

Sep 3, 2020

建構高效能次世代網路 Aruba OS CX+Wifi 6

自動化.統一架構.安全防護
Automate. Unify. Protect.

Allen Pan
Aruba Solution Manager

aruba

a Hewlett Packard
Enterprise company



品牌 轉型 演變



1979

2010

2015





a Hewlett Packard
Enterprise company

連續14年名列領導者象限

成長速度比市場同業快2-3倍

全球超過八萬五千會員：Airheads community

提供用戶安全且穩定的有線無線平台

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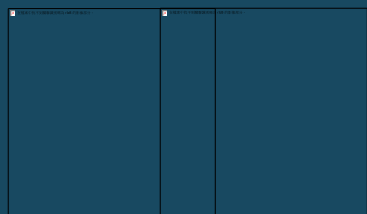
Source: Gartner Magic Quadrant for the Wired and Wireless LAN Access Infrastructure
July 2018. Tim Zimmerman, Christian Canales, Bill Menezes, Mike Toussaint
ID Number: G00345275

Wired and Wireless LAN Access Gartner Magic Quadrant 2019

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



網路面臨的挑戰 邊際存取 (at the Edge)



技術阻礙
Technology Siloes
Hinder Agility



缺乏網路自動化與可視性
Lack of Network
Automation & Visibility



安全威脅不斷上升
Security Threats
Rising



經濟影響與資源有限
Economic & Resource
Headwinds

網路基礎建設應該有所不同 Networks Must Do More

Aruba 邊緣服務平台 INTRODUCING ARUBA ESP

人工智慧維運 AIOPS

AI Insights | User Insights



好管

統一基礎建設 UNIFIED INFRASTRUCTURE

Wi-Fi | Switching | SD-WAN | 5G | IOT



好用

安全不妥協 ZERO TRUST SECURITY

Dynamic Segmentation | Device Insight



好安全

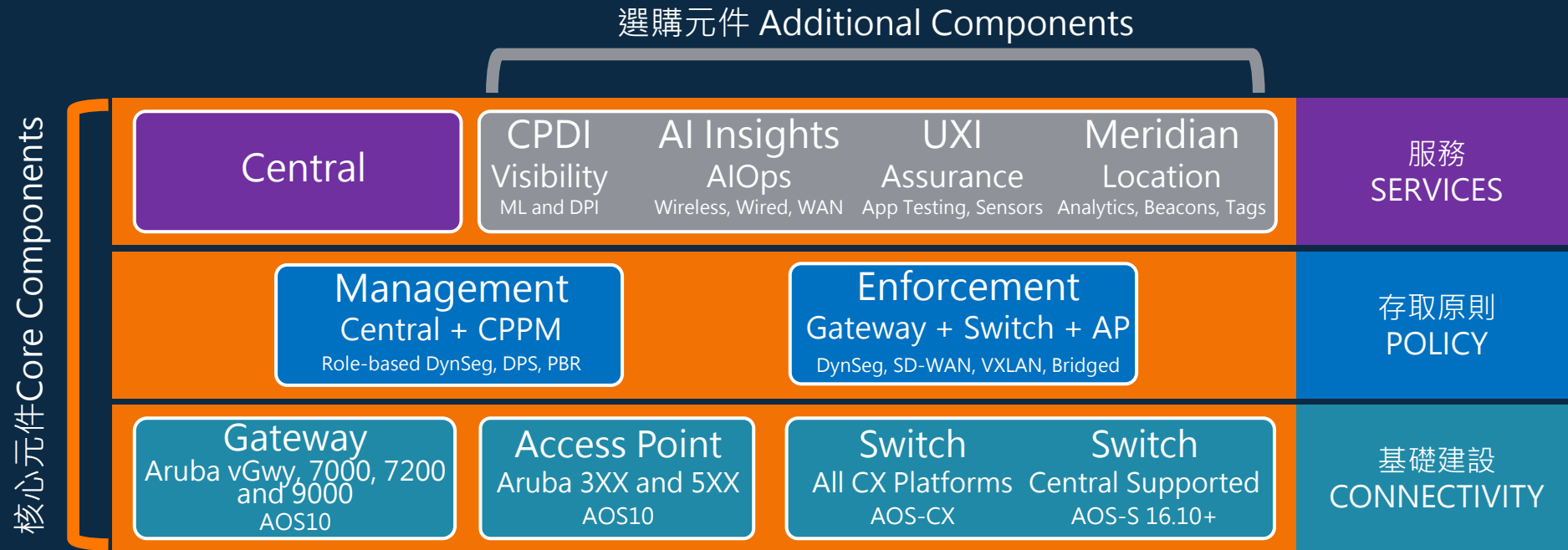
消費與融資服務 Financial and Consumption Flexibility

