# Nobility First How Tomorrow Moves for Education

Presented by:

aruba

a Hewlett Packard Enterprise company Sponsored by:



Simplifying Enterprise IT.



### GENMOBILE IS AT THE HEART OF OUR TECHNOLOGY STRATEGY



# THE RISE OF

### 2005

# GENMOBILE

2013



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## THE PERFECT STORM: MOBILE, IoT and CLOUD

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## **Reading the Waves – 802.11ac**



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### Gigabit Wi-Fi makes it possible to unplug the cord

## \$750K annual savings & 350 tons of Co2 reduction by moving to primarily Wi-Fi access for employees



## Learning is Transforming



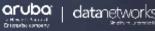


What's changed

Curriculum Digital, Online, Blended

#### Adoption By Teachers and Students

Funding Federal/State/ Local Results Student Performance



## **Supporting the Digital Classroom**



1:1 initiatives



Cloud apps

s Guest Access



Online



Student collaboration





## **The Education Evolution**

#### Past

Face-to-face Low or minimal tech Traditional in classroom instruction Minimal competitive challenges

#### Present

Any place, anywhere, anytime BYOD, Digital Content Innovative programs Alternative programs

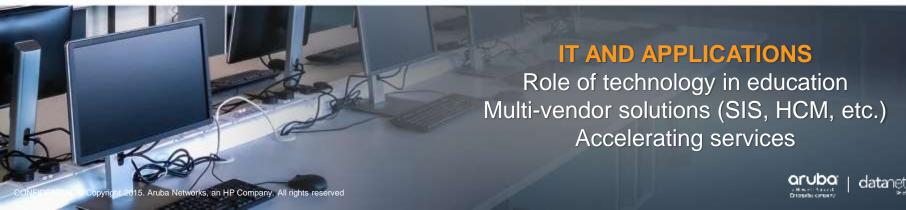
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#### INSTITUTIONAL

Perception of degree low ROI Graduates lack readiness for the workplace Student security and safety

## **Today's Challenges**





## Building an Environment for Student Success Mobile-First Campus

Uninterrupted experience Optimized Gigibit Wifi and connectivity for user, device, and environment

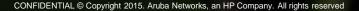


## Improving Digital Learning with a Mobile-First Experience

Uninterrupted learning

Connectivity optimized for BYOD

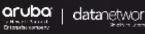




## 1:1 Learning Requires a Reliable, Stable Network

Can teachers rely on Wi-Fi for 30-50 student devices at once?

Is Wi-Fi reliable for online testing?



## **OUR APPROACH**



#### **Legacy** Separate architectures Port, VLAN aware Proprietary systems



#### **Mobile First**

Single set of hardware App, device, user aware Multi-vendor software





### SCALE NETWORK OPERATIONS FOR WIRED ACCESS

#### **Future proof wired infrastructure** Wired is aggregation for WLAN and IoT

User, device aware "colorless" ports with Aruba ClearPass

Zero touch provisioning at the branch with Aruba AirWave



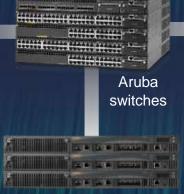


### SOFTWARE CONTROLS FOR "COLORLESS" PORTS

Device and user identity stores



IoT devices on the wired network connecting to any port

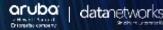


Secure per device tunneling to Aruba Mobility Controller Ports assigned to new VLANs through ClearPass based on device type

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Prevention against malware and insider threats

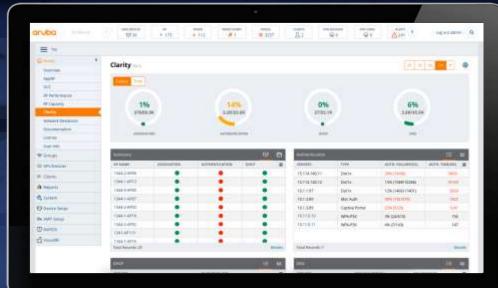


### SCALE NETWORK OPERATIONS FOR WI-FI ACCESS

#### Eliminate complaints on Wi-Fi with Aruba 802.11ac and ClientMatch

Predict, not troubleshoot, issues with Aruba Clarity and AirWave

**Optimize Wi-Fi per application** with Aruba AppRF



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## SOFTWARE CONTROLS FOR END-TO-END NETWORK HEALTH



Drippebe company

# Connectivity That Adapts to New Requirements

Can the infrastructure easily accommodate new mobile use-cases with the necessary controls?





## **A More Intuitive User Experience**

**OLD WAY:** Without advanced policy, separate traffic by SSIDs



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#### Ask to Join Networks

Known networks will be joined automatically. If no known

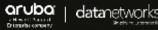
#### NEW WAY:

Simplify with ClearPass, separate traffic dynamically



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#### **Promote Self** Service **BYOD ClearPass Onboard** User and IT friendly: One time user registration Secure: 802.1x EAP-TLS Visibility: Regain visibility for policy and troubleshooting



## **Registered Guest Access** for Parents and Visitors

#### **ClearPass Guest**

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Custom portals to promote your school

Can be used to advertise mobile app and deliver download link

Social logon support

One Wi-Fi login for repeat visitors



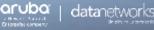
## ClearPass Policy Manager

Create policies that adapt to BYOD growth and IoT adoption

Customized device profiling for any uncategorized connected device

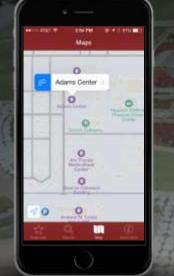
Multi-factor authentication on mobile devices for network usage





## **Intelligent Mobility Enhances Engagement**









#### Way-Finding

Indoor turn-by-turn directions (for guided tours)

#### **Push Notifications**

Time and location relevant messaging





## **Aruba Beacons Power Indoor Location**



#### Aruba Beacons

Blue dot directions and notifications based on real-time position

#### Aruba AP w/ integrated Beacon

Communicates with Aruba Beacons and Meridian Platform

#### **Meridian Platform**

Location-based and personalized content for apps Monitor and manage beacon battery level, operating mode / firmware Meridian-Powered Mobile App White-label or custom app w/ SDK

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## Comprehensive Management and Analytics Tools

Beacons Mobile App Update indoor map and measure accuracy

#### **Meridian Cloud**

Monitor beacon status, battery power level, and update firmware



ATET S 2.00 PM **Aruba Beacons** LogIn orubo **data**networks



INNOVATION LEADER IN CAMPUS NETWORKS

"Clients globally should consider HP Aruba for all wired / WLAN access layer opportunities."

> Gartner MQ for Wired and Wireless LAN Access Infrastructure, August 2015

Source: Gartner Magic Quadrant for the Wireleas LAN Access Infrastructure September 2015. Tim Zimmerman, Bill Menezes, Andrew Lerner, ID Number: G00277052 This Magic Quadrant graphic was published by Gartner Inc. as part of a larger research note and should be evaluated in the context of the entire report. The Gartner report is available upon request from HP. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research tool.

