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#CiscoLiveAPJC



Automate the deployment of a wireless network with the help of Cisco Catalyst Center

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BRKOPS-2402

Cisco Webex App

Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until November 15, 2024.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKOPS-2402>



Wireless

Guest SSID

AAA

Policy Tag

SWIM

RF Tag

802.1x

Enterprise SSID

AP Join Profile

Policy Profile

MU-MIMO WLAN Profile

Wi-Fi 6E

Fastlane

OFDMA

Site Tag

Flex Profile

Ekahau

Clean Air

RF Profile

Radio Resource Management

Catalyst 9800

Hamina

Plug and Play

Cisco Catalyst Center

Agenda

- Define Network Intent for Wireless
- Onboarding of Infrastructure
- Deployment Modes
- Software Image Management (SWIM)
- Day-N Operations

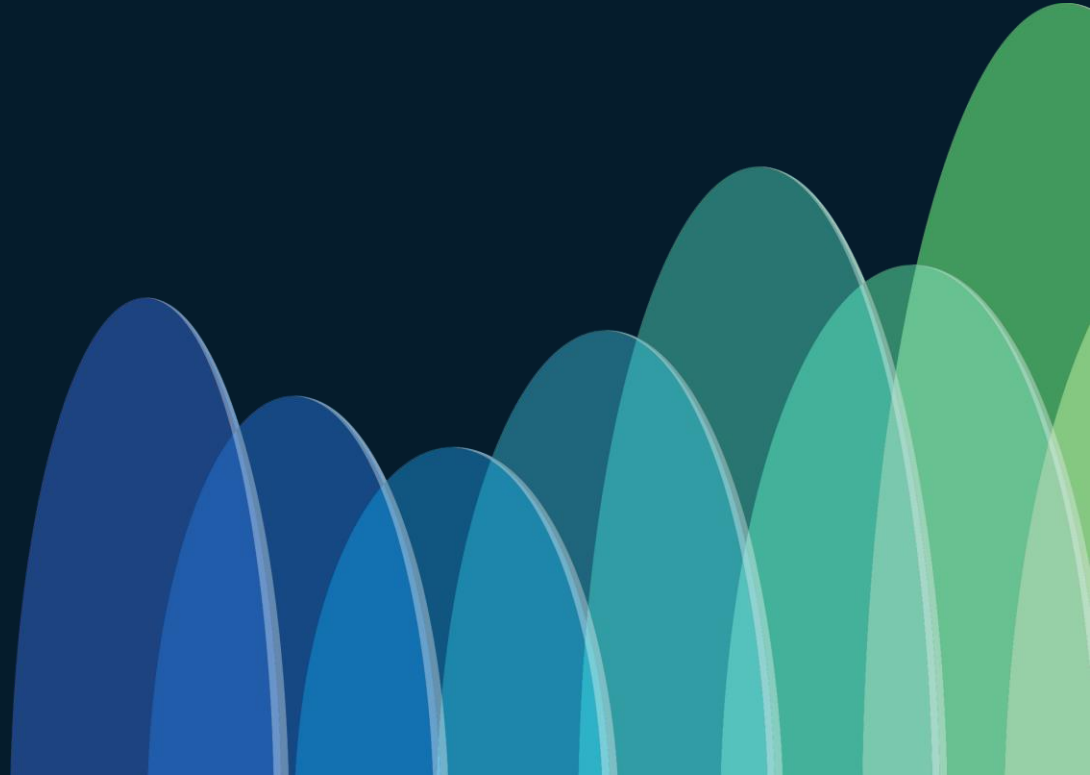
Martyn Rees

Customer Success Specialist

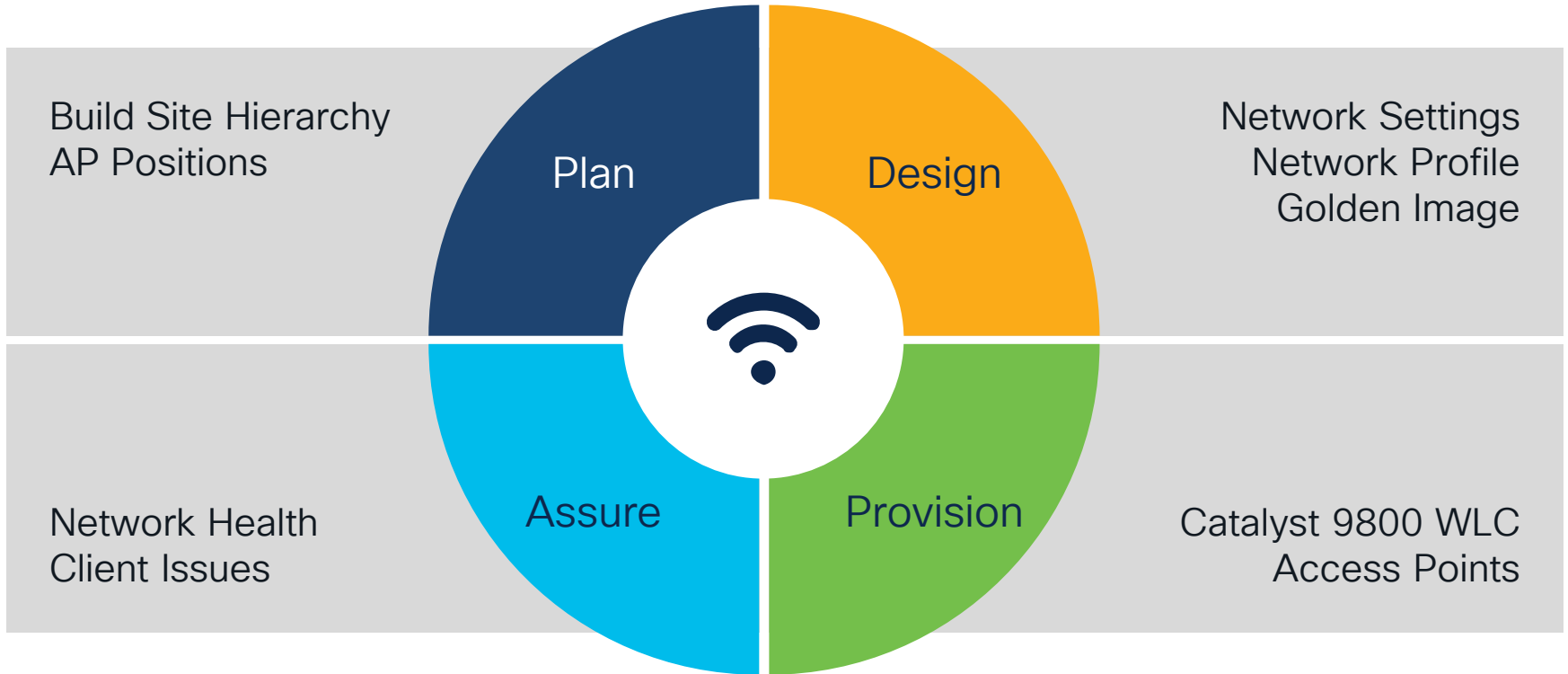
Joined Cisco in 2021



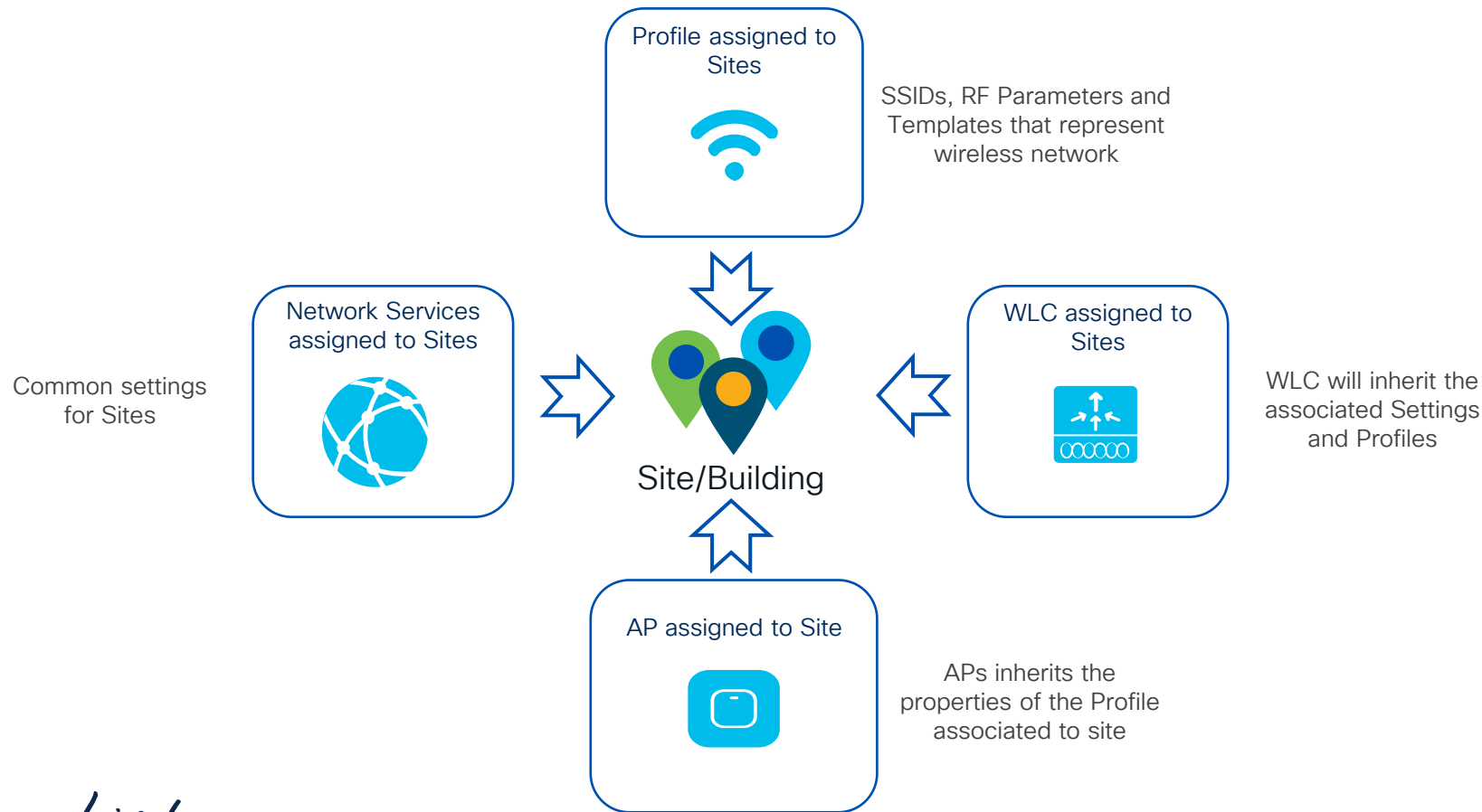
Network Intent for Wireless



Wireless Deployment Workflow

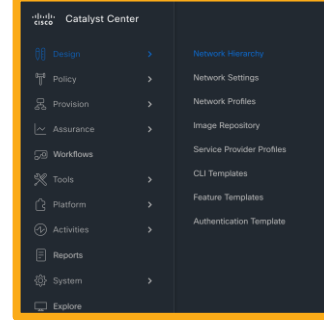
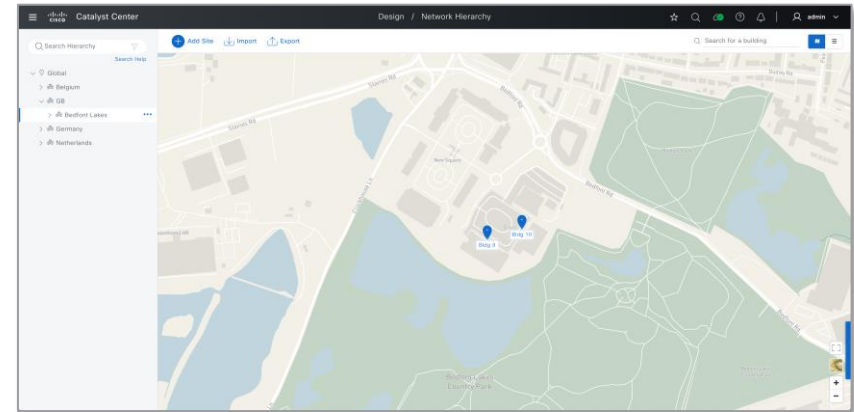


Wireless Deployment Workflow



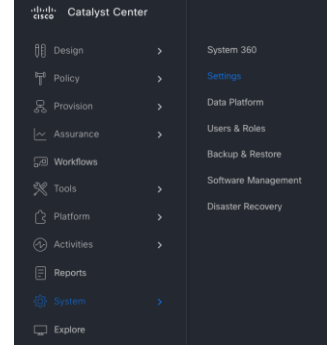
Hierarchy creation: Sites and Maps

- Area – (Area) ... – Building – Floor
- Buildings need an address or Lat/Lon coordinates
 - Use the mapbox integration to auto-complete addresses
- Migration Options:
 - Manual Import
 - Sites
 - Export Network Device Groups from PI (APIC-EM Format)
 - Fix missing Lat / Lon and addresses in CSV
 - Floorplans
 - Export Wireless Maps from PI
 - Use Map Import in Catalyst Center
 - PI Migration with Catalyst Center coexistence tool in PI
 - Ekahau Import



ISE Integration

- Don't configure ISE as AAA server type!
- Automatically learn all nodes in ISE Cluster
 - All PSN nodes are automatically populated in to AAA Network & Client Endpoint drop down lists.
- Ability to configure VIP for PSN's behind load balancers



System / Settings

Settings / External Services

Authentication and Policy Servers

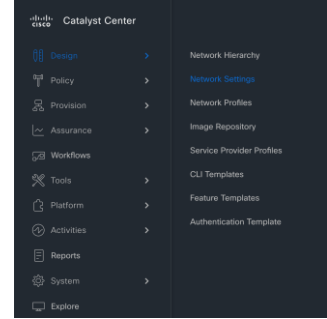
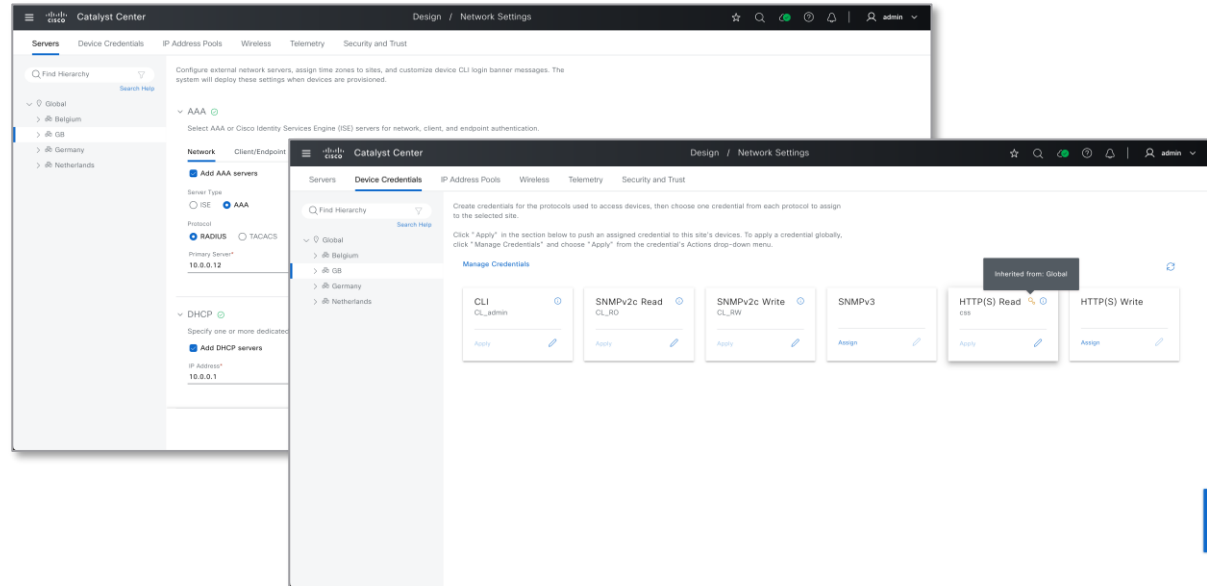
Use this form to specify the servers that authenticate Catalyst Center users. Cisco Identity Services Engine (ISE) servers can also supply policy and user information.

[Add](#) [Export](#)

IP Address	Protocol	Type	Status
192.168.10.252	RADIUS	AAA	ACTIVE
10.66.78.198	RADIUS_TACACS	ISE	ACTIVE

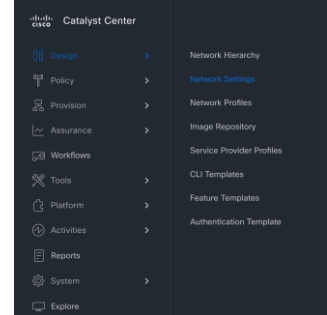
Network Settings

- Network:
 - AAA, DHCP, DNS, NTP and Time zone
- Device Credentials
 - CLI, SNMP, HTTP(S)
 - Netconf – Mandatory



Network Settings – Time Zone

- Scheduling
 - Upgrades & provisioning based on site time
 - Maintenance windows
- AI-RRM Busy Hours



Time Zone

Select the time zone that corresponds to the site's physical location. The site time zone is used when scheduling device provisioning and updates.

GMT 

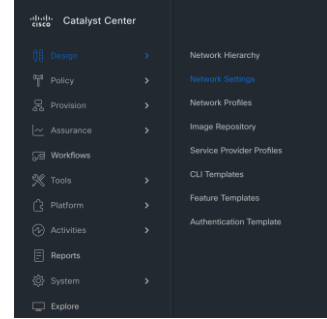
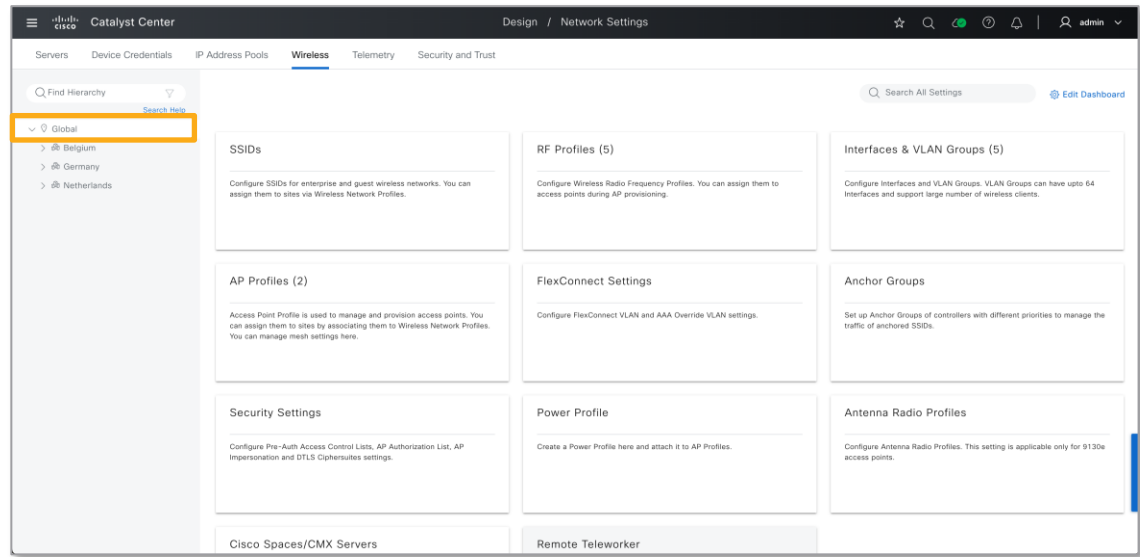
Time Zone

Select the time zone that corresponds to the site's physical location. The site time zone is used when scheduling device provisioning and updates.

Australia/Sydney 

Network Settings: Wireless

- SSIDs
- RF Profiles
- Interfaces & VLAN Groups
- AP Profiles
- FlexConnect Settings
- Anchor Groups
- Security Settings
- Power Profile
- Antenna Radio Profiles
- Cisco Spaces/CMX
- Remote Teleworker



Feature Templates (aka Model Config)

- AAA Radius Attributes
- Advances SSID
- CleanAir
- 802.11ax (Wi-Fi 6)
- Event Driven RRM
- Flex
- Global IPv6
- Multicast
- RRM FRA
- RRM General
- Rogue General

The image displays two configuration windows from the Cisco Catalyst Center interface.

