

Introducing Aruba Instant On Wi-Fi for Small Business

February, 2020

Agenda

- Small Business Challenges
- Introducing Aruba Instant On
- Competitive Landscape
- Pricing
- Key Details
- Available Resources
- Feature Release
 - 1.2
 - 1.3

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Small Business Objectives





Improve Operational Efficiencies ...



Gain Competitive Advantage ...



... by investing in technology to reach new buyers and increase sales

... to manage costs and increase productivity

... by adopting digital payment options, providing guest Wi-Fi and more.



The New Aruba Instant On Portfolio



Announced on June 11th, 2019 Target Audience: Small Businesses with less than 100 users



Why Aruba Instant On?



Simplicity at it's best

- Hassle-free set-up and management
- Remote and multi-site management: Instant On mobile app and Cloudbased web portal

Best-in-Class security

- Secure guest and employee access
- Integrated Wi-Fi security standards for secure authentication -WPA2/WPA3, OWE

"Always-on" quality

- Superior SW & HW from a trusted vendor
- High performance Wi-Fi access
- Unmatched user experience and support



Purpose-built Wi-Fi

Customer Nee	d Feature			
Simplicity	App-based management	 Plug and Play with quick setup using mobile app or cloud-bas Mobile app provides complete control, with no license or subs Remotely manage multiple sites from anywhere, anytime 		
Business growth	Scalability	 Up to 25 APs in one network Supports up to 8 SSIDs "Mix n Match" of different Instant On models in a network 		
Secure Wi-Fi everywhere	Smart Mesh	 Reliable signal in hard-to-wire areas Easy process for adding additional APs Integrated WPA2/WPA3 security standards 	orubo Instant on	
Peace of mind	Superior Post-Sales Support	 Phone & chat support 1-year warranty Instant On community 	Google Play	Download on the App Store

Instant On Mobile App / Cloud-based web portal

"Similar functionality : Ability to choose from two modes"

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Smart Mesh Setup

 Add additional access points to your network with 1step mesh set-up



Auto-proofing

• Automatic software updates, keeps network up-todate and secure.

Personalized views

• Whether a reseller managing multiple sites or small biz owner, you see what's important to you.



Smart management of multiple networks

• It sounds difficult, but it's just a simple way of creating separate guest and employee networks.

Guest portal customization

• Custom guest login page helps build your brand and make Internet access a breeze.



Aruba Instant On: The End-to-End Small Business Solution



Instant On Access Points

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	Applications Constraints 27.4 M machine traine	Inventory	<u> </u>

Mobile App and Cloud-based Web Management



OfficeConnect 1920S



OfficeConnect 1950

HPE OfficeConnect Switches

Simple, secure and reliable wired & wireless



Use Cases and Target Markets

Small Business: Sub-100 user size

- "Do-it-for me" customers
- "Do-it-yourself" customers
- Serviced by Aruba business or proximity partners

Use Cases	Typical Verticals	Existing Customers	Competitive Take- out
 Small business networks Indoor and outdoor areas 	 Medical clinics Independent retails Boutique hotels Professional offices SOHO 	 Upgrade customers to Wave 2 Wi-Fi Upsell customers (HPE OfficeConnect switches) 	 802.11 a/b/g/n/ac Wave 1 refresh cycles Small business customers deploying competitors



Instant On vs Instant AP Positioning

	Instant On Access Points	Instant Access Points
Target	Small businesses - Small offices, retail, independent hotels (less than 100 users)	Enterprise branches and mid-size campus (more than 100 users)
Management	Mobile app and Cloud-based portal (different from Central)	Multi-vendor AirWave, Cloud-based Central, Web-based GUI
IT resources	Little or no IT staff	IT generalist/specialist
Upgradability and Use-cases	 Right-sized features for small business Small networks: 25 APs/Network; 8 SSIDs (both radios) 	 Scalable, customizable and upgradable (CAP/Cloud) Mid-large networks: 128 APs/Network; 16 SSIDs (per radio)
Wi-Fi Standard	Wi-Fi 5 (.11ac Wave 2)	Wi-Fi 5 (.11ac Wave 2) and (Wi-Fi 6) .11ax
Breadth of portfolio	Right-sized 4 indoor models and 1 outdoor AP	30+ models (including external antenna)
Support	 24X7 90 day phone support; online chat for 1-year warranty period Aruba Instant On Community 	 8x5 best effort TAC first 90 day Airheads community
Warranty	1-Year Warranty	Limited Lifetime Warranty (LLW)



(Cont'd) Instant On vs Instant Positioning

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Instant On Access Points

Instant Access Points

Network Scale	Up to 25 APs and 100-150 user devices at a site	Up to 128 APs and 2000 user devices at a site
Management scale	Manage tens of sites with app/cloud portal	Manage thousands of sites with Central/Airwave
Future-proof	Need for enterprise features or scale will require new hardware. No conversion to IAP/CAP.	Cloud managed. Easy conversion to controller based APs for scale/feature needs
Flexibility	Right-sized features for small businesses	Feature-set to meet all mid to enterprise use-cases
Firewall	Basic firewall for network based rules	Context driven policy enforcement firewall
User roles	SSID based user roles	Detailed user role definition (per role, user, device, location, app)
RF	No ClientMatch. ARM enabled with no controls.	Advanced RF optimization with ClientMatch and customized configuration
AppRF & WebCC	Visibility and blocking for major categories only	Fine-grained policies at individual app level
Services	None	Advanced - Airgroup, Clarity, IoT, UCC, RTLS, IAP-VPN.
ClearPass	Basic authentication/access security integration	Integration for advanced security and policy enforcement and third party services like PAN.

