

Migrating AireOS Wireless Controller to Catalyst 9800 Controller for Cisco DNA Center Intent-Based Deployments, Cisco DNA Center 2.3.5.5

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1. About this documentation

This guide focuses on the steps and recommendations for migrating from an AireOS-based WLAN controller to a Catalyst 9800 WLAN controller. The procedure outlined in this document is applicable only for deployments that utilize the Cisco DNA Center for orchestration and automation. The supported deployment includes fabric-enabled wireless (FEW) for SDA and non-fabric wireless networks, which leverage Cisco Catalyst intent-based network automation.

2. Purpose

To serve as a reference document for migrating to the Catalyst 9800 wireless controller, the following procedures are detailed in this document:

- Cisco DNA Center intent level migrations.
- Onboarding the Catalyst 9800 controller onto Cisco DNA Center.
- Mobility pairing for seamless roaming with Inter-Release Controller Mobility (IRCM).
- Recommendation, explaining two different approaches for moving Access points to the Catalyst 9800 controller.

3. Prerequisites

Before starting the procedures described in this document, ensure the below prerequisites are taken care of.

- Catalyst 9800 wireless controller is brought up and discoverable from the Cisco DNA Center if Day N discovery would be used for onboarding or the C9800 can be added to the Cisco DNA Center inventory using the Day 0 PnP process.
- Ensure that routing is in place between the existing AP subnet and the C9800 management interface subnet.
- If the Guest Anchor was provisioned in a non-fabric deployment using Cisco DNA Center, ensure the Catalyst 9800 controller can reach the Anchor controller.
- Check the <u>compatibility matrix</u> to ensure Catalyst 9800 would be running an Inter-Release Controller Mobility (IRCM) compatible image with the AireOS controller.
- Ensure the APs that will be migrated are compatible with the Catalyst 9800 controller version. Please refer to the <u>link</u> for compatibility check.

- Plan to download the Catalyst 9800 based AP images locally in a TFTP server for the corresponding APs that will be migrated, these images can be pre-downloaded later to the APs using <u>WLAN poller</u> before migration reducing the downtime significantly.
- Ensure AP fallback is enabled in AireOS controller using CLI "show network summary".

4. Introduction

This document serves as a comprehensive guide to the migration procedure, focusing on the intricacies and best practices involved in transitioning from an existing AireOS-based wireless controller to Catalyst 9800 wireless controller for Cisco DNA Center intent-based deployments i.e., Cisco SD-Access fabric wireless and also nonfabric wireless deployment that has leveraged Cisco DNA Center network automation.

Any migration process must address the following essential considerations:

- Initiate the migration by targeting a smaller subset of the network, such as a single floor. If the initial migration proves successful, proceed to migrate additional floors gradually.
- Robust rollback mechanism to revert changes in the event that the migration does not proceed as anticipated. This ensures a safety net and minimizes potential disruptions.
- Recognize that the migration and evaluation phases may extend over days to weeks. Throughout this period, it is crucial to maintain seamless functionality in the wireless network, allowing for coexistence between the old and new components of the network.

The procedure and steps outlined in the document embody the essential considerations mentioned above as integral elements for the migration process.

Below is a sample topology depicting the network at a high level, where we have two floors of Building BGL18 (F1, F2) initially being managed by the AireOS controller and later one of the floor being migrated and being managed by the Catalyst 9800 controller. This results in a coexistence of both AireOS and Catalyst 9800 seamlessly working together, while you can evaluate and progressively migrate the other floors based on the evaluation.

The document is written by validating the scenario outlined with the following versions:

Cisco DNA Center: 2.3.5.5

AireOS: 8.10.183.0 C9800: 17.9.4a

However, the steps outlined in the document should work and are independent of the versions used.



Figure 1 High level Network topology depicting migration scenario of SD-Access network

5. Wireless controller migration

5.1 Migrate the design elements

As we are migrating from AireOS to Catalyst 9800 wireless controller, which is based on two different architectures and with configuration model differences, a few intent-level changes need to be taken care of in Cisco DNA Center.

The design elements that are discussed in the below subsections need to be taken care of for all the Wireless network profiles in Cisco DNA Center, that are attached to the sites managed by the AireOS controller.

5.1.1 Custom AP profile

AP profile on the Cisco DNA Center has general AP settings such as SSH/Telnet, AP authentication, Security, Mesh, and many more. Cisco DNA Center doesn't allow to reuse of the existing custom AP profiles which were created for AireOS-based controllers to the C9800 controllers. As a part of the migration process, we need to replicate the custom AP profiles, if used with existing AireOS controllers, for the Catalyst 9800 controller.

Procedure

- From the Global Site hierarchy navigate to the wireless page Design -> Network Settings -> Wireless
- In the wireless page scroll down to find the AP Profile option, click Add "AP profile for IOS-XE"

■ Cisco DNA Center			Design / Networ	k Settings					0000
Network Device Credentials	IP Address Pools SP Profiles Wit	eless Telemetry	Security and Trust						
Q. Find Hierarchy ▽ Search Heip ✓	1 Records AP Profile (5) Q Search Table Edit Delete 0 Selected					Show Records: 10	<u> </u>	1 - 1 AP Profile for I AP Profile for A	Add Add OS-XE AlreOS
> dh Mumbai > dh tmp-area	AP Profile Name *	Description	Device Type	Remote Teleworker	Management	Security ()	Mesh	Power	Usage
	AirOS_Test_AP_Profile_IOS-	XE -	AireOS	No	SSH/Telnet Disabled	Rogue Detection	Disabled	N/A	Network Profile

Figure 2 AP profile for Catalyst 9800 controller

3. Configure the required settings to replicate the existing Aire-OS based AP profiles used or you may even add additional features supported for Catalyst 9800 controllers.

E Cisco DNA Center	Design / Network Settings / Edit AP Profile	Q @ C Q
Wireless / Edit AP Profile		
Edit Access Point Profile 🚥		
Access Point Polifie is used to manage and provision access points. AP Polifies or be assigned to acite by associating them to Wireless Network Profiles.	an	
Description		
Check this box if this AP Profile is for Remote Teleworker APs or OEAPs.		
Remote Teleworker 🕢		
Management Security Mesh Power Additional		
Access Points Authentication ()		
These setting are applicable during PnP claim and for day-N authentication of AP. service impacting for the PnP onboarded APs and will need a factory-reset for the	Changing these settings will be ose APs.	
NO-AUTH No-AUTH No-AUTH Summary and the second of the s	care based	
EAP-FAST Flexible Authentication via Secure Tunneling (EAP-FAST). Enter the user name and the par applied during PnP claim process.	ssword to be	
		Cancel

Figure 3 AP profile configuration for Catalyst 9800 controller

Repeat the above steps for the entire set of AP profiles used with AireOS based controller.

5.1.2 AP group, Flex group to site tag and policy tag migration

AP groups – AP groups in general are logical groupings of APs within a geographic area such as a building, floor, or remote branch office that share common configurations. AP groups are useful in a Cisco wireless network deployment because they allow network administrators to assign specific configurations to different groups of APs.

AP Profile – AP profiles consolidate the AP authentication settings, aWIPS, rogue management, and mesh settings in Cisco DNA Center. AP profiles allow you to manage and provision APs. Cisco DNA Center provides a default AP profile for both AireOS and IOS-XE based controller.

AP zone – An AP zone with Cisco DNA Center allows you to associate different SSIDs and RF profiles for a set of APs on the same site. You can create separate AP zones with a subset of SSIDs configured in the network profile.

Site Tag - Custom site tags can be provisioned using Cisco DNA Center, which helps in mapping an Area/Building/Floor to the site tag along with AP Profile.

Policy Tag - Policy Tag with Cisco DNA Center helps in creating a custom policy tag per floor along with an option to map an AP zone to it.

Technical Note

- AP group and flex group configuration are applicable to the Cisco AireOS Wireless Controller.
- Site tag and policy tag configuration are applicable to the Cisco Catalyst 9800 Series Wireless Controller.

The AP group feature in Cisco DNA Center facilitates grouping a set of access points that share similar characteristics, such as WLANs broadcasted and AP profiles for AireOS controller deployment. These AP groups are then mapped to floors/buildings within the network hierarchy in the wireless network profile in Cisco DNA Center. However, with Catalyst 9800 Wireless controller, there is no AP group concept. Instead, similar functionality is achieved through the use of site tags and policy tags. Therefore, if AP groups were used in Cisco DNA Center for AireOS-based controllers, it's necessary to migrate them to Site tags and policy tags within the Cisco DNA Center wireless network profile.

AP group configurations on Cisco DNA Center have AP zone, AP profile, RF profile, and site mapping as parameters, whereas the Cisco DNA Center Site tag configuration takes care of mapping the AP profile to a set of sites. Policy tag helps to create a custom policy tag per floor along with AP zone mapping if any.

Flex connect group, which helps in grouping a set of flex sites that have to be part of a roaming domain. This option in Cisco DNA Center is applicable only for AireOS-based controllers, but the same functionality is taken care with the Custom site tag option where we can have this custom flex profile created along with site mapping.

Below is a snapshot capturing the custom flex profile option for a Wireless network profile that has flex SSIDs part of it.

Technical Note – *The flex options in Cisco DNA Center will appear only when you have flex SSIDs configured in the network profile.*

E Cisco DNA Center	Design / Network Profiles / Wireless				
Network Profiles / Wireless	Create Site Tag				
> AP Groups and AP Profiles (1)	NOTE: If Ourteen Site Tap is parted for Damate Televiseder floors, then the pape default flow profile will be used				
> Flex Groups (0)	Nort: In Custom Site ray is opted for Remote relevance noors, then the non-default flex prome will be used. Site Tag Name* APG1-1_ST				
$\scriptstyle \vee$ Site Tags and AP Profiles (1)	AP Profile* BGL18-ap-profile1_IOS-XE View Details Flex Profile Name* BGL16-F1_FP1				
Default AP Profile (default-ap-profile) will be applied to all Cisco DNA () Note: Site Tag cannot be created across multiple areas.	Select Sites				
Custom Site Tags (1)	Q Search Hierarchy				
Q Search Table	v] ෯ Global				
0 Selected Edit Delete	✓ ● 働 Bangalore				
Site Tags • AP Profile	✓ □ ♣ BLR-CAMP1 ✓ □ ➡ BGI-16				
BGL-16 default-ap-	pro BGL16-F1				

Figure 4 Custom flex profile along with site tag creation

Procedure

Below snapshot in Figure 5 depicts a scenario, wherein we have two AP groups (APG1-1, APG1-2) for same floor BGL18-F1 with different AP profile, AP zone and RF profile combinations. Below procedure explains, how we can migrate this to relevant site tag and policy tag in Cisco DNA Center.