Left Window: Add CleanAir Configuration

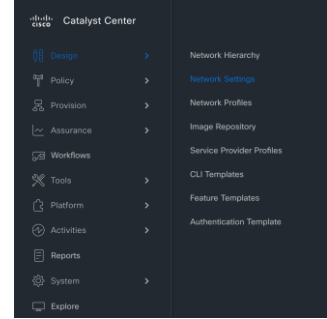
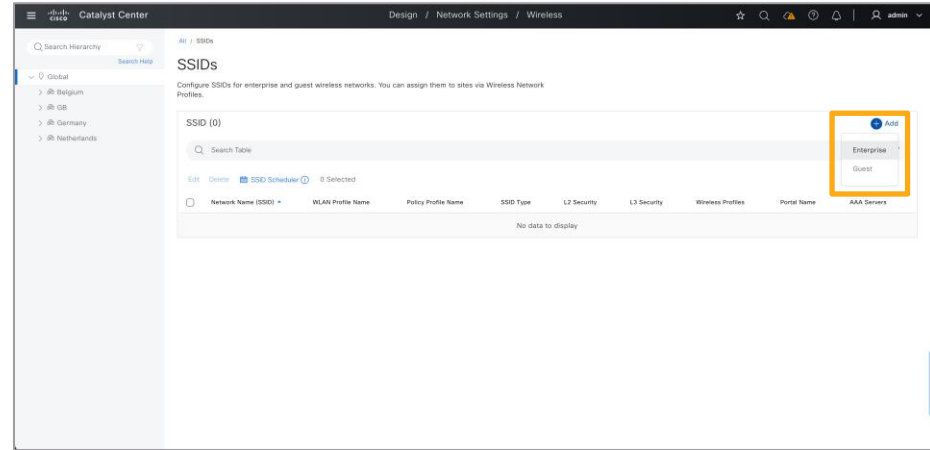
- Title: Add CleanAir Configuration
- Description: This capability is used for configuring CleanAir parameters on Device
- Design Name*: CleanAir 2.4 GHz
- Radio Band*: 2.4 GHz
- Lock all (icon)
- CleanAir Enable (checked)
- CleanAir Device Reporting Enable (checked)
- Persistent Device Propagation (checked)
- Enable Interferers Features
 - ☐ BLE Beacon
 - ☐ Bluetooth Paging Inquiry
 - ☐ Bluetooth SCO ACL
 - ☒ Continuous Transmitter
 - ☒ Generic DECT
 - ☒ Generic TDD
 - ☒ Jammer
 - ☒ Microwave Oven
 - ☒ Motorola Canopy
 - ☒ SI FHSS
 - ☒ Spectrum 802.11 FH
 - ☒ Spectrum 802.11 Non STD Channel

Right Window: Add Advanced SSID Configuration

- Title: Add Advanced SSID Configuration
- Description: This capability is used for configuring the advanced SSID parameters on the device
- Design Name*: Warehouse
- Lock all (icon)
- Tabs: General (selected), Client Data Rates, SSID Data Rates, 802.11ax Configuration, More
- Peer to Peer Blocking: DISABLE
- Passive Client Enable (checked)
- Assisted Roaming Prediction Optimization (disabled)
- Neighbor List Dual Band (disabled)
- Network Admission Control(NAC-SNMP) (disabled)
- Network Admission Control(NAC-Radius) (disabled)
- DHCP Required: YES
- DHCP Server - IP Address (empty)
- FlexConnect Local Authentication (disabled)
- Buttons: Cancel, Save

SSID creation

- Enterprise or Guest
- Settings following Best Practice
- Advanced Settings:
 - Fast Transition (802.11r)
 - 11v BSS Transition
 - MFP
 - Neighbor List (802.11k)
 - Set the Session Timeout to 86400s



SSID creation

Catalyst Center Wireless SSID

Basic Settings

Fill the information like name, wireless options, state and network to complete the basic settings.

Except L2 Security, AAA Configuration, MAC Filtering, NAS-ID and Client Rate Limit, all other settings are inherited from the selected template.

Wireless Network Name (SSID)
Cisco_Ent

WLAN Profile Name*
Cisco_Ent_profile

Policy Profile Name
Cisco_Ent_profile

Radio Policy

☐ 2.4GHz ☒ 5GHz ☒ 6GHz

802.11b/g Policy ☐ Band Select ☐ 6 GHz Client Steering

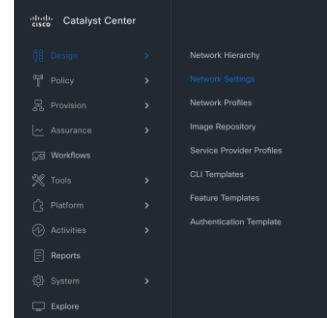
Quality of Service(QoS)

Egress: VoIP (Platinum) Ingress: VoIP (Platinum) Up

SSID STATE

☒ Admin Status ☒ Broadcast SSID

[Exit](#) [Next](#)



SSID creation

Configure AAA Server for Cisco_Ent

⚠ Catalyst 9800 Controllers versions less than 17.9 support only upto 8 Accounting Method list configuration. Configuring more than that will result in provisioning failure.

Configure Authentication and Authorization Servers

Server: 10.0.0.12

[Copy same Servers for Accounting](#)

Configure Accounting Server

Server: 10.0.0.12

Cancel Configure

Catalyst Center	
Design	Network Hierarchy
Policy	Network Settings
Provision	Network Profiles
Assurance	Image Repository
Workflows	Service Provider Profiles
Tools	CU Templates
Platform	Feature Templates
Activities	Authentication Template
Reports	
System	
Explore	

SSID creation

The image displays three overlapping screenshots of the Cisco Catalyst Center interface, specifically the 'Wireless SSID' configuration page. The top screenshot shows the 'Basic Settings' tab. The middle screenshot shows the 'Security' tab. The bottom screenshot shows the 'Advanced Settings' tab, which is the primary focus. The 'Advanced Settings' tab includes sections for Fast Transition (802.11r), MFP Client Protection, Protected Management Frame (802.11w), WPA3 Encryption, Auth Key Management, 11k, and Session Timeout. The 'Session Timeout' field is highlighted with an orange box, showing a value of 86400 seconds.

Advanced Settings
Configure the advanced fields to complete SSID setup.

SSID Name: Cisco_Ent (Enterprise)

Fast Transition (802.11r)
☒ Adaptive ☐ Enable ☐ Disable
☐ Over the DS

MFP Client Protection
☒ Optional ☐ Required ☐ Disabled

Protected Management Frame (802.11w)
☐ Optional ☒ Required ☐ Disabled

WPA3 Encryption
☒ AES(CCMP128) ☐ GCMP128 ☐ CCMP256 ☐ GCMP256

Auth Key Management
☒ 802.1x (802.1X-SHA1)
☒ 802.1x-SHA256 (802.1X-SHA2)

11k
☒ Neighbor List

Session Timeout
☒ In (secs)* 86400

Client Exclusion
☒ In (secs)* 180

Buttons: Back, Next

SSID creation

The image displays a sequence of overlapping screenshots from the Cisco Catalyst Center interface, illustrating the steps for creating a Wireless SSID. The top-most screenshot shows the 'Associate Model Config to SSID' page, where the 'Enterprise' design instance is selected. Below it, other screenshots show the 'Basic SSID' and 'Security' configuration steps. On the right, a sidebar menu lists various configuration options like Design, Policy, Provision, Assurance, Workflows, Tools, Platform, Activities, Reports, System, and Explore.

Wireless SSID Configuration Steps:

- Associate Model Config to SSID:** Select a design instance from the table or add new design instance to associate the Model Config to SSID. The 'Enterprise' design instance is selected.
- Basic SSID:** Fill the information for the SSID.
- Security:** Configure the security settings for the SSID.

Design Instances Table:

Design Name
☐ Default Advanced SSID Design
☒ Enterprise

Wireless SSID Configuration Options:

- SSID Name: [Enter SSID Name]
- Level of Service: [Enterprise]
- Radio Policy: [2.4GHz]
- Quality of Service: [Most secure]
- Authentication: [AAA]
- SSID Security: [WPA3]
- Auth Key: [802.1X]
- 11k: [Neighborhood]
- Session: [Session]

Design Instances Table:

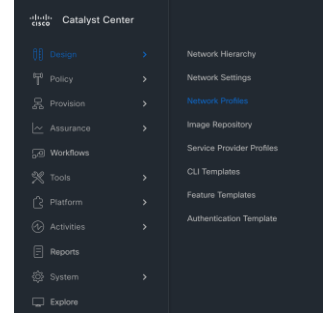
Design Name
☐ Default Advanced SSID Design
☒ Enterprise

Wireless SSID Configuration Options:

- SSID Name: [Enter SSID Name]
- Level of Service: [Enterprise]
- Radio Policy: [2.4GHz]
- Quality of Service: [Most secure]
- Authentication: [AAA]
- SSID Security: [WPA3]
- Auth Key: [802.1X]
- 11k: [Neighborhood]
- Session: [Session]

Wireless Network Profile

- Combine SSID with Site Specific Settings
- AP Zones
- Model Configs
 - Feature Templates
- CLI Templates
- Advances Settings
 - Provision Group
 - Custom Site and Policy Tags
 - Additional Interfaces

A screenshot of the 'Edit Network Profile' form in Cisco Catalyst Center. The form is titled 'Edit Network Profile' and is located under the 'Design / Network Profiles / Wireless' path. It includes a list of tasks to complete before creating a Wireless Network Profile: 1. Define SSIDs, Interface, RF Profiles and AP Profiles under Network Settings > Wireless; 2. Define Templates under CLI Templates (Optional); 3. Define Model Configs under Model Config Editor (Optional). A note states: 'Changes in SSIDs, AP Zones, Model Config, Template sections require Controller provisioning. Changes in Custom Tags/Groups require Access Point provisioning.' The form has a 'Profile Name' field set to 'Cisco_Ent' and a 'Site' dropdown set to '7 sites'. Below this, there are tabs for 'SSIDs', 'AP Zones', 'Model Configs', 'Templates', and 'Advanced Settings'. The 'SSIDs' tab is active, showing a form with fields for 'SSID' (set to 'Cisco_Ent'), 'WLAN Profile Name' (set to 'Cisco_Ent_profile'), and 'Policy Profile Name' (set to 'Cisco_Ent_profile'). There are also radio buttons for 'Fabric' (set to 'No') and a checkbox for 'Enable SSID Scheduler'. Under the 'TRAFFIC SWITCHING' section, there are radio buttons for 'Interface' (selected) and 'VLAN Group', and a dropdown for 'Interface Name' set to 'Clients'. At the bottom, there is a question 'Do you need Anchor for this SSID?' with radio buttons for 'Yes' and 'No'.

Wireless Network Profile

Catalyst Center Design / Network Profiles / Wireless

Network Profiles / Wireless

Edit Network Profile

Following tasks must be completed before creating a Wireless Network Profile.

1. Define SSIDs, Interface, RF Profiles and AP Profiles under [Network Settings > Wireless](#)
2. Define Templates under [CLI Templates](#) (Optional)
3. Define Model Configs under [Model Config Editor](#) (Optional)

Note: Changes in SSIDs, AP Zones, Model Config, Template sections require Controller provisioning. Changes in Custom Tags/Groups require Access Point provisioning.

Profile Name: **Office**

Site: **16 sites**

SSIDs AP Zones Model Configs Templates Advanced Settings

SSID: **Cisco_Ent**

WLAN Profile Name: **Cisco_Ent_profile** Policy Profile Name: **Cisco_Ent_profile**

Fabric: ☐ Yes ☒ No

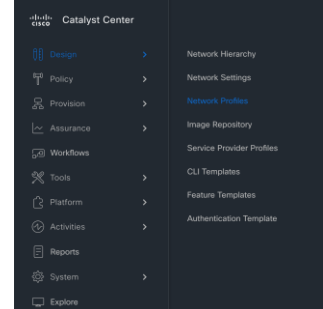
☐ Enable SSID Scheduler

TRAFFIC SWITCHING: ☒ Interface ☐ VLAN Group

Interface Name*: **Clients**

Do you need Assistance for this SSID? ☐ Yes ☒ No

Cancel Save



Wireless Network Profile

Edit Network Profile

Following tasks must be completed before creating a Wireless Network Profile.

1. Define SSIDs, Interface, RF Profiles and AP Profiles under [Network Settings > Wireless](#)
2. Define Templates under [CLI Templates](#) (Optional)
3. Define Model Configs under [Model Config Editor](#) (Optional)

Note: Changes in SSIDs, AP Zones, Model Config, Template sections require Controller provisioning. Changes in Custom Tags/Groups require Access Point provisioning.

Profile Name: **Office**

Site: [16 sites](#)

SSIDs **AP Zones** Model Configs Templates Advanced Settings

AP Zone will allow you to apply different SSID and RF Profile for set of APs on the same site. Device Tags can be used to identify APs where you want to apply AP Zone. These configurations will be applied to APs only during AP provisioning.

If custom AP Zone is not configured during AP provisioning, then "default-zone" will be used to configure all SSID(s) assigned to the network profile and user will need to select an RF Profile. AP zones will not be applicable to AP in Plug and Play workflow.

AP Zone Name
Office

Device Tags
Device Tags

RF Profile*
TYPICAL

SSID*
Corporate (Non Flex)

Cancel Save

Wireless Network Profile

Catalyst Center Design / Network Profiles / Wireless

Edit Network Profile

Following tasks must be completed before creating a Wireless Network Profile.

1. Define SSIDs, Interface, RF Profiles and AP Profiles under [Network Settings > Wireless](#)
2. Define Templates under [CLI Templates](#) (Optional)
3. Define Model Configs under [Model Config Editor](#) (Optional)

Note: Changes in SSIDs, AP Zones, Model Config, Template sections require Controller provisioning. Changes in Custom Tags/Groups require Access Point provisioning.

Profile Name: **Office**

Site: **16 sites**

SSIDs AP Zones

SSID: **Cisco_Ent**

WLAN Profile Name: **Cisco_Ent_profile**

Fabric: ☐ Yes ☒ No

Enable SSID: ☐

TRAFFIC SWITCHING: ☒ Interface ☐

Do you need Advanced Provisioning? ☐ Yes ☒ No

Attach Model Configs

Advanced SSID Configuration
Enterprise

SSIDs

CleanAir Configuration
CleanAir 2.4 GHz

[Add Model Config](#)

[Capabilities](#) [Tags](#)

[Cancel](#) [Save](#)

Catalyst Center

- Design > Network Hierarchy
- Policy > Network Settings
- Provision > Network Profiles
- Assurance > Image Repository
- Workflows > Service Provider Profiles
- Tools > CLI Templates
- Platform > Feature Templates
- Activities > Authentication Template
- Reports
- System
- Explore

Wireless Network Profile

Edit Network Profile

Following tasks must be completed:

1. Define SSIDs, Interface,
2. Define Templates under
3. Define Model Configs under

Note: Changes in SSIDs, AP Profile Name: **Office**

Site: **16 sites**

SSIDs **AP Zones**

SSID: **Cisco_Ent**

WLAN Profile Name: **Cisco_Ent_profile**

Fabric: ☐ Yes ☒ No

Enable SSID: ☐

TRAFFIC SWITCHING: ☒ Interface ☐ VLAN

Do you need Advanced Features? ☐ Yes ☒ No

Advanced Settings

This section is used to define custom names for AP Groups and Flex Groups (applicable to AireOS controller), Site Tags and Policy Tags (applicable to C9800 controller), in order to avoid auto-generated Groups/Tags by Catalyst Center.

Please note that Flex Group section would be available only when network profile has one or more flex ssids associated.

> AP Groups and AP Profiles

> Site Tags and AP Profiles(1)

Default AP Profile (default-ap-profile) will be applied to all Catalyst Center generated Site Tags.

Custom Site Tags (1)

Create Custom Site Tag

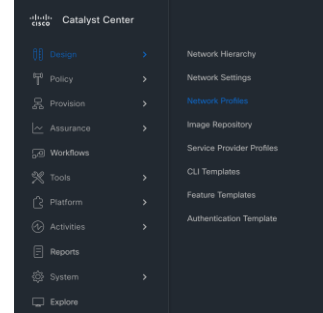
Search Table

0 Selected Edit Delete Import Export

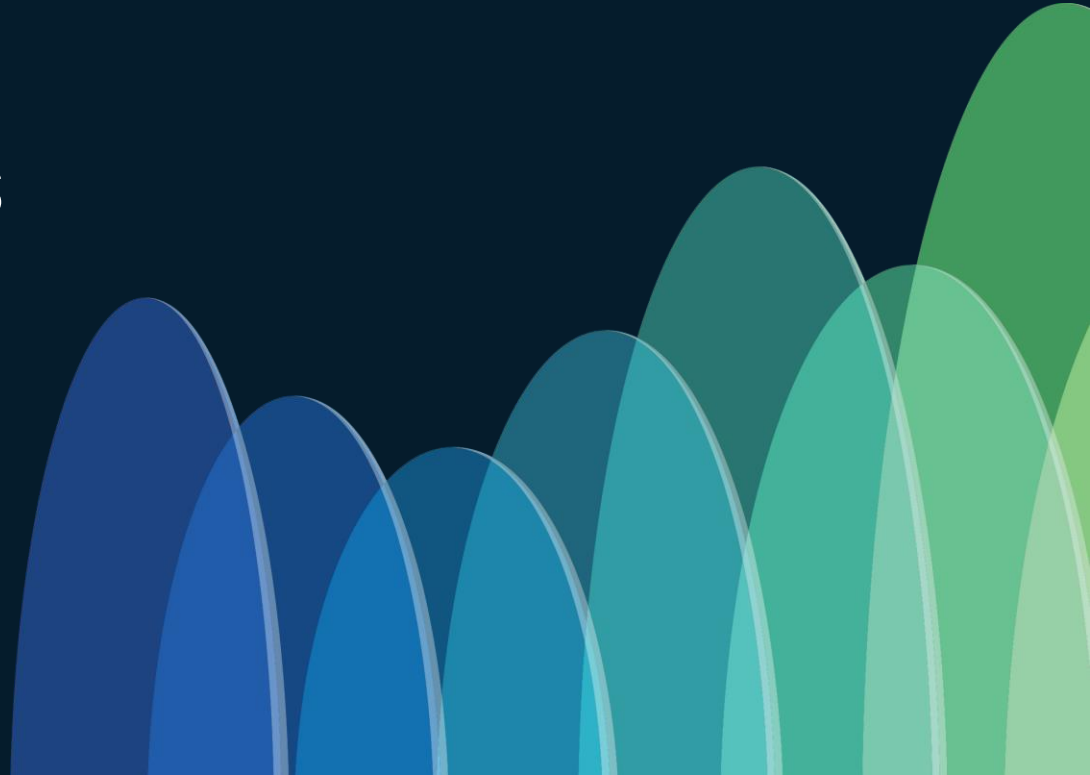
Site Tags	AP Profile	Flex Profile Name	Site
☐ Bedfont Lakes	☐ default-ap-profile	default-flex-profile	5

1 Record(s) Show Records: 25 1 - 1

Cancel Save



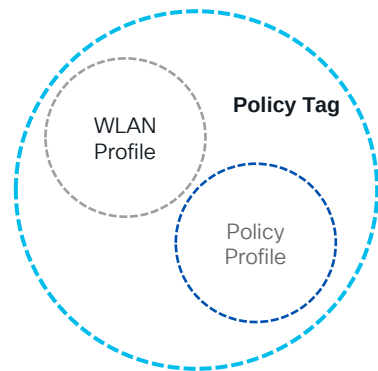
Wireless Profiles vs. Tags



Cisco Catalyst 9800 Config Model



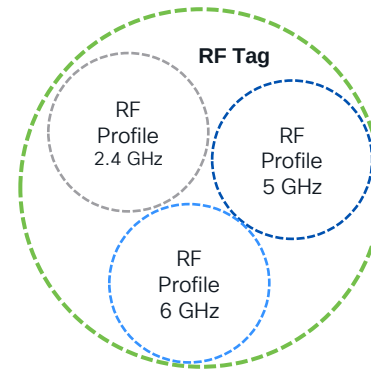
for reference



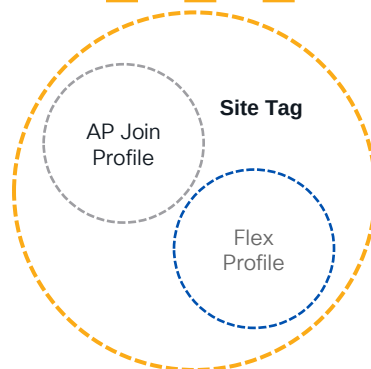
Defines the broadcast domain (list of WLANs to be broadcasted) with the properties of the respective SSIDs



Access Points



Defines the RF properties of the network

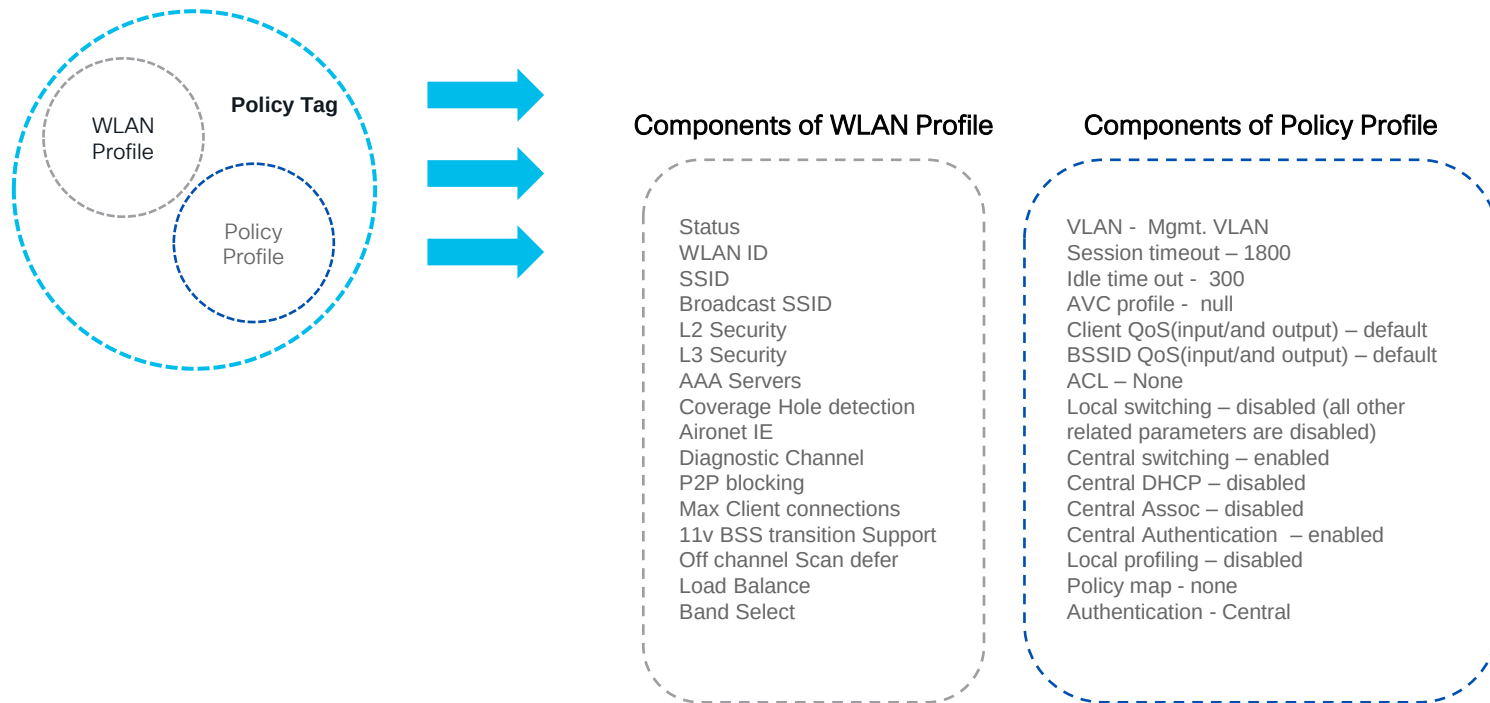


Defines the properties of the central and the remote site APs

Components of Policy Tag



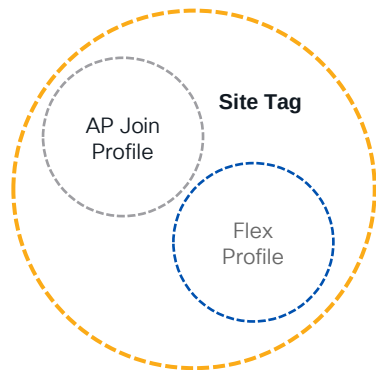
for reference



Components of Site Tag



for reference



AP Join Profile - defaults

LED state – Enable
Heartbeat timer– 30 secs
Primary discovery timer – 120 sec
Primed join timeout – 0 seconds
Discovery timeout - 10 secs
Fast heartbeat timer – 1 sec
Fast heartbeat – disabled
TCP/MSS - enabled (set to 1250)
Retransmit count – 5 secs
Retransmit interval – 15 secs
Dot1x authentication – disabled
UDP lite – disabled
Username/password – “current default”
Preferred mode – IPV4
11u venue group – unspecified
11u venue type – unspecified
Client QinQ – disabled
DHCP QinQ – disabled
Reset - Disable
Static nameserver/domain name – “current default”
Backup primary/secondary – “current default”
Core dump - “current default”
Syslog - “current default”
Hyperlocation – disable