Key Competitors



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Instant On versus Meraki Go

Differentiation	Instant On	Meraki Go	Benefits
AP models	5 Models (Indoor, Outdoor, Hospitality) deployment	2 models (Indoor, Outdoor) deployment	Deployment flexibility
Support	90 days phone and 24x7 chat for 1 year; online community	Online chat (business hours, 5 days), Support community. Support cost included in subscription	Phone support for quick resolution and easy troubleshooting .
Warranty	1 Year	1 Year	
Multi-site management	Yes	No	Easy to manage, monitor network operations
Management options	Mobile app , Cloud Portal	Mobile app only No support for Meraki dashboard	Multiple Network mgmt. options for ease of use
Subscription cost	No Subscription required	No Subscription required	Cost savings as no annual subscription is required for support , Remote Management .
Social Login for Guest network	Yes supports Facebook login	No	Ease of access for end users ,also useful for traceability
Language Support	Supports up to 8 Languages	Only supports English, Spanish, French, German and Japanese	To ensure global usability
Availability	Global	Only available in EU, UK, USA, Japan	Global presence
Wi-Fi Alliance Certification	Yes	No	To ensure global reliability

Instant On versus Ubiquiti

Differentiation	Instant On	Ubiquiti
AP platforms	All 802.11ac Wave 2 platforms	 Most APs are Wave 1 (excluding Ubiquiti Dream Machine - 802.11ac Wave 2, 4x4:4 Indoor AP)
Ease of Use	Simple setup through a mobile app or cloud-portal , One-touch Mesh set-up	Extremely complex dashboard with too many menus and options
Support	• 24X7 90 days phone and chat for 1 year; online community	 Chat support for 1 year; community Need to buy Elite support separately (US only)
Warranty and RMA	1 year warranty10-day shippingPaid shipping costs both ways	 1 year warranty if bought from listed resellers only Customers responsible for shipping cost
Enterprise quality	Aruba Instant brand. Enterprise grade reliability.	 No. e.g., gateway needs to be re-provisioned from scratch upon power failure.
Ease of use	 Simple to deploy. No cloud key or gateway needed. 	 Not simple to set up. Cloud key and gateway required for advanced features.
Gateway features	 Built advanced features including Guest Access, DHCP, NAT, QoS * 	Requires external gateway (\$344+)
Remote management	• Yes	 Ubiquiti requires cloud key (\$79 - \$199), hosted software or cloud subscription. Ubiquiti Dream Machine – integrated cloud key and security gateway
ARM	Auto RF optimization	Requires manual config of each AP
Auto-mesh	One-touch mesh with app	Not easy to set up
Historical data	• 1 to 7* days	Ubiquiti requires additional hardware or cloud
Security	 Firewall, DPI, IDS included *, WPA3 support 	 Requires gateway (\$344+) for DPI, IDS , no WPA3 support
End user price * Adv	 \$ 89 - \$ 215 anced features will be available in a future release. 	Only looks cheaper at \$ 79 - \$ 199

Portfolio Details

Pricing that fits any Space!

(2x2:2)	AP11D (2x2:2)	Ideal Deployments	AP15 (4x4:4)	AP17 (2x2:2)
SOHOBoutiquesRetail Shops	Boutique HotelsMedical OfficesSOHO	 Doctor's Offices Cafes Boutique Hotels Restaurants 	Tech Start-upsDesign FirmsProfessional Offices	Outdoor CaféOpen Restaurants
		List Price (ROW)*		
\$ 105	\$ 149	\$ 179	\$ 209	\$ 259
		List Price (US)*		
\$ 119	\$ 165	\$ 199	\$ 230	\$ 289



Warranty and Support Options

	Instant On Limited Warranty	Foundation Care for Instant On (HK1Y0E)
Warranty	1 Year	3 Years
Next Business Day (NBD) replacement of parts	30 days (from purchase); after which parts will be replaced within 10 days	3 Years
24x7 telephone support	90 days (from purchase)	3 Years
24x7 chat support	1 Year	3 Years
Software support	90 days (from purchase)	3 Years
Transferable	No	Yes

*Note - Add for an extended warranty and support services within 90 days of your purchase

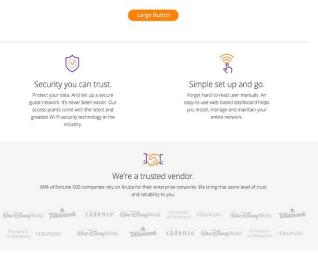
Because your network is critical to your small business



www.arubainstanton.com



It's premium-grade Wi-Fi that you can count on. With Aruba Instant On solutions, you can rest assured that you'll get the speed and reliability you need to run today's business-critical mobile and cloud apps.







