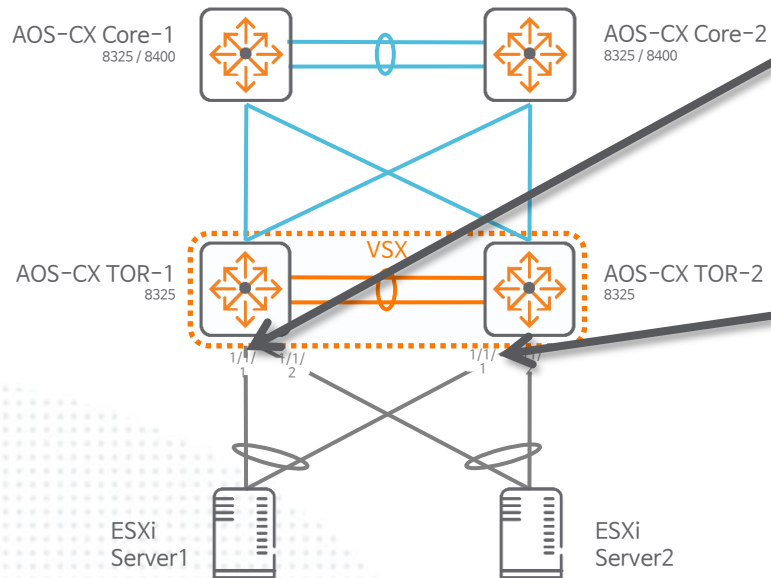
NAE Data Center Use Case

01

LLDP INFORMATION TO INTERFACE DESCRIPTION

Problem Statement

Updated Connectivity Information



```
TOR-1# show run
Current configuration:
!
!Version ArubaOS-CX GL.10.03.0020
hostname 8325-1
...
interface 1/1/1
no shutdown
description ?
...
```

```
TOR-2# show run
Current configuration:
!
!Version ArubaOS-CX GL.10.03.0020
hostname 8325-1
...
interface 1/1/1
no shutdown
description ?
...
```