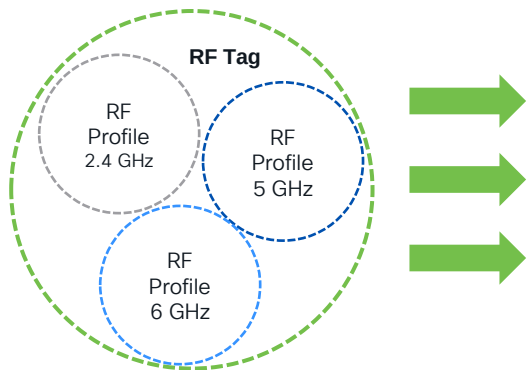
Components of Flex Profile

Native VLAN ID
HTTP Proxy Port
HTTP Proxy IP Address
Fallback Radio Shut
ARP Caching
Efficient Image Upgrade
Local Authentication
Local Auth Users
Policy ACL
VLAN Name and ID

Components of RF Tag



for reference



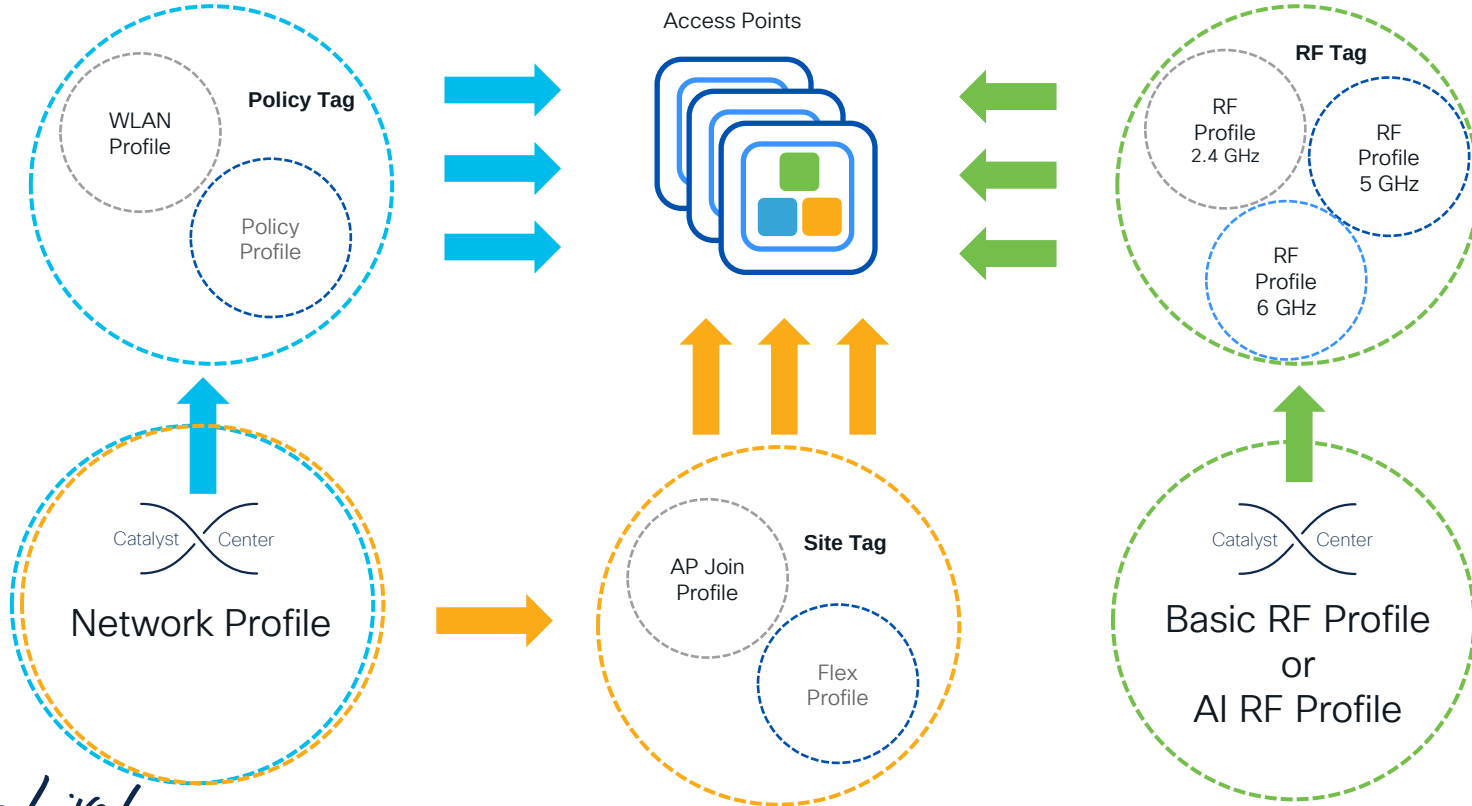
Components of RF Profile

- Data Rates
- MCS Settings
- Maximum and Minimum Power Level Assignment
- Power Threshold v1/v2
- DCA Channel Width
- DCA Foreign AP Interference Avoid Enable
- DCA Channel list
- Coverage Hole Detection Parameters (Data/Voice RSSI, Coverage Exception, Coverage Level)
- Profile Threshold for Traps (Interference/Clients/Noise/Utilization)
- Maximum Clients
- Multicast Data Rates
- Rx Sop Threshold
- Load Balancing (window & denial)
- Band Select Parameters (Applicable only for 802.11bg)

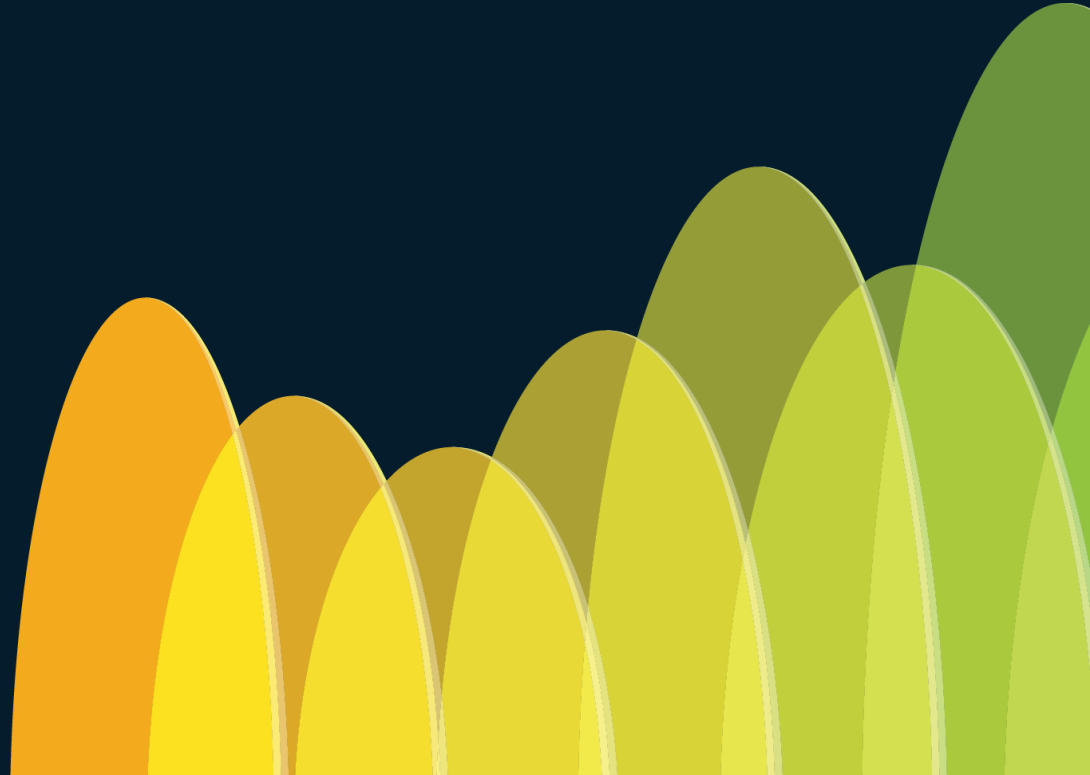
How Catalyst Center simplifies the Config Model



for reference



Planning and Deployment



Workflow

- Create Hierarchy in Catalyst Center
- Export Maps to Ekahau Project
- Plan in Ekahau, final names for APs (naming convention)
- Import back into Catalyst Center
- Add APs via PnP or other method

Create Floors in Catalyst Center and export

The image displays the Cisco Catalyst Center interface, specifically the 'Design / Network Hierarchy' view. The left sidebar shows a search hierarchy for buildings, including 'Global', 'Belgium', 'GB', 'Bedfont Lakes', 'Bldg 9', 'Bldg 10', 'Germany', and 'Netherlands'. The 'Export Floor Maps' option is highlighted in the 'Edit Building' context menu. The main map area shows a map of Europe with several buildings marked with blue dots. A dialog box titled 'Export Floor Maps' is open, showing the file name 'DNAC_Map_Archive_192.168.199.10' and the export format 'Ekahau Project'. The dialog also includes a confirmation message: 'Do you still want to continue with data export? Click Export to proceed. The file will be automatically downloaded once export is complete.' The 'Export' button is highlighted in blue.

Catalyst Center

Design / Network Hierarchy

Search Hierarchy

- Global
 - Belgium
 - GB
 - Bedfont Lakes
 - Bldg 9
 - Bldg 10
 - Germany
 - Netherlands

Edit Building

- Delete Building
- Add Floor
- Import Ekahau Project
- Import Ekahau Survey
- Sync Cisco Spaces/CMX Server
- Export Floor Maps**
- View Devices
- View Settings

Search for a building

Export Floor Maps

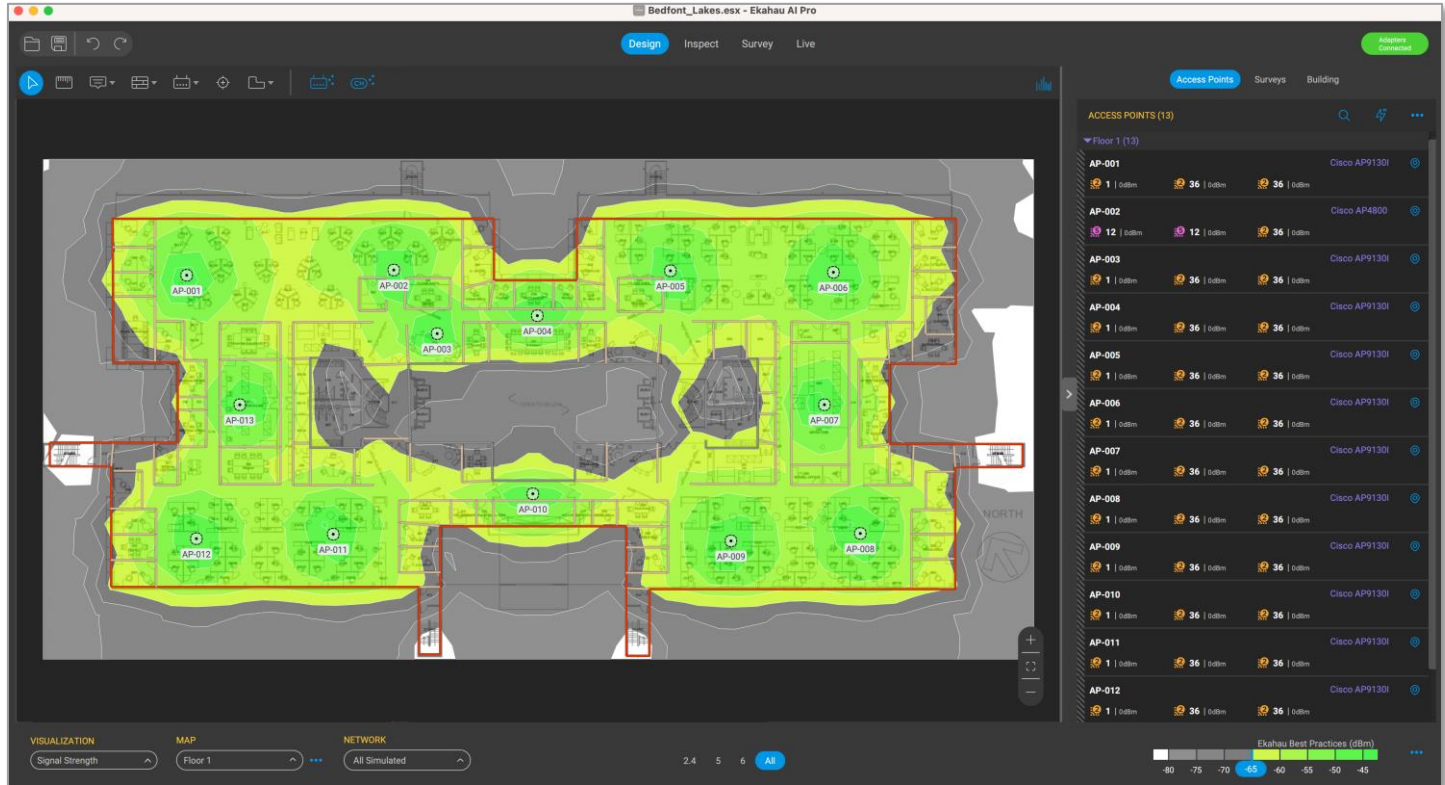
File to be saved to*
DNAC_Map_Archive_192.168.199.10

Export Format ☒ Ekahau Project ☐ Prime

Do you still want to continue with data export? Click **Export** to proceed. The file will be automatically downloaded once export is complete.

Cancel Export

Ekahau AI Pro



Import Ekahau Project into Catalyst Center

The screenshot displays the Cisco Catalyst Center web interface. The top navigation bar shows 'Design / Network Hierarchy'. On the left, a search hierarchy sidebar lists 'Global', 'Belgium', 'GB', 'Bedfont Lakes', 'Bldg 9', 'Bldg 10', 'Germany', and 'Netherlands'. The 'Bedfont Lakes' item is selected, and a context menu is open, highlighting the 'Import Ekahau Project' option. The main area shows a map of Europe with two blue location markers labeled '4' and '8'. The right sidebar contains a list of navigation links: Design, Policy, Provision, Assurance, Workflows, Tools, Platform, Activities, Reports, System, and Explore.

Import Ekahau Project into Catalyst Center

The screenshot displays the Cisco Catalyst Center interface, specifically the 'Design / Network Hierarchy' view. The top navigation bar includes the Cisco logo, the text 'Catalyst Center', and the path 'Design / Network Hierarchy'. A user profile 'admin' is visible in the top right corner. Below the navigation bar, there is a search bar and a sidebar on the left showing a hierarchical tree structure. The main area displays a floor plan diagram of a building, with various rooms and corridors. The diagram is labeled 'Bedfont Lakes / Bldg 9 / Floor 1' and 'Updated 50 seconds ago'. The floor plan shows several access points (APs) marked with circular icons and labeled with IDs: AP-001, AP-002, AP-003, AP-004, AP-005, AP-006, AP-007, AP-008, AP-009, AP-010, AP-011, and AP-012. Two specific APs, AP-001 and AP-002, are highlighted with orange circles. A north arrow is located in the bottom right corner of the floor plan. The interface also includes a top navigation menu with options like Design, Policy, Provision, Assurance, Workflows, Tools, Platform, and Activities.

Use Plug and Play to onboard APs

The screenshot displays the Cisco Catalyst Center interface for managing network devices. The main view is the 'Network Plug and Play Overview' for AP-0001 (10.0.10.4). The interface shows the device status as 'Provisioned (8)' and a list of devices with their details.

Device Status: All (10) | Unclaimed (0) | Error (0) | Provisioned (8)

Devices (2) Focus: All

#	Device Name	Serial Number	Product ID	Last Contact	State
1	AP-0001	FGL2649L5H6	CW9162I-E	Jan 24, 2024 6:00:30 PM	Onboarded
2	AP-0002	FGL2649L5MY	CW9162I-E	Jan 24, 2024 6:00:28 PM	Onboarded

AP-0001 (10.0.10.4)
Serial Number: FGL2649L5H6 | Site: Global/GB/Bedfont Lakes/B...or 1 | As of: a few seconds ago

Executing Workflow: Onboarding is in progress. [Refresh](#)

SUDI: Not Supported
Status: Day 0 Config Generated

Configuration

Template

Radio Frequency Profile
Radio Frequency Profile: TYPICAL

Day-0 Configuration preview

Generated	Jan 24, 2024 5:53:19 PM
RFTagName	*TYPICAL*
policyTagName	*PT_Bedfo_Bldg9_Floor1_f9c71*
primaryWlcIP	*10.0.0.6*
primaryWlcName	*C9800-CL*
siteTagName	*Bedfont Lakes*

Planned APs replaced automatically

The screenshot displays the Cisco Catalyst Center interface, specifically the Design / Network Hierarchy view. The main window shows a 2D floor plan of a building, with 13 Access Points (APs) labeled AP-001 through AP-013. The interface includes a sidebar on the left with a search hierarchy, a top navigation bar, and a main view area with a 2D/3D toggle and a 6 GHz frequency selector. The floor plan shows a complex layout with rooms and corridors, with APs distributed throughout. A north arrow is visible in the bottom right corner of the floor plan view.

