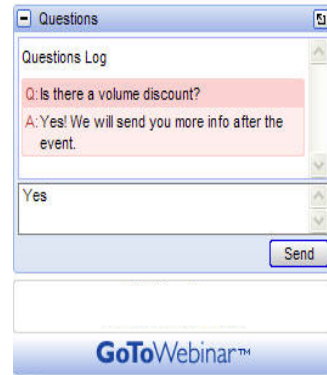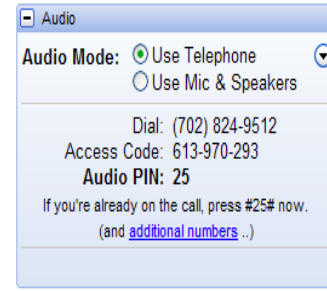# Welcome to the Technical Climb Webinar

Listen to this webinar using the **computer audio broadcasting** or dial in by phone.

The dial in number can be found in the audio panel, click **additional numbers** to view local dial in numbers.

If you experience any difficulties accessing the webinar contact us using the **questions panel**.

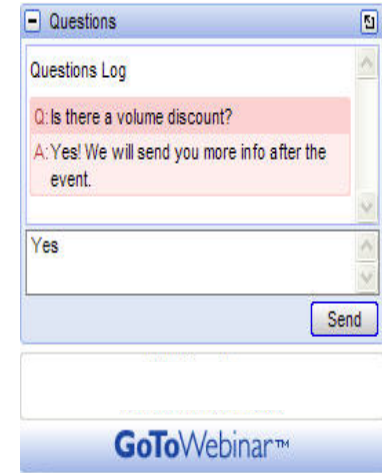# Housekeeping

This webinar will be recorded

All lines will be muted during the webinar

How can you ask questions?
Use the question panel on your screen

The recorded presentation will be posted on Airheads Community (http://community.arubanetworks.com/)

WHAT IS AIRGROUP FEATURE?

How is Airgroup implemented in Aruba?

aruba
a Hewlett Packard
Enterprise company

Introduction: Airgroup

AirGroup is a unique enterprise-class capability that leverages zero configuration networking to enable Bonjour® services like Apple® AirPrint and AirPlay from mobile devices in an efficient manner

AirGroup solution supports both wired and wireless devices. Wired devices which support the Bonjour services are made part of the AirGroup when the VLANs of the devices are terminated on the Virtual Controller.

Airgroup and Aruba Clearpass

AirGroup also supports Aruba ClearPass Policy Manager (CPPM).

With Aruba CPPM:

- Users, such as students in dorm rooms can register their personal devices and define a group of users who are allowed to share the users' registered devices.

- Administrators can register and manage an organization's shared devices like printers and conference room Apple TVs. An administrator can grant global access to each device, or restrict access according to the username, role, or user location.

Airgroup Architecture at a glance

The distibuted AirGroup architecture allows each IAP to handle Bonjour queries and responses individually instead of over loading a Virtual controller with these tasks. This results in a scalable AirGroup solution.

P1	Air Print		P1	Air Print		P1	P1
TV1	Air Play		TV1	Air Play		TV1	Air Play

LOCAL AREA NETWORK

IAP1   IAP2   IAP3

MDNS packet printer service

MDNS, Air Play service query

MDNS, TV1 service response

MDNS packet airplay service

Air Printer (P1)