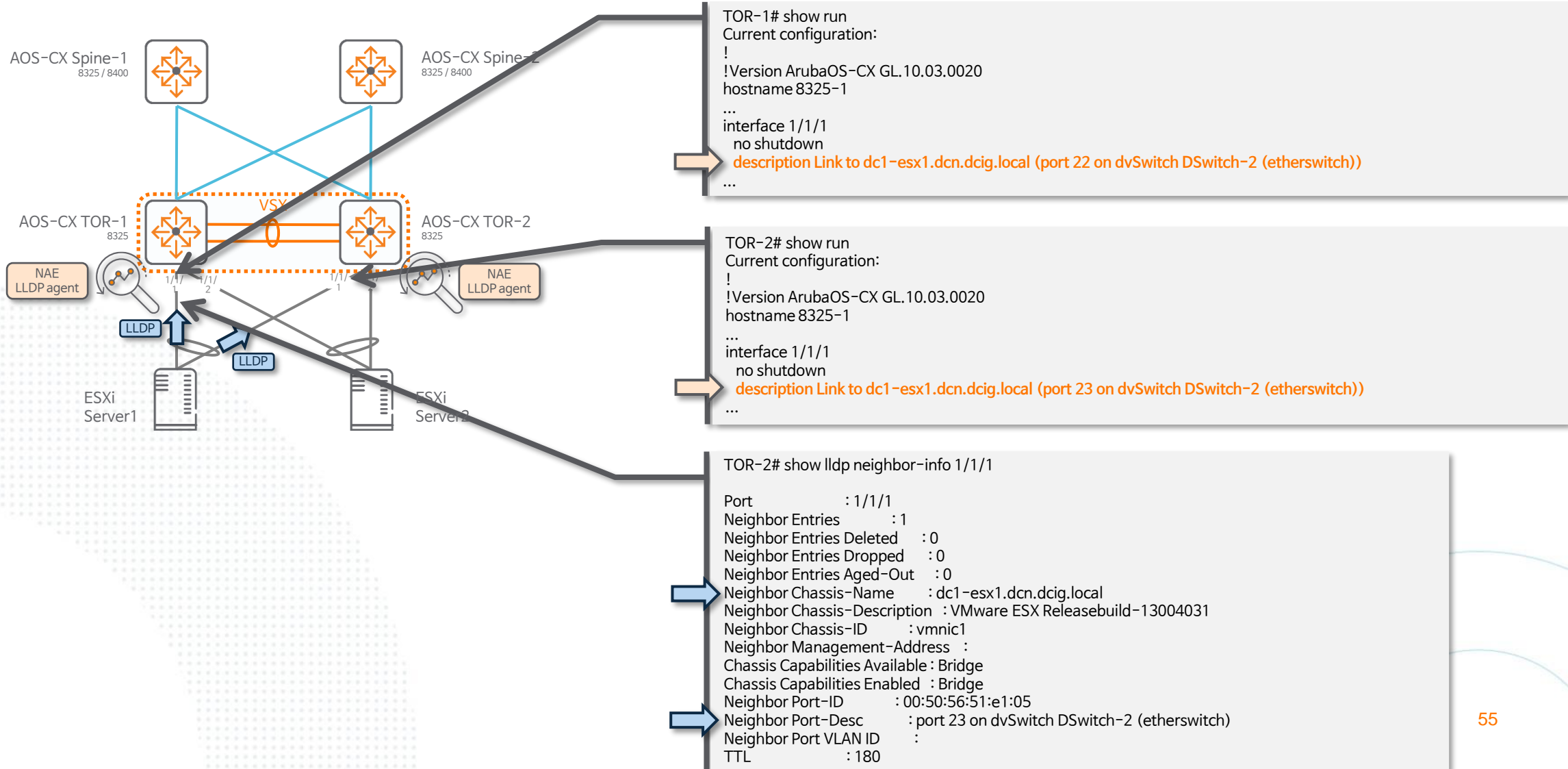


The screenshot shows the Aruba NetEdit Editor interface. On the left, there is a navigation menu with options: Overview, Network, Devices, Plans, Firmware Repository, Users, Logs, Notifications, Diagnostics, and Settings. The 'Devices' section is expanded, showing a list of devices with checkboxes. The device '8325-3 (15.136.40.233)' is selected. The main area displays the configuration for this device, with the 'Device Viewer' tab active. The configuration shows several interfaces: interface 1/1/1 (no shutdown, lag 101), interface 1/1/7 (lag 107), interface 1/1/11 (no routing), interface 1/1/12 (no routing, vlan trunk native 1, vlan trunk allowed all), and interface 1/1/25. The interface 1/1/1 configuration is highlighted with an orange box.



OUTCOME

Connectivity Information is automatically updated

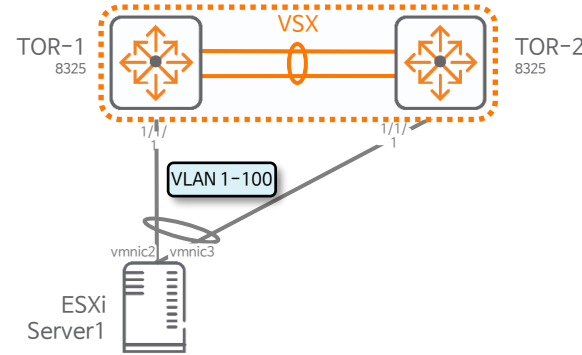
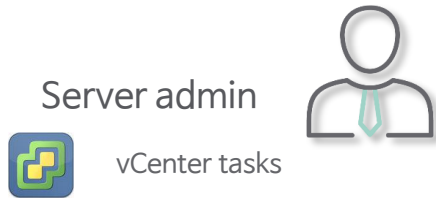


02

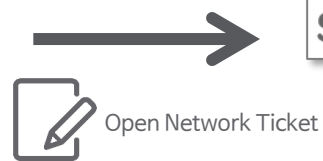
LACP + VLAN AUTOMATED PROVISIONING

Problem Statement

Server-ToR Connectivity set-up time



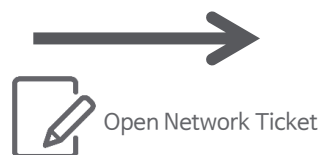
1. Create LAG with Server1 vmnics
2. Assign VLANs 1-80
3. Wait for ticket update