On the left sidebar, under "DEVICE WORK ITEMS", there is a search hierarchy:

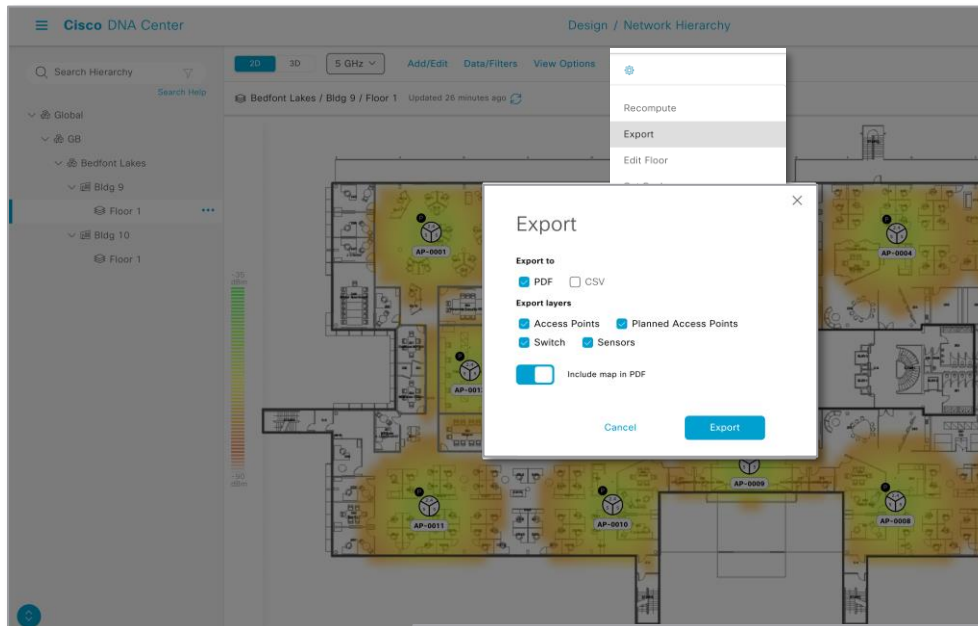
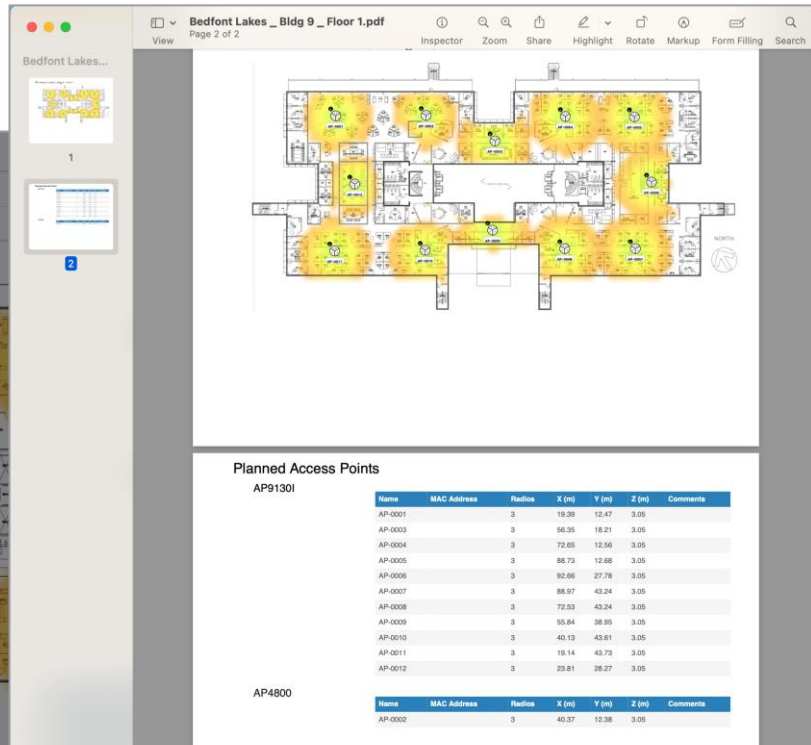
- Unreachable
- Unassigned
- Failed Provision
- Non Compliant
- Outdated Software
- No Golden Image
- Failed Image Provision
- Under Maintenance
- Security Advisories
- Marked for Retirement

The search hierarchy on the left shows the following structure:

- Global
 - Belgium
 - GB
 - Bedfont Lakes
 - Bldg 9
 - Floor 1

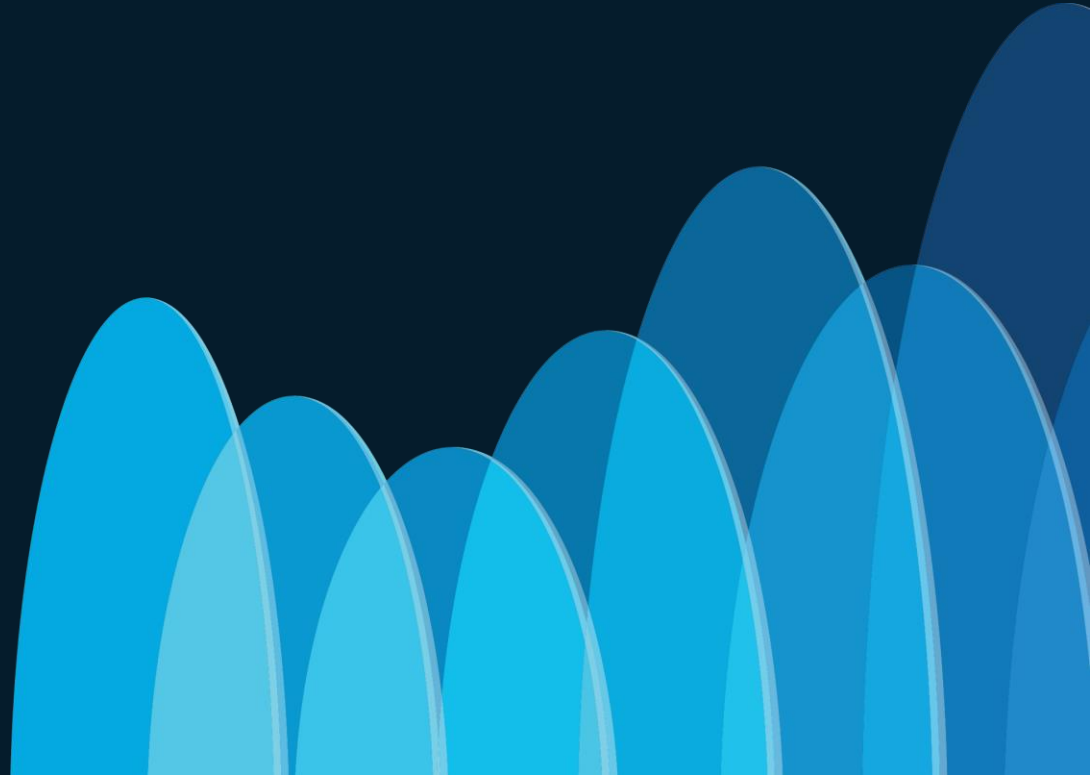
The main view area shows the floor plan with 13 APs. The APs are labeled AP-001 through AP-013. The interface also includes a top navigation bar with tabs for All, Routers, Switches, Wireless Controllers, Access Points, and Sensors. The top right corner shows the user's name "admin" and a search bar.

Create PDF for installers



- Map with AP Names
- List with AP Names, X, Y, Height

Catalyst 9800 Onboarding



Catalyst 9800 PnP

The screenshot shows the 'Network Plug and Play Overview' page in Cisco Catalyst Center. At the top, the breadcrumb navigation reads 'Provision / Network Devices / Plug and Play'. The page features a 'Device Status' filter bar with 'All (8)', 'Unclaimed (2)', 'Error (0)', and 'Provisioned (6)'. Below this, a 'Devices (2)' section shows a search bar and a table of two unclaimed devices. The table columns include #, Device Name, Serial Number, Product ID, Last Contact, State, Onboarding Progress, IP Address, MAC Address, Source, Site, and Created. Both devices are 'WLC' (Wireless LAN Controllers) with IP addresses 10.0.0.106 and 10.0.0.105. The first device is 'Device ready to be claimed' and the second is 'Initializing'.

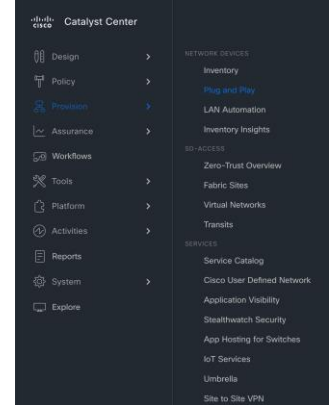
#	Device Name	Serial Number	Product ID	Last Contact	State	Onboarding Progress	IP Address	MAC Address	Source	Site	Created
1	WLC	9JZLR4NULN3	C9800-CL-K9	Jan 23, 2024 6:06:06 PM	Unclaimed	Device ready to be claimed.	10.0.0.106	-	Network	-	Jan 23, 2024 6:05:06 PM
2	WLC	96WNH8X8931	C9800-CL-K9	Jan 23, 2024 6:06:12 PM	Unclaimed	Initializing	10.0.0.105	-	Network	-	Jan 23, 2024 6:05:27 PM

The sidebar shows the 'Catalyst Center' navigation menu. The 'Network Devices' section is expanded, showing 'Inventory', 'Plug and Play', 'LAN Automation', and 'Inventory Insights'. The 'Services' section is also visible, listing various services like 'Service Catalog', 'Cisco User Defined Network', 'Application Visibility', 'Stealthwatch Security', 'App Hosting for Switches', 'IoT Services', 'Umbrella', and 'Site to Site VPN'.

Catalyst 9800 PnP

The screenshot displays the Cisco Catalyst Center interface for Network Plug and Play (PnP). The breadcrumb navigation is 'Provision / Network Devices / Plug and Play'. The page title is 'Network Plug and Play Overview'. On the left, there's a sidebar with 'Device Status' and 'Devices (2)'. The main content area shows a summary of device status: All (8), Unclaimed (2), Error (0), and Provisioned (6). Below this, there's a search bar and a table of 2 selected devices. A context menu is open for device 1, showing options: Claim, Edit, Reset, Delete, and Authorize.

#	Name	Serial Number	Product ID	Last Contact	State	Onboarding Progress	IP Address	MAC Address	Source	Site	Created
1		9JZLR4NULN3	C9800-CL-K9	Jan 23, 2024 6:06:06 PM	Unclaimed	Device is ready to be claimed.	10.0.0.106	-	Network	-	Jan 23, 2024 6:05:06 PM
2		96WNH8X8931	C9800-CL-K9	Jan 23, 2024 6:06:27 PM	Unclaimed	Device is ready to be claimed.	10.0.0.105	-	Network	-	Jan 23, 2024 6:05:27 PM



Catalyst 9800 PnP

The screenshots show the Cisco Catalyst Center interface for configuring Plug and Play (PnP) for Catalyst 9800 devices. The top screenshot shows the 'Network Plug and Play Overview' page. The middle screenshot shows the 'Assign Site' step in progress, with two devices selected. The bottom screenshot shows the 'Assign Site' step with a table of recommended sites. An orange box highlights the 'Site (Recommended)' column in the table.

Device Name	Serial Number	Product ID	Site (Recommended)	Actions
C9800-1	9JZLR4NULN3	C9800-CL-K9	Global/GB/Bedfont Lakes/Bldg 9	...
C9800-1-HA	96WNH8X8931	C9800-CL-K9	Global/GB/Bedfont Lakes/Bldg 9	...

The screenshot shows the Cisco Catalyst Center navigation menu. The menu is organized into several sections: Design, Policy, Provision, Assurance, Workflows, Tools, Platform, Activities, Reports, System, and Explore. Each section has a list of sub-items. The 'Provision' section is highlighted, showing sub-items like Inventory, Plug and Play, LAN Automation, and Inventory Insights. The 'Workflows' section is also highlighted, showing sub-items like Zero-Trust Overview, Fabric Sites, Virtual Networks, and Transits. The 'Reports' section is highlighted, showing sub-items like Service Catalog, Cisco User Defined Network, Application Visibility, Stealthwatch Security, App Hosting for Switches, IoT Services, and Umbrella. The 'System' section is highlighted, showing sub-items like Site to Site VPN.

Catalyst 9800 PnP

Assign Configuration

There are total of 2 devices missing required configuration. [Show devices.](#)

Devices (2) [Clear Configuration](#)

Device Name	Serial Number	Product ID	Assigned Site	Configuration	Actions
C9800-1	9JZLRANULN3	C9800-CL-K9	Global/GB/Bedfont Lakes/Bldg 9	Image: C9800-CL-universalk9...bin Template: Assign Catalyst WLC: Assign*	...
C9800-1-HA	96WNH8X8931	C9800-CL-K9	Global/GB/Bedfont Lakes/Bldg 9	Image: C9800-CL-universalk9...bin Template: Assign Catalyst WLC: Assign*	...

Showing 2 of 2

[Cancel](#) [Back](#) [Next](#)

Catalyst 9800 PnP cont.

Catalyst Center Provision / Network Devices / Plug and Play

Assign Site 2 Assign Configuration 3 Provision Templates 4 Summary

Assign Configuration

There are total of 2 devices missing required configuration. [Show devices.](#)

Devices (2)

Search Table

Device Name	Serial Number	Product ID	Assigned Site
C9800-1	9JZLR4NULN3	C9800-CL-K9	Global/GB/Bedfont
C9800-1-HA	96WNH8X8931	C9800-CL-K9	Global/GB/Bedfont

Configuration for device name: C9800-1

Serial Number	9JZLR4NULN3	Product ID	C9800-CL-K9
IP Address	10.0.0.106	Device Family	Wireless Controller
Assigned Site	Global/GB/Bedfont Lakes/B...	Device Series	Cisco Catalyst 9800 Wireless Controllers for Cloud
Device Name	Device Name C9800-1	Device Type	Cisco Catalyst 9800-CL Wireless Controller for Cloud

Catalyst Wireless LAN Controller Settings

Wireless Management IP*
10.0.0.6 IPv4

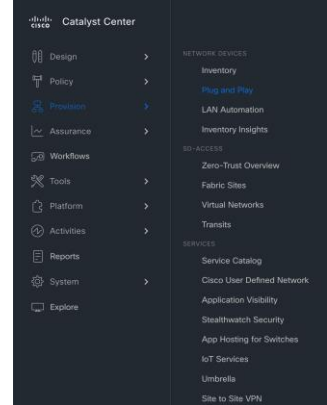
Subnet Mask*
255.255.255.0 IPv4

Gateway*
10.0.0.1 IPv4

IP Interface Name*
GigabitEthernet2

VLAN ID
1

Cancel Save



Catalyst 9800 PnP cont.

Configuration for device name: C9800-1

Serial Number: 9JZLR4NULN3, Product ID: C9800-CL-K9

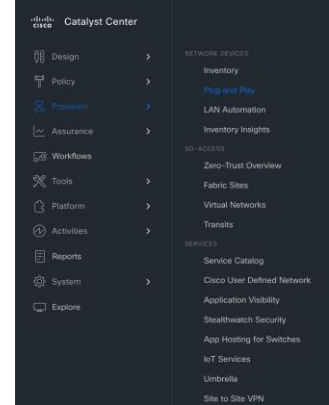
Assign Configuration

Devices (2)

Device Name	Serial Number	Product ID	Assigned Site	Configuration	Actions
C9800-1	9JZLR4NULN3	C9800-CL-K9	Global/GB/Bedfont Lakes/Bldg 9	Image: C9800-CL-universalk9...bin Template: Assign Catalyst WLC: Wireless Management IP: 10.0.0.6	...
C9800-1-HA	96WNH8X8931	C9800-CL-K9	Global/GB/Bedfont Lakes/Bldg 9	Image: C9800-CL-universalk9...bin Template: Assign Catalyst WLC: Wireless Management IP: 10.0.0.7	...

Showing 2 of 2

Cancel Back Next



Catalyst 9800 PnP cont.

The image displays three overlapping screenshots of the Cisco Catalyst Center interface, specifically the 'Plug and Play' workflow for provisioning network devices.

Top Screenshot: Shows the 'Assign Configuration' step. The configuration table for device name C9800-1 is visible:

Serial Number	Product ID
9JZLR4NULN3	C9800-CL-K9

Middle Screenshot: Shows the 'Assign Configuration' step. A red error message 'There are' is visible in the left sidebar under 'Devices (2)'. The 'Provision Templates' step is highlighted in the progress bar.

Bottom Screenshot: Shows the 'Provision Templates' step. A message box states: 'No action required on this step because no devices have been configured with a template. Click Next to proceed.' The 'Next' button is highlighted in blue.

The sidebar menu on the right side of the image lists various navigation options for the Cisco Catalyst Center interface:

- Design
- Policy
- Provision
- Assurance
- Workflows
- Tools
- Platform
- Activities
- Reports
- System
- Explore

Under the 'NETWORK DEVICES' section, the following options are listed:

- Inventory
- Plug and Play
- LAN Automation
- Inventory Insights

Under the 'SD-ACCESS' section, the following options are listed:

- Zero-Trust Overview
- Fabric Sites
- Virtual Networks
- Transits

Under the 'SERVICES' section, the following options are listed:

- Service Catalog
- Cisco User Defined Network
- Application Visibility
- Stealthwatch Security
- App Hosting for Switches
- IoT Services
- Umbrella
- Site to Site VPN

Catalyst 9800 PnP cont.

The screenshots illustrate the 'Plug and Play' process in Catalyst Center for provisioning Catalyst 9800 devices. The workflow consists of four main steps: Assign Site, Assign Configuration, Provision Templates, and Summary.

Assign Configuration Step: A configuration window for device name C9800-1 is shown, displaying the Serial Number 9JZLR4NULN3 and Product ID C9800-CL-K9.

Summary Step: The final Summary screen displays the configuration for two devices:

Device Name	Serial Number	Product ID	Assigned Site	Configuration	Device Configuration
C9800-1	9JZLR4NULN3	C9800-CL-K9	Global/GB/Bedfront Lakes/Bldg 9	Image: C9800-CL-universalk9...bin Template: No template has been selected. Wireless Management IP: 10.0.0.6 Subnet Mask: 255.255.255.0 Gateway: 10.0.0.1 IP Interface Name: GigabitEthernet2 VLAN ID: 1	Preview Configuration
C9800-1-HA	96WNH8X8931	C9800-CL-K9	Global/GB/Bedfront Lakes/Bldg 9	Image: C9800-CL-universalk9...bin Template: No template has been selected. Wireless Management IP: 10.0.0.7 Subnet Mask: 255.255.255.0 Gateway: 10.0.0.1	Preview Configuration

Showing 2 of 2

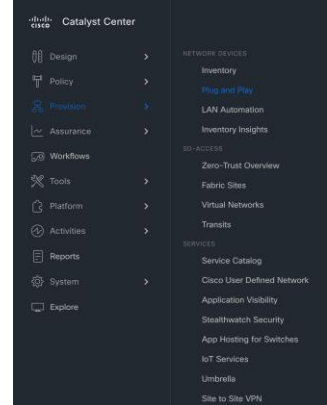
Buttons: Cancel, Back, Claim

Catalyst 9800 PnP cont.

The screenshot displays the Cisco Catalyst Center interface. The top navigation bar includes the Cisco logo, 'Catalyst Center', and tabs for 'Provision', 'Network Devices', and 'Plug and Play'. The main content area is divided into two panels. The left panel, titled 'Network Plug and Play Overview', shows a 'Device Status' summary with 8 All, 3 Unclaimed, 0 Error, and 6 Provisioned devices. Below this is a table of 'Devices (2)' with columns for #, Device Name, Serial Number, Product ID, and Last Contact. The right panel shows the details for device 'C9800-1 (10.0.0.202)', including its serial number, site, and a notification that it has been claimed. A 'History' tab is active, showing a list of events with columns for Status, Time, Details, and Work Item Details.

#	Device Name	Serial Number	Product ID	Last Contact
1	C9800-1	9JZLR4NULN3	C9800-CL-K9	Jan 21, 2024 4:16:47 PM
2	C9800-HA	96WNH8X8931	C9800-CL-K9	Jan 21, 2024 4:16:20 PM

Status	Time	Details	Work Item Details
●	Jan 21, 2024 4:16:54 PM	Claimed Device	-
●	Jan 21, 2024 3:43:31 PM	Task: System Task Completed	Info
●	Jan 21, 2024 3:43:09 PM	Executing System Workflow to Initialize Device	-
●	Jan 21, 2024 3:43:09 PM	Executing Task: System Task	-
●	Jan 21, 2024 3:42:54 PM	Secured Device	-
●	Jan 21, 2024 3:42:36 PM	Securing Device	-
●	Jan 21, 2024 3:42:36 PM	Network Device Created	-



Catalyst 9800 PnP cont.

The screenshot shows the Cisco Catalyst Center interface for Network Plug and Play. The main view is the 'Network Plug and Play Overview' for device C9800-1 (10.0.0.202). The interface displays a table of devices and a detailed view of the onboarding progress for device C9800-1, which is currently executing a workflow.

Device Status: All (6) | Unclaimed (0) | Error (0) | Provisioned (6)

Devices (2): Focus: Default

#	Device Name	Serial Number	Product ID	Last Contact
1	C9800-1	9JZLR4NULN3	C9800-CL-K9	Jan 23, 2024 6:22:15 PM
2	C9800-1-HA	96WNH8X8931	C9800-CL-K9	Jan 23, 2024 6:22:36 PM

Executing Workflow: Onboarding is in progress.

Status: Executing User Workflow (07:38)

Image File Transfer: 71%

Estimated time remaining: 02:54 (min)

Details:

Property	Value
Product ID	C9800-CL-K9
Device Type	Catalyst WLC
Image File	bootflash:packages.conf
Image Version	17.12.2
Source	Network
State	Onboarding
Onboarding Progress	Executing Workflow
Last Contact	Jan 23, 2024 6:22:15 PM
Last Updated	Jan 23, 2024 6:22:15 PM
First Contact	Jan 23, 2024 6:05:06 PM
Created	Jan 23, 2024 6:05:06 PM

The screenshot shows the Cisco Catalyst Center sidebar menu. The menu is organized into sections: Design, Policy, Provision, Assurance, Workflows, Tools, Platform, Activities, Reports, System, and Explore. The 'Provision' section is highlighted, showing options like Inventory, Plug and Play, LAN Automation, and Inventory Insights. The 'Workflows' section is also visible, showing options like Zero-Trust Overview, Fabric Sites, Virtual Networks, and Transits. The 'Reports' section shows options like Service Catalog, Cisco User Defined Network, Application Visibility, Stealthwatch Security, App Hosting for Switches, IoT Services, and Umbrella. The 'System' section shows options like Site to Site VPN.

Catalyst 9800 PnP cont.

The screenshots show the 'Network Plug and Play Overview' page in Cisco Catalyst Center. The top window shows a single device 'C9800-1 (10.0.0.202)' with serial number 9JZLR4NULN3. The middle window shows a search for 'C9800-CL-K9'. The bottom window shows a table of two devices, with the second device 'C9800-1-HA' highlighted in orange, showing a 'Provisioned' status.

#	Device Name	Serial Number	Product ID	Last Contact	State	Onboarding Progress	IP Address	MAC Address	Source	Site	Created
1	C9800-1	9JZLR4NULN3	C9800-CL-K9	Jan 23, 2024 6:34:11 PM	Onboarding	Executing Workflow	10.0.0.109	-	Network	Global/GB/Bedfont Lakes/Bldg 9	Jan 23, 2024
2	C9800-1-HA	96WNH8X8931	C9800-CL-K9	Jan 23, 2024 6:34:24 PM	Provisioned	Provisioned	10.0.0.7	-	Network	Global/GB/Bedfont Lakes/Bldg 9	Jan 23, 2024

Catalyst 9800 PnP cont.

The screenshots show the Cisco Catalyst Center interface for Network Plug and Play (PnP) management. The top two windows show individual device details for C9800-1. The bottom window shows a list of devices under the search 'C9800-CL-K9'.

Device Name	Serial Number	Product ID	Last Contact	State	Onboarding Progress	IP Address	MAC Address	Source	Site	Created
C9800-1	9JZLR4NULN3	C9800-CL-K9	Jan 23, 2024 6:35:20 PM	Provisioned	Provisioned	10.0.0.6	-	Network	Global/GB/Bedfont Lakes/Bldg 9	Jan 23, 2024 6:00
C9800-1-HA	96WNH8X8931	C9800-CL-K9	Jan 23, 2024 6:34:24 PM	Provisioned	Provisioned	10.0.0.7	-	Network	Global/GB/Bedfont Lakes/Bldg 9	Jan 23, 2024 6:00

Prepare Catalyst 9800 for discovery without PnP

- Basic Config required (Day-0)
 - Hostname
 - Admin user / enable secret
 - SNMP / SSH / **netconf-yang**
 - Interface config
 - Wireless management interface (Trustpoint for C9800-CL)
 - Wireless country code
 - Reload device

Using the Day-0 flow on C9800 optionally creates SSID and AAA config, which should be removed before discovery

Discovery Workflow

Cisco

Catalyst Center

Discover Devices

☆ 🔍 🔄 ⌚ 🔔 | 👤 admin ▾

Discover Devices

Begin by naming this discovery job. Then select your preferred type of discovery. The discovered devices can be assigned to a site later in this workflow. Access Points associated with discovered wireless controllers will be automatically added to Inventory.