We're here to help.

We're here to help. Our access points help your business run smarter and they come with an attractive price point. And guess what - we won't charge you with additional licensing and support fees - and support and 24x7 chat service is included.





Get connected. Can your network keep up with your business needs? If not, you've come to the right place. Experience the power of our Instant On solutions for true premium grade connectivity and performance.

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Features	Benefits		
Wireless Mesh	Convenience: Expandyour network to hand-to-wire areas	Cost effectively extends Wi-Fi connectivity with- out need for cables back to switch	Sama network configurations (SSE), passwent, security)
802.11ac wave 2	802.11ac is three times faster than .11n	Allows multiple clients to transmit data simulta- neously, improving performance and productivity in mid - high-density winniess environments.	Full range portfolio flow-mid density 2202 to high density 4/404) 11ac
WI-FI Alliance WPA2/WPA3 and enhanced open	Secure employee and guest neternits. WPAINIPAI: Enterprise enhances encryption and simplifies configuration	WPA2/WPA3: Enterprise enhances encryption and simplifies configuration	Secure user data traffic in open networks such coffee shops
Captive Portal	Customizable landing page for visitors and pro- vide windess access in a branded and romment separated from the core business network.	Scalable with cluster of up to 25 access points per network	
Scalability	Scalable with cluster of up to 25 access points per network	Supporting 8 SSDs	
Application/ Web Visibility	Appikation visibility only (no blocking, no priori- string)	Reque AP detection (detection only)	Web categorization (childring on (c
Multi-Language Support	Local larguage support (Local Web Interface) -		

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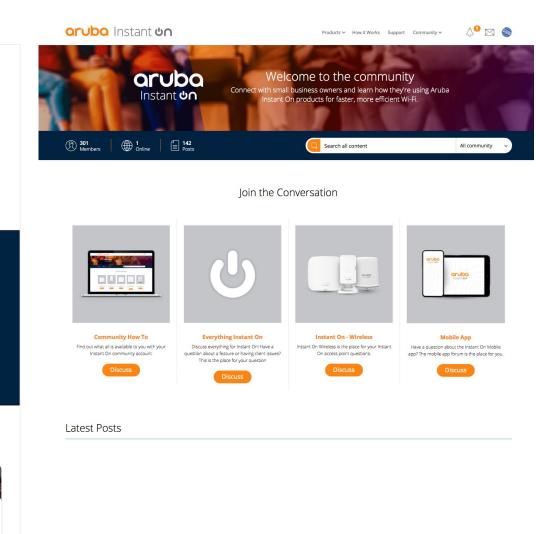


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community.arubainstanton.com



Aruba Instant Summary

From Blazing to Amazing





Mobile app and Cloud-based admin access

Remote and multi-site management

Separate employee and guest access

Customizable captive portal

Proven reliability



August, 2019



Instant On Ver 1.2 Feature Update

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Agenda

Instant On mobile app - 7 new languages
 DHCP/NAT
 Bandwidth limiting - per SSID/user
 Client blocking



Expanded Mobile App Support

7 New Languages

English plus;

- Chinese (simplified)
- Japanese
- French
- German
- Italian
- Spanish
- Portuguese

Go Anywhere administration for partners with customers in multiple regions

- 1. When the app starts, it detects the locale of the phone and sets local language, which is saved and used every time the app launches
- 2. Saved language is communicated to the cloud and notifications are sent in the same language
- 3. If the phone's locale is not one of the supported languages, it defaults to English





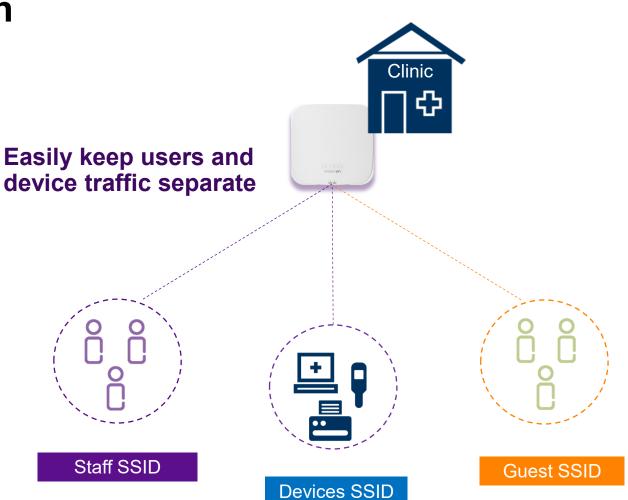


Secure Network Segmentation

Built-in DHCP/NAT Support

IP Address Costs Savings

- Only pay for 1 Static IP Address from Provider
 - No monthly fee for next level addressing (2, 3, 5 addresses)
- Does not require paying for external Gateway (~ \$340 or more savings)
- NAT lets outside world **only** see public address scheme