1. Create LAG with Server1 vmnic2/3 (1/1/1 TOR-1, 1/1/1 TOR-2)
2. Assign VLANs 1-80
3. Wait for ticket update



1. Forgot some VLANs. Assign missing VLAN 81-100 for Server 1
2. Wait for ticket update.



Time

Rejected, port information missing

1. VSX LAG created for Server1 vmnic2/3 (1/1/1 TOR-1, 1/1/1 TOR-2)
2. VLANs 1-80 assigned

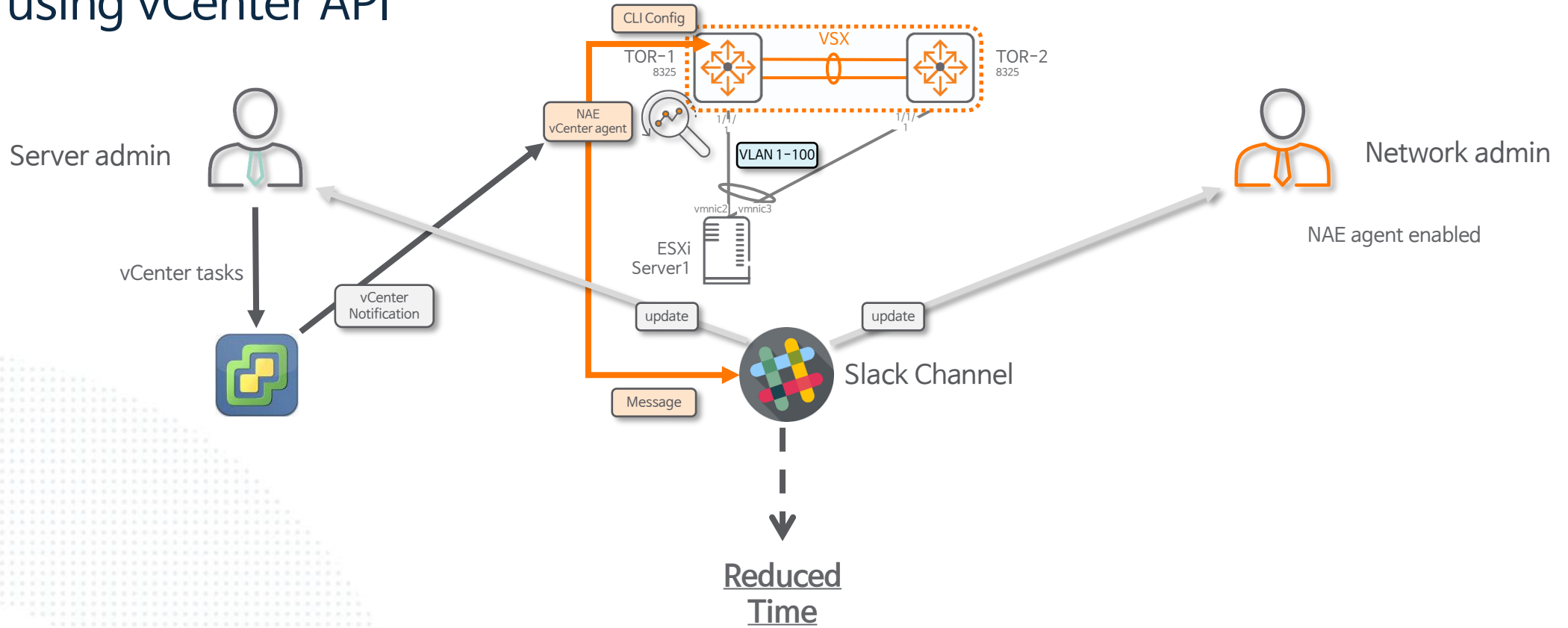
Completed, ticket closed.