Eisco DNA Center	Design / Network	Profiles / Wireless		Q @ C 4
Network Profiles / Wireless				
Custom AP Groups (5)				Create Custom AP Group
Q Search Table				∇
0 Selected Edit Delete				de Import
AP Group Name *	AP Profile	SSID	RF Profile	Site
AGP1-1	BGL18-ap-profile1	BGL-CORP-TEST	HIGH	Global/Bangalore/BLR-CAMP1/BGL- 18/BGL18-F1
APG1-2	Default_AP_Profile_AireOS	CiscoSensorProvisioning, BGL- CORP, BGL-CORP-TEST	TYPICAL	Global/Bangalore/BLR-CAMP1/BGL- 18/BGL18-F1

Figure 5 Custom AP groups

1. For site tag creation we need, AP profile, flex profile (if any) and the site mapping. Create site tag say for example APG1-1_ST and map it with an AP profile that we had created for IOS-XE as part of the previous section (5.1.1). We can also create a new AP profile while mapping it to site tag.

Design -> Network profiles -> Edit Network profile -> Advanced Settings -> Site tag and AP profiles -> Create custom site tag

E Cisco DNA Center	Design / Network Profiles / Wireless	Q @ C 4
Network Profiles / Wireless	Create Site Tag	×
G AGP1-1	BGL1 NOTE: If Custom Sile Tag is opted for Remote Teleworker floors, then the non-default flex profile will be used.	
APG1-2	Site Tag Name* Defai APG1-1_ST	
APG1-3	BGL18-ap-profile1_IOS-XE View Details default-flex-profile	
APG2-1	BGL1 Select Sites	
APG2-2	BGL1 Q. Search Hierarchy	
5 Records	○ 命 Global	Search Help
Site Togs and AP Profiles (6) Default AP Profile (default-ap-profile) will be applied to all Cisco DMA Center ge Note:: Eller Tog cannot be created across multiple anaxe. Custom Site Togs (0) Q : Search Table 0 Selected Eller Default De	>	
Site Tags AP Profile		
		Cancel Save

Figure 6 Custom site tag creation

Technical Note -

In the given example, there were two AP groups for the same floor, but we cannot have two site tag constructs for the same site with different AP profiles. We may need to consolidate to a single site.

While creating custom site tags along with flex profile, we may need to ensure the flex settings (like AP Native vlan, and client Vlan mapping) are common across the sites that we are grouping here. If this is not taken care of, will result in a Wireless controller provision error.

2. If the Custom AP groups were used along with AP zones, and if the Network admin wants to avoid Cisco DNA Center auto-generated Policy tags in the Catalyst 9800 controller we may need to create custom policy tags.

Custom policy tags are per floor and per AP zone. In our example as per figure 5 we had two AP groups (APG1-1, APG1-2) with different AP zones for the same floor. When we create corresponding Policy tags to match it for Catalyst 9800 control, we need to have two Policy tags created.

Create policy tag1 (APG1-1_PT1), with the respective AP zone and floor mapped to it. Similarly, repeat the process to create policy tag2 (say, APG1-1_PT2) mapped with its AP zone and same floor.

Design -> Network profiles -> Edit Network profile -> Advanced Settings -> Policy tag -> Create Policy Tag

E Cisco DNA Center	Design / Network Profiles / Wireless	$Q \odot \Box \varphi$
Network Profiles / Wretess	Create Policy Tag	×
This section is used to define castom names for AP Groups and Flex Groups (applicable anto-generated Groups/Tags by Clacco DNA Center. Control (Section 2014) and Section 2014 (Section 2014) (Section 2014) Control (Section 2014) (Section 2014) (Section 2014) (Section 2014) Castom AP groups and Res groups will be configured aiming Control reproducing and If there are no castom Groups/Tags defined. Casto DNA Center will auto-generate them Please note that Flex Group section would be available only when network profile has on	Add:1.2/TI Add:1.2/TI Azone-1 SS00 B0CORP-TEST Select Sites	
> AP Groups and AP Profiles (5)	Q. Search Hierarchy	
> Site Tags and AP Profiles (0)	 ✓ dR Global ✓ dR Bangaiore 	Search Help
 Policy Tags (0) 	> 歳 BLR-CAMP1 > 頭 BGL-16	
Q Search Table	> HE BGL-17 > HE BGL-18	
0 Selected Create Policy Tag More Actions V		
	- UOL 10***	Cancel Save

Figure 7 Custom Policy tag creation

≡	Cisco DNA Center	Design / Netw	ork Profiles / Wireless	
Netv	vork Profiles / Wireless			
	Default AP Profile (default-ap-profile) will be applied to all ① Note: Site Tag cannot be created across multiple areas.	Cisco DNA Center generated Site Tags.		
	Custom Site Tags (1)			Create Custom Site Tag
	Q Search Table			∇
	0 Selected Edit Delete			ت Import
_	Site Tags •	AP Profile	Flex Profile Name	Site
	APG1-1_ST	BGL18-ap-profile1_IOS-XE	default-flex-profile	Global/Bangalore/BLR-CAMP1/BGL- 18/BGL18-F1
L	Records			Show Records: 25 🗸 1 - 1 < 🕚 >
v I	Policy Tags (2)			
	Q Search Table			∇
	0 Selected Create Policy Tag More Actions V			ය් Import
	Policy Tag *	AP Zone	SSID	Site
	APG1-1_PT1	APzone-1	BGL-CORP-TEST	Global/Bangalore/BLR-CAMP1/BGL- 18/BGL18-F1
	APG1-1_PT2	APzone-2	BGL-CORP	Global/Bangalore/BLR-CAMP1/BGL- 18/BGL18-F1
				Show Records: 25, Marcel 1 = 2

Figure 8 Custom site tag and Policy tag view

5.1.3 Model config

Cisco DNA Center supports various wireless model config types, if a model config design was attached to the wireless network profile that was used with AireOS based controller, we may need to ensure this model config design is considered for Catalyst 9800 controller too.

5.1.4 Cli Template

Cisco DNA Center offers an interactive template hub that allows users to author CLI templates. These templates can be designed easily with predefined configurations using parameterized elements or variables. Once created, these templates can be used to deploy devices in one or more sites throughout the network.

Due to the configuration model differences between the AireOS controller and Catalyst 9800 wireless controllers, any CLI templates used for the existing AireOS controller will need to be converted for use with the Catalyst 9800 controller. This involves creating corresponding CLI templates specifically for the Catalyst controller.

After creating the CLI templates for the Catalyst 9800 controller, it is important to ensure that these templates are attached to the corresponding wireless network profile. This ensures that the correct configuration is applied to the wireless network when provisioning the Catalyst 9800 controller.

Technical Note -

<u>WLC config converter</u> can be used to convert the specific set of configuration that is being provisioned through cli template for AireOS controller to Catalyst 9800 relevant configurations and then templatizing it in Cisco DNA Center.

5.2 Onboard Catalyst 9800 controller to Cisco DNA Center

Onboard Catalyst 9800 controller to Cisco DNA Center, one may choose to onboard the controller to Cisco DNA Center using Day 0 PnP onboarding or as a Day N onboarding process with the Cisco DNA Center Discovery feature.

 If Day 0 PnP onboarding was used, as a part of the claim process assign the Wireless controller to the same physical site as AireOS controller, also you will be able to configure the Wireless management IP, Subnet mask, Gateway, IP interface name, and optionally, VLAN ID.

If day N Discovery was used to onboard the Catalyst 9800 controller, assign the Wireless controller to the same physical site as AireOS controller.

Technical Note – *The same physical site is being used to reuse the site-level network settings in Cisco DNA Center for the Catalyst 9800 controller.*

2. Ensure the telemetry configuration push is successful at this stage, and the telemetry connection to Cisco DNA Center is in an "UP" state.



Figure 9 Telemetry connection status

Technical Note – If you have a pair of Catalyst 9800 to be onboarded as a single HA SSO pair, you can onboard both the controllers individually to Cisco DNA Center and then form an HA pair with the help of Cisco DNA Center. Here is a <u>config guide</u> on how to do it.

3. Provision the Catalyst 9800 controller in Cisco DNA Center, as a part of the provisioning workflow the controller needs to be the primary controller managing a wireless site. To achieve this, we create a temporary site and attach it to a Wireless Network profile that is attached to the sites managed by AireOS controller. Ensure this temporary site is not managed by the AireOS controller before provisioning the Catalyst 9800 controller.

E Cisco DNA Center	Provision / Network De	avices / Provision Devices	Q @ C 4
Network Devices / Provision Devices		Managed AP Location ()	×
1 Assign Site 2 Configuration	n 3 Model Configuration 4 Advanced Configuration 5 Summary		
DC1-WLC1-1.cisco.com	Serial Number Devices TTM21463106 DC1-WLC1-1.clsco.com	Q Search Hierarchy	Search Help
		> □ 続 Global (2)	
		✓ ☐ dia Bangalore	
	Skip AP Provision ()	✓ □ A BLR-CAMP1	
	Polling AP Lingrado	> U # BGL-16	
	Koning AF Opgrade	> □ = BGL=17	
	AP Reboot Percentage	□ ⊕ BGL18-F1	
	Enable 25 V ()	□ ⊕ BGL18-F2	
		⊕ BGL18-F3	
		□ ⊕ BGL18-F4	
		□ ⇔ BGL18-F5	
		□ 🐵 BGL18-F6	
		□ 😔 BGL18-F7	
		□ © BGL18-F8	
		□ ⇔ BGL18-F9	
		□ © BGL18-F10	
		BGL18-TMP_NP1	
			Cancel

Figure 10 Provision Catalyst 9800 controller with temp site

If the APs are onboarded using local/AAA authorization ensure AP auth list is checked while provisioning the Catalyst 9800 Controller. We can reuse the existing Auth list that was created for AireOS based controller.