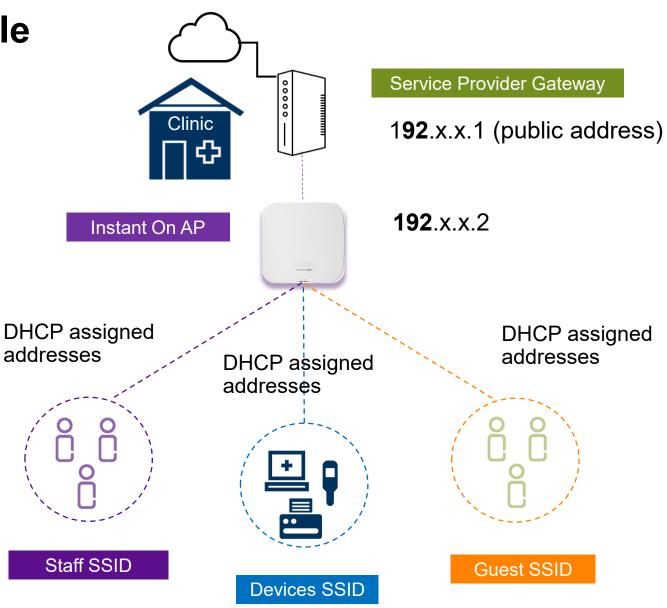




How it Works - Example

Built-in DHCP/NAT Support

- Devices on each network has their own address scheme
- Simple to keep different traffic from users/devices secure



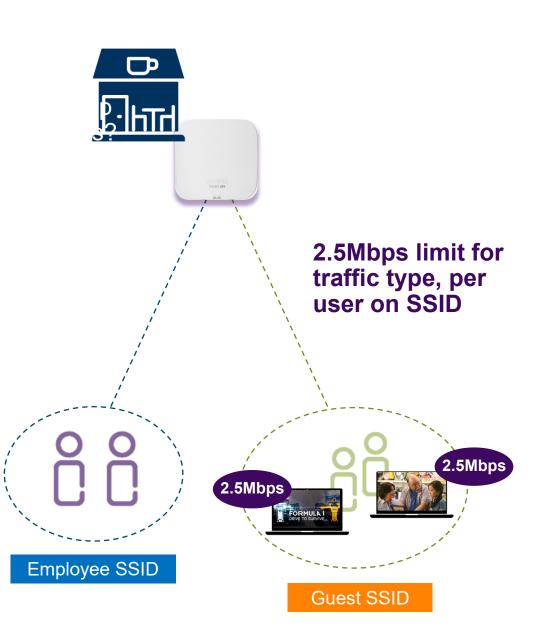


Per SSID, Per User Rate Limiting

Simple Quality of Service Control

Control bandwidth use during peak hours

- Limit video bandwidth to 2.5Mbps (720p) per user on an SSID
 - > 4Mbps needed for 1080p HD
 - Day of the week, set hours
- Easy to setup different QoS rate for employee network if needed
- Simple to configure via mobile app or web



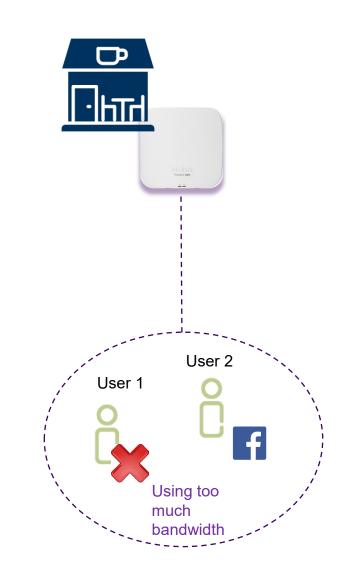


Client/Device Blocking

Fast and Easy Performance and Security Fix

Simple MAC address blocking

- Notice user/device using over consuming bandwidth
- Takes minutes to keep person or device from using the network
- Implement via mobile app or web





October, 2019



Instant On

Ver 1.3 Features Update

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Agenda

- 1. Integrated gateway and firewall
- 2. App/web traffic visibility and blocking
- 3. Support for popular guest Wi-Fi portals
- 4. Mobile app enhancements
 - Enhanced troubleshooting
 - New installation wizard
 - 2 new languages
- 5. Automated regulatory table (DRT) updates



