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Aruba Airgroup Implementation

# Laerdal Medical Aruba AOS 8.x

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# **1** Deployment Considerations

Bonjour is Apple's implementation of zero-configuration networking (zeroconf), a group of technologies that includes service discovery, address assignment, and hostname resolution.

The following is a list of some of the Laerdal Medical devices that use this protocol for device discovery.

- SimMan3G
- Patient Monitor
- LinkBox
- Session Viewer

Each query or advertisement is sent to the Bonjour multicast address for delivery to all clients on the subnet. Apple's bonjour protocol relies on mDNS operating at UDP port 5353 and each query or advertisement are sent to the following reserved group addresses:

- IPv4 Group Address 224.0.0.251
- IPv6 Group Address FF02::FB

The addresses used by the Bonjour protocol are link-local multicast addresses and thus are only forwarded on the local L2 domain. Routers cannot use multicast routing to redirect the traffic because the time to live (TTL) is set to one, and link-local multicast is meant to stay local by design.



#### 1.1 Aruba Gateway and Controller

On the Aruba Controller the Bonjour services are not advertised by default on access points that are configured in the mode local. In order for the controller to advertise the mDNS services that the Laerdal Medical simulation devices advertise the custom mDNS service ids must be configured on the controller.

The following outlines he	w to enable AirGroup se	ervice on the Aruba Controller.
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AteaAruba	ROLLER VLC	ACCESS POINTS         CLIENTS         ALERTS           ∅ 1         0         ♀ 0         ▲ 1				
← Mobility Controller >						
C     Mobility Controller       Image: Controller and the second s	Q Dashboard Configuration WLANS Roles & Policies Access Points AP Groups Authentication Services Interfaces System Tasks License Redundancy Diagnostics Maintenance	AirGroup VPN Firewall AirGroup service:  Mode: Centralized AirGroup profile: default Forced registration: Disabled Services:	P Mobility External Serv  Distributed  SERVICE  +	Guest Provisioning	DHCP WAN	
		Disallowed services by VLAN:	+ SERVICE	USAGE	ROLE	
		Disallowed services by role:	+			
		> IPv6 > Domains				
		> Server-Based Policy				

# 2 AirGroup Configuration

#### 2.1 AirGroup Service Profile Creation

The following shows how to create a AirGroup Service Profile.

Under System -> Profiles -> AirGroup Profile-> AirGroup Service

Select the plus sign to add a new service profile.

	ROLLER WLC	ACCESS POINTS         CLIENTS         ALERTS           ∅ 1         0         ♥ 0         ▲ 1	admin
<ul> <li>Mobility Controller &gt; AteaAruba</li> <li>AteaAruba</li> <li>Mobility Controller</li> <li>AteaArubaWLC</li> </ul>	WLC Dashboard Configuration WLANs	General Admin AirWave CPSec Certificates SNMP Logging Profiles Whitelist More All Profiles AirGroup Service Profile	
	Roles & Policies Access Points AP Groups Authentiation Services Interfaces System Tasks Redundancy Diagnostics Maintenance	ArtGroup ClearPass      ArtGroup Domain      ArtGroup Domain      ArtGroup Profile      ArtGroup Profile      ArtGroup Profile      ArtGroup Service Profile      ArtGroup Service       ArtGroup Service	

### 2.2 AirGroup Profile Service Configuration

Select the AirGroup Service profile to add the custom mDNS service IDs to the service profile.

Mobility Controller > AteaAruba	IWLC			
Ck Q	Dashboard	General Admin AirWave CPSec Certificates	SNMP Logging Profiles Whitelist More	
C Mobility Controller	Configuration			
📼 AteaArubaWLC	WLANs	All Profiles	AirGroup Service Profile: Laerdal_Srv	
	Roles & Policies	⊕ □ AP	SERVICE ID	m
	Access Points	⊖ 🖻 AirGroup	ctrsenver. top	
	AP Groups	AirGroup ClearPass	_http_tcp	
	Authentication	AirGroup Domain	_lleaphost_tcp	
	Services	AirGroup IPv6	_simbridgetcp Service id:	
	Interfaces	AirGroup Profile	_simlink_tcp	
	System Tasks Redundancy	⊘   AirGroup Service	_simmonitor_tcp	
		🕒 Laerdal_Srv 🗇		
		default-airplay		
	Diagnostics	default-airprint	Ferrier Developiers	
	Maintenance	default-allowall	Laerdal_Services	
		default-amazontv		
		🕒 default-dial		
		🕒 default-dina-media		

Select the plus sign to add the service id under the service profile.