1. VLANs 81-100 assigned
- Completed, ticket closed.**



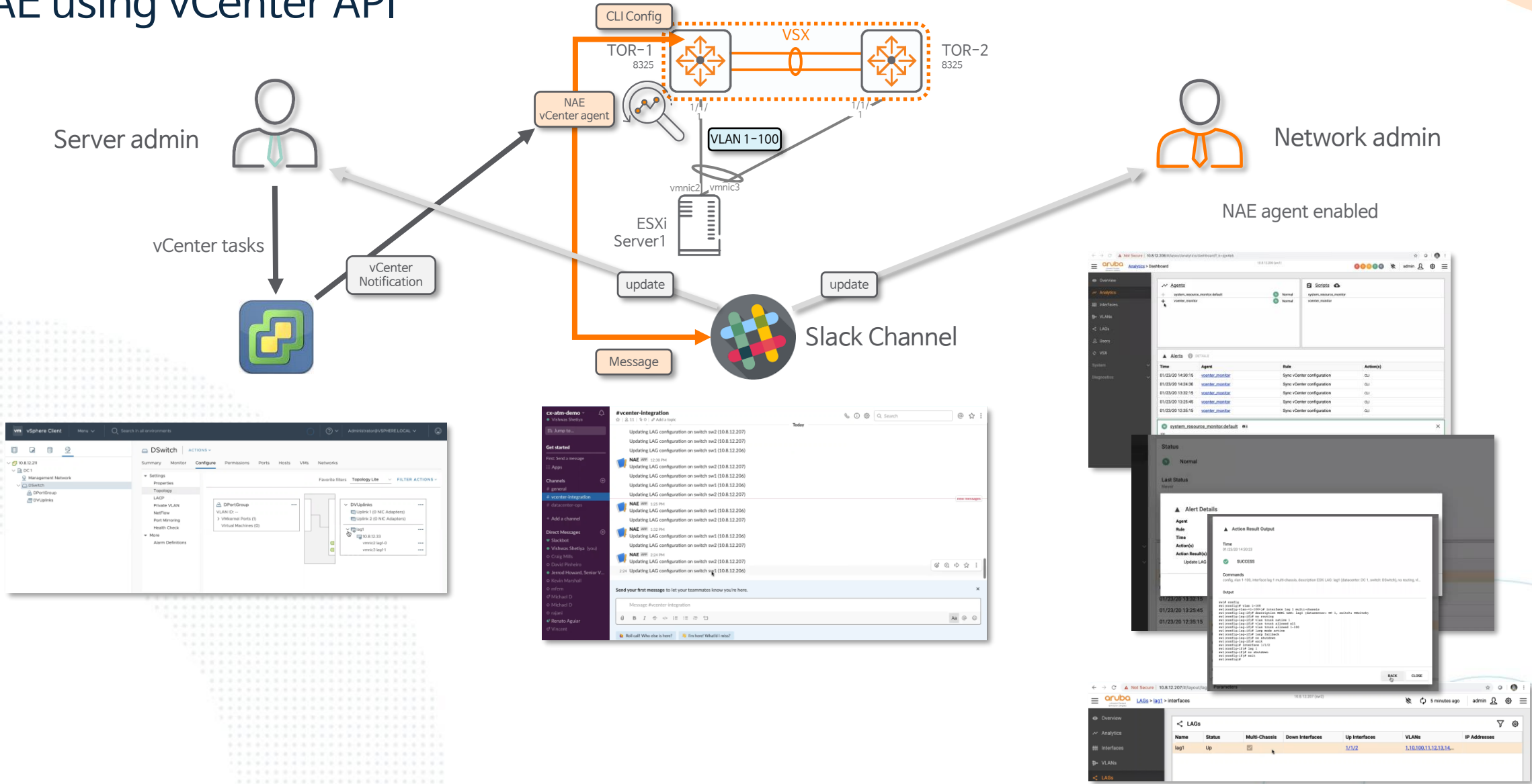
Automated Connectivity set-up

NAE using vCenter API



Automated Connectivity set-up

NAE using vCenter API