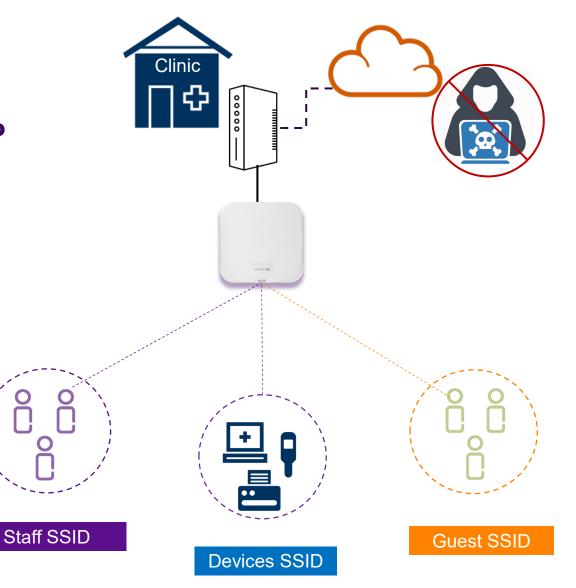


Integrated Router and Firewall

No need for External Devices

Gateway function lets you connect an AP directly to a modem while automatically blocking traffic initiated from outside

- Now, the AP can assign DHCP IP addresses and perform NAT for clients, and for other wired/mesh APs
- Keeps business computers and IoT devices safer
- Added protection without buying extra hardware or software services
- Rules are pre-built for hassle free security



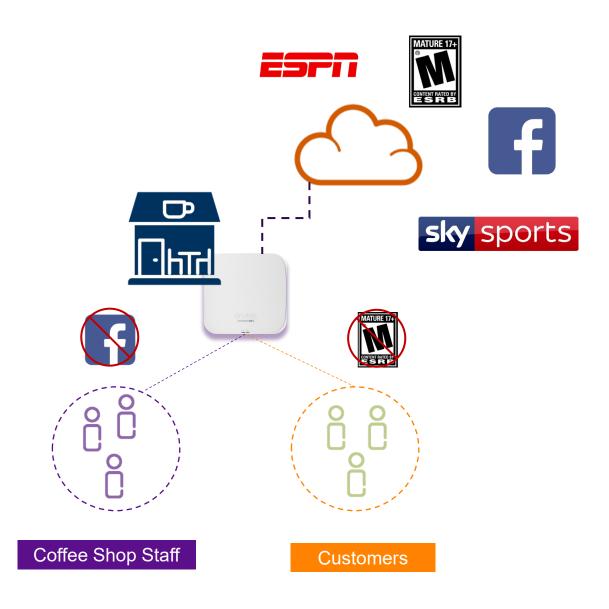


Traffic Visibility and Blocking

For Apps and Web Traffic Categories

Spot common apps and filter by network

- Visibility into app and web traffic using integrated deep packet inspection engine
 - Understand resource usage and spot unwanted traffic
- Easily block up to 19 categories of content
 - Sports, adult entertainment, social networks, gaming...
- All without an external firewall, enabling simplicity and cost savings





New Support for Guest Logins

Popular guest access portals and Facebook Wi-Fi

Easy to use guest portal integration

- Simple login using third-party portals or social logins
- Leverage partner analytics for data on users, behavior and visits
- Facebook Wi-Fi also supported for social logins, likes, and easy guest experience...





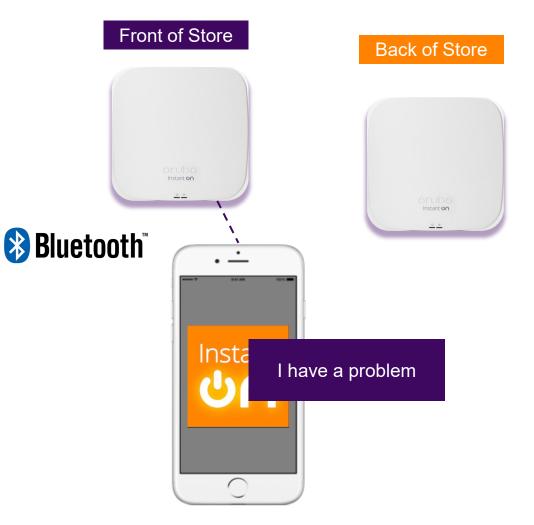


Enhanced Troubleshooting using Bluetooth

No Cabling Required

APs tell you when there's a problem during initial setup

- I'm not connected to the network
- No IP address, authentication failed, no Internet access
- Mesh AP detected and up
- Works with Instant On Mobile App
- Helps simplify troubleshooting without climbing on a ladder to diagnose
- Unique to Aruba Instant On