iPAD

Apple TV (TV1)
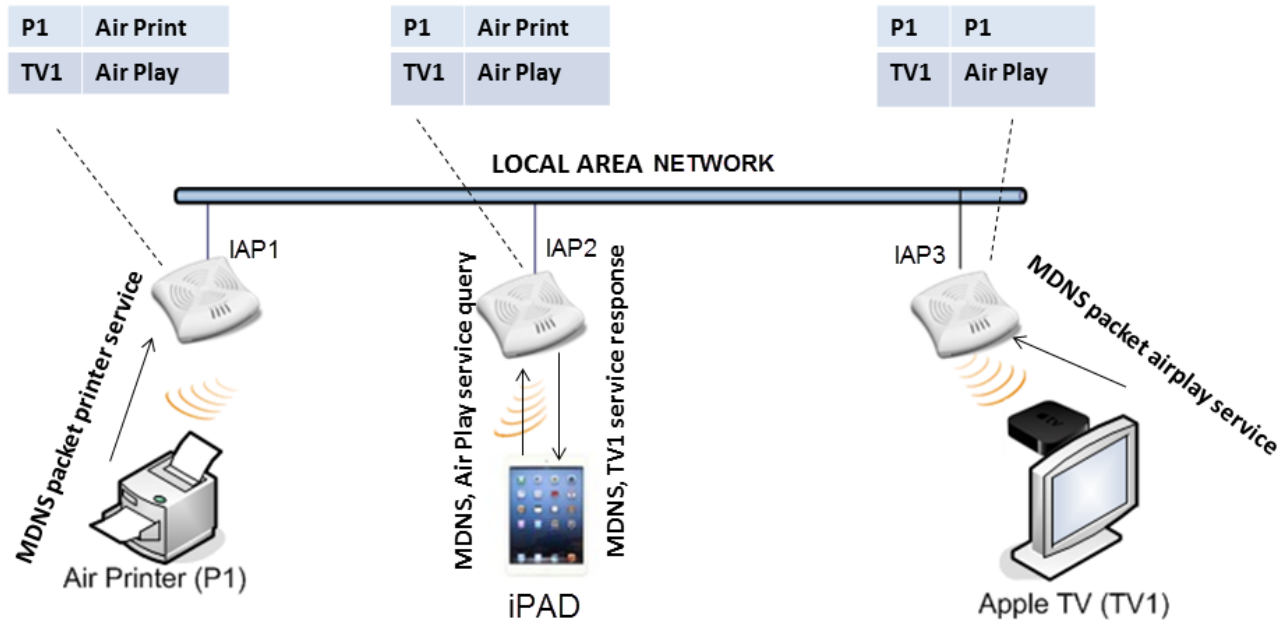
How does Airgroup work?

AirGroup functionality is described in the steps below. This flow occurs when an Aruba WLAN is powered by an Aruba Instant and ClearPass Policy Manager.
A device can be registered by an administrator or a guest user.

1.   The AirGroup administrator gives an end user the AirGroup operator role which authorizes the user to register the users device—such as an Apple TV on the ClearPass Policy Manager platform.
2.   Aruba Instant maintains state information for all mDNS services. Aruba Instant queries ClearPass Policy Manager to map each device's access privileges to available services.
3.   Aruba Instant responds back to the query made by a device based on contextual data – user role, username, and location.
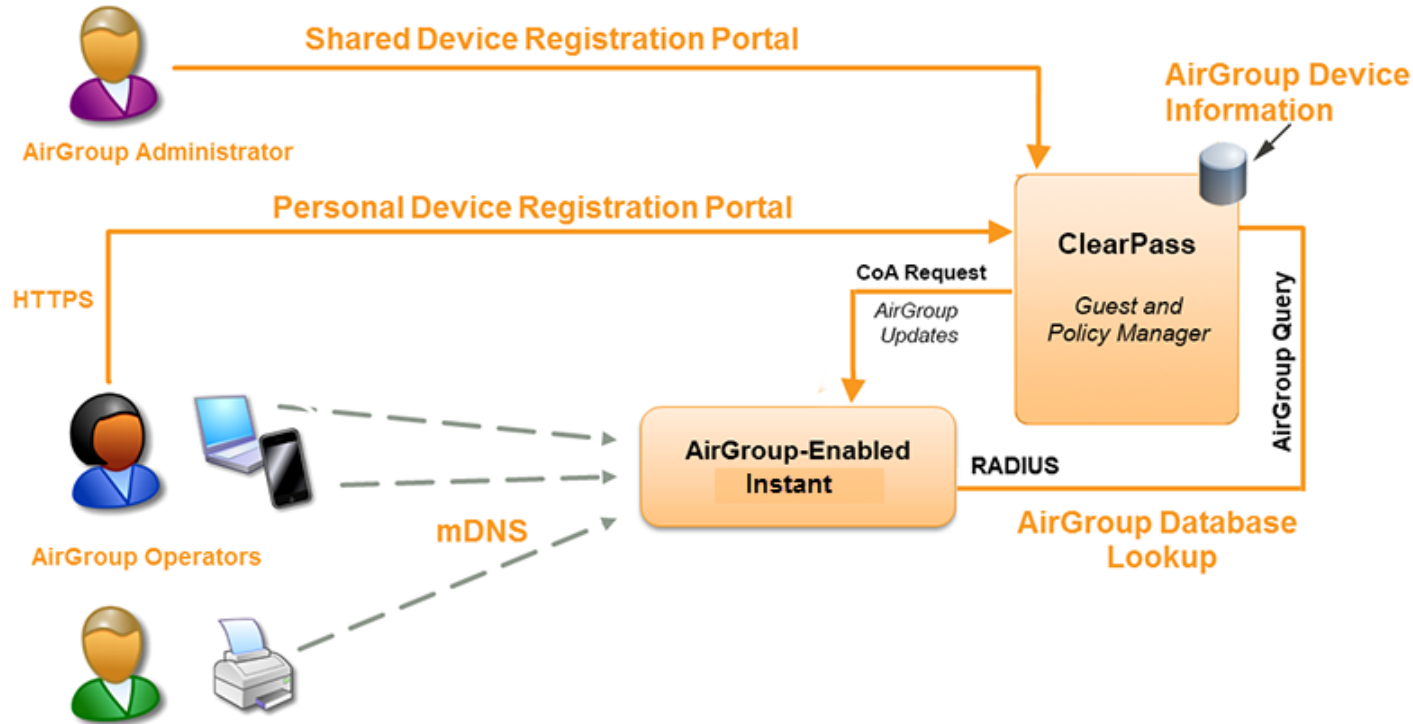
Features of Airgroup