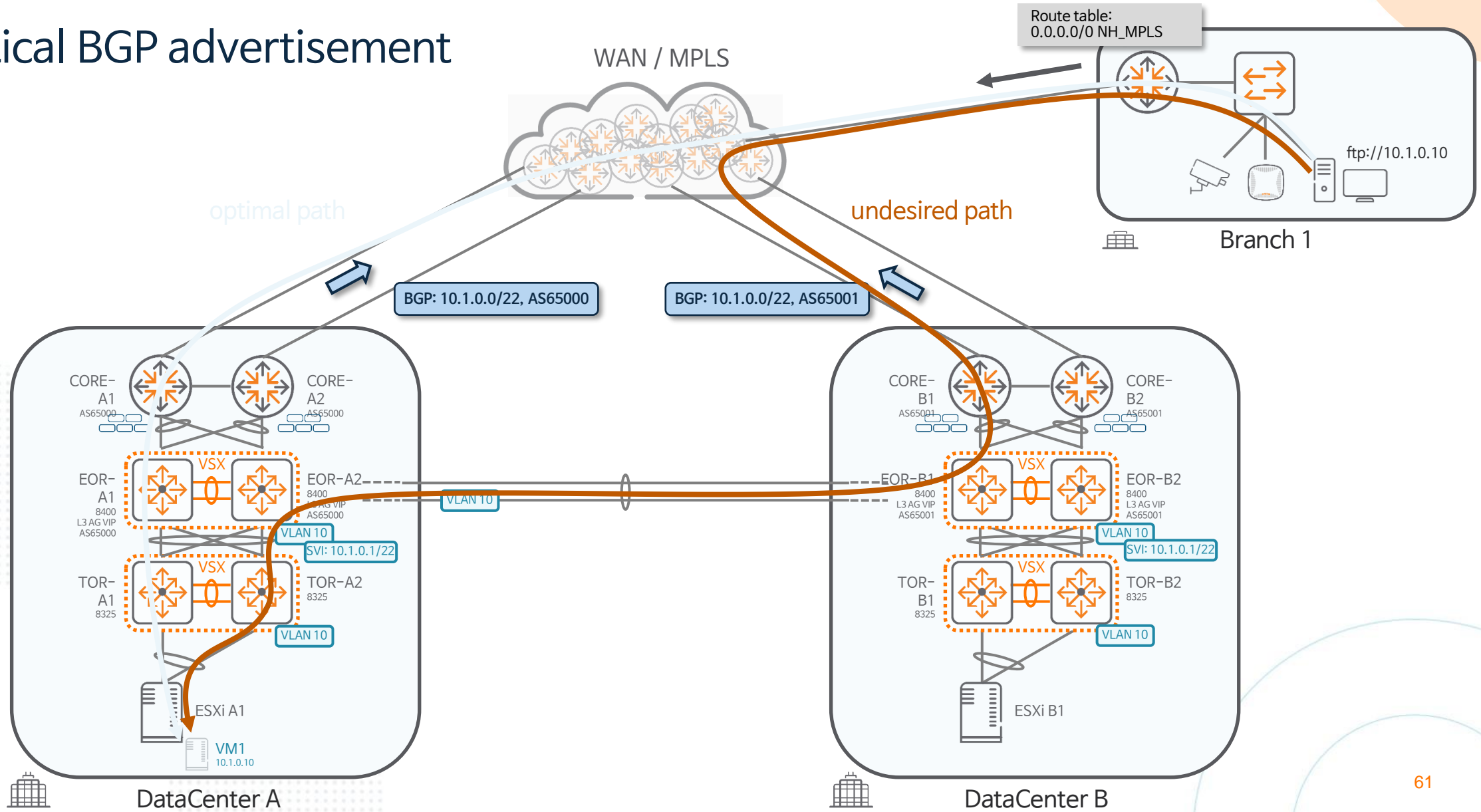


03

EVENT BASED ROUTING PATH OPTIMIZATION FOR vMOTION

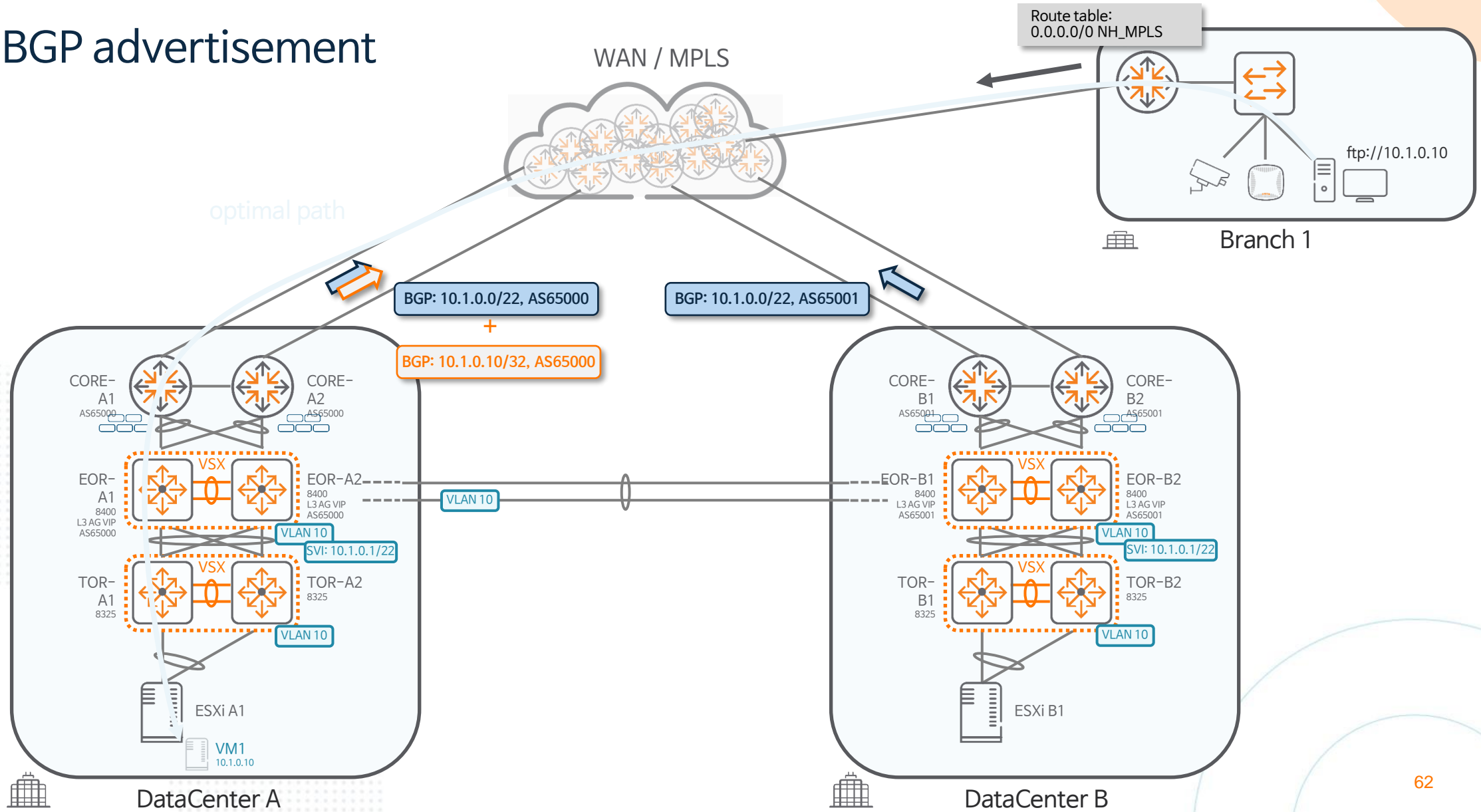
Problem statement

Identical BGP advertisement

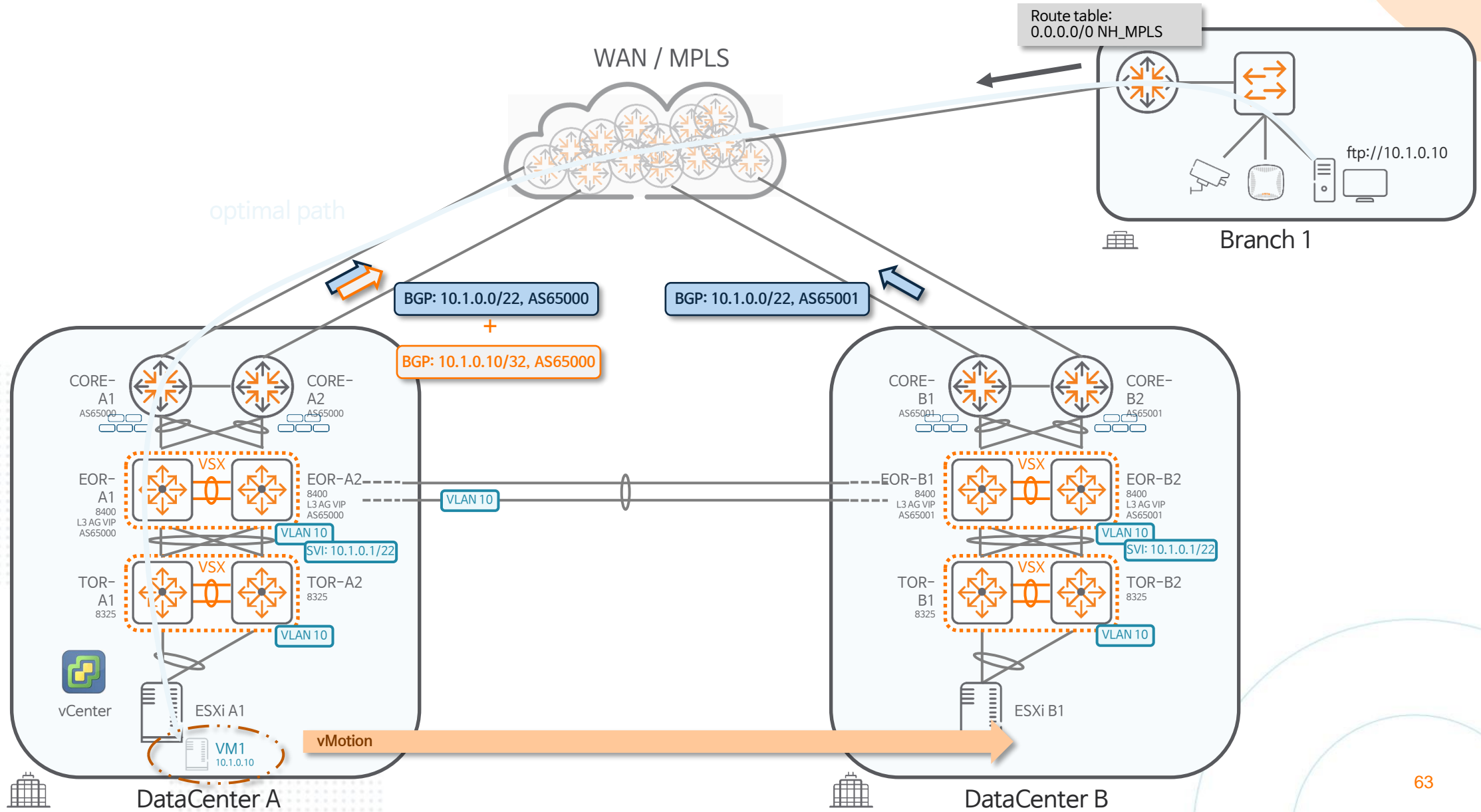