Discovery Job Name*
Discover 9800

DISCOVERY TYPE

☐ CDP ☒ IP Address Range ☐ LLDP ☐ CIDR

This workflow is used to discover Cisco [Network Devices](#). Third party devices can be manually added in the inventory page.

IP ADDRESS RANGE

Starting IP Address*

Ending IP Address*

+

PREFERRED MANAGEMENT IP ADDRESS ☐

☒ None ☐ Use Loopback (If Applicable)

Exit

Next

Catalyst Center		
	Design >	Discovery
	Policy >	Topology
	Provision >	Command Runner
	Assurance >	License Manager
	Workflows	Template Hub
	Tools >	Model Config Editor
	Platform >	Wide Area Bonjour
	Activities >	Security Advisories
	Reports	Field Notices
	System >	Network Reasoner
	Explore	Network Bug Identifier

Discovery Workflow

Catalyst Center

Discover Devices

☆ 🔍 🔄 ⌚ 🔔 | 👤 admin ▾

Catalyst Center

Discover Devices

☆ 🔍 🔄 ⌚ 🔔 | 👤 Demo ▾

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Provide Credentials

1

Global credentials are provided only for ease of use when entering credentials. At the device level, only the device-specific credentials are saved. The device-to-global-credentials association isn't saved.

Next, confirm the credentials that Catalyst Center uses for the devices it discovers. At least one CLI credential and one SNMP credential are required. You can have a maximum of five global credentials and one task-specific credential for each type. Optionally, you can update SNMP properties and protocols used for CLI.

CLI (0)

SNMP ▾
SNMPv2c Read (1)
SNMPv2c Write (1)
SNMPv3 (0)
NETCONF (0)
Advanced Settings ▾
HTTP(S) Read (0)
HTTP(S) Write (0)
Protocol Order
SNMP Polling Properties

Select from existing credentials or add new ones. You can add either a job-specific credential or a global credential.

EXISTING GLOBAL CLI CREDENTIALS

☐ cisco ☐ cisco

➕

Add CLI Credentials

Exit

ReviewBackNext

Catalyst Center		
Design	>	Discovery
Policy	>	Topology
Provision	>	Command Runner
Assurance	>	License Manager
Workflows		Template Hub
Tools	>	Model Config Editor
Platform	>	Wide Area Bonjour
Activities	>	Security Advisories
Reports		Field Notices
System	>	Network Reasoner
Explore		Network Bug Identifier

CISCO *Live!*

#CiscoLiveAPJC

BRKOPS-2402

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58

Inventory

cisco

Catalyst Center

Provision / Inventory

☆

🔍

🔄

?

🔔

admin

GB

✓ All

Routers

Switches

Wireless Controllers

Access Points

Sensors

🔧

☰

🔍

📍

DEVICE WORK ITEMS

☐ Unreachable
 ☐ Unassigned
 ☐ Failed Provision
 ☐ Non Compliant
 ☐ Outdated Software Image
 ☐ No Golden Image
 ☐ Failed Image Prechecks
 ☐ Under Maintenance
 ☐ Security Advisories
 ☐ Marked for Replacement

Devices (2)

Focus: Select

Take a tour

Export

⚙️

🔍 Click here to apply basic or advanced filters or view recently applied filters

0 Selected

Tag

+ Add Device

Actions

ⓘ

As of: Jan 23, 2024 7:57 PM

	Device Name	IP Address	Vendor	Reachability ⓘ	Manageability ⓘ	Compliance ⓘ	Site	Image Version	Last Updated	Serial Nu
☐										
☐	C9800-1.cclab.local	10.0.0.6	Cisco	🟢 Reachable	🟢 Managed	🟢 Compliant	.../Bedfont Lakes/Bldg 9	17.10.1	2 minutes ago Latest Sync Details	9JZLR4
☐	C9800-1-HA.cclab.local	10.0.0.7	Cisco	🟢 Reachable	🟢 Managed	🔴 Non-Compliant	.../Bedfont Lakes/Bldg 9	17.10.1	2 minutes ago Latest Sync Details	96WNH

2 Record(s)

Show Records: 25

1 - 2

<

1

>

The screenshot displays the Cisco Catalyst Center web interface. On the left is a dark navigation pane with the Cisco logo and a list of menu items, each with an icon and a right-pointing chevron. The main content area on the right has a light blue header with the text 'NETWORK DEVICES' and a sub-header 'Inventory' in blue. Below this, there are several links: 'Plug and Play', 'LAN Automation', 'Inventory Insights', and 'NO-ACCESS'. Under 'NO-ACCESS', there are links for 'Zero-Trust Overview', 'Fabric Sites', 'Virtual Networks', and 'Transits'. A 'SERVICES' section follows, containing links for 'Service Catalog', 'Cisco User Defined Network', 'Application Visibility', 'Stealthwatch Security', 'App Hosting for Switches', 'IoT Services', 'Umbrella', and 'Site to Site VPN'.

Navigation Menu (Left):

- Design
- Policy
- Provision
- Assurance
- Workflows
- Tools
- Platform
- Activities
- Reports
- System
- Explore

Main Content Area (Right):

NETWORK DEVICES

- Inventory**
- Plug and Play
- LAN Automation
- Inventory Insights

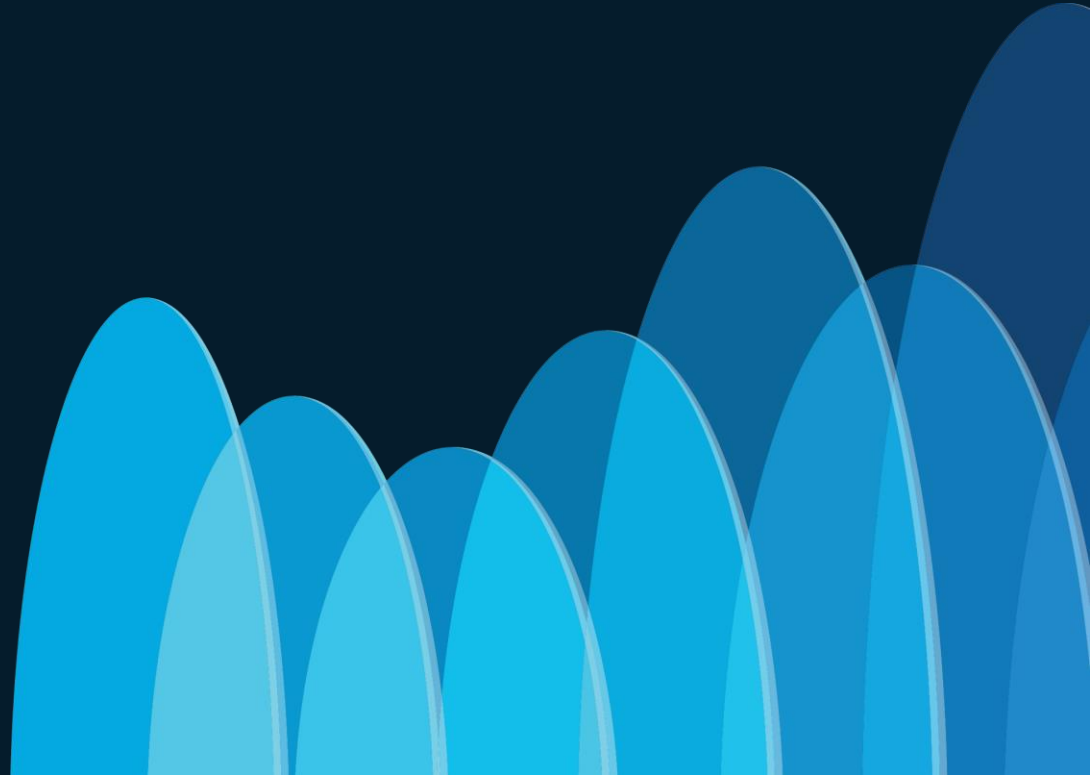
NO-ACCESS

- Zero-Trust Overview
- Fabric Sites
- Virtual Networks
- Transits

SERVICES

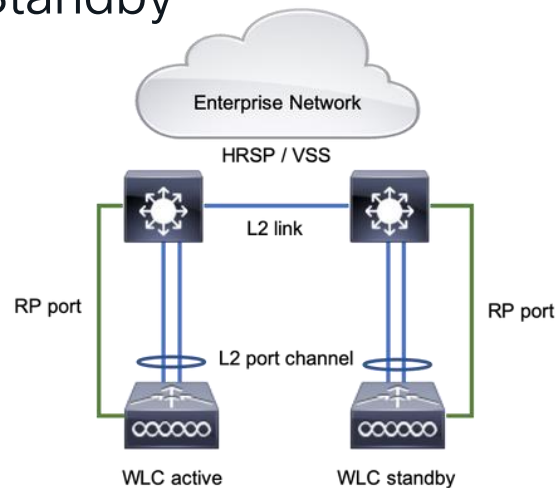
- Service Catalog
- Cisco User Defined Network
- Application Visibility
- Stealthwatch Security
- App Hosting for Switches
- IoT Services
- Umbrella
- Site to Site VPN

Catalyst 9800 High Availability



Prerequisites

- Active and Standby Controllers added to inventory
- Both Controllers of the same type and version
- Wireless Management Interface configured on Standby
- Best way: use PnP to onboard Standby



High Availability with AP SSO

The screenshot shows the Cisco Catalyst Center interface. The top navigation bar includes the Cisco logo, 'Catalyst Center', and the 'Provision / Inventory' path. A user profile 'admin' is visible in the top right. Below the navigation bar, there are tabs for 'All', 'Routers', 'Switches', 'Wireless Controllers', 'Access Points', and 'Sensors'. The 'Wireless Controllers' tab is selected. On the left, there is a 'DEVICE WORK ITEMS' section with various status filters. The main area displays a table of devices. A context menu is open for the device 'C9800-1-HA-cllab.local', showing options like 'Inventory', 'Software Image', 'Provision', 'Telemetry', 'Device Replacement', 'Compliance', and 'More'. The 'Provision' option is highlighted, and a sub-menu is visible with options: 'Assign Device to Site', 'Provision Device', 'Configure WLC HA', 'Configure WLC Mobility', and 'Manage LED Flash Status'. The table lists two devices with columns for Device Name, Location, Reachability, Manageability, Compliance, Site, Image Version, Last Updated, and Serial Number.

Device Name	Location	Reachability	Manageability	Compliance	Site	Image Version	Last Updated	Serial Number
C9800-1-cllab.local	...	...	Managed	Compliant	.../Bedfont Lakes/Bldg 9	17.10.1	a few seconds ago Latest Sync Details	9JZLR4
C9800-1-HA-cllab.local	...	...	Managed	Compliant	.../Bedfont Lakes/Bldg 9	17.10.1	a minute ago Latest Sync Details	96WNH

The sidebar menu on the right side of the interface. It includes sections for 'NETWORK DEVICES' (Inventory, Plug and Play, LAN Automation, Inventory Insights), 'TO ACCESS' (Zero-Trust Overview, Fabric Sites, Virtual Networks, Transits), 'SERVICES' (Service Catalog, Cisco User Defined Network, Application Visibility, Stealthwatch Security, App Hosting for Switches, IoT Services, Umbrella, Site to Site VPN), and 'Tools' (Design, Policy, Provision, Assurance, Workflows, Reports, System, Explore).

High Availability with AP SSO

High Availability

Please make sure the Redundancy Management IP and Peer Redundancy Management IP are not assigned to any other network entities. If used, kindly change the IP accordingly and configure.

Primary C9800
C9800-1.cllab.local

Select Primary Interface
GigabitEthernet3

Select Secondary C9800
C9800-1-HA.cllab.local

Device IP: 10.0.0.7

Netmask*
/24 (255.255.255.0)

Redundancy Management IP*
10.0.0.26

Peer Redundancy Management IP*
10.0.0.27

Cancel Configure HA

RP for C9800-CL

RMI IP

High Availability with AP SSO

The screenshot displays the Cisco Catalyst Center interface for configuring High Availability (HA) for AP SSO. The main window is titled "High Availability" and contains a warning message: "Please make sure the Redundancy Management IP and Peer Redundancy Management IP are not assigned to any other network entities. If used, kindly change the IP accordingly and configure." Below this, the configuration fields are visible: Primary C9800 (C9800-1.clab.local), Select Primary Interface (GigabitEthernet3), Redundancy Management IP* (10.0.0.26), Select Second C9800 (C9800-1-HA.clab.local), Secondary Interface (GigabitEthernet3), and Peer Redundancy Management IP* (10.0.0.27). A "Warning" dialog box is overlaid on the configuration fields, stating: "Please be informed that WLCs will go for a reboot once HA is enabled. Do you want to continue?" with "No" and "Yes" buttons. The background shows the "Provision / Inventory" section of the Catalyst Center, with a list of devices and a "Device Work Items" panel on the left.

High Availability with AP SSO

The screenshot displays the Cisco Catalyst Center Provisioning page. The top navigation bar includes the Cisco logo, 'Catalyst Center', and the 'Provision / Inventory' path. A user profile 'admin' is visible in the top right. The left sidebar contains a 'DEVICE WORK ITEMS' section with various status filters like 'Unreachable', 'Unassigned', 'Failed Provision', etc. The main content area is titled 'Devices (2)' and shows a table of two devices. Both devices are 'Unreachable' and 'Managed'. The table columns include Device Name, IP Address, Vendor, Reachability, Manageability, Compliance, Site, Image Version, Last Updated, and Serial Number. The bottom of the page shows '2 Record(s)' and 'Show Records: 25'.

Device Name	IP Address	Vendor	Reachability	Manageability	Compliance	Site	Image Version	Last Updated	Serial Number
C9800-1.cclab.local	10.0.0.6	Cisco	Unreachable	Managed Device Unreachable	Compliant	.../Bedfont Lakes/Bldg 9	17.10.1	4 minutes ago Latest Sync Details	9JZLR4
C9800-1-HA.cclab.local	10.0.0.7	Cisco	Unreachable	Managed Device Unreachable	Non-Compliant	.../Bedfont Lakes/Bldg 9	17.10.1	4 minutes ago Latest Sync Details	96WNH

High Availability with AP SSO

The screenshot displays the Cisco Catalyst Center Provisioning interface. The main view shows a list of devices under the 'Access Points' filter. A device named 'C9800-1.clab.local' is selected, and a 'Redundancy Summary' pop-up window is open, displaying the following details:

Property	Value
Primary WLC:	C9800-1.clab.local
Secondary WLC:	C9800-1-HA.clab.local
Unit MAC:	00:0c:29:e6:e8:f8
Redundancy State:	SSO
Mobility MAC:	00:1e:49:e4:ac:ff
Sync Status:	Duplex
Primary Chassis Serial No:	9JZLR4NULN3
Secondary Chassis Serial No:	96WNH8X8931
Active RMI IP:	10.0.0.26
Standby RMI IP:	10.0.0.27
Gateway Monitoring:	Enabled
Recovery mode:	Not Applicable

The background interface includes a sidebar with 'DEVICE WORK ITEMS' and a table of devices with columns for Device Name, IP Address, Vendor, Reachability, Manageability, Compliance, Site, Image Version, Last Updated, and Serial Number. The device 'C9800-1.clab.local' is shown as 'Compliant' and 'Latest Sync Details' are available.

C9800 – High Availability with AP SSO



for reference

Search Menu Items

Dashboard

Monitoring

Configuration

Administration

Licensing

Troubleshooting

Walk Me Through

Monitoring > General > System

Memory Utilization CPU Utilization Wireless Interface Management Summary **Redundancy**

General Active Statistics Standby Statistics

Refresh

My State ACTIVE

Peer State STANDBY HOT

Unit Primary

Unit ID 1

Redundant Mode (Operational) sso

Redundancy Mode(Configured) sso

Redundancy State sso

Manual Swact enabled

Communications Up

Standby Failures 0

Switchovers System Experienced 0

Chassis Details

Chassis	Role	MAC Address	Priority	H/W Version	Current State	IP Address	RM/ IP Address	Mobility MAC Address	Image Version	Device Uptime
*1	Active	000c.29e6.e8f8	2	V02	Ready	169.254.0.26	10.0.0.26	001e.49e4.acff	17.10.1	6 minutes
2	Standby	000c.29ad.9f65	1	V02	Ready	169.254.0.27	10.0.0.27	0000.0000.0000	17.10.1	4 minutes

1 - 2 of 2 items

Switchover Details

Index	Previous Active	Current Active	Switch Over Time	Switch Over Reason
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No items to display

High Availability Failure

The screenshot displays the Cisco Catalyst Center Provisioning / Inventory page. The left sidebar shows 'DEVICE WORK ITEMS' with various status filters. The main content area shows a table of devices, with one device selected: C9800-CL-1. A modal window titled 'Redundancy Summary' is open for this device, showing details about its HA configuration. The 'Redundancy State' is 'Non-redundant', and the 'Sync Status' is 'Simplex'. A red box highlights the 'HA SSO Analysis' link in the 'Sync Status' section. The table also shows the device's IP address, device family, reachability, software image, OS update status, site, and provisioning status.

DEVICE WORK ITEMS

- ☐ Unreachable
- ☐ Unassigned
- ☐ Failed Provision
- ☐ Non Compliant
- ☐ Outdated Software Image
- ☐ No Golden Image
- ☐ Failed Image Prechecks
- ☐ Under Maintenance
- ☐ Security Advisories
- ☐ Marked for Replacement

Devices (1) Focus: Software Images

Click here to apply basic or advanced filters or view recently applied filters

0 Selected [Tag](#) [Add Device](#) [Image Update](#) [Image Update Status](#) [Actions](#)

Device Name	IP Address	Device Family	Reachability	Software Image	OS Update Status	Site	Provisioning Status	Manage
C9800-CL-1				C9800-CL-universalk9.17.12.02....	Device Updatate	.../Amsterdam/AMS-5	Success See Details	Mani

Redundancy Summary

Primary WLC: C9800-CL-1
Secondary WLC: C9800-CL-1-HA
Unit MAC: 00:0c:29:bc:a8:2b
Redundancy State: Non-redundant
Mobility MAC: 00:1e:f6:17:8e:ff
Sync Status: Simplex
HA SSO Analysis

Primary Chassis Serial No: 9U4UGSMX1GY
Active RMI IP: 10.0.0.26
Standby RMI IP: 10.0.0.27
Gateway Monitoring: Enabled
Recovery mode: Not Applicable

1 Record(s) Show Records: 25 1 - 1

The sidebar menu on the right side of the screen shows the navigation structure of the Cisco Catalyst Center. It includes sections for 'NETWORK DEVICES' (Inventory, Plug and Play, LAN Automation, Inventory Insights), 'TO ACCESS' (Zero-Trust Overview, Fabric Sites, Virtual Networks, Transits), and 'SERVICES' (Service Catalog, Cisco User Defined Network, Application Visibility, Stealthwatch Security, App Hosting for Switches, IoT Services, Umbrella, Site to Site VPN).

High Availability Failure

The screenshot displays the Cisco Catalyst Center interface for an HA SSO Analysis. The main panel shows a 'Root Cause Analysis' section with a 'Reasoning Activity' tab selected. Below this, a diagram illustrates five steps, each in a blue hexagon with a checkmark, indicating successful completion:

- Check Controller Manageability
- Evaluate Cisco DNA Center platform.
- Check HA is configured in Controller.
- Check Primary device and Secondary device status in HA Pair.
- Show RP and RMI Status.

The diagram is titled 'Relevant Activity Details' on the right. The top right of the analysis panel shows 'Last Run: Jan 29, 2024 4:53 PM' and a 'Run Again' button. The left sidebar lists 'DEVICE WORK ITEMS' with various status filters like 'Unreachable', 'Unassigned', 'Failed Provision', etc. The top navigation bar shows 'Provision / Inventory' and the user 'admin'.

High Availability Failure

The screenshot displays the Cisco Catalyst Center interface, specifically the 'Provision / Inventory' section. A modal window titled 'HA SSO Analysis' is open, showing a 'Root Cause Analysis' for a High Availability (HA) failure. The analysis is dated 'Last Run: Jan 29, 2024 4:53 PM'. The 'Conclusions (5)' tab is active, listing three issues:

- Issue 1:** The Standby Controller is in HA Removed stage.
Suggested Action: Please verify the Standby Controller power source ,RP link connectivity and network connectivity.
[Relevant Activity Details](#)
- Issue 2:** RP link is Down.
Suggested Action: Please verify RP link Status between the active and the standby controller.
[Relevant Activity Details](#)
- Issue 3:** RMI link is Down.
Suggested Action: Please verify the connectivity of the RMI link between active and standby controllers. Please verify gateway reachability from each controller.
[Relevant Activity Details](#)

At the bottom right of the modal, there is a feedback prompt: 'Was this automated root cause analysis helpful?' with thumbs up and down icons.