HPEFS | Managed Connectivity Services



Aruba邊緣服務平台

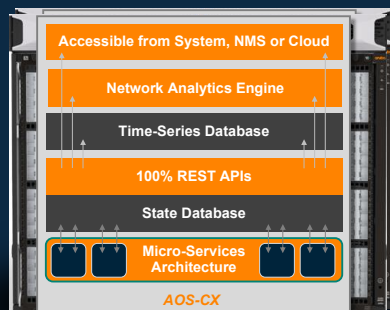
產品組成



ARUBA CX 交換器家族系列

新世代架構, 針對雲端維運而生的產品

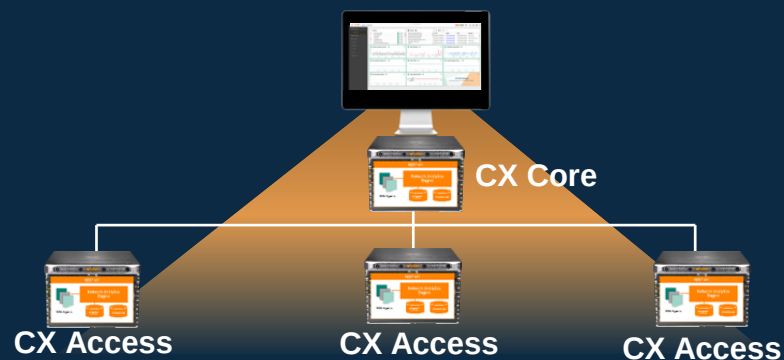
AOS-CX



為雲端而生
Cloud
Native

Modern, microservices architecture for full network programmability and workflow automation

Aruba NetEdit and Network Analytics Engine



分散式分析工具
Distributed
Analytics

Analytics in every node for network-wide, real-time insights to proactively detect and resolve issues

