Aruba Technology update: Wi-Fi 6

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WLAN Competitive TME
HPE ARUBA
AGENDA

➢ Trend and challenges
➢ Wi-Fi 6 Features
➢ Benefits of Wi-Fi 6
➢ Aruba’s Wi-Fi 6 CERTIFIED Indoor AP portfolio
➢ Advantages of AOS 8
➢ AOS 8 Customer Blogs
Trends and challenges
Need for Wi-Fi 6

GROWTH IN DEVICES
DIVERSITY OF APPLICATIONS

HOW CAN WE SOLVE THIS?

INCREASED UPSTREAM TRAFFIC DUE TO USER UPLOADS AND GROWING USER EXPECTATIONS

IOT CONNECTIVITY

IOT CONNECTIVITY
ENHANCEMENTS IN Wi-Fi 6
802.11ax or High-Efficiency Wireless

Increased Efficiency

Increased Performance
ENHANCEMENTS IN Wi-Fi 6
802.11ax or High-Efficiency Wireless

Better power saving mechanism
Better media access mechanism
Increase in data rate and range
Benefits of Wi-Fi 6
## BENEFITS OF Wi-Fi 6
802.11ax or High-Efficiency Wireless

<table>
<thead>
<tr>
<th>Feature</th>
<th>Improvements over 802.11ac</th>
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<tbody>
<tr>
<td>New OFDM symbol</td>
<td>20% higher data rates over 802.11ac</td>
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<tr>
<td>OFDMA downlink &amp; uplink</td>
<td>~ 3x system capacity for short packets or many clients</td>
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<tr>
<td>MU-MIMO downlink and uplink for up to 8 clients</td>
<td>~ 2x capacity over 802.11ac</td>
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<tr>
<td>Spatial re-use (BSS color)</td>
<td>~ 2x capacity over 802.11ac</td>
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<tr>
<td>High-order modulation 1024 QAM</td>
<td>25% over 802.11ac</td>
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<tr>
<td>Target Wait Time</td>
<td>~ 3-10x battery life</td>
</tr>
<tr>
<td>20 MHz – only client option</td>
<td>Lower cost chips</td>
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<tr>
<td>Special preamble for long links</td>
<td>~ 2x more range for a given data rate</td>
</tr>
<tr>
<td>Long guard interval option</td>
<td>Allows a 1km difference in multipath without self-interference (vs 250m)</td>
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Network (BSS) capacity vs number of clients

Total capacity, Mbps vs Client count

- after 802.11ax
- before 802.11ax

(for 217 Byte packets in an 80 MHz channel, not including 1024-QAM options)
The above tests were performed using 11ac Clients with 1460 B TCP packet on 80 MHz wide SSID
ARUBA Wi-Fi 6 ALSO INCLUDES ADVANCED SECURITY CAPABILITIES

- Wi-Fi CERTIFIED WPA3
- Wi-Fi CERTIFIED Enhanced Open
- Aruba Air Slice
- Aruba Policy Enforcement Firewall
Wi-Fi 6 CERTIFIED COMPLETE INDOOR PORTFOLIO

High performance  Incredible efficiency  Enhanced protection

ARUBA 500 SERIES
ARUBA 510 SERIES
ARUBA 530 SERIES
ARUBA 550 SERIES

AI POWERED  SLA-GRADE ASSURANCE  CLOUD OR ON-PREMISES

RELIABILITY  TRUST  INTEROPERABILITY
Advantages of AOS 8

- Always-on network with no downtime
- More intelligence and automation
- Simplified operation
- Enhanced security
Wi-Fi 6 and AOS 8 Customer Blogs

- [https://blogs.arubanetworks.com/industries/does-your-k-12-district-really-need-Wi-Fi-6/?highlight=11ax%20Education](https://blogs.arubanetworks.com/industries/does-your-k-12-district-really-need-Wi-Fi-6/?highlight=11ax%20Education)
THANK YOU
Competitive TME Team
https://arubapedia.arubanetworks.com/arubapedia/index.php/Category:Competitive_-_WLAN

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