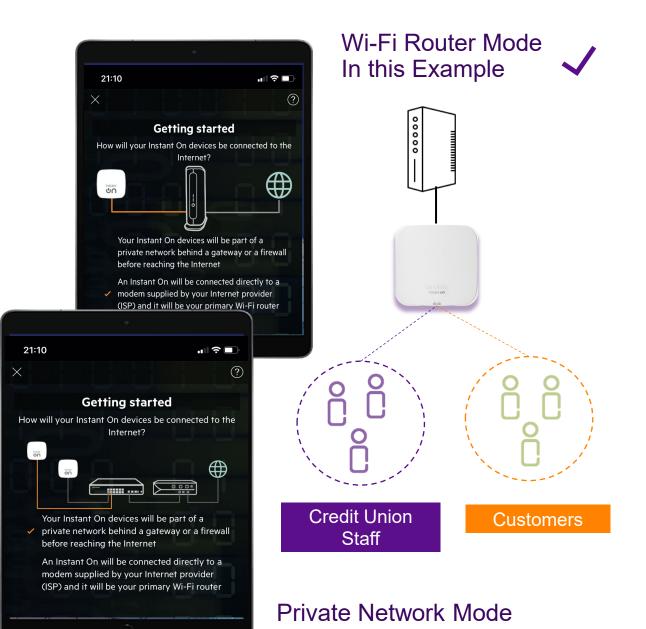


Installation Wizard

Step-by-step installation guidance

No need to look at physical documentation to deploy your network

- Makes it easy for non-Tech staff to deploy Wi-Fi
- Just match your setup to the image in wizard
- Two (2) basic AP modes:
 - Private Network: acts as DHCP server for guest clients only
 - Wi-Fi Router: provides IP addresses to all other APs





Expanded Mobile App Support

2 New Languages (now 10 in total)

English plus;

Korean Chinese (traditional)

- Chinese (simplified)
- Japanese
- French
- German
- Italian
- Spanish
- Portuguese

Go Anywhere administration for partners with customers in multiple regions

- 1. When the app starts, it detects the locale of the phone and sets local language, which is saved and used every time the app launches
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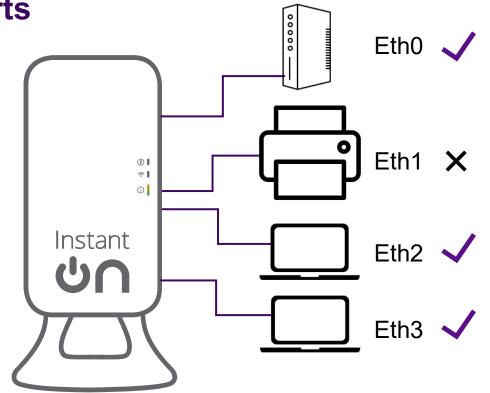


AP Wired Port Visibility

Built-in Ethernet Ports Just Got Smarter

Real-time status on how the your ports are working

- Port status (Link up/down)
- Port speed negotiation
- Download and upload speed
- See the status of ports on any AP with Mobile or web
- No need to send someone out to look at LEDs or climb ladders

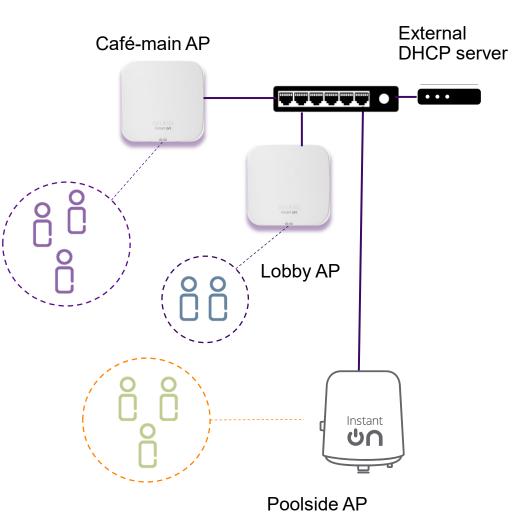




Easy to Configure AP Hostnames

IT Time Saver

- Useful in deployments where there is an external DHCP server
- See Status and Stats of an AP by Area, Location, Etc.
- Hostnames are easier to remember than IP addresses for faster troubleshooting
- Makes reports easy to read





Jan 2020



Instant On

Ver 1.4 Features Update

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Agenda

- **1. PPPoE / static IP settings**
- 2. RF controls:
- a) Ability to control network band
- b) Ability to control channel bandwidth
- 3. Performance improvements (DPI)
- 4. Open guest network
- 5. Applications and client visibility enhancements
- 6. Gateway availability enhancements
- 7. RADIUS proxy / NAS IP
- 8. LED quiet mode

9. Features to share internally and with partners **Orubo** a Hewlett Packard Enterprise company

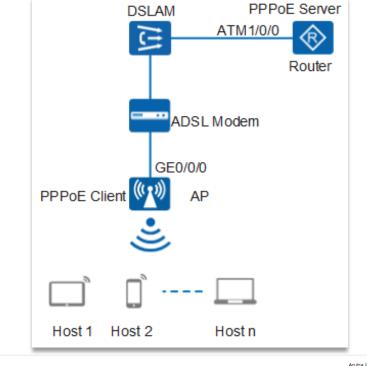


PPPoE*

Assign static IP address to an AP while connecting the AP to the ISP's PPPoE server