■ Cisco DNA Center		Provision / Network Devices / Provision Devices				
Network Devices / Provision Devices						
1 Assign Site 2 Configura	tion 3 Model Configuration 4	Advanced Configuration 5 Summary				
DC1-WLC1-1.cisco.com	Serial Number TTM21463106	Devices DC1-WLC1-1.cisco.com	WLC Role	Managed AP location(s) ① Managing 2 Primary location(s)		
			Anchor	Select Secondary Managed AP Locations		
	Skip AP Provision AP Authorization List					
	AP Authorization List Name test1	View Entries				
	Polling AP Lingrade					
	AP Reboot Percentage					
	Enable 25	~ 0				

Figure 11 AP Authorization list provision

For nonfabric WLANs, the provisioning flow would also include the interface config associated with the WLAN.

1-WLC1-1.cisco.com	Serial Number TTM21463106	Devices DC1-WLC1-1.clisco.com	WLC Role Active Main WLC () Anchor	Managed AP location(s) ③	
	Interface Name Interfa	ice Group Name VLAN ID • 301	IP Address	Gateway IP Address	Subnet Mask(in bits) Subnet Mask
	1 Records			Show Records	: <u>25 ∨</u> 1-1 < (
	Rolling AP Upgrade				
	AP Reboot Percen	tage \checkmark ()			

Figure 12 Provision Catalyst 9800 controller non Fabric flow

4. Once the provision of the Catalyst 9800 controller is successful, add the wireless controller to the Fabric. At this point, you will have both the AireOS and Catalyst 9800 controller part of the same Fabric site.



Figure 13 Add Catalyst 9800 controller to Fabric

5.3 Setup mobility tunnel between AireOS and Catalyst 9800 controller

When designing a migration between an AireOS deployment and the Catalyst 9800 wireless controller, it is common to adopt a phased approach. In this strategy, the access points are planned to be migrated in batches to the new Catalyst 9800 controller.

Cisco supports Inter-Release Controller Roaming (IRCM) between the Catalyst 9800 and AireOS wireless controllers. This feature is crucial in ensuring seamless mobility during brownfield and migration scenarios. It allows clients to roam smoothly between the two controllers without any interruption or loss of connectivity.

Cisco DNA Center supports the provisioning of mobility tunnel between the AireOS and Catalyst 9800 controllers.

1. Select the AireOS controller-> Provision -> Configure WLC Mobility

			All Routers Sw	itche	s 🗸 Wireless Controllers Ad	cess Points	Sensors
	Devices (2)	Focus: Provision \lor					
	Q Filter devic	ces					
	1 Selected	Add Device Tag	Actions \land ①				
E	1	Device Name	Inventory	>	amily Site		Reachability 🕕
		DC1-WLC1-1 cisco com	Software Image	>	Controllor /PLD_CAMD1	49GI - 18	Reachable
			Provision	>	Assign Device to Site		- Redenable
	0	DC1-WLC-5520-1	Telemetry	>	Provision Device	GL-18	🥏 Reachable
<			Device Replacement	>	Configure WLC HA		
			Compliance	>	Configure WLC Mobility		
			More	>	Manage LED Flash Status		

Figure 14 Mobility provision with AireOS

2. Provide a custom mobility group name, and RF group name and configure mobility to deploy the configuration to the AireOS wireless controller.

≡ የ			Pro	vision / Inventory				Q @ @ \$
This release enables new telemetry s These telemetry subscriptions are co	subscription for Cisco onfigured via NETCON	DNA Center Assurance data F and will be applied to the a	Configure Mobility	Group				×
DEVICE WORK ITEMS	Devices (2 Q Filter d 1 Selected	2) Focus: Provision ~ evices Add Device Tag	Mobility Group Name* mob-grp1 Virtual IP 1.1.1.1	~ 0	RF Group Name* rf-grp1 Restart for Virtual IP	to take effect ()	Data Link Encryption	
Failed Provision	•	Device Name	Mobility Peers					🕒 Add
 Non Compliant Outdated Software Image 	0 0	DC1-WLC1-1.cisco.com	Q Search					∇
No Golden Image Under Maintenance		DC1-WLC-5520-1	 Delete 0 Selected Device Name • 	IP Address	MAC Address	Manageability 🕕	Hash Mobility Gro	As of: Oct 30, 2023 5:13 PM
Marked for Replacement					N	o data to display		
System Beacon Enabled								
						Cancel	Reset Mobility	Configure Mobility

Figure 15 Mobility configuration with AireOS controller

3. Launch the mobility workflow group for Catalyst 9800 WLC, existing mobility group names are listed in the drop-down box. Select the mobility

group name configured with the AireOS controller, mob-grp1 in our example. RF group name will be auto-populated.

≡ •				Pro	vision / Invent	ory			Q 💿 🕲 🗘
This release enables new telemetry These telemetry subscriptions are co	subscriptio onfigured v	n for Cisco DN ia NETCONF a	IA Center Assurance data nd will be applied to the a	Configure Mobility	Group				
DEVICE WORK ITEMS	[Devices (2)	Focus: Provision V	Mobility Group Name* mob-grp1	~ 0	RF Group Name* rf-grp1	0	Data Link Encry	rption
Unreachable		Q Filter devi	ces	DTLS High Cipher Only 🕕		Restart for DTLS Ciphers to	take effect 🛈 🚺		
 Unassigned 	1	Selected	Add Device Tag	_					
Failed Provision			Device Name	Mobility Peers					🖨 Add
Non Compliant				O Search					
Outdated Software Image		0	DC1-WLC1-1.cisco.com	S					ų
No Golden Image				Delete 0 Selected					As of: Nov 4, 2023 3:49 PM
Under Maintenance		0	DC1-WLC-5520-1	Device Name •	IP Address	MAC Address	Manageability 🕕 🕈	Hash	Mobility Group Name
Security Advisories	<					N	a data ta diaplay		
Marked for Replacement						14	o data to display		
System Beacon Enabled									

Figure 16 Mobility provision with Catalyst 9800 controller

Add the AireOS wireless controller as the peer controller depicted in *Figure 17* and save the configuration, followed by deploying the changes.

≡ •				Provision / Inv	rentory	Q	0	C (9
This release enables new telemetry These telemetry subscriptions are of the second	subscriptic	on for Cisco D via NETCONF	NA Center Assurance data and will be applied to the a	Configure Mobility Group / Add Mobility Peer Add Mobility Peer					×
DEVICE WORK ITEMS Unreachable Unassigned Failed Provision Non Compliant Outdated Software Image No Golden Image		Devices (2) Q Filter dev 1 Selected) Focus: Provision ∨ idees Add Device Tag Device Name DC1-WLC1-1.eisco.com DC1-WLC-5520-1	Select type of Mobility Preer Managed WLC Deternal WLC Device Details Select a Wireless LAN Controller that is alread Urvice Name D1-WLC-5520-1	dy added in your inventory. Adding Managed WLC will add its corresponding Mobility Peers if any. MAC Address 00:a3:8e:23:97:6b				
Under Maintenance Security Advisories Marked for Replacement System Beacon Enabled	•			Mobility Group Name mob-grp1	Hash For C9800-CL model only				
					Cancel		S	ave	

Figure 17 Mobility peer addition for Catalyst 9800 controller

≡ •			Provision / Inventory Q 💿	C 4
This release enables new telemetry subscr on switching platforms. These telemetry su	iption for Cisco DI Ibscriptions are co	NA Center Assur onfigured via NET	Configure Mobility Group	×
DEVICE WORK ITEMS	Devices (2)	Focus: Provis	Mobility Group Name* mob-grp1 0 RF Group Name* rf-grp1 Data Link Encryption	
Unreachable	Q Filter devi	ces	DTLS High Cipher 0 Restart for DTLS Ciphers to take effect 0	
Unassigned	1 Selected	Add Device	Only	
Failed Provision	8	Device Name	Mobility Peers	占 Add
Non Compliant			O Search	∇
Outdated Software Image	2	DC1-WLC1-1.		U
No Golden Image			Belete 0 Selected As of: Oct 31, 2023	3 11:41 AM
Under Maintenance		DC1-WLC-552	🗌 Device Name 🔺 IP Address MAC Address Manageability 🕕 Hash Mobility Group Name	
Security Advisories				
Marked for Replacement			U DC1-WLC-5520-1 11.1.21.20 4c:77:6d:91:80:83 Managed mob-grp1	
System Beacon Enabled				
			Showing 1 of 1	
			Cancel Reset Mobility Configure	Mobility

Figure 18 Mobility provision summary

The mobility tunnel provisioned by Cisco DNA Center has been successfully configured on the wireless controllers, as confirmed through the command runner output in *Figure 19*.

					-			
0	DC1-WLC1-1.cisco.com	⊱_ Command Run	ner		DC1-WLC1-1.cisco.com@11.1.21.1	0	ď	×
		You can access red	cently viewed devic	ces using the	key combination Q+D.			
0	DC1-WLC-5520-1	Note: You can ente DC1-WLC1-1.cisco.c Mobility Summary Wireless Managemen Wireless Managemen	er "man" anytime to com> show wireless at VLAN: 121 at IP Address: 11.	o get the list mobility summ 1.21.10	of currently supported command	is and shortcuts.		
		Wireless Managemer Mobility Control N Mobility High Cipl Mobility DTLS Supp Mobility Keepalive Mobility Keepalive Mobility Multicast Mobility Multicast Mobility MAC Addre Mobility Domain Ic	<pre>tt IPv6 Address: dessage DSCP Value: ner : False ported Ciphers: TLG a Interval/Count: : ne: mob-grp1 t Ipv4 address: 0.(: Ipv6 address: :: ses: 00a3.8e323.9761 Hentifier: 0x8a01</pre>	: 48 5_ECDHE_RSA_AE L0/3 0.0.0	S128_GCM_SHA256, TLS_RSA_AES256	GCM_SHA384, TLS_RSA_AES126	8_CBC_SHA	
		Controllers config	gured in the Mobil:	ity Domain:				
		IP	Multicast IPv4	Public Multicast IP	Ip v6	MAC Address C Status	Group Name PMTU	e
						0002 0022 076b		
		11.1.21.10	0.0.0.0	::		N/A	N/A	
		11.1.21.20	0.0.0.0	::	1.20	4c77.6d91.8083 n Up	mob-grp1 1385	
		DC1-WLC1-1.cisco.d	com>					

Figure 19 Mobility tunnel status, provisioned through Cisco DNA Center

5.4 AP movement

When migrating an access point from an AireOS-based wireless controller to a Cisco IOS XE-based controller, you have the flexibility to choose between two suggested approaches based on the network requirements.