Provision C9800

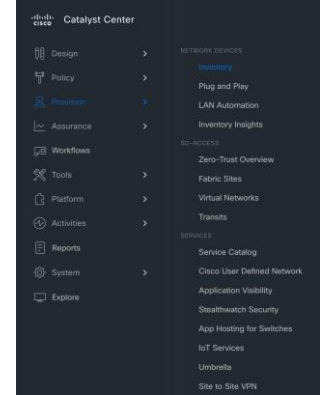
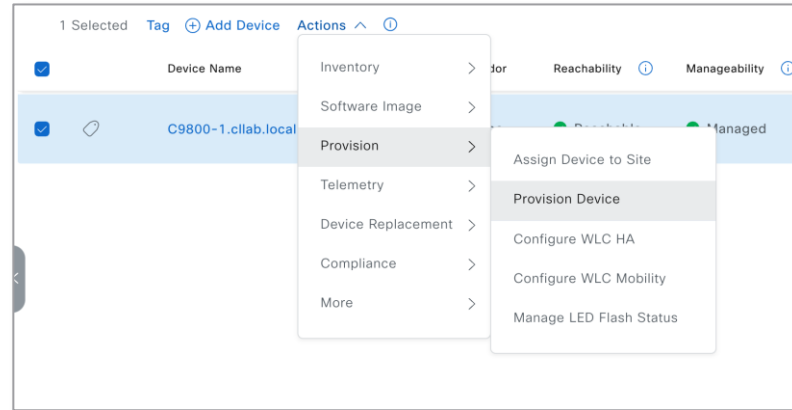
Monitor Provisioning Task

The screenshot displays the Cisco Catalyst Center Provisioning interface. At the top, the breadcrumb navigation shows 'Provision / Inventory'. Below this, a filter bar includes tabs for 'All', 'Routers', 'Switches', 'Wireless Controllers', 'Access Points', and 'Sensors'. The 'Wireless Controllers' tab is selected. A dropdown menu labeled 'Focus: Provision' is open, showing options: 'Inventory', 'Default', 'Software Images', 'Provision' (highlighted with an orange box), 'Security', 'Templates', and 'Device Replacement'. Below the dropdown, a table lists devices. The first device is 'C9800-1.clab.local' with IP '10.0.0.6', identified as a 'Wireless Controller' at '.../Bedfont Lakes/Bldg 9'. Its status is 'Reachable', provisioning is 'Success', and it was last provisioned 'a minute ago'. The table has columns for Device Name, IP Address, Device Family, Site, Reachability, Provisioning Status, Credential Status, Last Provisioned, Device Role, MAC Address, and Associated WLC IP. A sidebar on the right contains a navigation menu with categories like 'Design', 'Policy', 'Provisioning', 'Assurance', 'Workflows', 'Tools', 'Platform', 'Activities', 'Reports', 'System', and 'Explore'. The bottom of the interface shows '1 Record(s)' and 'Show Records: 25'.

Device Name	IP Address	Device Family	Site	Reachability	Provisioning Status	Credential Status	Last Provisioned	Device Role	MAC Address	Associated WLC IP
C9800-1.clab.local	10.0.0.6	Wireless Controller	.../Bedfont Lakes/Bldg 9	Reachable	Success See Details	Not Applied See Details	a minute ago	ACCESS	00:1e:49:e4:ac:ff	NA

Provision Device

- Assign Site
 - Site needs to have a wireless profile assigned
- Managed AP Locations
- Interfaces
- Model Config
- Advanced Config



Provision C9800

Catalyst Center Provision / Inventory

Catalyst Center Provision / Network Devices / Provision Devices

Network Devices / Provision Devices

1 Assign Site 2 Configuration 3 Model Configuration 4 Advanced Configuration 5 Summary

C9800-1.cclab.local

Serial Number: 9JZLR4NULN3, 96WNH8XB931

Devices: C9800-1.cclab.local

WLC Role

☒ Active Main WLC ⓘ

☐ Anchor

Managed AP location(s) ⓘ

☒ Managing 2 Primary location(s)

☐ Managing 3 Secondary location(s)

Assign Interface

Interface Name	Interface Group Name	VLAN ID	IP Address	Gateway IP Address	Subnet Mask(in bits)
Clients ⓘ	-	2	IP Address	Gateway IP Address	Subnet Mask

1 Record(s) Show Records: 25 1 - 1 < ⓘ >

Rolling AP Upgrade

☐ Enable AP Reboot Percentage 25 ⓘ

Cancel Next

N+1 Redundancy
Catalyst Center will provision
primary and secondary WLC
on APs

Provision C9800

The screenshot displays the Cisco Catalyst Center Provisioning interface for C9800 devices. The interface is divided into several sections:

- Header:** Shows the Catalyst Center logo and the navigation path: Provision / Inventory.
- Navigation:** A sidebar on the left contains various navigation options, including Design, Policy, Provision, Assurance, Workflows, Tools, Inform, and Hub.
- Provisioning Steps:** A sequence of steps is shown at the top: 1. Assign Site, 2. Configuration, 3. Model Configuration (highlighted), 4. Advanced Configuration, and 5. Summary.
- Devices Section:** A search bar is present, and a list of devices is displayed. The device "C9800-1.clab.local (2)" is highlighted with an orange box. Below it, two options are listed: "CleanAir Configuration" and "Advanced SSID Configuration".
- Advanced SSID Configuration - Model Configs:** A table displays the configuration details for the selected device.

Design Name	WLAN Profile Name	WLAN ID	SSID	Description	
Enterprise	Cisco_Ent_profile	17	Cisco_Ent	-	Edit View

Showing 1 of 1

Buttons: Cancel, Next

Provision C9800

Catalyst Center

Provision / Network Devices / Provision Devices

Network Devices / Provision Devices

1 Assign Site 2 Configuration 3 Model Configuration 4 Advanced Configuration 5 Summary

Devices
Select devices to fill out provisioning parameters

Search

Show All Success Failed

Devices having No Templates

C9800-1.clab.local

No Devices Selected
Select a device or template from "Devices" panel. Shift + click to select multiple devices under a template, or single click to select one at a time.

Cancel Next

Catalyst Center

Design > NETWORK DEVICES > Inventory > Plug and Play > LAN Automation > Inventory Insights > TO ACCESS > Zero-Trust Overview > Fabric Sites > Virtual Networks > Transits > SERVICES > Service Catalog > Cisco User Defined Network > Application Visibility > Stealthwatch Security > IoT Services > Umbrella > Site to Site VPN

CLI Templates:
Network Profile needs to be assigned to the site of the C9800

Provision C9800

Catalyst Center Provision / Network Devices / Provision Devices

1 Assign Site 2 Configuration 3 Model Configuration 4 Advanced Configuration 5 Summary

C9800-1.cllab.local

1 Default AP Profile (Default_AP_Profile_Aireos/default-ap-profile) will be applied to all Catalyst Center generated AP Groups/Site Tags

⚠ Catalyst Center will clean up unused custom Site Tags/ Policy Tags, which does not have any Catalyst Center provisioned Access Points. Any out of band configurations using these tags will be impacted post this provision.

▼ Device Details

Device Name:	C9800-1.cllab.local
Platform Id:	C9800-CL-K9, C9800-CL-K9
Device IP:	10.0.0.6
Device Location:	Global/GB/Bedfont Lakes/Bldg 9
Device Role:	Active Main WLC
Associated Anchor device(s)	None

▼ Network Settings

NTP Server:	10.0.0.1
AAA Network Primary Server:	10.0.0.12 (RADIUS)
AAA Client Server:	AAA client/endpoint settings are pushed as per the configuration added for each Managed AP location per WLAN. <small>WARNING: Do not use "admin" as the username for your device CLI credentials, if you are using ISE as your AAA server. If you do, this can result in you not being able to login to your devices.</small>
DNS Domain Name:	cllab.local
DNS Primary Server:	10.0.0.1
Syslog Server	Cisco DNA Center, 192.168.255.10
Cisco TrustSec (CTS) Credentials	No

Cancel Next

Provision C9800

 Catalyst Center

Provision / Network Devices / Provision Devices

☆ 🔍 🟢 ⓘ 🔔 | 👤 admin ▾

Provision Device

As of: 9:13:02 AM

Step 1 of 3: Performing Initial Checks

Cisco Catalyst Center is now performing early validations to ensure a seamless provisioning operation.

✓ 🟢 Pending Operations ⓘ

Success. No pending operations conflicting with the current operation found.

✓ 🟢 Device Compliance ⓘ

Success. No compliance violations found for the devices involved in the current operation.

Click [here](#) to see what is included in the configuration compliance check. Certain items like EoX - End of Life, Startup vs Running Configuration, Software Image, etc., which are part of overall compliance calculation are not included in this check as they don't impact the current operation. When compliance run is in progress, then last known compliance data is used to determine the list of the devices.

Exit

Recheck

Back

Next

 Catalyst Center

NETWORK DEVICES

Design >

Policy >

Provision >

Assurance >

Workflows >

Tools >

Platform >

Activities >

Reports >

System >

Explore

Inventory

Plug and Play

LAN Automation

Inventory Insights

Zero-Trust Overview

Fabric Sites

Virtual Networks

Transits

Service Catalog

Cisco User Defined Network

Application Visibility

Stealthwatch Security

IoT Services

App Hosting for Switches

Umbrella

Site to Site VPN

CISCO *Live!*

The screenshot displays the Cisco Catalyst Center web interface. On the left is a navigation sidebar with a 'Cisco' logo at the top. Below the logo is a search bar containing the text 'sh'. The sidebar lists several menu items, each with an icon and a right-pointing arrow: Design, Policy, Provision, Assurance, Workflows, Tools, Inform, Utilities, Ports, Alarm, and Role. A white rectangular box highlights the 'Tools' menu item. The main content area on the right is titled 'Catalyst Center' and features a 'NETWORK DEVICES' section with a blue 'Inventory' link. Below this are links for 'Plug and Play', 'LAN Automation', and 'Inventory Insights'. A '5G-ACCESS' section follows, containing links for 'Zero-Trust Overview', 'Fabric Sites', 'Virtual Networks', and 'Transits'. A 'SERVICES' section is at the bottom, listing 'Service Catalog', 'Cisco User Defined Network', 'Application Visibility', 'Stealthwatch Security', 'App Hosting for Switches', 'IoT Services', 'Umbrella', and 'Site to Site VPN'.

Catalyst Center

Design >

Policy >

Provision >

Assurance >

Workflows >

Tools >

Inform >

Utilities >

Ports >

Alarm >

Role >

NETWORK DEVICES

[Inventory](#)

Plug and Play

LAN Automation

Inventory Insights

5G-ACCESS

Zero-Trust Overview

Fabric Sites

Virtual Networks

Transits

SERVICES

Service Catalog

Cisco User Defined Network

Application Visibility

Stealthwatch Security

App Hosting for Switches

IoT Services

Umbrella

Site to Site VPN

Provision C9800

The screenshot displays the Cisco Catalyst Center web interface for provisioning a network device. The main window is titled "Provision Device" and shows "Step 3 of 3: Preview Configuration". The device being provisioned is "C9800-1.clab.local" with IP "10.0.0.6". The configuration to be deployed is shown in YANG format, including sections for `<wlan-cfg-data>` and `<ios:native>`. The interface includes a search bar, a "View by Configuration Source" dropdown, and a "Tree View" toggle. The status is "Ready" as of 9:15:44 AM. The bottom of the window features buttons for "Exit and Preview Later", "Discard", and "Deploy".

Provision Device
Step 3 of 3: Preview Configuration
Review the device configuration provided below by clicking on each device. When you are done reviewing, click Deploy.

Device IP: 10.0.0.6 Site: Global/GB/Bedfont Lakes/...
Configuration to be Deployed
View by Configuration Source · All
YANG - All
629 Line(s)

```
1 <wlan-cfg-data xmlns= "http://cisco.com/ns/yang/Cisco-IOS-XE-wireless-wlan-cfg" >
2   <wlan-policies>
3     <wlan-policy>
4       <policy-profile-name>
5         <[CDATA[Cisco_Eng_profile]]>
6       </policy-profile-name>
7       <per-ssid-qos>
8         <ingress-service-name>
9           <[CDATA[platinum-up]]>
10          </ingress-service-name>
11         <egress-service-name>
12           <[CDATA[platinum]]>
13          </egress-service-name>
14        </per-ssid-qos>
15        <autoqos-mode>
16          <mode>autoqos-disabled</mode>
17        </autoqos-mode>
18      </wlan-policy>
19    </wlan-policies>
20  </wlan-cfg-data>
21  <ios:native xmlns:ios= "http://cisco.com/ns/yang/Cisco-IOS-XE-native" >
22    <ios:radius-server xmlns:aaa= "http://cisco.com/ns/yang/Cisco-IOS-XE-aaa" >
23      <ios-aaa:dead-criteria></ios-aaa:dead-criteria>
24      <ios-aaa:deadtime>3</ios-aaa:deadtime>
25      <ios-aaa:attribute>
26        <ios-aaa:number>8</ios-aaa:number>
```

Generation Status Legend
Exit and Preview Later Discard Deploy

Provision C9800

The screenshot shows the Cisco Catalyst Center Provisioning interface. The main view is the 'Provision Devices' page, which displays a list of devices. The sidebar on the left shows 'DEVICE WORK ITEMS' with various status filters. The main table lists the following device:

Device Name	IP Address	Device Family	Site	Reachability	Provisioning Status	Credential Status	Last Provisioned	Device Role
C9800-1.cllab.local	10.0.0.6	Wireless Controller	.../Bedfont Lakes/Bldg 9	Reachable	Configuring	Not Applied	13 hours ago	ACCESS

The interface also includes a search bar, filters (All, Routers, Switches, Wireless Controllers, Access Points, Sensors), and a 'Take a tour' button. The bottom of the page shows '1 Record(s)' and 'Show Records: 25'.

Monitor Provisioning Task

The screenshot displays the Cisco Catalyst Center Provisioning interface. The main view shows the provisioning status for the device **C9800-1.cclab.local**. The interface includes a sidebar with navigation options like Design, Policy, Provision, Assurance, Workflows, Tools, and Platforms. The main content area shows the device details and a list of provisioning tasks.

Device Details:

- Management IP: 10.0.0.6
- Device Type: Cisco Catalyst 9800-CL Wireless Controller for Cloud
- Device Role: ACCESS

Provisioning Tasks:

App Name	Configured At	Description	Status
Device Provisioning, Device Controllability and Telemetry	Jan 24, 2024 9:17 AM	Provision Device	Success
Model Config Provisioning	Jan 24, 2024 9:16 AM		Success
HA Provisioning	Jan 23, 2024 7:57 PM		Success
Device Controllability and Telemetry	Jan 23, 2024 6:40 PM		Success

The interface also shows a list of devices on the left, with the selected device **C9800-1.cclab.local** highlighted. The status bar at the bottom indicates 1 Record(s).

Monitor Provisioning Task

The screenshot displays the Cisco Catalyst Center Provisioning interface. The main view shows the provisioning task for device **C9800-1.clab.local**. The task status is **SUCCESS** for all steps. The left sidebar shows the **Devices** list with **C9800-1.clab.local** selected. The top navigation bar shows **Provision / Inventory**.

Device Details:

- Management IP: 10.0.0.6
- Device Type: Cisco Catalyst 9800-CL Wireless Controller for Cloud
- Device Role: ACCESS

Provisioning Task Steps:

- Start
- Initialize business intent processing: **SUCCESS**
- Preprocessing of business intent: **SUCCESS**
- Validation of business intent: **SUCCESS**
- Validation of device intent: **SUCCESS**
- Conversion of business intent to network intent: **SUCCESS**
- Deployment of network intent: **SUCCESS**
- Deployment of Model Config: **SUCCESS**
- Deployment of network intent(templates): **SUCCESS**

Device List:

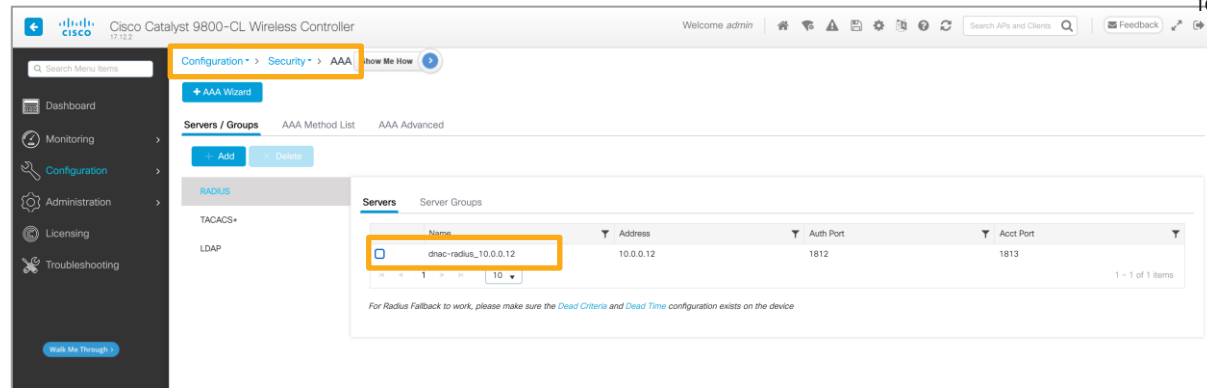
Device Name
C9800-1.clab.local

What gets configured on Catalyst 9800



for reference

- AAA
- Policy Profiles
- WLANs
- Site Tags



What gets configured on Catalyst 9800



for reference

- AAA
- Policy Profiles
- WLANs
- Site Tags

The top screenshot shows the 'AAA' configuration page with the 'AAA Wizard' button. The bottom screenshot shows the 'Policy' configuration page with a table of policy profiles. The table has columns for Admin Status, Associated Policy Tags, Policy Profile Name, and Description. Two rows are visible: 'Cisco_Ent_profile' and 'default-policy-profile'. The 'Cisco_Ent_profile' row is highlighted with an orange box.

Admin Status	Associated Policy Tags	Policy Profile Name	Description
☒		Cisco_Ent_profile	Cisco_Ent_profile
☐		default-policy-profile	default policy profile

What gets configured on Catalyst 9800



for reference

- AAA
- Policy Profiles
- WLANs

The image displays three overlapping screenshots of the Cisco Catalyst 9800-CL Wireless Controller configuration interface, illustrating the configuration steps for AAA, Policy Profiles, and WLANs.

Top Screenshot: AAA Configuration

- Navigation: Configuration > Security > AAA
- Buttons: AAA Wizard, Servers / Groups, AAA Method List, AAA Advanced
- Buttons: Add, Delete

Middle Screenshot: Policy Profiles Configuration

- Navigation: Configuration > Tags & Profiles > Policy
- Buttons: Add, Delete, Clone
- Table:

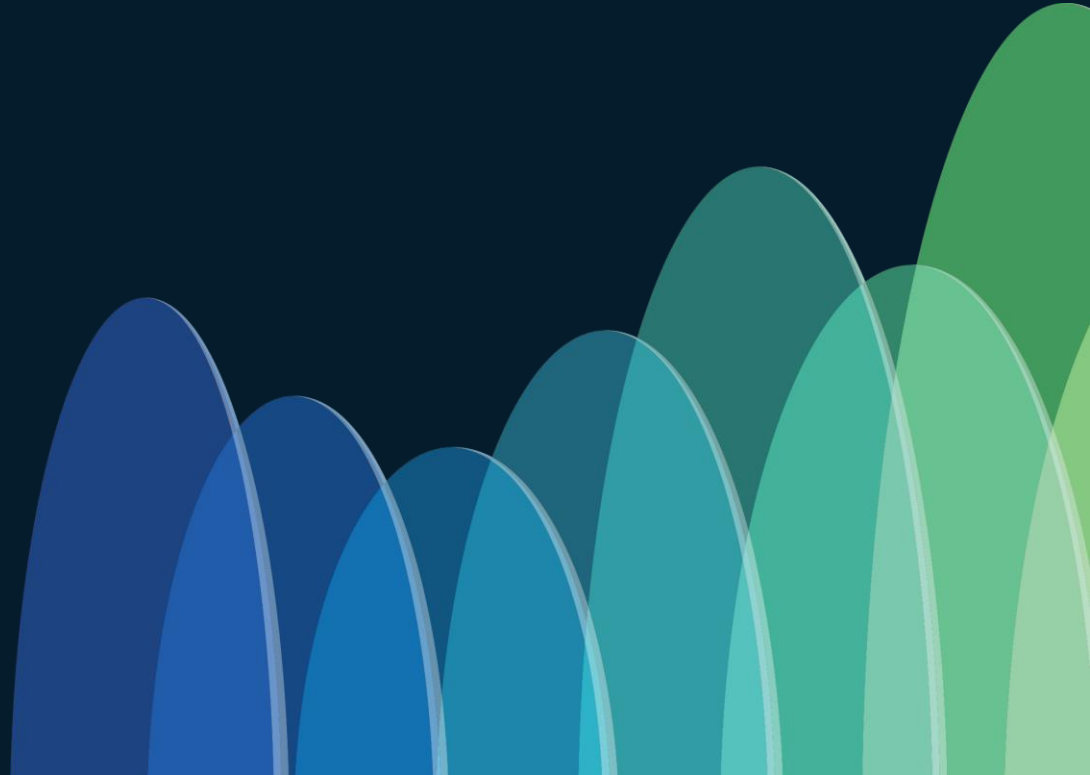
Admin Status	Associated Policy Tags	Policy Profile Name	Description
☐	☒	Cisco_Ent_profile	Cisco_Ent_profile
☐	☒	default-policy-profile	default policy profile

Bottom Screenshot: WLAN Configuration

- Navigation: Configuration > Tags & Profiles > WLANs
- Buttons: Add, Delete, Clone, Enable WLAN, Disable WLAN, WLAN Wizard
- Selected WLANs: 0
- Table:

Status	Name	ID	SSID	2.4/5 GHz Security	6 GHz Security
☐	Cisco_Ent_profile	17	Cisco_Ent	[WPA3]FT + 802.1x[AES][PMF 802.1X]FT Enabled	[WPA3]FT + 802.1x[AES][PMF 802.1X]FT Enabled

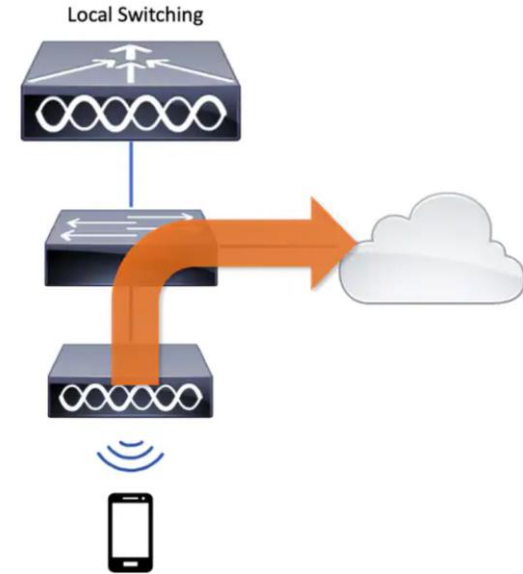
Flex Connect with Cisco Catalyst Center



How to deploy Flex Connect with Catalyst Center

Flex Connect has site specific settings

- Network Design
 - Native VLAN for APs
 - VLAN mapping for AAA override
- Network Profile
 - Enable FlexConnect local switching
 - Default VLAN for WLAN



Site specific Flex Connect VLANs

Catalyst Center

Design / Network Profiles / Wireless

Network Profiles / Wireless

SSIDs AP Zones Model Configs Templates Advanced Settings

All changes made to the local VLAN ids must be followed by a controller Re-provision to avoid configuration inconsistency.