- Until now, Instant On Access Points(AP) required DHCP IP only. Now, we can assign a static IP address to the AP
- Instant On APs now support PPPoE. With this, APs can authenticate and get connected to the ISP's PPPoE server using their uplink.
- How it works?
- After the AP boots, it will broadcast an SSID InstantOn-AB:CD:EF
- Connect to this SSID and use the web browser and enter the URL <u>https://connect.arubainstanton.com</u>.
 Enter the authentication credentials and you are done

* needs to be tested with all the ISPs in the respective countries



Device information		IP addressing		
Model Aruba Instant On AP11D	2020; CLOUD cmd at uptime 0D 1H 20M 0S: write erase all	DHCP Static Username user1 Password user12345 Service name (if required)	PPPoE By default, both PAP and CHAP user name, and password/chap-secret are saved. Authentication will be	
Portal connectivity			Authentication will be based on ISP requests.	
Instant On portal status	Instant On portal message			
Device onboarding status Error	Device onboarding message			
Device local time 2020-01-17 17:35:53 (UTC)	Time source Instant On Portal			

RF Enhancements and Controls

- Control network band
- Control channel width

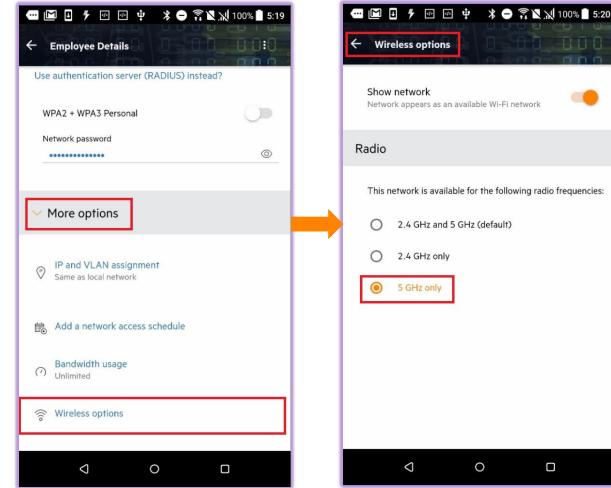


Ability to control network band

- User can now select the network band of operation from the below options
 - 2.4GHz and 5Ghz
 - 2.4 GHz only
 - 5GHz only
- In order to keep the config simple, this ability is only in the advanced tab that's not expanded by default (Figure).

Customer benefit:

- Certain devices can only operate at a specific band.
- This feature is also useful for the CEDIA market



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2.4 GHz (802.11b/g/n)





1	5 G	Hz	(80)	2.11	la/1	1/ac	:)															
	36	40	44	48	52	56	60	64	100	104	108	112	116	120	124	128	132	136	140	144	149	15

Ability to control channel width

- Users now have the ability to select different channel widths in the different radios as shown in the figure
- These configs are under the advanced tab to keep the overall config simple
- Customer benefit:
 - Ability to fine tune the network according to the customer's specific requirements

← Radio Management
Changing these settings may disconnect client from the network
2.4GHz Radio
Channel width
20MHz (default)
O 20/40MHz
Channel selection
5GHz Radio
Channel width
O 20/40MHz
20/40/80MHz (default)
Channel selection
36 52 100 116 132 149



Key Performance Improvements

Ability to turn on/off DPI

Under Visibility and Control, there are two options

- Application details shows all apps used (turns DPI on)
- Application activity summary disables DPI (no visibility into used apps)
- Improves throughput of the AP in high density environments
- Instant On APs have DPI and FW functionality built-in which is a huge value add.
 - Competitors like Ubiquiti and others do this on a separate GW/FW and charge extra
- DPI impacts performance. This feature is primarily for customers who prefer performance over DPI:
 - We now have an option to turn off DPI which potentially increases throughput on the AP

Visibility And Control

Application details (default)

Allow to view and control applications in the network. This may slow down overall network performance.

Application activity summary

Overview of uploaded and downloaded data in the network. Choose this for better network performance.

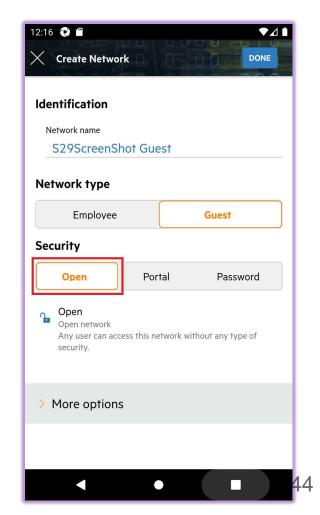




Open Guest Network

- This is the ability to have an open guest network without Captive portal or PSK
- Guests will now be able to directly connect to the Wi-Fi without entering any details or going through additional steps
- Customer benefit
- Simplified guest onboarding experience as config for the admin







App and client visibility enhancements

- Visibility of top 5 apps
- Alert message to clients if an app is blocked in their network
- Enhancement of client blocking config and visibility