5.4.1 Iterative AP migration within a floor (least disruption)

As the wireless controllers are based on two different operating systems, achieving a hitless migration of access points is not possible. However, we have devised an approach to minimize disruption as much as possible.

Let's consider an example of a meeting room in an enterprise network that is served by two access points. In this scenario, the network administrator can choose to migrate one access point to the Catalyst 9800 wireless controller. Once successfully onboarded and serving clients, the other access points can be gradually moved from AireOS to the Catalyst 9800 controller.

This example can be extrapolated to an entire floor, where the network administrator can choose to move the access points in multiple iterations within that floor. This ensures network availability at any given point during the migration process.

1. Pick a floor that needs to be migrated and decide on the number of iterations and respective Access points part of each iteration. Tag the APs in Cisco DNA Center accordingly for easy filtering during migration.

≡ Q Global				Provision / I	nventory					Q @ C Q
		V All	Routers Sv	witches Wireless	Controllers Access	Points Sensors			89	:≡ ‰ ⊙
DEVICE WORK ITEMS	Devices (6)) Focus: Inventory V							Take a tour	1 Export
Unreachable	Q tag: (BGI	L18-F1*)								$\times \mathbb{A}$
Unassigned	0 Selected	Add Device Tag	Actions \lor	0					As of: No	v 7, 2023 2:13 PM 📿
Failed Provision		Device Name	IP Address	Device Family	Reachability 🕕	EoX Status 🕕	Manageability 🕕	Compliance (Health Score	Site
 Non Compliant Outdated Software Image 	•	AP4C77.6D9E.615C BGL18-F1-Iter1	98.1.0.20	Unified AP	Reachable	A Not Scanned	🕑 Managed	N/A	10	/BGL-18/BGL18-F
 No Golden Image Under Maintenance 	•	AP780C.F0D2.C0E8 BGL18-F1-Iter1	98.1.0.23	Unified AP	Reachable	A Not Scanned	🥏 Managed	N/A	10	/BGL-18/BGL18-F
Security Advisories Marked for Replacement		APD4E8.8019.5094 BGL18-F1-Iter1	98.1.0.27	Unified AP	Reachable	A Not Scanned	Managed	N/A	1	/BGL-18/BGL18-F
System Beacon Enabled		AP005D.7319.0E4A BGL18-F1-Iter2	98.1.0.22	Unified AP	Reachable	A Not Scanned	🥑 Managed	N/A	10	/BGL-18/BGL18-F
	•	BGL18-AP-c3700-1 BGL18-F1-Iter2	98.1.0.24	Unified AP	Reachable	A Not Scanned	🥑 Managed	N/A	10	/BGL-18/BGL18-F
	•	APC4B9.CDF4.0A70 BGL18-F1-Iter2	98.1.0.26	Unified AP	Reachable	A Not Scanned	Managed	N/A	10	/BGL-18/BGL18-F

Figure 20 Access points tagged with device tags identifying the iteration

2. Create a temporary floor (ex. *BGL18-F1_jgTjv* in Figure 21) in the same network hierarchy as the floor which you are trying to migrate.

Technical Note – The interim purpose of this logical temp floor in this step is to mimic the actual floor, hence in case of any floor level overrides with Design -> Network Settings -> Wireless for the actual floor needs to be replicated for the temp floor too.



Figure 21 Temporary floor mirroring the actual floor that is being migrated

Check if this temp floor is mapped to the same wireless network profile that has the actual floor mapping, if not map this temp floor to the corresponding wireless network profile.

=	Cisco DNA Center	Design / Ne	twork Profiles	Q @ C Q
			Add Sites to Profile: Fabric-CAMP1	×
	Q Search Table			
	Profile Name 🔺	Туре	C Choose a site	Search Help
	Fabric-CAMP1	Wireless	 ✓ □ ♣ BLR-CAMP1 	
	NF-CAMP1-1	Wireless	> 🗋 🗃 BGL-16	
	NE-Flex	Wireless	>) @ BGL-17 ∨ Ø ⊯ BGL-18	
	Test	switching	S ⊕ BGL18-F1	
			✓ ↔ BGL18-F1_jgTjv ✓ ↔ BGL18-F2	
4	Records		2 😣 BGL18-F3	
			🥪 😣 BGL18-F4	
			Ø BGL18-F5	
			✓ ◎ BGL18-F6	
			Ø ⊕ BGL18-F7	
			G ≈ BGL10-F0	
			Ø ⊕ BGL18-F10	
			Ø ⊕ BGL18-TMP_NP1	
			> □ @ BLR-DC1	
			Cano	el Save

Figure 22 Temporary floor attached to the Wireless network profile

Ensure this temp floor is not managed by the AireOS controller in Cisco DNA Center. This can happen if the entire building was already primarily managed by the AireOS controller. If so, uncheck this temp floor from the primary managed locations of the AireOS controller and provision the AireOS controller for this change to take effect.

Technical Note – Ensure this location is not secondary managed by an AireOS N+1 controller, as we don't support a location that is being primarily managed by Catalyst 9800 controller to be secondary managed by an AireOS controller.

■ Cisco DNA Center	Provision / Network De	vices / Provision Devices	Q @ @ \$
Network Devices / Provision Devices		Managed AP Location ①	×
1 Assign Site 2 Configuration	on 3 Model Configuration 4 Advanced Configuration 5 Summary		
DC1-WLC-5520-1	Setial Number Devices PCH2152V0XX DC1-WLC-5520-1 Skip AP Provision	 Search Hierarchy → 🖨 Global (7) → @ Blagalore → @ BLLR-CAMP1 > @ BLL-76 > @ BLL-18 @ @ BLL-18 @ @ BLL18-F1 → @ BLL8-F1_offy 	Search Heip
		 ◎ 6 60.18-F2 ◎ 60.18-F3 ◎ 60.18-F4 ◎ 60.18-F5 ◎ 60.18-F6 ○ 6 60.18-F6 ○ 6 60.18-F8 	
		G = BGL18-F9 G = BGL18-F10 G = BGL18-TMP_NP1	

Figure 23 Temporary floor not being managed by AireOS controller

3. Provision the Catalyst 9800 controller to primary manage this new temp floor.

■ Cisco DNA Center	Provision / Network Dev	vices / Provision Devices	Q @ @ 4
Network Devices / Provision Devices		Managed AP Location ()	×
1 Assign Site 2 Configuration	3 Model Configuration 4 Advanced Configuration 5 Summary		
DC1-WLC1-1.eisco.com	Serial Number TTM21463106 DC1-WLC1-1.cisco.com Skip AP Provision () Rolling AP Upgrade Problem 25 V () Problem 25 V ()	Q. Search Hierarchy → Bangalore → Bangalore → BBL-CAMP1 → BBL-16 → BBL-16 → BBL-18 → BBL18-F1_jgTyb → BBL18-F2 → BBL18-F3 → BBL18-F3 → BBL18-F5 → BBL18-	Search Hép
			Cancel

Figure 24 Temporary floor being managed by Catalyst 9800 controller



- 4. As you know, the first time the AP joins a controller based on a different OS, it will have to download the image and reload. This can be accelerated if we pre-download the Catalyst 9800 based image to the AP while it is associated with AireOS controller. We recommend doing this to make it as least disruptive as possible. There is a tool named <u>WLAN poller</u> hosted in Cisco Devnet, which can be used to pre-download the image to a set of APs using SSH protocol. Below are the recommended steps which can be followed.
 - a) Once the WLAN poller tool is downloaded, there are few files that needs to be edited to match our requirement. Let's start with editing the config.ini file. The below snapshot highlight captures the changes that has been done to the existing config.ini file. Either, we are commenting or uncommenting the default values and also updating the uncommented lines with respective required values.

|LGeneraIJ # Label label = test ; active value should be based on 1 == AirOS WLC, 2 == eWLC and False for failure. ;wlc_type: 1 ; config global mode for WLC and AP connection: "ssh" or "telnet" mode: ssh ap_mode: ssh Commented out, as not performing any operation in WLC ; set global WLC credentials ;wlc_user: wow123 ;wlc_pasw: Pass_123 ;wlc_enable: Pass_123 ; set global AP credentials ap_user: admin ap_pasw: Pass_123 ap_enable: Pass_123 AP SSH login credentials needs to be added ; syslog address syslog_server: self ; log file mode: one file per "day" (default) or one file per timestamp "time": ;log_fo_file_mode: time ; set transfer mode (tftp or ftp, default is tftp) ;transfer_mode = tftp ; tftp tftp_addr: 19.1.1.200 tftp_addr_v6: self tftp_path: TFTP server that would be used for image copy from AP : ftp ;ftp_addr: self commented out, as FTP is not used ftp_path: ftp_user: <ftp_user> ftp_pasw: <ftp_pasw> ; FEATURES ; enable data-poller poller_enable: True ; radio event collection event_enable: False ; dfs trace dfstrace_enable: False ; ap file system checks (WARNING: recover will force IOS image download and AP reload) ap_fs_check: False ap_fs_recover: False ; IOS AP certificate check ap_cert_check: False ; WLC config backup and ap crash file collection (default is disabled) ;wlc_config_backup: True ;collect_ap_crash: True ;collect_supp_bundle: True ; data poller command lists cmdlist_wlc = cmdlist_wlc.txt cmdlist_ewlc = cmdlist_ewlc.txt cmdlist_ios = cmdlist_ios.txt cmdlist_cos = cmdlist_cos.txt cmdlist_cos_qca = cmdlist_cos_qca.txt cmdlist_cos_bcm = cmdlist_cos_bcm.txt # working directories
poller_root = ./data/
#syslog_root = ./syslog/
#tftp_root = ./atfupboot/
archive = ./archive/
;logs = ./logs/