Solution

Host BGP advertisement

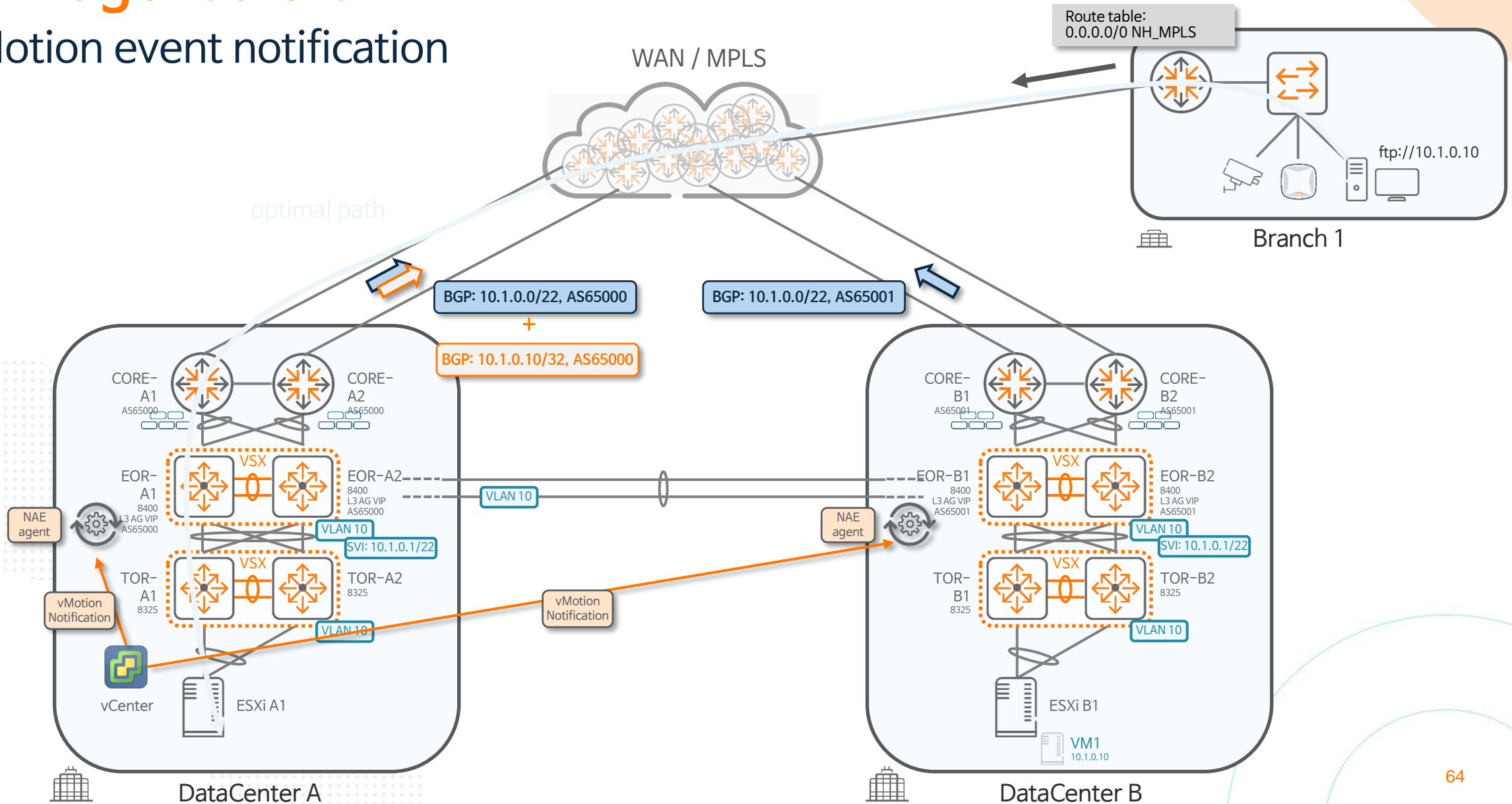


vMotion



NAE agent alert

vMotion event notification



Automated Route Injection with NAE CLI action

VM in DC-B

```

route-map NAE permit seq 10
match tag 1000
...
no ip route 10.1.0.10/32 loopback0 distance 250 tag 1000
...
router bgp 65000
address-family ipv4 unicast
redistribute static route-map NAE
exit-address-family
...
vsx
vsx-sync static
...
    
```