- AirGroup sends unicast responses to mDNS queries and reduces mDNS traffic footprint.

- Ensure cross-VLAN visibility and availability of mDNS devices and services.

- Allow or block mDNS services for all users.

- Allow or block mDNS services based on user roles.

- Allow or block mDNS services based on VLANs.

- Match users' devices, such as iPads, to their closest Bonjour devices, such as printers. This requires CPPM support.

Clearpass related Airgroup features

- Registration portal for WLAN users to register their personal devices, such as Apple TVs and printers.

- Registration portal for WLAN administrators to register shared devices, such as conference room Apple TVs and printers.

- Operator-defined "personal AirGroups" to specify a list of other users who can share devices with the operator.

- Administrator defined username, user role, and location attributes for shared devices.

The overall Airgroup Solution

The components that make up the AirGroup Solution include the Aruba Instant, ClearPass Policy Manager, and ClearPass Guest.

Component	Minimum Version
Aruba Instant	6.2.0.0-3.2
ClearPass Guest software	3.9.7
AirGroup Services plugin	0.8.7
ClearPass Policy Manager software	5.2

Configuring Airgroup on Aruba Instant

Configuring AirGroup and its service requires that you enable the AirGroup feature. IAP AirGroup supports two default services i.e. AirPlay and AirPrint.

As the first step in configuring AirGroup services, you must enable AirGroup in the Instant UI.

1.　　　　Go to **Settings** > **Air Group** to enable this feature.
2.　　　　Select **Enable Air Group** to view the Air Group Settings.

Instant supports two types deployment models:

- **Intra Cluster**
- **Inter Cluster**

In the Intra Cluster model, the IAP does not share the mDNS database information with the other clusters. In the Inter Cluster model, the IAP shares the mDNS database information with the other clusters.

Enabling Airgroup across mobility domains

Enable Air Group across mobility domains—

Select **Enable Air Group across mobility domains** to enable Inter cluster.

NOTE: *By default, this feature is disabled.*

Navigate to **L3 Mobility** tab of **Settings** to define a set of clusters.

Enabling Air Print and Air Play

Enable Air Print— When enabled, the following two options are made available:

- Air Print disallowed roles— Clients with these roles will not have access to AirPrint devices.

- Air Print disallowed VLANs — No AirPrint servers will be seen on these VLANs.

Enable Air Play— When enabled, the following two options are made available:

- Air Play disallowed roles— Clients with these roles will not have access to AirPlay devices.

- Air Play disallowed VLANs — No AirPlay servers will be seen on these VLANs.

Troubleshooting Airgroup

You can view the following AirGroup commands in the Command drop-down list.

- AP AirGroup Cache— Displays the Bonjour mDNS records for the selected IAP(s).
- AP AirGroup CPPM Entries— Displays the AirGroup CPPM policies of the registered devices.
- AP AirGroup CPPM Servers— Displays the AirGroup CPPM server information.
- AP AirGroup Debug Statistics— Displays the debug statistics for the selected IAP(s).
- AP AirGroup Servers— Displays information about the Bonjour devices which supports AirPrint and AirPlay services for the selected IAP(s).
- AP AirGroup User— Displays IP/MAC address, device name, VLAN, type of connection of the Bonjour devices for the selected IAP(s).
- VC AirGroup Service— Displays the bonjour services supported for the selected IAP(s).
- VC AirGroup Status— Displays the enable/disable status of the AirGroup and the parameters of the CPPM servers for the selected IAP(s).
- VC AirGroup vlan— Displays the AirGroup status information for a VLAN of the selected IAP(s).

QUESTIONS

Any Questions?