Figure 25 WLAN Poller config.ini file changes part1

ap_fs_recover: False	
; IOS AP certificate check ap_cert_check: False	
; WLC config backup and ap crash file collection (defau ;wlc_config_backup: True ;collect_ap_crash: True ;collect_supp_bundle: True	ult is disabled)
<pre>; data poller command lists cmdlist_wlc = cmdlist_wlc.txt cmdlist_ewlc = cmdlist_ewlc.txt cmdlist_ios = cmdlist_ios.txt cmdlist_cos = cmdlist_cos.txt cmdlist_cos_qca = cmdlist_cos_qca.txt cmdlist_cos_bcm = cmdlist_cos_bcm.txt</pre>	
<pre># working directories poller_root = ./data/ #syslog_root = ./syslog/ #tftp_root = ./tftpboot/ archive = ./archive/ ;logs = ./logs/</pre>	
; AP name_filter ;ap_name_filter =	
: location filter ;loc_filter: False ;loc_list: location1,location2	Commented out Location filter, as we are using AP list updated in CSV file
; concurrent connections (default: 30) ;concurrent_conn: 10	
; timeout when waiting for AP commands to execute ap_timeout=120 # use UTC timestamps # utctime = True # per-file timestamp # False (default): one file per device per day, in tim # True : one timestamped file per run, in ro # file_timestamp = True	me based directory structure bot data directory
; WLC sections must be named as [WLC- <wlcname>] ;[WLC-1] ;active: False ;ipaddr: 11.1.21.20 ;mode: ssh</wlcname>	Commented out WLC details section
;[WLC-2] ;active: False ;ipaddr: <wlc-ip-addr> ;mode: ssh</wlc-ip-addr>	
[AP-CSV] aplist: aplist.csv	aplist.csv file part of theWLAN poller bundle is updated with AP IPs
;[AP-List] ; <ap-name>: <ap-ipaddr></ap-ipaddr></ap-name>	
<pre>;rq [DataExport] ;textfile_out = True ;dx_enable = True ;dx_srv_addr = localhost ;dx_srv_port = 5672 ;dx_srv_user = guest ;dx_srv_pasw = guest</pre>	
[FTS] username: password: path:	

Figure 26 WLAN Poller config.ini file changes part2

b) Next step is to edit the cmdlist_* (except cmdlist_wlc and cmdlist_ewlc) files that are actually used for executing the commands at the Access points. Delete the existing set of commands or comment it out with # and add the below command.

archive download-sw /no-reload tftp://19.1.1.200/<apimage>

Please replace the tftp server IP with your tftp server, and the ap image depends on the actual AP which is in your network. You can get this mapping with *"show ap bundle all"* in AireOS controller.

Below would be an actual command for C9120 Access point. archive download-sw /no-reload tftp://19.1.1.200/ap1g7

- c) As a final step, run the wlanpoller.exe that is part of the bundle. The executable shows the progress in the console, and logs are captured in data and logs folder.
- 5. Export the map of the particular floor at *Design->* Network Hierarchy -> Floor -> Export Maps

Technical Note – While we move the Access Points to a temp floor, exporting and preserving it ensure we don't lose the AP positioning. This exported file can be imported again to the same floor, once the APs are back to the actual floor later.



Figure 27 Floor map exported in prime format

 Config AP workflow in Cisco DNA Center is used to configure the Catalyst 9800 controller as the primary WLC. Pick the APs marked for iteration 1 in the floor that we are migrating and provision the same using config ap workflow.

E Cisco DNA Center	Configure Access Points	Q @ 49 A
How do you want to config		
How do you want to comig	ure APS?	
Choose how you want to configure the AP and R	idio parameters.	
Configure AP And Radio • Parameters	Schedule Recurring Events For AP O And Radio Parameters	
Choose which steps to configure relevant parameters on the selected APs.	You can configure the Admin and LED status of the AP and the Radio Admin status as recurring events.	
Select the steps you want to configure		
One we approved the steps you want to comigure		
Configure AP Parameters		
Configure 5 GHz Radio Parameters		
Configure 2.4 GHz Radio Parameters		
Configure 6 GHz Radio Parameters		
Configure Dual-Band (XOR) Radio Parameters		
Configure Tri-Radio Parameters		

€ Exit

Review Back Next

Figure 28 Configure Access point workflow

Select Access Pc Select reachable APs to config APs and Unassigned APs Tab.	oints gure. APs can be selected fro Access Points (3)	m both Assigned							
APs and Unassigned APs Tab.	Access Points (3)								
Assigned APs Unassigned APs	Access Points (3)								
	0								🛧 Export 🛛 🗇
Q Search Hierarchy	Q device lags: (BGL 18-	-F1-Iter1)							$\times \nabla$
Search Help	0 Selected							As of: No	v 6, 2023 3:41 PM 🔁
Global (13)									
V so bangalore	AP Name *	Ethernet MAC Address	IP Address	AP Mode	Reachability	Associated WLC IP	MAC Address	Site	Device Tags
> 🖂 🖻 BGL-16	AP4C77.6D9E.615C	4c:77:6d:9e:61:5c	98.1.0.20	Local	Reachable	11.1.21.20	70:69:5a:51:4e:60	/BLR-CAMP1/BGL-18/BGL18-F1	BGL18-F1-Iter1
> 🖂 🗃 BGL-17	_								
∨ 😑 BGL-18	AP780C.F0D2.C0E8	78:0c:f0:d2:c0:e8	0.0.0.0	Local	Reachable	11.1.21.20	00:ea:bd:47:2c:60	/BLR-CAMP1/BGL-18/BGL18-F1	BGL18-F1-Iter1
☑ ☺ BGL18-F1	APD4E8.8019.5094	d4:e8:80:19:50:94	0.0.0.0	Local	Reachable	11.1.21.20	d4:e8:80:19:b0:a0	/BLR-CAMP1/BGL-18/BGL18-F1	BGL18-F1-Iter1
□ ⇔ BGL18-F1_jgTjv									
□ 😔 BGL18-F2									
BGL18-F3									
□ 😔 BGL18-F4									
□ 👳 BGL18-F5									
BGL18-F6									
□ 😔 BGL18-F7									
□ 😔 BGL18-F8									
□ © BGL18-F9	3 Records							Show Records: 25 🗸 1 -	3 < 1 >
□ ⇔ BGL18-F10									
- Exit								Paulaur Pack	Next

Figure 29 Access points filtered with device tag part of the first iteration

e en ingule / a l'arannetere		
Select parameters to configure. These parameters will be selected APs.	applied to all the	
Admin Status	AP Failover Priority	
Enable Disable	Select AP Failover Priority V	
AP Mode		
	High Availability ①	
Select AP Mode V	Select Primary Controller Name DC1-WLC1-1	
AP Location ()	Palest Sasanden: Asstallar Name	
Use currently assigned site location ①	DC1-WLC-5520-1	
Enter Location	Select Tertiary Controller Name	
Max length: 255	Ciear V	
AP LED Status	Primary Controller IP Address	
Enable Disable		
C LED Brightness Level 0	Secondary Controller IP Address 11.1.21.20	
Select Brightness Level		
4 ~ ~	Tertiary Controller IP Address	

Figure 30 Catalyst 9800 controller being configured as Primary controller

 Once all the APs part of the first iteration have joined the Catalyst 9800 controller, provision this set of APs to the temp floor managed by the Catalyst 9800 controller.

Technical Note - We can provision a maximum of 300 APs one time, if the number
for the iteration exceeds we may need to split the provision accordingly.

≡ የ					Provision	/ Inventory				Q (3) 🔿 🗘
This release enables new telemetry These telemetry subscriptions are c	r subscrip configure	otion for Cisco I d via NETCONF	DNA Center Assurance data and will be applied to the a	and optimizes exis pplicable devices v	ting subscriptions for p which have been discov	erformance. An additional subs- rered with NETCONF. Apply Fix	cription is provided in	n this release for Security-	Group Policy monitor	ing on switching platfo	orms. X
				All Routers	Switches Virele	ss Controllers 🗸 Access Points	s Sensors			89 😑 9	9 4
DEVICE WORK ITEMS		Devices (1	11) Focus: Select V							Take a tour ⊥ Export	t 🐵
 Unreachable 		Q Filter de	avices								V
Unassigned		0 Selected	Add Device Tag	Actions \lor ①						As of: Nov 6, 2023 3:	53 PM
Failed Provision	C	•	Device Name	IP Address	Device Family	Site	Reachability 🕕	Provisioning Status 🌖	Associated WLC IP	Credential Status	Last Provisic
 Non Compliant Outdated Software Image 	C] 🧳	AP4C77.6D9E.615C BGL18-F1-Iter1	98.1.0.20	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	11.1.21.10	Not Applicable	11 minut
 No Golden Image Under Maintenance] 🧳	AP780C.F0D2.C0E8 BGL18-F1-Iter1	98.1.0.23	Unified AP	/BGL-18/BGL18-F1	🥑 Reachable	Success See Details	11.1.21.10	Not Applicable	11 minut
 Security Advisories Marked for Replacement) 🥜	APD4E8.8019.5094 BGL18-F1-Iter1	98.1.0.27	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	11.1.21.10	Not Applicable	11 minut
System Beacon Enabled	C) 🥜	AP005D.7319.0E4A BGL18-F1-Iter2	98.1.0.22	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	11.1.21.20	Not Applicable	11 days
	C] 🥏	BGL18-AP-c3700-1 BGL18-F1-Iter2	98.1.0.24	Unified AP	/BGL-18/BGL18-F1	🥝 Reachable	Success See Details	11.1.21.20	Not Applicable	17 minut
	C	- C	APC4B9.CDF4.0A70 BGL18-F1-Iter2	98.1.0.26	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	11.1.21.20	Not Applicable	17 minut