Enter all the required service ids before moving on to the next step.



#### 2.3 Airgroup Service ID CLI Configuration Commands

The following commands can be used to create the mDNS Service Profile and add the service IDs to it from the CLI.

Important Note: The mDNS ".local." ending should not be added to the Aruba service IDs.

```
airgroupprofile service "Laerdal_Srv"
id "_ctgserver._tcp"
id "_http._tcp"
id "_lleaphost._tcp"
id "_simbridge._tcp"
id "_simlink._tcp"
id "_simmonitor._tcp"
id "_simse._tcp"
id "_simventures._tcp"
id "_ssh._tcp"
id "_workstation._tcp"
description "Laerdal_Services"
```

#### 2.4 AirGroup Profile Creation

Select AirGroup Profile and select the blue plus sign to create a new AirGroup Profile.



#### 2.5 AirGroup Profile Configuration

Select the Airgroup Profile that you created and then select the AirGroup Service container listed under the profile. In the AirGroup Service container select the blue plus sign to add the Airgroup service to the Airgroup profile.

General	Admin	AirWave	CPSec	Certificates	SNMP	Logging	Profil	<b>es</b> Whitelis	st More		
All Prof	iles				AirGroup	Service Profil	le				
€ [	AP									m	
Θ	AirGroup				AIRGROUP SERVICE PRO			AIRGROUP SER	ACE PRO		
(	🕀 📑 AirGro	oup ClearPass									
(	🕀 📑 AirGro	oup Domain									
(	AirGroup IPv6     AirGroup Profile										
(								+			
	Θ 🖻 s	imGrpProfile									
		📑 AirGroup C	learPass								
		🗗 AirGroup II	Pv6								
		🕒 AirGroup S									
		📑 AirGroup a	ctive domair	n							
		🗗 Network									
	🕀 🗖 d	efault									
(	🕀 📑 AirGro	oup Service									
(		ark									

#### 2.6 AirGroup Profile CLI Configuration Commands

The following commands can be used to create and associate the Airgroup service with the Airgroup Profile from the CLI.

airgroupprofile "SimGrpProfile" service "Laerdal\_Srv" disallow-vlan type servers service "" disallow-role "" type servers service "

# 2.7 AirGroup Profile Enable Setting

To enable the AirGroup Profile on the controller select it from the dropdown menu and select Submit.

Mobility Controller >						¢
C, q	Dashboard	AirGroup VPN Firewall	IP Mobility External Sen	ices Guest Provisioning	DHCP WAN	
🔁 Mobility Controller	Configuration		IF MODILITY External Serv	duest Provisioning	DICF WAIN	
📼 AteaArubaWLC	WLANs	AirGroup service:				
	Roles & Policies	Mode: Centralized SimGrpProfile	Oistributed			
	Access Points	AirGroup profile:	6			
	AP Groups	registration: Disabled				
	Authentication	Service-Based Policy				
	Services		SERVICE	AUTO ASSOCIATE	то	
	Interfaces					
	System	Services:				
	Tasks					
	License		+			
	Redundancy		SERVICE	USAGE	VLAN	m
	Diagnostics					
	Maintenance	Dicallowed services by VI AN:				
		Disalitived services by vEAN.				
			+			
			SERVICE	USAGE	ROLE	
		Disallowed services by role:				
			+			
		> ClearPass Policy Manager				
		> IPv6				
		> Domains				
		Sonier Pased Policy				
		Server-bused roney				
						Cancel
	Aruba9004. 8.6.0.6					submit

#### 2.8 AirGroup Profile CLI Configuration Commands

The following commands can be used to enable the AirGroup Profile from the CLI.

airgroupprofile activate airgroupprofile "SimGrpProfile" mode distributed