Aruba CX Switches



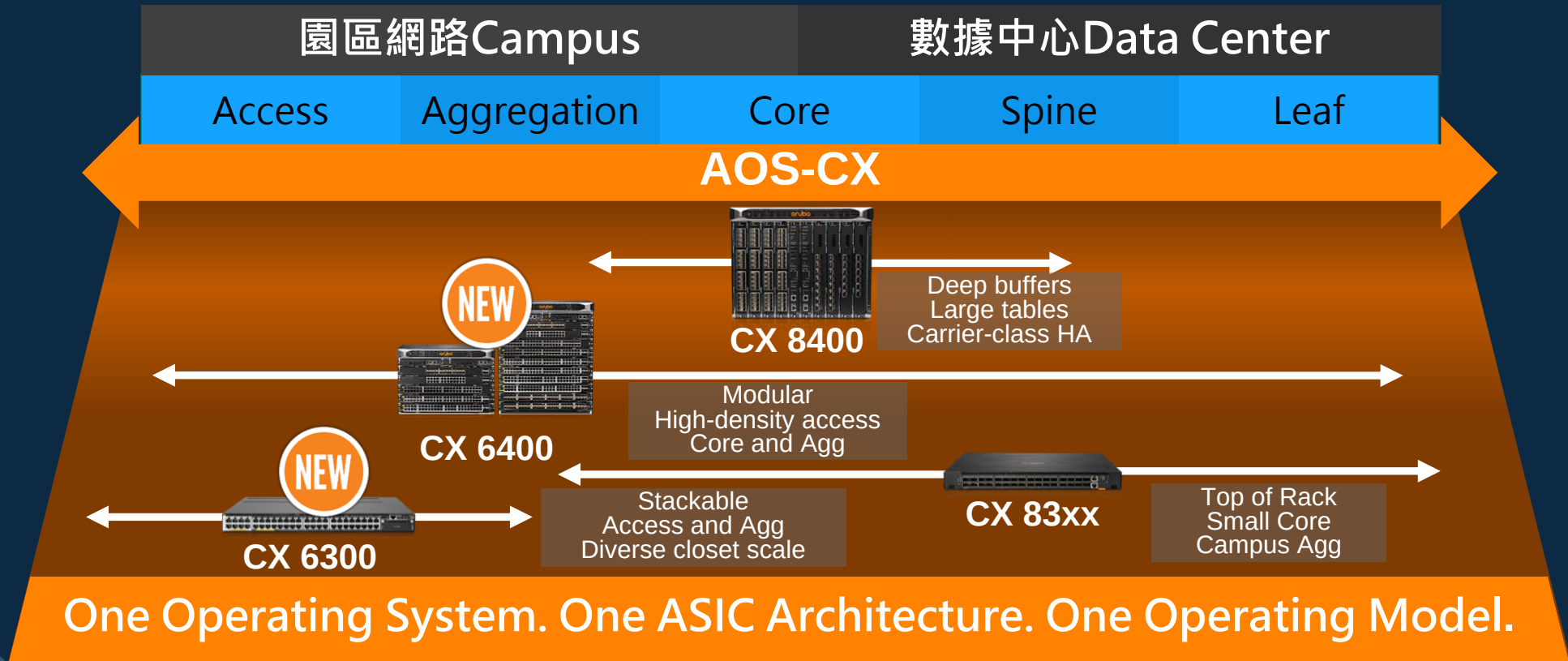
從邊際到數據中心
Edge Access to
Data Center

Flexibility to deploy same hardware and software for a consistent operational experience from edge access to data center



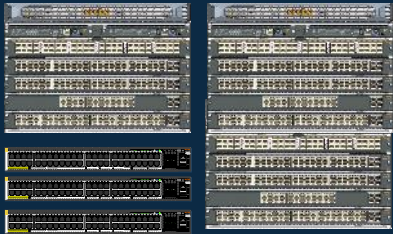
ARUBA CX 企業用交換器

完整的交換器家族都使用新的作業系統



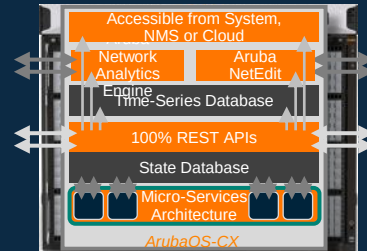
全新 AOS-CX 系列解決方案的優勢與效益

硬體



Aruba
6k 系列

軟體



AOS-CX

分析功能



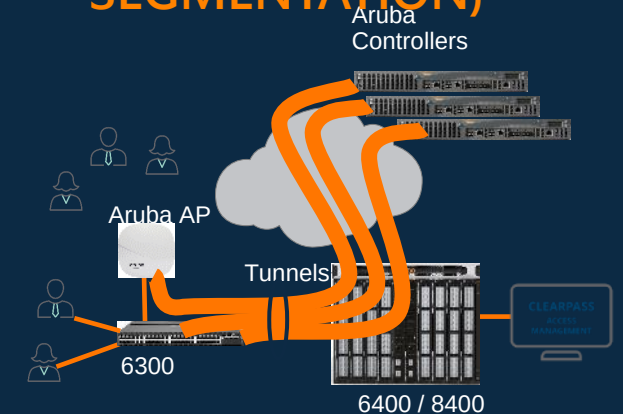
Aruba 網路分析引擎 (NAE)

自動化



Aruba
NetEdit

動態分段 (DYNAMIC SEGMENTATION)