Figure 31 APs part of the first iteration joined Catalyst 9800 controller

≡ •					F	Provision / Inventory					Q 0 0) Q
This release enables new telemetry su These telemetry subscriptions are con	ibscripti ifigured	on for Cisc ria NETCO	o DNA Center Assurance da NF and will be applied to the	ta and optimize applicable de	es existing subscrip vices which have b	otions for performance. An additi een discovered with NETCONF. /	onal subscri pply Fix	ption is provided in this release	for Security-Group Po	licy monitoring on switc	hing platforms.	×
				V All	Routers Switche	s Wireless Controllers Acces	Points S	ensors		89	i≡ % (9
DEVICE WORK ITEMS		Devices	(3) Focus: Provision ~							Take a tour	① Export 🛛 🐇	9
Unreachable		Q tag: (BGL18-F1-Iter1)								\times \triangledown	7
Unassigned		0 Selected	Add Device Tag	Actions \checkmark	0			Most recent operation		As of: No	v 6, 2023 4:06 PM	ø
Failed Provision			Device Name	IP Address	Device Family	Site	Reachabi	AP Provisioning	Credential Status	Last Provisioned	Device Role	MAC
 Non Compliant Outdated Software Image 	0	•	AP4C77.6D9E.615C BGL18-F1-Iter1	98.1.0.20	Unified AP	/BGL-18/BGL18-F1_jgTjv	🥑 Read	hable Success See Details	Not Applicable	a few seconds ago	ACCESS	70:€
 No Golden Image Under Maintenance 	•		AP780C.F0D2.C0E8 BGL18-F1-Iter1	98.1.0.23	Unified AP	/BGL-18/BGL18-F1_jgTjv	🥑 Read	hable Success See Details	Not Applicable	a few seconds ago	ACCESS	00:¢
Security Advisories Marked for Replacement System Beacon Enabled		•	APD4E8.8019.5094 BGL18-F1-Iter1	98.1.0.27	Unified AP	/BGL-18/BGL18-F1_jgTjv	🥑 Reac	hable Success See Details	Not Applicable	a few seconds ago	ACCESS	d4:¢

Figure 32 APs part of first iteration provisioned successfully to temp floor

8. Repeat the steps 4-8 detailed above for the remaining iterations, and once all the APs part of that floor is moved temp floor. Provision the AireOS controller to not manage this actual floor, also ensure this actual floor is not secondary managed by an AireOS N+1 controller if any.

■ Cisco DNA Center		Provision / Network Dev	ices / Provision Devices	Q @ @ \$		
Network Devices / Provision Devices			Managed AP Location 🕕	×		
1 Assign Site 2 Configuration	3 Model Configuration	4 Advanced Configuration 5 Summary				
DC1-WLC-5520-1	Serial Number	Devices	Q Search Hierarchy			
	FCH2152V0XX	DC1-WLC-5520-1		Search Help		
			✓ □ ∞ bangalore			
	Skip AP Provision ()					
			> O # BGL-17			
			✓ () ≡ BGL-18			
			□ @ BGL18-F1			
			□ ⇔ BGL18-F1_jgTjv			
			BGL18-F2			
			☑ ⊕ BGL18-F3			
			🥑 😣 BGL18-F4			
			🥪 🕺 BGL18-F5			
			SGL18-F6			
			□ © BGL18-F7			
			□ ⊕ BGL18-F8			
			□ ⊕ BGL18-F9			
			□ ◎ BGL18-F10			
			G B BGL18-TMP_NP1			
				Cancel Save		

Figure 33 AireOS controller not managing the actual floor

9. Provision the actual floor to be managed by Catalyst 9800 controller.

Instruct Devices / Provision Over Imaged AP Location Image: Image of the provision Image of the	■ Cisco DNA Center		Provision /	/ Network Devices / Provision Devices	Q @ 🛆 🗘
Avan Ster Contgueration Series DD1-WLC1-1.clasco.com Series Number D1-WLC1-1.clasco.com Series Number DD1-WLC1-1.clasco.com Series Number BLB0-CMMPI Series Number State APP Provision ① A Release Proventages Series Number State APP Provision ② State APP Provision ③ State APP Provision ③ State APP Provision ③ State APP Provision ③ <	Network Devices / Provision Devices			Managed AP Location ()	>
DC1-WLC1-1.cisco.com CC1-WLC1-1.cisco.com CC1-WLC	1 Assign Site 2 Confi	guration 3	Model Configuration 4 Advanced Config	iguration 5	
 Nike Hour 100 Out Hour 1 Machadologie Skip AP Provision () Rolling AP Upgrade AP Rebort Percentage Bable 25 () () (DC1-WLC1-1.cisco.com	Serial Number	Devices	Q Search Hierarchy	
 Skip AP Provision ● Rolling AP Upgrade AP Reboot Percentage Enable 25 ♥ ● BolL 16 BolL 16 BolL 16 BolL 16 BolL 16 BolL 16 BolL 18-F1 BolL 18-F1 BolL 18-F2 BolL 18-F3 BolL 18-F3 BolL 18-F5 BolL		11102140310	bel-weer-	✓ □ ♣ Global (3)	
Skip AP Provision				✓ □ 爺 Bangalore	
Sup AF Provision () Rolling AP Upgrade AP Rebot Percentage Enable 25 ∨ () Balling F1 Balling F				→ D 🖗 BLR-CAMP1	
AP Reboot Percentage AP Reboot Percentage I Enable 25 I Enable 25 I Enable I Enable I Enable I I I I I I I I I I I I I I I I I I I		U SKIP AF FI		> 🗌 📾 BGL-16	
AP Retoot Percentage ♥ ● BGL18-F1 ■ Enable 25 ● BGL18-F2 ● BGL18-F4 ● BGL18-F6 ● BGL18-F7 ● BGL18-F7 ● BGL18-F8 ● BGL18-F9 ● BGL18-F1		Rolling AP	Jpgrade	> 🗌 🗃 BGL=17	
△ P Reboot Percentage ② ③ BGL18-F1 ○ Enable 25 ○ ③ ○ ◎ BGL18-F2 ○ ◎ BGL18-F2 ○ ◎ BGL18-F3 ○ ◎ BGL18-F3 ○ ◎ BGL18-F5 ○ ◎ BGL18-F6 ○ ◎ BGL18-F6 ○ ◎ BGL18-F8 ○ ◎ BGL18-F10 ○ @ BGL18-F10				∨ 🗋 🖻 BGL-18	
□ Enable 25 ✓ □ Enable 25 ✓ □ BGL18-F1_jgTy □ □ BGL18-F2 □ □ BGL18-F3 □ □ BGL18-F5 □ □ BGL18-F6 □ □ BGL18-F8 □ □ BGL18-F9 □ □ BGL18-F10 ☑ ☑ ⊕ BGL18-TMP_NP1 □			AP Reboot Percentage	☑ ☺ BGL18-F1	
 □ ⊕ BGL18-F2 □ ⊕ BGL18-F3 □ ⊕ BGL18-F3 □ ⊕ BGL18-F5 □ ⊕ BGL18-F6 □ ⊕ BGL18-F7 □ ⊕ BGL18-F8 □ ⊕ BGL18-F9 □ ⊕ BGL18-F10 ● BGL18-TMP_NP1 		Enable	25 ~ ①	Ø ☺ BGL18-F1_jgTjv	
 □ ⊕ BGL18-F3 □ ⊕ BGL18-F4 □ ⊕ BGL18-F5 □ ⊕ BGL18-F6 □ ⊕ BGL18-F8 □ ⊕ BGL18-F9 □ ⊕ BGL18-F10 ☑ ♥ BGL18-TMP_NP1 				□ ⊜ BGL18-F2	
 ⇒ BGL18-F4 ⇒ BGL18-F5 ⇒ BGL18-F6 ⇒ BGL18-F7 ⇒ BGL18-F8 ⇒ BGL18-F10 ⊗ BGL18-F10 ⊗ BGL18-F10 				□ 😔 BGL18-F3	
 ⇒ BGL18-F5 ⇒ BGL18-F6 ⇒ BGL18-F7 ⇒ BGL18-F8 ⇒ BGL18-F0 ⇒ BGL18-F10 ≅ ⊗ BGL18-F10 ≅ ⊗ BGL18-F10 				□ 😔 BGL18-F4	
 □ ⇔ BGL18-F6 □ ⇔ BGL18-F7 □ ⇔ BGL18-F8 □ ⇔ BGL18-F10 ○ ⇔ BGL18-F10 ○ ⇔ BGL18-F10 				□ ⊜ BGL18-F5	
□ ● BGL18-F7 □ ● BGL18-F8 □ ● BGL18-F9 □ ● BGL18-F10 ◎ ● BGL18-TMP_NP1				□ 😣 BGL18-F6	
 ⇒ BGL18-F8 ⇒ BGL18-F9 ⇒ BGL18-F10 ≅ € BGL18-TMP_NP1 				□ 😔 BGL18-F7	
Ge BGL18-F9 Ge BGL18-F10 Ge BGL18-TMP_NP1				☐ ☺ BGL18-F8	
© ⊕ BGL18-F10				□ @ BGL18-F9	
₿ ⊕ BGL18-TMP_NP1				□ ⊕ BGL18-F10	
				BGL18-TMP_NP1	
Cancel Save					Cancel

Figure 34 Actual floor being managed by Catalyst 9800 controller

10. Provision the Access points to the actual floor in the same iterative way.

Technical Note – we do this because the temp floor was always meant to be a temporary positioning as we cannot have a single floor being managed by two wireless controllers in Cisco DNA Center . Also, there could be maps with AP positioning, custom site tags, and policy tags associated with the actual floor. Hence, we recommend always moving back to the actual floor where the AP was attached before migration.