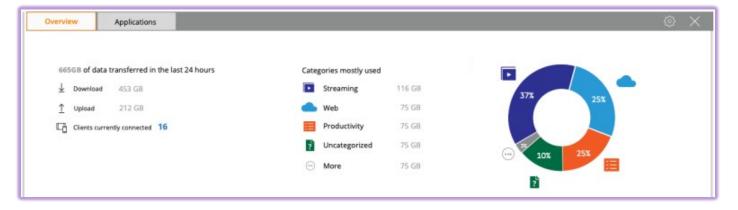
Application visibility enhancements

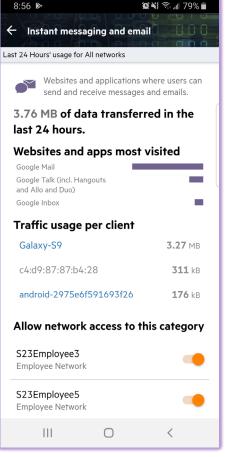
Enhanced visibility of apps:

Ability to view traffic usage per app per client

• View top 5 applications in client page

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Alert messages to clients if an app is blocked on the network:

• Client gets a notification when an app is blocked for http only.



Client blocking visibility enhancements

Block / unblock apps from Networks page

- Simplification of config for blocking clients
- Easy visibility of blocked clients



	Connected clients (2)	Blocked clients (2)								
	Name	Network	Device	Duration	Signal	IP Address	MAC Address	OS	ť	
,	> iPhone	S03_gpsk	AP11Sec-CNJ0K9T2LQ	4 minutes ago	•	172.18.0.118	70:ec:e4:0e:34:07	🔹 iPhone		
;	 OfficeConnectL 	S03_guest_open	AP12-CNHYJSS01W	9 minutes ago	•	172.16.0.223	9c:da:3e:1a:e1:cc	Windows 8		

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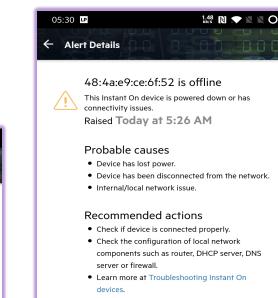
GW availability enhancements

- In the router mode, if the main AP (GW) fails, there is now an ability to swap it out with a new AP.
- For faster resolution, an existing AP in the site can also be used to replace the router that is down.
- Mesh APs will automatically connect to the new router

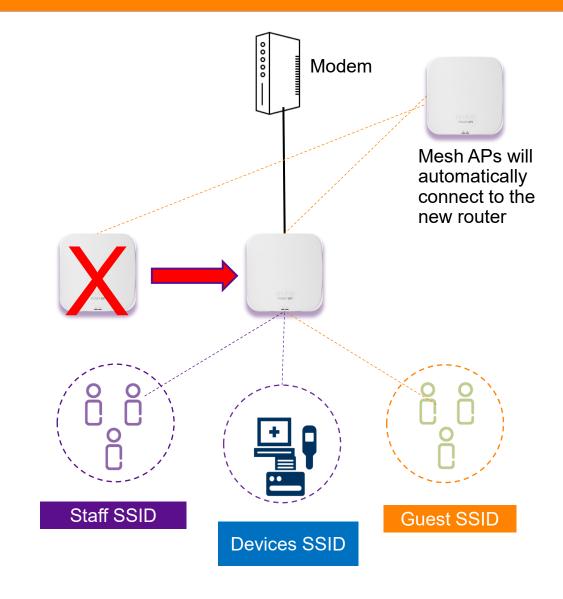
Customer benefit

Quick downtime resolution





If this Instant On device was removed from the network and this is an expected situation, you may want to replace it from your inventory.



RADIUS proxy / NAS IP

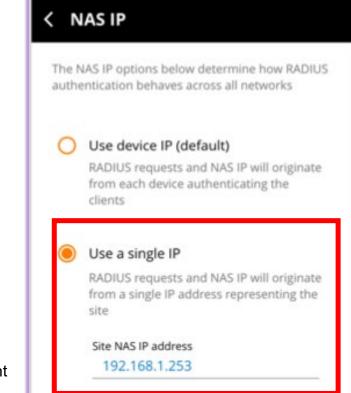
- Now, there is an ability to add a single NAS IP in the external RADIUS server which represents all the APs in the network.
- This eliminates the need to add the IP addresses of all the APs in the network and simplifies configuration
- A NAS-IP should be a statically assigned address that never changes in the network (in case of failover in the network)

Customer benefit

Simplified Configuration

**If you select the first choice (which is the default), you will need to configure your RADIUS server to accept requests from all the APs IPs in the network

**If you select the second choice, you need to specify the IP address you want to use AND your RADIUS server to accept requests from that IP address





LED quiet mode

 This is the ability to turn off the LEDs on the AP through software

Customer benefit

- To maintain ambient lighting and not cause "light pollution"
- **Note: this capability is NOT available in the hardware and is only controlled through the mobile app