- 真正的新世代ASIC晶片技術
- 保障未來需求的擴充性
- 單一平台支援從存取、核心到資料中心

- 技術原生於 8400 系列
- 系統具擴充性
- 單一作業系統

- 讓企業網路不中斷
- 節省除錯與管理時間
- 節省管理人力
- 減少費用支出

- 強化組態的解決方案
- 簡化企業網路配置與修改
- 提高網路設備安裝效率ZTP

- 基於角色存取原則
- 整合有線無線存取管理
- 快速建置與強化網路安全

ARUBA CX 系列交换器

CX 6300



CX 6400



CX 8320



CX 8325



CX 8400



Speeds	1/10/25/50G	1/10/25/100G	1/10/40G	1/10/25/40/100G	1/10/25/40/100G
Form Factor	Compact 1 U models with stacking (10)	Compact 5 (7 RU) and 10 slot (12 RU) modular chassis	Compact 1U models	Compact 1U models	Compact 8 slot (8U) modular chassis
Positioning	Aggregation, Access	Campus: Core, Aggregation, Access Data Center: Collapsible Spine/Leaf	Campus: Aggregation, Small Campus Core Data Center Leaf, ToR	Campus: Core, Aggregation Data Center: Leaf, Spine, ToR/EoR	Campus: Core and Aggregation Data Center: Spine, EoR, MoR
AOS-CX	●	●	●	●	●
Onboard Analytics (NAE)	●	●	●	●	●
API-driven Orchestration (NetEdit)	●	●	●	●	●
Carrier-class HA (deep buffers, tables)					●
REST APIs, Python Scripting	●	●	●	●	●
Dynamic Segmentation	●	●			
Wi-Fi 6 Ready (Smart Rate, 60W PoE, Always-On PoE)	●	●			
Stacking (VSF), Virtualization (VSX)	VSF ●	VSX ●	VSX ●	VSX ●	VSX ●
VSX Live Upgrade		●	●	●	●



AOS-CX 主要優勢

簡化維運, 提高網路安全, 支援 WI-FI 6 相關標準

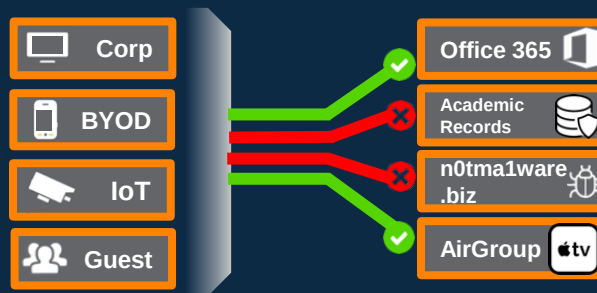
VSX Live Upgrades



Extended to Access

Dual control and data planes with improved performance to bring live upgrades to modular access

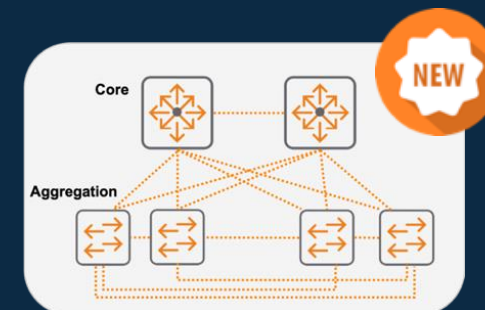
Dynamic Segmentation



Extended to Access and AOS-CX

Secure, unified access across wired and wireless for users and IoT, enabled by policy-based automation

VXLAN with MP-BGP EVPN



Industry-standard segmentation that scales and provides consistent architecture across campus and data center

Always-on PoE



Enable APs, healthcare devices, sensors, and IoT devices to keep power during upgrades