≡ 9 Global				Provision / I	nventory				Q @ 🖱 🗘
		All	Routers Switch	Wireless Con	trollers 🗸 Access Points	Sensors		ē	82 ∷ ≫ ⊙
DEVICE WORK ITEMS	Devices (6	6) Focus: Select ∨						Take a tou	ir 🕧 Export 🛛 🚳
Unreachable	Q tag: (bg	I18-f1*)							$\times \bigtriangledown$
Unassigned	0 Selected	Add Device Tag	Actions \checkmark	0				As of: N	lov 7, 2023 2:41 PM 🟾 🥰
Failed Provision	•	Device Name	IP Address	Device Family	Site	Reachability (i)	Provisioning Status 🌖	Associated WLC IP	Credential Status
Non Compliant		AD4077 6005 6150							
Outdated Software Image		BGL18-F1-Iter1	98.1.0.20	Unified AP	/BGL-18/BGL18-F1	🥝 Reachable	Success See Details	11.1.21.10	Not Applicable
🗌 No Golden Image		AP780C E0D2 C0E8					Success		
Under Maintenance		BGL18-F1-Iter1	98.1.0.23	Unified AP	/BGL-18/BGL18-F1	Reachable	See Details	11.1.21.10	Not Applicable
Security Advisories		APD4E8.8019.5094					Success		
Marked for Replacement		BGL18-F1-Iter1	98.1.0.27	Unified AP	/BGL-18/BGL18-F1	Reachable	See Details	11.1.21.10	Not Applicable
System Beacon Enabled		AP005D.7319.0E4A BGL18-F1-Iter2	98.1.0.22	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	11.1.21.10	Not Applicable
	•	BGL18-AP-c3700-1 BGL18-F1-Iter2	98.1.0.24	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	11.1.21.10	Not Applicable
	•	APC4B9.CDF4.0A70 BGL18-F1-Iter2	98.1.0.26	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	11.1.21.10	Not Applicable

Figure 35 APs part of the floor BGL18-F1 is successfully migrated to Catalyst 9800 controller

11. Actual floor is migrated and managed by Catalyst 9800 controller, now we can import the map that was exported in step 5, that way we retain the AP positioning post migrating the floor.



Figure 36 Map being imported back at Global level

- 12. Remove the temp floor from the site hierarchy, as all the APs have been moved back to the actual floor which is now being managed by the Catalyst 9800 controller.
- 13. As config Access point workflow was used to override the primary WLC of the APs, we may need to revert back by using the workflow again to let it use site inherited parameters.

■ Cisco DNA Center	Configure Access Points
Configure AP Parameters Select parameters to configure. These parameters will be applied to all the	
Admin Status	AP Failover Priority
Enable Disable	Select AP Failover Priority
Select AP Mode	High Availability Select Primary Controller Name Inherit from site / Clear
AP Location ()	Select Secondary Controller Name Inherit from site / Clear
Enter Location Max length: 255	Select Tertiary Controller Name Clear
AP LED Status Enable Disable	Primary Controller IP Address
LED Brightness Level	Secondary Controller IP Address
4 <u> </u>	Tertiary Controller IP Address

Figure 37 Config AP workflow to revert the WLC HA parameters

14. Repeat the steps 1-13 for other floors one by one. For the last floor that's being migrated while provisioning the AireOS controller to not manage that particular floor, you may need have some dummy floor managed by the AireOS controller as at least one floor has to be managed for the provisioning to succeed.

5.4.2 Floor-wise migration of APs to a new controller

You may decide to take a hit to migrate the entire set of Access points in a floor to the Catalyst 9800 controller without bothering about the disruption and hassles of steps described in the previous section. Below are the steps recommended if you wish to follow this approach.

- 1. The first step is to pick the floor that you want to migrate to Catalyst 9800 controller.
- 2. As you know, the first time the AP joins a controller based on a different OS, it will have to download the image and go for a reload. This can be accelerated if we pre-download the IOS-XE-based image to the AP while it

is associated with the AireOS controller. We recommend doing this to make it as least disruptive as possible. There is a tool named <u>WLAN poller</u> provided by Cisco, which can be used to pre-download the image to a set of APs using SSH protocol. Please check Section 5.4.1 -> Step 4 of this document for more details on this.

3. Now, the APs are ready to be moved to the Catalyst 9800 controller. We can use the Cisco DNA Center config AP workflow to configure the Access points with the Catalyst 9800 controller as the primary controller.

≡	Cisco DNA Center	Configure Access Points	Q @ 49 Q
	How do you want to config Choose how you want to configure the AP and Ru	Jio parameters.	
	Configure AP And Radio • Parameters	Schedule Recurring Events For AP O And Radio Parameters	
	Choose which steps to configure relevant parameters on the selected APs.	You can configure the Admin and LED status of the AP and the Radio Admin status as recurring events.	
	Select the steps you want to configure		
	Modify AP Name Configure AP Parameters Configure 5 GHz Radio Parameters		
	Configure 2.4 GHz Radio Parameters		
	Configure 6 GHz Radio Parameters Configure Dual-Band (XOR) Radio Parameters		
	Configure Tri-Radio Parameters		

€ Exit									Review Back	Next	
Figure 38 Confi	igure Acc	ess point v	vorkflow								
				Confi	gure Acces	s Points				ର ୭ ୯ ୯	2
Select Ac Select reachable APs and Unassign	CESS Points APs to configure. Af ned APs Tab.	S Ps can be selected from	both Assigned								
Assigned APs Unassigned APs Q Search Hierarchy	V	Access Points (6) Q Filter devices								t Export Ø	
✓ □ ♣ Global (1) ✓ □ ♣ Bangalore	Search Help	6 Selected	Ethernet MAC Address	IP Address	AP Mode	Reachability	Associated WLC IP	MAC Address	As of: Nov	20, 2023 5:23 PM 🔗	Dv
◇ □ 碘 BLR-CAMP1> □ Ⅲ BGL-16		AP4C77.6D9E.615C	4c:77:6d:9e:61:5c	98.1.0.20	Local	Reachable	11.1.21.20	70:69:5a:51:4e:60	/BLR-CAMP1/BGL-18/BGL18-F1	8.10.183.0	
> □ III BGL-17 ∨ □ III BGL-18		AP005D.7319.0E4A	00:5d:73:19:0e:4a	98.1.0.22	Local	Reachable	11.1.21.20	b4:de:31:f3:f3:40	/BLR-CAMP1/BGL-18/BGL18-F1	8.10.183.0	
☑ ☺ BGL18-F1	•	AP780C.F0D2.C0E8	78:0c:f0:d2:c0:e8	98.1.0.23	Local	Reachable	11.1.21.20	00:ea:bd:47:2c:60	/BLR-CAMP1/BGL-18/BGL18-F1	8.10.183.0	
□ 🔤 BGL18-F2 □ 😂 BGL18-F3		APC4B9.CDF4.0A70	c4:b9:cd:f4:0a:70	98.1.0.26	Local	Reachable	11.1.21.20	c4:b9:cd:f4:89:e0	/BLR-CAMP1/BGL-18/BGL18-F1	8.10.183.0	
□ ⊕ BGL18-F4		APD4E8.8019.5094	d4:e8:80:19:50:94	98.1.0.27	Local	Reachable	11.1.21.20	d4:e8:80:19:b0:a0	/BLR-CAMP1/BGL-18/BGL18-F1	8.10.183.0	
□ ⊕ BGL18-F6 □ ⊕ BGL18-F7		BGL18-AP-c3700-1	f4:4e:05:8c:f0:70	98.1.0.24	Local	🥏 Reachable	11.1.21.20	f4:4e:05:97:fb:50	/BLR-CAMP1/BGL-18/BGL18-F1	8.10.183.0	
□ ⊕ BGL18-F9 □ ⊕ BGL18-F9 □ ⊕ BGL18-F10	4	6 Records						Show Re	cords: 25 🗸 1 - 6	< 0 >	Þ

Figure 39 APs part of the floor BGL18-F1 is selected

Exit

Review Back

Configure AP Parameters		
Select parameters to configure. These parameters will be applied selected APs.	to all the	
Admin Status	AP Failover Priority	
Enable Disable	Select AP Failover Priority	
AP Mode ①		
Select AP Mode V	High Availability ① Salect Premary Controler Name DC1-WLC1-1 V	
AP Location Use currently assigned site location	Select Secondary Controller Name Inherit from site / Clear V 🕜	
Enter Location Max length: 255	Select Tortiary Controller Name	
AP LED Status	Primary Controller IP Address 11.1.21.10	
LED Brightness Level 🛈	Secondary Controller IP Address	
Select Brightness Level 4	Tertiary Controller IP Address	

Figure 40 Catalyst 9800 controller is configured as Primary controller

Ensure the Access points are successfully joined to the Catalyst 9800 controller.

≡ 9 BGL18-F1					Provision / Inventory					Q ()	۵ ۵
This release enables new telemetry su These telemetry subscriptions are cor	ubscription for Ci nfigured via NETC	sco DNA Center Assurance d CONF and will be applied to the	lata and optimize he applicable dev	s existing subscri lices which have l	iptions for performance. An been discovered with NETCO	additional subscripti DNF. <mark>Apply Fix</mark>	on is provided in this rele	ease for Security-Gro	up Policy monitoring o	n switching platfor	ms. ×
			All Rou	ters Switches	Wireless Controllers	Access Points Sen	sors			89 🗄 🇞	0
DEVICE WORK ITEMS	Device	es (6) Focus: Select V							Take a	tour 🟦 Export	ø
Unreachable	Q Filt	er devices									∇
Unassigned	0 Select	ed OAdd Device Tag	Actions \lor	0					As of	Nov 27, 2023 4:49 P	м
Failed Provision		Device Name	IP Address	Device Family	Site	Reachability 🕕 🕯	Provisioning Status 😗	Credential Status	Associated WLC IP	Last Provisioned	Devic
Non Compliant Outdated Software Image	0	AP4C77.6D9E.615C	98.1.0.20	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	Not Applicable	11.1.21.10	15 minutes ago	ACC
 No Golden Image Under Maintenance 	0 0	AP005D.7319.0E4A	98.1.0.22	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	Not Applicable	11.1.21.10	15 minutes ago	ACC
Security Advisories Marked for Replacement		AP780C.F0D2.C0E8	98.1.0.23	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	Not Applicable	11.1.21.10	15 minutes ago	ACC
System Beacon Enabled	0 0	BGL18-AP-c3700-1	98.1.0.24	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	Not Applicable	11.1.21.10	15 minutes ago	ACC
	0 0	APC4B9.CDF4.0A70	98.1.0.26	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	Not Applicable	11.1.21.10	15 minutes ago	ACC
	0 0	APD4E8.8019.5094	98.1.0.27	Unified AP	/BGL-18/BGL18-F1	Reachable	Success See Details	Not Applicable	11.1.21.10	15 minutes ago	ACC

Figure 41 APs successfully Associated to the Catalyst 9800 controller

 Provision the AireOS-based controller to not manage the chosen floor for migration. Additionally, ensure that this location is not secondary managed by any N+1 AireOS controller, if applicable.

