Network Management
Integrated, Cloud, On Premise
Agenda

Overview of Aruba’s Management Solutions
AirWave 7.7
Aruba Central
Recap of the Network Management Solutions
Q & A
Aruba management suite

Customer premises

Aruba Activate

Aruba Central

Best of breed across the entire management lifecycle
AirWave 7.7
AppRF – Firewall visibility

- Summary page to display top destinations & applications
- Drill down pages similar to ArubaOS
- Client diagnostic page to display top 3 apps/destinations
AppRF – Firewall visibility

- Drill down pages similar to ArubaOS
- Client diagnostic page to display top 3 apps/destinations
ARM 3.0 – Client Match

- Visibility into client match events and reporting
ARM 3.0 – client health

Client health: Dashboard and overlay
IAP GUI Config

- Simplified UI to configure VCs and APs
- Terminology, help similar to IAP
- Tools to override settings per location/VC and resolve mismatches
IAP GUI Config

Add note on any field

Multi-edit for Name/IP
IAP GUI Config

Drill down to a location and override any field

<table>
<thead>
<tr>
<th>Networks &gt; IGC-Stores</th>
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<tbody>
<tr>
<td><strong>General</strong></td>
</tr>
<tr>
<td>Name &amp; Usage</td>
</tr>
<tr>
<td>Name (SSID): IGC-Stores</td>
</tr>
<tr>
<td>Primary usage:</td>
</tr>
<tr>
<td>Employee</td>
</tr>
<tr>
<td>Voice</td>
</tr>
<tr>
<td>Guest</td>
</tr>
<tr>
<td>Bandwidth Limits</td>
</tr>
<tr>
<td>Airtime: 50%</td>
</tr>
<tr>
<td>Each user:</td>
</tr>
<tr>
<td>Each radio:</td>
</tr>
<tr>
<td>Transmit Rates</td>
</tr>
<tr>
<td>2.4GHz: 1 - 54 mbps</td>
</tr>
<tr>
<td>5GHz: 6 - 54 mbps</td>
</tr>
<tr>
<td>Miscellaneous</td>
</tr>
<tr>
<td>Content filtering:</td>
</tr>
<tr>
<td>Band: All</td>
</tr>
<tr>
<td>Inactivity timeout:</td>
</tr>
<tr>
<td>1000 secs</td>
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</tbody>
</table>
Watched Client (VIP) Dashboard

- Any client can be added to the watched list.
- SNR, Speed and health are tracked.
- Shows trend as compared to previous hour.
Capacity Dashboard - Upgrade to 11ac?

X-Y scatter plot of all radios:
#clients vs. radio utilization

Radios in the from the diagonal deserve further investigation

125 radios were “heavily utilized” 75-100% of the time.

(“Heavily utilized” is 80%+ utilization).

(Only “on time” is considered. That is, blocks of time the radio is doing something, not the middle-of-the-night).
Graphs: moved Flash → HTML5

All graphs in AirWave 7.7 are converted from Flash to HTML5.
Graphs: moved Flash → HTML5

By clicking on a graph, can then zoom in/out, pan, and hover (to get values for each point)
Support for new APs
- AP224/AP225 (802.11ac), RAP155/155P

AOS 6.3 Support
- Configuration of new and updated profiles
- AP monitoring with HA Lite

Real time monitoring for controllers
- Client monitoring data (state and stat)

Aruba Instant
- Support for IAP 3.3
- Threshold to mark VC down (similar to SNMP threshold)
- Show the AP acting as VC in lists
- Firmware upgrade improvements: Image Server Integration, group enforce flag
- Configuration of 7.1 and 7.2 profiles
- MAS config is its own tab (do not use same AMP group for controller and MAS config)
Per switch overrides on any profile
7.7 – Other Enhancements

**Trigger Enhancements**
- Auto acknowledgement of up/down alerts
- NMS integration now supports SNMPv3 informs
- Radio up trigger

**Reporting Enhancements**
- Folder level summarization in Device Summary reports
- Wired bandwidth in Network Usage Report
- Quarterly reports (reports every n months)
- Email CSV reports

**Usability and workflow enhancements**
- 30x improvement in time taken for nightly audit (login to controller once for all the APs)
- Import config from controller/switch when added into group (like Instant)
- Show device name everywhere (no more mac addresses in AP names)
- Aruba AP Group on APs/Devices-> New page
- Split up image download and reboot (Cisco and Aruba)
- First discovering AP/time in the rogue list
Other Enhancements - continued

Multi-vendor device support
• Support for Cisco 1600 and 2600
• Support for HP devices

API Improvements
• API to get report data in XML format (XHTML)
Serviceability Enhancements

- Visibility into performance issues on AMP
- Run commands enhancements (both IAPs and controllers)
Features

• Identify planned APs on a floor plan
• Show notes field (read only)
• New AP Support (AP224, RAP155)

Performance and Scalability Improvements

• Loading VisualRF page is faster
• Optimized for better handling of channel utilization and interface metrics
• Speedups in VisualRF startup
• Better logging and diagnostics
• Better defaults for http timeouts
• Handle OOM issues better
• Location Accuracy Tool for better troubleshooting
Anomaly detection

Anomalies illustrated for clients and bandwidth.

Shown here, the current reading (blue, green), plotted against 40-week average +/− one standard deviation.

Average for any given period of time, (for example, noon-12:10 on a Friday), is calculated for that same time-period (noon-12:10) for the previous 40 Fridays.

(Average is NOT simply the previous few days).
Aruba Central
Introducing Aruba Central

✓ Centralized cloud based management for Instant APs

✓ Multiple sites (or)

✓ Multiple clusters in a single site

✓ No servers to install

✓ No ongoing maintenance
Key platform capabilities

- Multi-tier multi-tenant architecture
- MSP console
- Complete “rebrandability”
- Highly reliable cloud infrastructure to provide SLA to your customers
Summary on NMS Solutions
## AirWave or Aruba Central?

<table>
<thead>
<tr>
<th>Private cloud</th>
<th>Public Cloud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong data privacy, compliance and security requirements</td>
<td>Ease of setup, deployment and expansion of a “cloud” based solution</td>
</tr>
<tr>
<td>Desire control over management software (exact image version etc.)</td>
<td>Do not want to “manage the management software”</td>
</tr>
<tr>
<td>Prefer a one time expense over a recurring fee</td>
<td>Prefer an operational expense over initial upfront capital expense</td>
</tr>
<tr>
<td>Want to control access to the management software only from internal network</td>
<td>Prefer having access to the management software from anywhere in the world with an Internet connection</td>
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**Your choice depending on your business requirements**