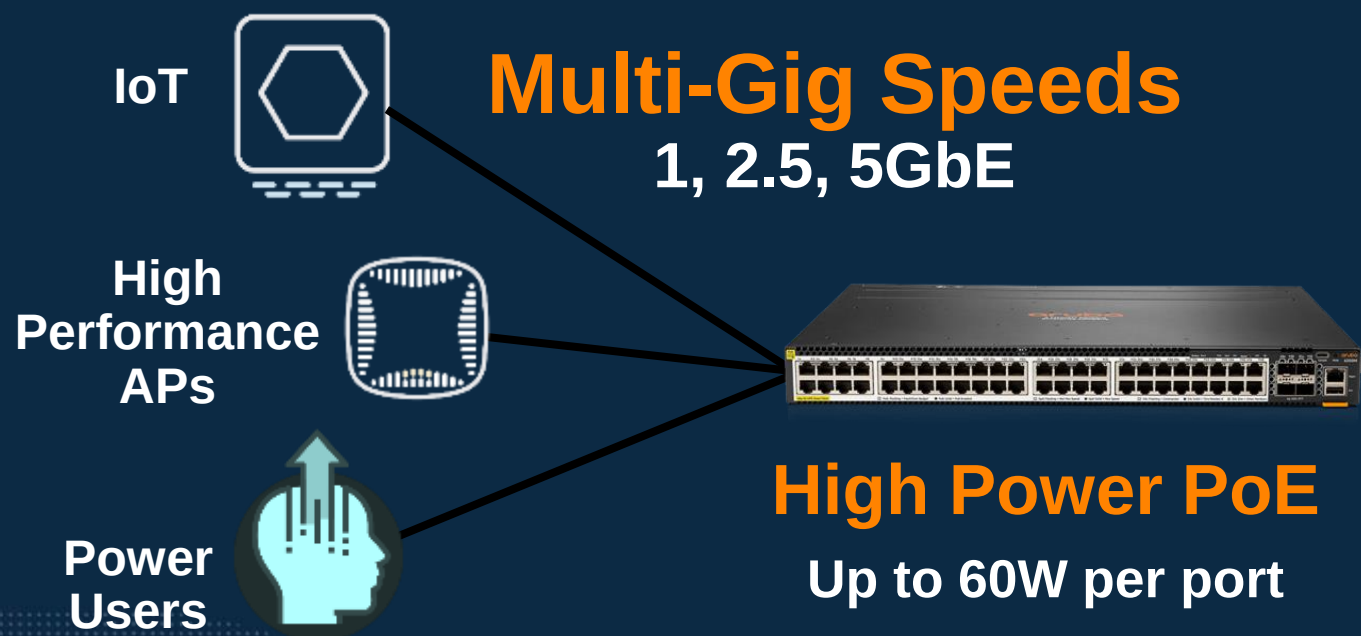
VRF



The most asked-for feature on AOS-CX for routing segmentation



支援PoE Class 6供電與 智能連線交換器



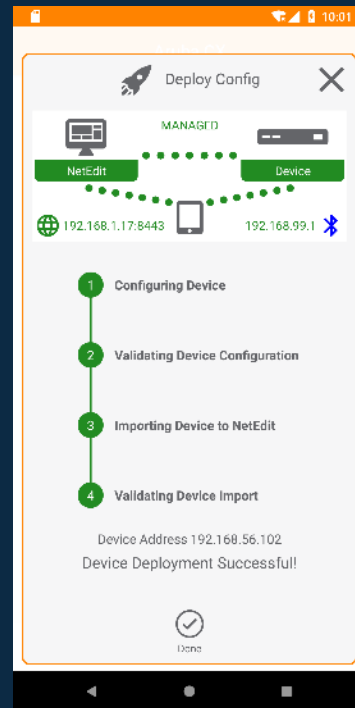
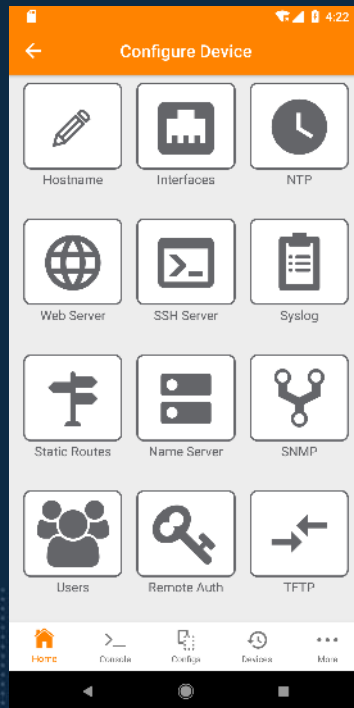
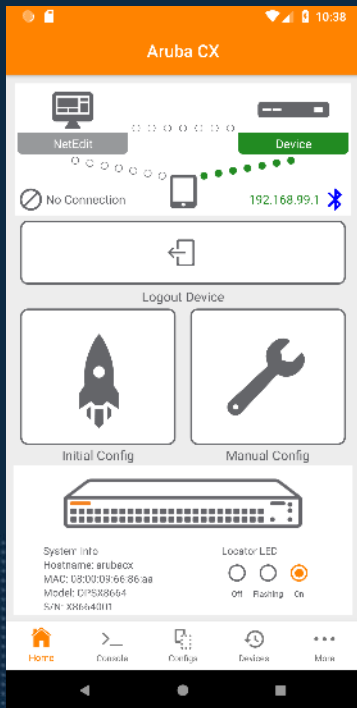
滿足Wifi 6連線需求

不需重新佈線，省佈線成本

重開機不影響PoE供電

ARUBA CX 行動 APP

簡化交換器安裝與配置



- Mobile app provides the **visibility and convenience** needed for today's fast paced IT
- **Connectivity via Bluetooth or Wi-Fi** makes setting up switches quick and easy
- Configure, view and manage configurations
- **Simple to use built-in templates** save time and cut down on errors
- **Integration with Aruba NetEdit** allows for intelligent and validated configuration conformance
- Check the **PoE budget and utilization** on switches from the CX Mobile app home screen to see available.
- **Auto-detection of potential stack members** and stack links makes it go from independent switches to a virtualized stack with just a few taps.