SSID: Cisco_Ent

WLAN Profile Name: Cisco_Ent_profile

Policy Profile Name: Cisco_Ent_profile

Fabric: ☐ Yes ☒ No

Enable SSID Scheduler

TRAFFIC SWITCHING: ☒ Interface ☐ VLAN Group

Interface Name*: Clients

Do you need Anchor for this SSID? ☐ Yes ☒ No

☒ Flex Connect Local Switching

Local To VLAN*: 31

VLAN “clients” will be local to VLAN 31

All APs of the assigned sites will be set to FlexConnect mode

Site specific Flex Connect VLANs

Search Hierarchy

- Global
 - Belgium
 - GB
 - Bedfont Lakes**
 - Bldg 9
 - Floor 1
 - Bldg 10
 - Germany
 - Netherlands

FlexConnect Settings

FlexConnect settings are inherited by all children sites. Overrides done at the child level do not affect the parent. If custom Site tags and Flex profiles are used in Wireless network profile, Please configure unique custom Site Tag name and Flex profile name for site(s) where Native VLAN/AAA VLAN is overridden.

FlexConnect VLAN [Delete](#) [Inherit](#)

Configure the VLAN for all FlexConnect access points managed in the site. FlexConnect VLAN ID change requires Controller provision before Access Point provision.

Native VLAN ID
30
VLAN ID range is 1..4094

AAA Override VLAN [Delete](#) [Inherit](#)

Flex deployments support a maximum of 16 VLANs. For Catalyst 9800 Series Wireless Controllers, this includes the WLAN's VLAN and VLANs pushed by AAA. AAA Override VLAN change requires Controller provision or Access Point provision.

VLAN ID	VLAN Name
31 VLAN ID range is 1..4094	flex-client Only 31 characters are allowed
32 VLAN ID range is 1..4094	flex-guest Only 31 characters are allowed

[Cancel](#) [Save](#)

Native VLAN for AP management

AAA Override VLAN Mapping

C9800 Flex Profile

The screenshot displays the Cisco Catalyst 9800-CL Wireless Controller configuration interface. The main navigation pane on the left includes links for Dashboard, Monitoring, Configuration (highlighted), Administration, Licensing, and Troubleshooting. The breadcrumb trail indicates the current location: Configuration > Tags & Profiles > Flex. The 'Edit Flex Profile' window is open, showing the 'General' tab. A table lists the configured Flex Profiles:

Flex Profile Name	VLAN Name	ID	Ingress ACL
☐ default-flex-profile			
☐ FP_Munic_cgaue_5b4f2_NV1	☐ clients	31	
	☐ flex-guest	32	
	☐ flex-clients	31	

An orange box highlights the 'clients' entry in the table, with an arrow pointing to it. A text box on the right states: "VLAN 'clients' will be local to VLAN 31". The background shows the 'Cisco Ent' configuration page with fields for SSID, WLAN Profile Name, Policy Profile Name, Fabric (set to No), and Traffic Switching (set to Interface).

C9800 Flex Profile

The screenshot shows the Cisco Catalyst 9800-CL Wireless Controller configuration interface. The left sidebar contains navigation links: Dashboard, Monitoring, Configuration (highlighted), Administration, Licensing, and Troubleshooting. The main content area displays the 'Edit Flex Profile' dialog for the 'flex-guest' profile. The 'VLAN' tab is selected, showing a table of VLAN mappings. An orange box highlights the 'flex-guest' profile, and an arrow points to the 'flex-guest' entry in the table.

VLAN Name	ID	Ingress ACL	Egress ACL
clients	31		
flex-guest	32		
flex-clients	31		

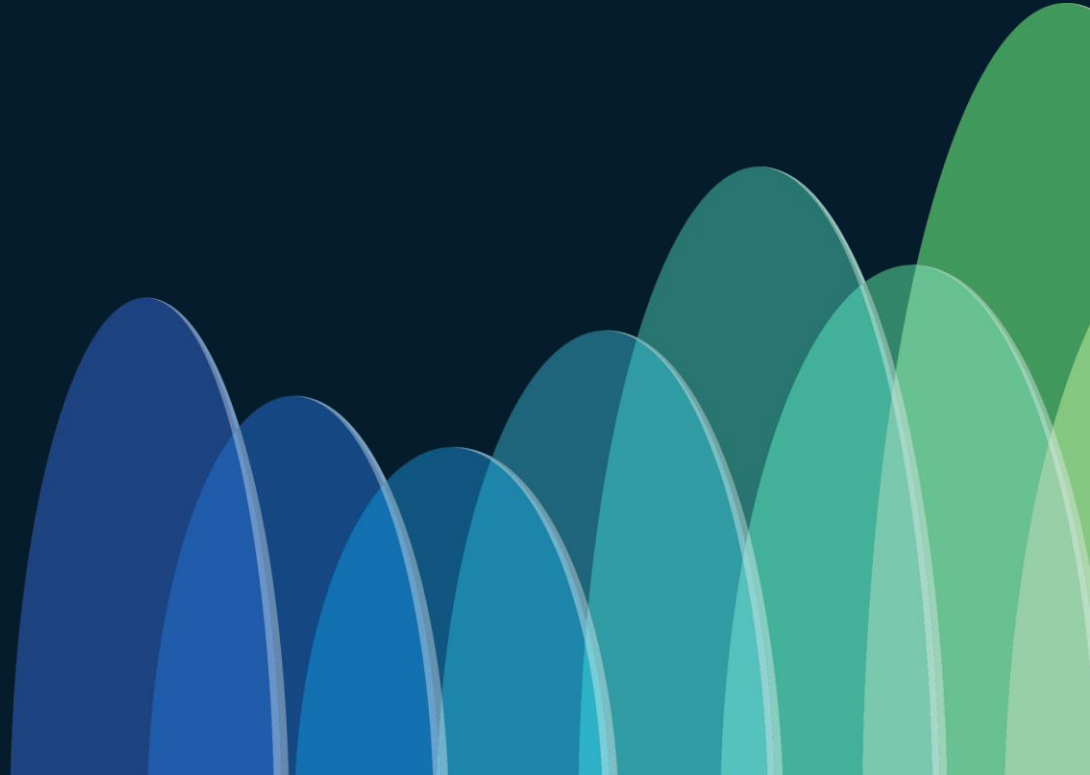
AAA Override VLAN Mapping

AAA Override VLAN Mapping

Flex deployments support a maximum of 31 VLANs. AAA Override VLAN change requires Controller provision or Access Point provision.

VLAN ID	VLAN Name
31	flex-client
32	flex-guest

Access Points



PnP discovery

- Use DNS

for PnP via Catalyst Center

`pnpserver.localdomain`

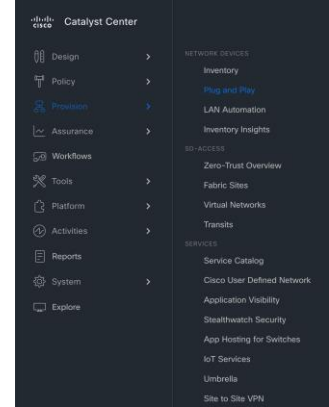
Do not use `cisco-capwap-controller.localdomain`

- or DHCP Option 43 for PnP

`5A1N;B2;K4;I198.18.129.100;J80`

Do not use Hex string pointing to WLC

- Claim APs via Catalyst Center Plug and Play
- joined APs:
 - automatically show up in inventory (skipping PnP)
 - Require manual site assignment and provisioning



Catalyst Center
Enterprise IP
address

AP Plug and Play: Bulk Add

The screenshot shows the Cisco Catalyst Center interface. The main header is 'Catalyst Center' with a navigation bar containing 'Provision / Network Devices / Plug and Play'. The left sidebar shows 'Network Plug and Play Overview' and 'Device Status' filters: All (8), Unclaimed (0), Error (0), and Provisioned (8). The 'Devices (0)' section has a search bar and a table with columns: #, Device Name, Serial Number, Product ID, Last Contact, State, and Onboard. The right panel is the 'Add Devices' modal, which prompts the user to 'Select one of these methods:' and offers three options: 'Single Add' (represented by a single device icon), 'Bulk Add' (represented by a device icon with a dashed border), and 'Smart Account Add' (represented by a cloud and device icon).

The sidebar menu on the right includes the following items: Design, Policy, Provision, Assurance, Workflows, Tools, Platform, Activities, Reports, System, and Explore. Under 'NETWORK DEVICES', there is a link for 'Plug and Play'. Under 'SD-ACCESS', there are links for 'Zero-Trust Overview', 'Fabric Sites', 'Virtual Networks', and 'Transits'. Under 'SERVICES', there are links for 'Service Catalog', 'Cisco User Defined Network', 'Application Visibility', 'Stealthwatch Security', 'App Hosting for Switches', 'IoT Services', 'Umbrella', and 'Site to Site VPN'.

AP Plug and Play: Bulk Add

The screenshot displays the Cisco Catalyst Center interface for bulk adding devices. The main window shows the 'Network Plug and Play Overview' page with a table of devices. The 'Add Devices in Bulk' dialog box is open, showing a file upload area with 'AP_PNP.csv' (276B of 276B) and an 'Upload' button. Below the upload area are 'Import Devices' and 'Download File Template' buttons. A code block at the bottom shows the CSV file content.

1 Serial Number*,Product ID*,Device Name,Site,Profile*,ManagementIP*,SubnetMask*,Gateway*,VlanID,Interface Name*

2 FGL2649L5H6,CW9162I-E,AP-0001,Global/GB/Bedfont Lakes/Bldg 9/Floor 1,TYPICAL,,,,,

3 FGL2649L5MY,CW9162I-E,AP-0002,Global/GB/Bedfont Lakes/Bldg 9/Floor 1,TYPICAL,,,,,

AP Plug and Play: Bulk Add

Catalyst Center

Provision / Network Devices / Plug and Play

Network Plug and Play Overview

Device Status: All (8) Unclaimed (0) Error (0) Provisioned (8)

Devices (0) Focus: All

Search PnP devices

0 Selected Actions Add Devices

0 Selected

#	Device Name	Serial Number	Product ID	Last Contact	State	Onboard
---	-------------	---------------	------------	--------------	-------	---------

Add Devices in Bulk

AP_PNP.csv
276B of 276B 100%

Upload

Import Devices Download File Template

1 If you are adding a device and want to claim it immediately, click Add + Claim.
If you are adding a device and will claim it later, click Add Device. You will need to reenter claim parameters.

Imported devices (2)

Search Table

Import Validation	Device Name	Serial Number	Product ID	Site
☒	AP-0001	FGL2649L5H6	CW9162I-E	Global/GB/Bedfont Lakes/B...or 1
☒	AP-0002	FGL2649L5MY	CW9162I-E	Global/GB/Bedfont Lakes/B...or 1

2 Record(s) 1 - 2

Back Add + Claim Add Devices

AP Plug and Play: Bulk Add

1

Assign Site

2

Assign Configuration

3

Provision Templates

4

Summary

Provision / Network Devices / Plug and Play

☆

🔍

🟢

?

🔔

|

👤 admin

▼

Assign Site

Devices (2)

Clear Sites

🔍 Search Table

▼

Device Name ⓘ	Serial Number	Product ID	Device Type ⓘ	Site (Recommended) ⓘ	Actions
<div>🗑️</div> AP-0001	FGL2649L5H6	CW9162I-E	AP ▼	Global/GB/Bedfont Lakes/B...or 1	...
<div>🗑️</div> AP-0002	FGL2649L5MY	CW9162I-E	AP ▼	Global/GB/Bedfont Lakes/B...or 1	...

Showing 2 of 2

Cancel

Back

Next

🏠

Catalyst Center

🔧 Design >

📜 Policy >

🔗 Provision >

📊 Assurance >

🔄 Workflows

🛠️ Tools >

📁 Platform >

📅 Activities >

📈 Reports

⚙️ System >

🗺️ Explore

NETWORK DEVICES

Inventory

Plug and Play

LAN Automation

Inventory Insights

SD-ACCESS

Zero-Trust Overview

Fabric Sites

Virtual Networks

Transits

SERVICES

Service Catalog

Cisco User Defined Network

Application Visibility

Stealthwatch Security

App Hosting for Switches

IoT Services

Umbrella

Site to Site VPN

AP Plug and Play: Bulk Add

The screenshot shows the 'Assign Configuration' step in the Cisco Catalyst Center 'Plug and Play' workflow. The breadcrumb trail is 'Provision / Network Devices / Plug and Play'. The workflow progress bar shows four steps: 1. Assign Site (completed), 2. Assign Configuration (current step), 3. Provision Templates, and 4. Summary.

A green success message states: 'AP Location will be configured as the assigned site as part of the provision during the claim process. To change this setting, go to [System -> Settings -> PnP AP Location](#). After the setting is updated, click [Refresh](#)'.

The 'Devices (2)' section contains a table with the following data:

Device Name	Serial Number	Product ID	Assigned Site	Configuration	Actions
AP-0001	FGL2649L5H6	CW9162I-E	Global/GB/Bedfont Lakes/B...or 1	RF Profile: TYPICAL	...
AP-0002	FGL2649L5MY	CW9162I-E	Global/GB/Bedfont Lakes/B...or 1	RF Profile: TYPICAL	...

At the bottom of the table, it says 'Showing 2 of 2'. Navigation buttons at the bottom right are 'Cancel', 'Back', and 'Next'.

AP Plug and Play: Bulk Add

Catalyst Center

Provision / Network Devices / Plug and Play

Assign Site Assign Configuration Provision Templates **4** Summary

Summary

Devices (2)

Search Table

Device Name	Serial Number	Product ID	Assigned Site	Configuration	Device Configuration
AP-0001	FGL2649L5H6	CW9162I-E	Global/GB/Bedfont Lakes/B...or 1	RF Profile: TYPICAL	Preview Configuration
AP-0002	FGL2649L5MY	CW9162I-E	Global/GB/Bedfont Lakes/B...or 1	RF Profile: TYPICAL	Preview Configuration

Showing 2 of 2

Cancel Back Claim

AP Plug and Play

Catalyst Center

Provision / Network Devices / Plug and Play

> Network Plug and Play Overview

Device Status: All (10) Unclaimed (2) Error (0) Provisioned (8)

Devices (2) Focus: All

Auto-refresh: 30 s

Search PnP devices

0 Selected Actions Add Devices

As of: Jan 24, 2024 5:56 PM Refresh

	#	Device Name	Serial Number	Product ID	Last Contact	State	Onboarding Progress	IP Address	MAC Address	Source	Image Version	Site	Smart Account
☐	1	AP-0001	FGL2649L5H6	CW9162I-E	Not Contacted	Planned	Device Claimed.	-	-	User	-	Global/GB/Bedfont Lakes/B...or 1	-
☐	2	AP-0002	FGL2649L5MY	CW9162I-E	Not Contacted	Planned	Device Claimed.	-	-	User	-	Global/GB/Bedfont Lakes/B...or 1	-

2 Record(s)

Show Records: 25 1 - 2

Catalyst Center

- Design
- Policy
- Provision
- Assurance
- Workflows
- Tools
- Platform
- Activities
- Reports
- System
- Explore

NETWORK DEVICES

- Inventory
- Plug and Play
- LAN Automation
- Inventory Insights

SD-ACCESS

- Zero-Trust Overview
- Fabric Sites
- Virtual Networks
- Transits

SERVICES

- Service Catalog
- Cisco User Defined Network
- Application Visibility
- Stealthwatch Security
- App Hosting for Switches
- IoT Services
- Umbrella
- Site to Site VPN

AP Plug and Play

Device Status: All (10) Unclaimed (0) Error (0) Provisioned (8)

Devices (2) Focus: All

Auto-refresh: 30 s

0 Selected Actions Add Devices

As of: Jan 24, 2024 6:00 PM Refresh

#	Device Name	Serial Number	Product ID	Last Contact	State	Onboarding Progress	IP Address	MAC Address	Source	Image Version	Site
1	AP-0001	FGL2649L5H6	CW9162I-E	Jan 24, 2024 6:00:30 PM	Onboarding	Executing Workflow	10.0.10.4	CC:9C:3E:F0:27:80	User	17.12.2.35	Global/GB/Bedfont Lakes/B...
2	AP-0002	FGL2649L5MY	CW9162I-E	Jan 24, 2024 6:00:28 PM	Onboarding	Executing Workflow	10.0.10.5	CC:9C:3E:F0:29:C0	User	17.12.2.35	Global/GB/Bedfont Lakes/B...

2 Record(s)

Show Records: 25 1 - 2

AP Plug and Play

The screenshot displays the Cisco Catalyst Center interface for configuring an Access Point (AP) using Plug and Play. The main view is titled "Network Plug and Play Overview" and shows a list of devices. A specific device, AP-0001 (10.0.10.4), is selected, and its configuration details are shown on the right.

Network Plug and Play Overview

Device Status: All (10) | Unclaimed (0) | Error (0) | Provisioned (8)

Devices (2) Focus: All

Search: CW9162I-E

0 Selected Actions Add Devices

#	Device Name	Serial Number	Product ID	Last Contact	State
1	AP-0001	FGL2649L5H6	CW9162I-E	Jan 24, 2024 6:00:30 PM	Onboarded
2	AP-0002	FGL2649L5MY	CW9162I-E	Jan 24, 2024 6:00:28 PM	Onboarded

AP-0001 (10.0.10.4)

Serial Number: FGL2649L5H6 Site: Global/GB/Bedfont Lakes/B...or 1 As of: a few seconds ago

Executing Workflow: Onboarding is in progress. Refresh

SUDI Not Supported

Status Day 0 Config Generated

Details History Configuration

> Template

Radio Frequency Profile

Radio Frequency Profile TYPICAL

Day-0 Configuration preview

Generated	Jan 24, 2024 5:53:19 PM
RFTagName	*TYPICAL*
policyTagName	*PT_Bedfo_Bldg9_Floor1_f9c71*
primaryWlcIP	*10.0.0.6*
primaryWlcName	*C9800-CL*
siteTagName	*Bedfont Lakes*

AP Plug and Play

Catalyst Center Provision / Inventory

GB

✓ All Routers Switches Wireless Controllers Access Points Sensors

Take a tour Export

Devices (1) Focus: Select

Click here to apply basic or advanced filters or view recently applied filters

0 Selected Tag Add Device Actions

As of: Jan 24, 2024 6:05 PM

	Device Name	IP Address	Vendor	Reachability	Manageability	Compliance	Site	Image Version	Last Updated	Serial Num
☐	C9800-CL.cclab.local	10.0.0.6	Cisco	Reachable	Managed Syncing...	Compliant	.../Bedfont Lakes/Bldg 9	17.12.2	11 minutes ago Latest Sync Details	9ZGO6GW

1 Record(s)

Show Records: 25 1 - 1

Catalyst Center

Design > NETWORK DEVICES > Inventory > Plug and Play > LAN Automation > Inventory Insights

Workflows > SD-ACCESS > Zero-Trust Overview > Fabric Sites > Virtual Networks > Transits

Tools > SERVICES > Service Catalog > Cisco User Defined Network > Application Visibility > Stealthwatch Security > App Hosting for Switches > IoT Services > Umbrella > Site to Site VPN

Platform > Reports > System > Explore

AP Plug and Play

The screenshot displays the Cisco Catalyst Center interface for the 'Network Plug and Play Overview'. The breadcrumb navigation shows 'Provision / Network Devices / Plug and Play'. The 'Device Status' summary indicates 10 All, 0 Unclaimed, 0 Error, and 10 Provisioned devices. The 'Devices (2)' section shows a search for 'CW9162I-E' and a table of two provisioned devices.

> Network Plug and Play Overview

Device Status: All (10) Unclaimed (0) Error (0) Provisioned (10)

Devices (2) Focus: All

Auto-refresh: 30 s

0 Selected Actions Add Devices

As of: Jan 24, 2024 6:06 PM Refresh

	#	Device Name	Serial Number	Product ID	Last Contact	State	Onboarding Progress	IP Address	MAC Address	Source	Image Version	Site
☐	1	AP-0001	FGL2649L5H6	CW9162I-E	Jan 24, 2024 6:03:53 PM	Provisioned	Provisioned	10.0.10.4	CC:9C:3E:F0:27:80	User	17.12.2.35	Global/GB/Bedfont Lakes/B...or 1
☐	2	AP-0002	FGL2649L5MY	CW9162I-E	Jan 24, 2024 6:03:49 PM	Provisioned	Provisioned	10.0.10.5	CC:9C:3E:F0:29:C0	User	17.12.2.35	Global/GB/Bedfont Lakes/B...or 1

2 Record(s)

Show Records: 25 1 - 2

AP Plug and Play

The screenshot displays the Cisco Catalyst Center interface, specifically the 'Plug and Play' configuration page for 'Access Points'. The interface is divided into several sections:

- Header:** Catalyst Center logo and navigation tabs: Provision / Inventory.
- Left Sidebar:** A list of 'DEVICE WORK ITEMS' with checkboxes for various status categories: Unreachable, Unassigned, Failed Provision, Non Compliant, Outdated Software Image, No Golden Image, Failed Image Prechecks, Under Maintenance, Security Advisories, and Marked for Replacement.
- Main Content Area:**
 - Navigation:** Tabs for All, Routers, Switches, Wireless Controllers, Access Points (selected), and Sensors.
 - Devices (3):** A table listing three devices with columns for Device Name, IP Address, Vendor, Reachability, Manageability, Compliance, Site, Image Version, Last Updated, and Serial Number.
 - Table Data:**

Device Name	IP Address	Vendor	Reachability	Manageability	Compliance	Site	Image Version	Last Updated	Serial Number
C9800-CL.cclab.local	10.0.0.6	Cisco	Reachable	Managed	Compliant	.../Bedfont Lakes/Bldg 9	17.12.2	a minute ago	9ZGO6GW
AP-0002	10.0.10.5	NA	Reachable	Managed	NA	.../Bldg 9/Floor 1	17.12.2.35	a minute ago	FGL2649L
AP-0001	10.0.10.4	NA	Reachable	Managed	NA	.../Bldg 9/Floor 1	17.12.2.35	a minute ago	FGL2649L
 - Footer:** '3 Record(s)' and 'Show Records: 25'.