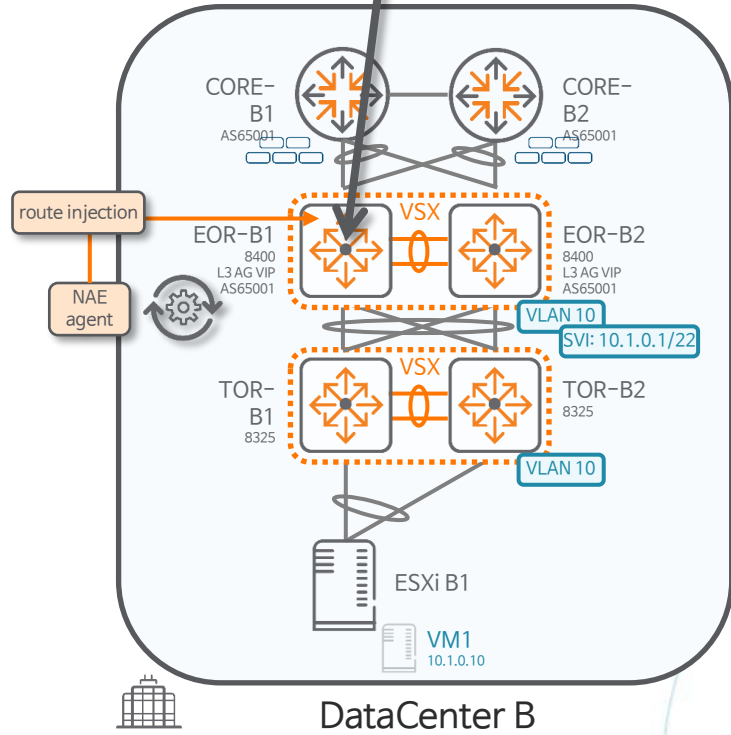
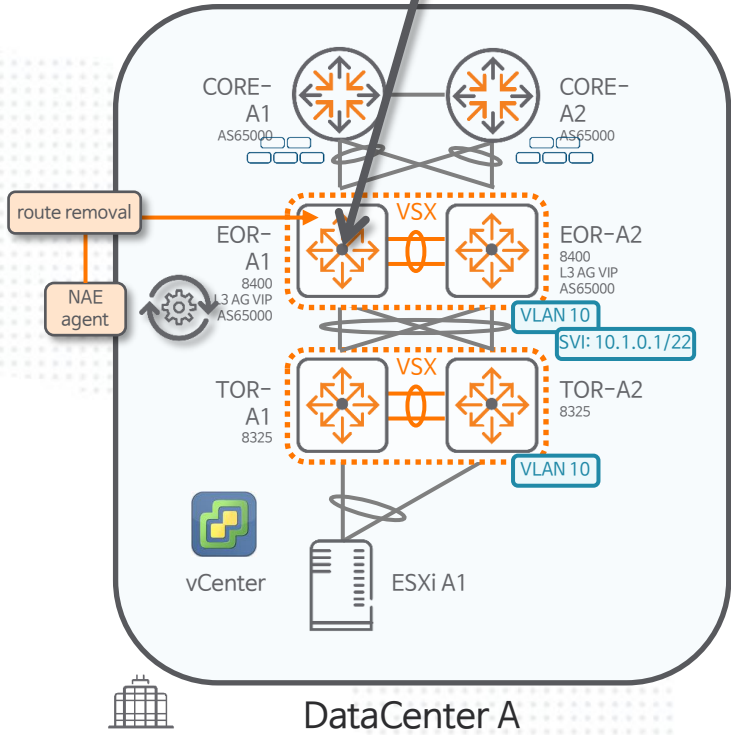
```

route-map NAE permit seq 10
match tag 1000
...
ip route 10.1.0.10/32 loopback0 distance 250 tag 1000
...
router bgp 65000
address-family ipv4 unicast
redistribute static route-map NAE
exit-address-family
...
vsx
vsx-sync static
...
    
```

BGP: 10.1.0.0/22, AS65000

BGP: 10.1.0.0/22, AS65000

BGP: 10.1.0.10/32, AS65000



Path Optimization

After BGP route update