The Aruba CX Mobile App is subscription free and is available to download at <https://www.arubanetworks.com/products/networking/switches/cx-mobileapp/>



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Wifi 6

自動化. 統一架構. 安全防護
Automate. Unify. Protect.

Allen Pan
Aruba Solution Manager

aruba

a Hewlett Packard
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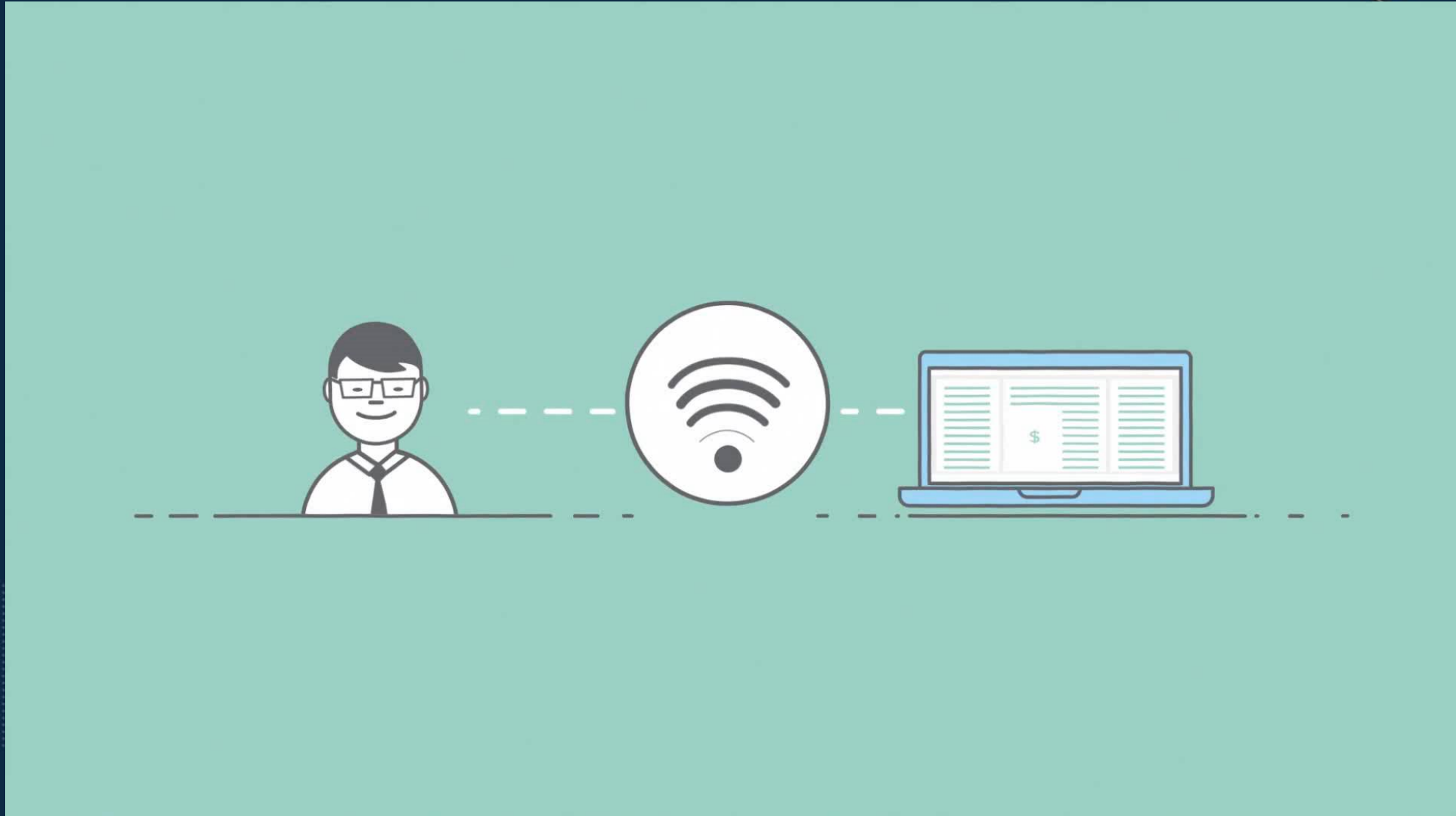