■ Cisco DNA Center		Provision / Network Dev	ices / Provision Devices	Q @ C 4
Network Devices / Provision Devices		Managed AP Location ()	×	
1 Assign Site 2 Configuration	3 Model Configuration	4 Advanced Configuration 5 Summary		
DC1-WLC-5520-1	Serial Number FCH2152V0XX	Devices DC1-WLC-5520-1	Q Search Hierarchy	Search Help
			〜 🗋 命 Global (5)	<u>*</u>
			〜 🗋 絶 Bangalore	
	Skin AP Provision		✓ □ ♣ BLR-CAMP1	
	0		> 🗋 ıiil BGL-16	
			> □ III BGL-17	
			∨ 🗋 🗏 BGL-18	
			□ 😔 BGL18-F1	
			✓ Ø BGL18-F2	
			BGL18-F3	
			🛃 😣 BGL18-F4	
			Ø ₩ BGL18-F5	
			✓ ♀ BGL18-F6	
			□ ⊕ BGL18-F7	
			0 ⊕ BGL18-FB	
			□ ₩ BGL18-F19	
			BGL18-THD NP1	
			C ⊕ BLR-DC1	
				Cancel Save

Figure 42 Floor BGL18-F1 is not being managed by AireOS controller through provision

5. Provision the Catalyst 9800 controller to manage this floor.

Network Devices / Provision Devices Managed AP Location ① ① Assign Site ② Configuration ③ Model Configuration ④ Advanced Configuration ⑤ Summary ⑤ Summary DC1-WLC1-1.cisco.com Serial Number TIM21463106 Dc1-WLC1-1.cisco.com	∑ Search Help
1 Assign Site 2 Configuration 3 Model Configuration 6 Summary 1 DC1-WLC1-1.cisco.com Serui Number Devices 0 Search Hierarchy 1 DC1-WLC1-1.cisco.com Devices DC1-WLC1-1.cisco.com 0 Search Hierarchy	Search Help
DC1-WLC1-1.cisco.com Serial Number Desices Q. Search Hierarchy TM21465106 DC1-WLC1-1.cisco.com	Search Help ▲
√ □ ♣ Global (2)	
✓ □ 韓 Bangalore	
Skip AP Provision O V 🗋 💩 BLR-CAMP1	
> □ iii BGL-16	
Rolling AP Upgrade > 🗋 🖩 BGL-17	
√ □ ፼ BGL-18	
AP Rebot Percentage 😰 👳 BGL18-F1	
□ Enable 25 ∨ 0 □ № BGL18-F2	
□ © BGL18-F3	
○ @ BGL18-F4	
□ © BGL18-F5	
□ © BGL18-F6	
□ ⊕ BGL18-F7	
□ @ BGL18-F8	
□ ⊕ 8G118-F9	
□ 😣 BGL18-F10	
🕑 🗎 BGL18-TMP_NP1	
> ○ ♠ BLR-DC1	•
Cancel	Save

Figure 43 Floor BGL18-F1 is being managed by Catalyst 9800 controller

6. Provision the Access points part of this floor to get it configured as part of a location managed by Catalyst 9800 controller.

Technical Note – *The RF profile and AP zone related information don't persist as we have moved this location to be managed by a new Catalyst 9800 controller. Please reuse the AP to RF and Zone mappings which were recommended to be captured earlier.*

≡ Cisco DNA C	Center		Provision / Network	Q Ø 🗷	
Network Devices / Provision	n Devices				
1 Assign Site	Configuration 3 Summary				
A Zones and SSIDs a	are listed from Provisioned Wireless pro	file(s) for each Access point. For ne	wly added Zones and SSIDs,	Please provision Controller prior to Access point provision.	×
Serial Number	Device Name	AP Zone Name	RF Profile	SSIDs	
FOC21461RR4	AP4C77.6D9E.615C	Apply to All ①	Apply to All ①	BGL-CORP-TEST	
FGL2148A2N6	AP005D.7319.0E4A	APzone-2 V	LOW	[∨] BGL-CORP	
FGL2232ABMG	AP780C.F0D2.C0E8	default-zone V	TYPICAL	<u> </u>	
FTX1842R3HU	BGL18-AP-c3700-1	APzone-1 ~	HIGH	✓ BGL-CORP-TEST	
KWC2108050F	APC4B9.CDF4.0A70	APzone-2 \checkmark	LOW	✓ BGL-CORP	
0	APD4E8.8019.5094	default-zone 💛	TYPICAL	× 3	
					Cancel Next

Figure 44 AP provision after the location is now being managed by Catalyst 9800 controller

■ 9 BGL18-F1		Provision / Inventory							Q @ 2	3 4		
This release enables new telemetry subscription for Cisco DNA Center Assurance data and optimizes existing subscriptions for performance. An additional subscription is provided in this release for Security-Group Policy monitoring on switching platforms. X These telemetry subscriptions are configured via NETCONF and will be applied to the applicable devices which have been discovered with NETCONF. Apply Fix												
				All Route	ers Switches	Wireless Controllers	Access Points	Sensors			89 😑 🖗	0
DEVICE WORK ITEMS	Devi	ces (6)	Focus: Select \lor							Take a t	our 🕧 Export 💦	0
Unreachable	Q	Filter dev	ices								7	7
Unassigned	0 Sele	ected	Add Device Tag	Actions \lor 0	D			Most recent operation		As of:	Nov 27, 2023 4:36 PM	Ø
Failed Provision			Device Name	IP Address	Device Family	Site	Reachabil	AP Provisioning	Credential Status	Associated WLC IP	Last Provisioned	Devic
 Non Compliant Outdated Software Image 		2	AP4C77.6D9E.615C	98.1.0.20	Unified AP	/BGL-18/BGL18-F1	React	able Success See Details	Not Applicable	11.1.21.10	2 minutes ago	ACCI
 No Golden Image Under Maintenance 		2	AP005D.7319.0E4A	98.1.0.22	Unified AP	/BGL-18/BGL18-F1	Reach	able Success See Details	Not Applicable	11.1.21.10	2 minutes ago	ACCI
Security Advisories Marked for Replacement		2	AP780C.F0D2.C0E8	98.1.0.23	Unified AP	/BGL-18/BGL18-F1	React	able Success See Details	Not Applicable	11.1.21.10	2 minutes ago	ACCI
System Beacon Enabled		9	BGL18-AP-c3700-1	98.1.0.24	Unified AP	/BGL-18/BGL18-F1	React	able Success See Details	Not Applicable	11.1.21.10	2 minutes ago	ACCI
		2	APC4B9.CDF4.0A70	98.1.0.26	Unified AP	/BGL-18/BGL18-F1	React	able Success See Details	Not Applicable	11.1.21.10	2 minutes ago	ACCI
		2	APD4E8.8019.5094	98.1.0.27	Unified AP	/BGL-18/BGL18-F1	Reach	able Success See Details	Not Applicable	11.1.21.10	2 minutes ago	ACCI

Figure 45 APs successfully provisioned

E Cisco DNA Center									
Welcome to Cisco DNA Center com	mand runner.								
You can access this window from anywhere using the key combination Q+T. You can access recently viewed devices using the key combination Q+D.									
Note: You can enter "man" anytime to get the list of currently supported commands and shortcuts.									
DC1-WLC1-1.cisco.com> show ap to Number of APs: 6	ag sum								
AP Name	AP Mac	Site Tag Name	Policy Tag Name	RF Tag Name	Misconfigured	Tag Source			
AP780C.F0D2.C0E8 AP4C77.609E.615C AP4C77.609E.615C AP0C95.7139.08AA APC488.019.5094 BGL18-AP-C3700-1 BGL18-AP-C3700-1 DC1-VLC1-1.cisco.com>	780c.f0d2.c0e8 4c77.6d9e.615c 005d.7319.0e4a c4b9.cdf4.0a70 d4e8.8019.5094 f44e.058c.f070	APG1-1_ST APG1-1_ST APG1-1_ST APG1-1_ST APG1-1_ST APG1-1_ST APG1-1_ST	PT_BLR-C_BGL-1_BGL18-F1_35585 ArGi-1_FT1 ArGi-1_FT2 ArGi-1_FT2 PT_BLR-C_BGL-1_BGL18-F1_35585 ArGi-1_FT1	TYPICAL HIGH LOW TVPICAL HIGH	NO NO NO NO NO	Static Static Static Static Static Static			

Figure 46 Controller output capturing the custom site tag/policy tag provisioned

7. As config Access point workflow was used to override the primary WLC of the APs, we may need to revert back by using the workflow again to let it use site inherited parameters.

■ Cisco DNA Center	Configure Access Points
Configure AP Parameters	
Select parameters to configure. These parameters will be applied to all the selected APs.	
Admin Status	AP Failover Priority
Enable Disable	Select AP Failover Priority
AP Mode ①	
Select AP Mode	Select Primary Controller Name
AP Location ()	Select Secondary Controller Name
Enter Location Max length: 255	Select Tertiary Controller Name Clear
AP LED Status Enable Disable	Primary Controller IP Address
C LED Brightness Level 🛈	Secondary Controller IP Address
Select Brightness Level 4	Tertiary Controller IP Address

Figure 47 Config AP workflow to revert the WLC HA parameters

 Repeat the above steps for other floors sequentially. For the last floor that's being migrated while provisioning the AireOS controller to not manage that floor, you may need have some dummy floor managed by the AireOS controller as at least one floor has to be managed for the provisioning to succeed.

6. Technical References

- <u>AireOS to Catalyst 9800 migration device side best practices</u>
- Inter Release Controller Mobility release support matrix
- <u>Configuration model for Cisco Catalyst 9800 wireless controller</u>
- <u>AP image download WLAN poller tool</u>
- WLC config converter tool for AireOS to Catalyst 9800 cli