WiFi 6 技術優勢

<http://www.ni.com/white-paper/53150/zht/>

- 向下相容於 802.11a/b/g/n/ac，同時支援2.4G/5G 頻段
- 將火車站、機場與體育館等高人口密度地點的每位使用者平均傳輸率提升 4 倍
 - 資料速率與通道寬度與 802.11ac 相似，但可搭配 1024-QAM 提供新的調變與編碼組合 (MCS 10 與 11)
 - 透過 MU-MIMO 與正交頻分多工存取 (OFDMA) 技術，進行指定的下鏈與上鏈多使用者作業
- WPA3 支援存取更安全
- BSSColor 改善流量與通道存取情形，使用者更好用
- 電源管理更為出色，IOT裝置更省電

802.11 ax 主要技術說明影片



不同領域體驗Wifi 6 帶來的優勢

高效能工作場域
Smart
Workplace



智慧店家
Smart Store



智慧建築
Smart
Manufacturing



智慧醫療
Smart
Hospitals



ARUBA 行動優先“平台”

Software Services from a Single Platform

行動優先平台



Network
Management

AirWave
Central
設備管理



Security

ClearPass
存取原則管理



UEB Analytics

ClearPass
Device Insight
行為管理

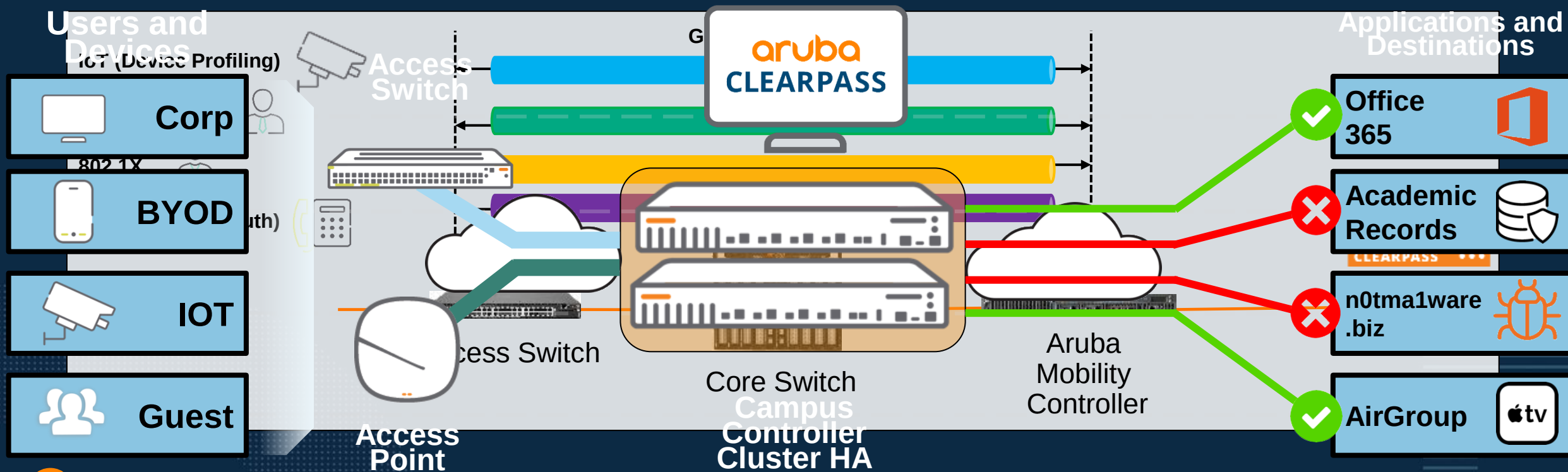


Location Services

Meridian
定位與推播方案

智能化動態配置 DYNAMIC SEGMENTATION

- 基於使用者 Tunneling – 有線存取控制與可見化
- 存取地點與個資- 動態辨識與派送存取原則與 – Stateful L7 Firewall



選擇 Aruba 基礎建設的優勢



智能

Aruba 具備人工智慧可以優化網路。讓人員無時不刻存取。能夠區分連線設備給與該有的存取權限。



效能

OS CX/Wi-Fi 6 提供簡易且安全的存取相同架構下僅升級基地台就可以快速建置讓用戶享受高速網路



創新

Aruba' s 目前為市場領導品牌，有許多新的技術可以協助各位在不同領域裡面成長，協助新創應用

A woman in a green shirt and safety glasses points at a control panel in a factory. Two men, one in a dark shirt and safety glasses and the other in a light blue shirt and safety glasses, look on. A laptop is on the table in front of them.

謝謝各位聆聽

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Enterprise company