What gets configured on Access Points?



for reference

- AP Name and Location
- AP Mode (Fabric, Local, Flex)
- Country code based on geographic location

The screenshot displays the 'Edit AP' configuration page in a web interface. The 'General' tab is active, showing fields for AP Name (AP-0001), Location (Global/GB/Bedford Lakes), Base Radio MAC (3891.b716.10e0), Ethernet MAC (cc9c.3ef0.2780), Admin Status (ENABLED), AP Mode (Local), Operation Status (Registered), Fabric Status (Disabled), CleanAir NSL Key, LED Settings (LED State: ENABLED, Brightness Level: 8), and Flash Settings (Flash State: DISABLED). The 'Tags' section shows Policy (PT_Bedfo_Bldg9...), Site (Bedford Lakes), and RF (TYPICAL). The 'Version' section lists Primary Software Version (17.12.2.35), Predownload Status (N/A), Predownload Version (N/A), Next Retry Time (N/A), Boot Version (1.1.2.4), IOS Version (17.12.2.35), and Mini IOS Version (0.0.0.0). The 'IP Config' section shows CAPWAP Preferred Mode (IPv4) and DHCP IPv4 Address (10.0.10.4). At the bottom, there are 'Cancel' and 'Update & Apply to Device' buttons.

What gets configured on Access Points?

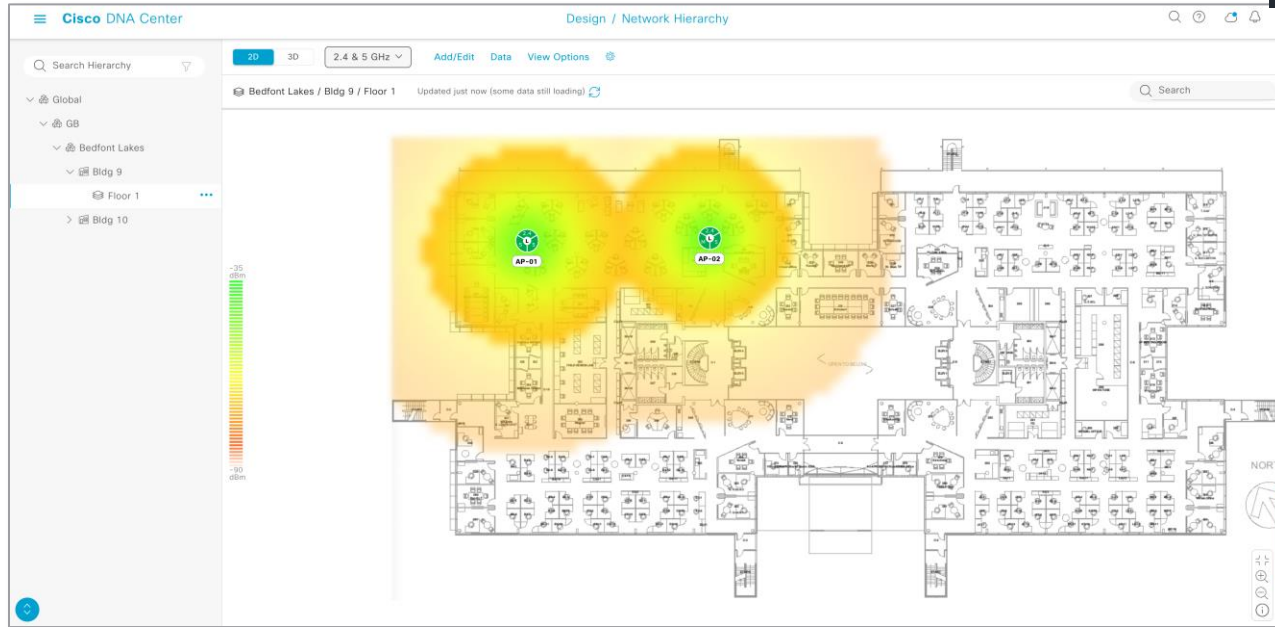


for reference

- AP Name and Location
- AP Mode (Fabric, Local, Flex)
- Country code based on geographic location
- Tags
 - Policy Tag
 - Site Profiles and Tags
 - RF Profiles and Tags
- best practice settings

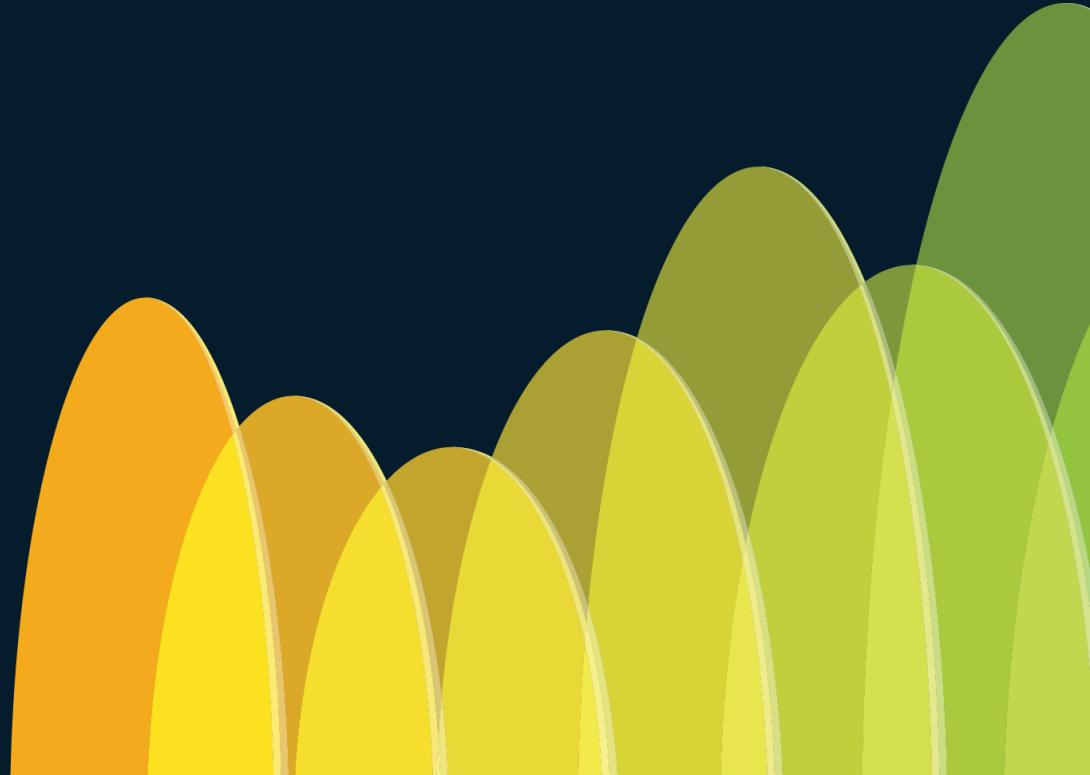
Wireless Maps

- Select Floor in Hierarchy
- Add/Edit → Access Points → Position



*View Options → Global Map Properties → Units → Feet/Meter

Software Image Management (SWIM)



Inventory

The screenshot displays the Cisco Catalyst Center Inventory page. The main view shows a list of devices under the 'Wireless Controllers' tab. A callout box highlights the 'WLC-9800-1.csslab.loc' device, which has a '1 alert' icon next to its 'Reachable' status. A large orange box with the text 'Check EoX Status' is overlaid on the device list. To the right, a detailed view of the selected device is shown, including its IP address (192.168.199.34), product family (Wireless Controller), and last scan time (Jan 10, 2023 3:00 AM). The 'Software' tab is active, showing a timeline of events: Announcement (Oct 1, 2022), End of Sale (Apr 1, 2023), Last Ship (Apr 1, 2023), End of Vulnerability / Security Support (Sep 30, 2024), and Last Date of Support (Mar 31, 2026). A '1 alert' icon is present next to the 'End of Sale' event. A 'Preview New Page' button is visible at the bottom right of the device details panel.

Global Provision / Inventory

CSS_DE_LAB Provision / Inventory

DEVICES (2) Focus: Inventory

Filter devices

0 Selected **Add Device** Tag Actions

Device Name	IP Address	Device Family	Reachability	EoX Status
S4-AP-1	10.4.255.2	Unified AP	Reachable	Not Scanned
WLC-9800-1.csslab.loc	192.168.199.34	Wireless Controller	Reachable	1 alert

2 Records

WLC-9800-1.csslab.loc

IP Address: 192.168.199.34
Product Family: Wireless Controller
Last Scan: Jan 10, 2023 3:00 AM

Hardware **Software** **Module**

Announcement
Oct 1, 2022

End of Sale
Apr 1, 2023

Last Ship
Apr 1, 2023

End of Vulnerability / Security Support
Sep 30, 2024

Last Date of Support
Mar 31, 2026

Image Upgrade

View Device Details

Catalyst Center

☆

🔍

🟢

🕒

🔔

|

👤 admin

▼

All Devices / WLC-9800-1.csslab.loc

🔍 WLC-9800-1.csslab.loc

Run Commands

View 360

Last Updated: 3 minutes ago

🟢 Reachable

|

🟢 Managed

|

IP Address: 192.168.199.34

|

Device Model: Cisco Catalyst 9800-CL Wireless Controller for Cloud

|

Device Role: ACCESS

|

Uptime: 18 days 1 hr 12 mins

|

Site: Global/Belgium/CSS_DE_LAB/SDA_SITE4

DETAILS

Interfaces >

System ▼

Hardware & Software

User Defined Fields

Browse Configurations >

Wireless Info

Mobility

SECURITY

Advisories

FIELD NOTICES

Field Notices

Potential Field Notices

COMPLIANCE

Hardware

Device Type	Wireless Controller	Series	Cisco Catalyst 9800 Wireless Controllers for Cloud
Platform	C9800-CL-K9	Serial Number	9G0W2CYU049
MAC Address	00:1e:49:06:54:ff	Vendor	Cisco

Software

Image	C9800-CL[17.06.04.0.4912]	Version	17.6.4
-------	---------------------------	---------	--------

Operational Summary

Uptime	18 days 1 hr 12 mins	Provision Status	Success 🟡
Last Provisioned	Jan 19, 2024 1:50 PM	Resync Interval	1 hour
Last Synced	4 minutes ago		

Catalyst Center

Design >

Policy >

Provision >

Assurance >

Workflows >

Tools >

Platform >

Activities >

Reports >

System >

Explore

NETWORK DEVICES

Inventory

Plug and Play

LAN Automation

Inventory Insights

SD-ACCESS

Zero-Trust Overview

Fabric Sites

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SERVICES

Service Catalog

Cisco User Defined Network

Application Visibility

Stealthwatch Security

IoT Services

App Hosting for Switches

Umbrella

Site to Site VPN

CISCO *Live!*

#CiscoLiveAPJC

BRKOPS-2402

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View Device Details

Catalyst Center

All Devices / WLC-9800-1.csslab.loc

WLC-9800-1.csslab.loc [Run Commands](#) [View 360](#) Last Updated: 3 minutes ago

Reachable Managed IP Address: 192.168.199.34 Device Model: Cisco Catalyst 9800-CL Wireless Controller for Cloud Device Role: ACCESS Uptime: 18 days 1 hr 12 mins Site: Global/Belgium/CSS_DE_LAB/SDA_SITE4

Compliance Summary [View Preference for Acknowledged Violations](#)

No events detected to trigger compliance check [Run Compliance Check](#)

- Network Settings** (0 Open Violations)
Compliant since Jan 12th, 2024, 02:03:52 PM
Compliance last run on: Jan 23rd, 2024, 06:08:09 PM
- EoX - End of Life** (0 Open Violations)
Compliance last run on: Jan 29th, 2024, 08:27:00 AM
Software: ▲ Compliant
Hardware: ● Compliant
Module: ● Compliant
- Startup vs Running Configuration** (0 Open Violations)
Compliance last run on: Jan 23rd, 2024, 06:08:08 PM
271 days since in sync
Lines added: 0
Lines removed: 0
Lines modified: 0
- Network Profiles** (0 Open Violations)
Compliant since Jan 11th, 2024, 06:20:26 PM
Compliance last run on: Jan 23rd, 2024, 06:08:22 PM
- Software Image** (1 Non-Compliant)
Non-Compliant since Jan 29th, 2023, 03:43:05 PM
Compliance last run on: Jan 29th, 2024, 02:01:03 AM
17.10.01 Golden Image Version
Running Version: **17.6.4**
- Critical Security Advisories** (1 Non-Compliant)
Non-Compliant since Jan 15th, 2024, 06:46:06 AM
Compliance last run on: Jan 29th, 2024, 01:49:34 PM

View Device Details

The screenshots illustrate the 'View Device Details' process in Cisco Catalyst Center. The top screenshot shows the main device overview for WLC-9800-1.csslab.loc, including its status (Reachable), IP address (192.168.199.34), and device model (Cisco Catalyst 9800-CL Wireless Controller for Cloud). The middle screenshot shows the left-hand navigation menu with 'Advisories' selected. The bottom screenshot shows the 'Advisories' page with a table of security advisories.

Advisories (7) [Manage All](#)

Search Table

0 Selected [Suppress Advisory](#)

☐	Advisory ID	Advisory Title	CVSS Score	Impact	Fixed Versions	CVE	Custom Match Pattern	Known Since	Last Updated
☐	cisco-sa-webui-cmdij-FzZAxAY	Cisco IOS XE Software Web UI Command Injection Vulnerability	8.8	High	17.6.6	CVE-2023-20231	Add match pattern	Sep 27, 2023	Sep 27, 2023
☐	cisco-sa-iosxe-webui-privesc-j22SaA4z	Multiple Vulnerabilities in Cisco IOS XE Software Web UI Feature	10	Critical	17.6.5a 17.6.6a	CVE-2023-20198 CVE-2023-20273	Add match pattern	Oct 16, 2023	Nov 1, 2023
☐	cisco-sa-mire-H93FswRz	Cisco IOS XE Software for ASR 1000 Series Aggregation Services Routers IPv6 Multicast Denial of Service Vulnerability	8.6	High	17.6.6	CVE-2023-20187	Add match pattern	Sep 27, 2023	Sep 27, 2023

Security Advisories

ADVISORIES

1 Critical 15 High

SCAN CRITERIA

20 Software Version 0 Custom 0 Advanced

Re-scan Network

Settings

Devices

Advisories

SUMMARY

> Scan Criteria

> Scan Status

> Device Family (5)

> Sites (32)

Devices (32)

Click here to apply basic or advanced filters or view recently applied filters

0 Selected Tag

As of: Jan 29, 2024 2:00 PM

	Device Name	IP Address	Advisories	Platform	Image Version	Last Scanned	Scan Status	Scan Criteria	Site
☐	S1-IN1.csslab.loc NDG:Location#All Locat...	172.16.1.36	14	C9300-24T	17.6.3	11 minutes ago	Success	Software Version	.../SDA_SITE1/FI
☐	csr1000v-lab1.csslab.loc	192.168.201.101	8	CSR1000V	17.3.6	11 minutes ago	Success	Software Version	.../CSS_DE_LAB/
☐	WCL-9800-nplus1.csslab.loc	192.168.199.138	7	C9800-CL-K9	17.6.4	11 minutes ago	Success	Software Version	.../CSS_DE_LAB/
☐	WLC-9800-1.csslab.loc	192.168.199.34	7	C9800-CL-K9	17.6.4	11 minutes ago	Success	Software Version	.../CSS_DE_LAB/
☐	S1-BN2.csslab.loc	172.16.1.112	7	C9500-48Y4C	17.6.4	10 minutes ago	Success	Software Version	.../SDA_SITE1/FI
☐	WLC-9800-2.csslab.loc	192.168.199.35	5	C9800-CL-K9, C9800-CL-K9	17.10.1	11 minutes ago	Success	Software Version	.../CSS_DE_LAB/
☐	S4-FE01.csslab.loc main_config	172.16.4.111	4	C9300-24P	17.6.5	11 minutes ago	Success	Software Version	.../CSS_DE_LAB/
☐	CSS-DE-NAT.csslab.loc main_config	192.168.255.33	3	C8300-1N1S-6T	17.9.3a	11 minutes ago	Success	Software Version	.../CSS_DE_LAB/

Catalyst Center

Design

Policy

Provision

Assurance

Workflows

Tools

Platform

Activities

Reports

System

Explore

Discovery

Topology

Command Runner

License Manager

Template Hub

Model Config Editor

Wide Area Bonjour

Security Advisories

Field Notices

Network Reasoner

Network Bug Identifier

Security Advisories

Catalyst Center Tools / Security Advisories / Overview

ADVISORIES: 1 Critical, 15 High

SCAN CRITERIA: 20 Software Version, 0 Custom, 0 Advanced

Devices (32)

ADVISORIES: 1 Critical, 15 High

SCAN CRITERIA: 20 Software Version, 0 Custom, 0 Advanced

WLC-9800-1.csslab.loc (192.168.199.34)

Reachable Uptime: 18 days 1 hr 22 mins Device Role: ACCESS

Run Commands View 360 Last updated: 12 minutes ago Refresh

Details Advisories

Advisories (7) Active Suppressed

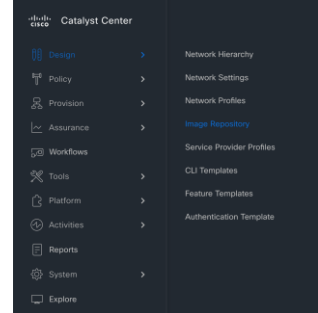
Search Table

0 Selected Suppress Advisory

Advisory ID	Advisory Title	CVSS Score	Impact	Fixed Versions	CVE	Custom Match Pattern	Know
☐ cisco-sa-webui-cmdij-FzZAeXAy	Cisco IOS XE Software Web UI Command Injection Vulnerability	8.8	High	17.6.6	CVE-2023-20231	Add match pattern	Sep 2023
☐ cisco-sa-iosxe-webui-privesc-j22SaA4z	Multiple Vulnerabilities in Cisco IOS XE Software Web UI Feature	10	Critical	17.6.5a, 17.6.6a	CVE-2023-20198, CVE-2023-20273	Add match pattern	Oct 1
☐	Cisco IOS XE Software for ASR 1000 Series						

SWIM – Software Image Management

- Import Images from Cisco CCO Repository
 - CCO Credentials & Accept EULA
- Mark Version as Golden Image
- Golden Image will be offered during PnP



Catalyst Center

Design / Image Repository / Summary

Global

All Routers Switches **Wireless Controllers** Security and VPN Sensors Virtual Devices

SUMMARY

2	6	0
Device Families	Devices	Device Families Without Golden Image

TOTAL IMAGES

5	18	2
Running	Imported	Golden

ADVISORIES

3	12
Critical On Running Images	High On Running Images

Image Families

Take a Tour Cisco.com ID asazhin (Not me?) Sync Updates

Filter Image Families

Update Devices Import Image Show Tasks As of: Jan 29, 2024 2:05 PM

Family Name	Devices	Images	Advisories		Images Marked Golden
			Critical	High	
Imported Images	N/A	18	N/A	N/A	N/A
Cisco Catalyst 9800-40 Wireless Controller	1	1	1	2	1
Cisco Catalyst 9800-CL Wireless Controller for Cloud	5	4	2	10	1

Image Repository

The screenshot displays the Cisco Catalyst Center interface, specifically the Image Repository section. The breadcrumb navigation shows the path: Design / Image Repository / Summary. The left sidebar contains a navigation menu with options like Global, SUMMARY, Device Family, Image Family, and a search filter. The main content area is titled 'Cisco Catalyst 9800-40 Wireless Controller' and shows a list of 7 images. The table columns include Image Name, Version, Devices, Image Status, Advisories (Critical, High), and Device Roles & Tags. The first image is 'C9800-40-universalk9_wlc.17.13.01.SPA.bin' with version 'IOSXE-17.13.1' and 0 devices. The second image is 'C9800-40-universalk9_wlc.17.06.06a.SPA.bin' with version 'Bengaluru-17.6.6a' and 0 devices. The third image is 'C9800-40-universalk9_wlc.17.09.04a.SPA.bin' with version '17.09.04a.0.6' and 0 devices, marked as 'Verified' and 'Suggested'. The fourth image is 'C9800-40-universalk9_wlc.17.03.08a.SPA.bin' with version 'Amsterdam-17.3.8a' and 0 devices. The fifth image is 'C9800-40-universalk9_wlc.17.09.03.SPA.bin' with version '17.09.03.0.4111' and 0 devices, marked as 'Verified'. The table also shows a 'Show Tasks' button and a 'Cisco.com ID' field with the value 'cgauer (Not me?)'. The bottom right corner indicates '7 Record(s)' and 'Show Records: 25'.

Image Name	Version	Devices	Image Status	Advisories	Device Roles & Tags	
				Critical	High	
C9800-40-universalk9_wlc.17.13.01.SPA.bin Latest	IOSXE-17.13.1 Add On (N/A)	0	Download	1	4	1
C9800-40-universalk9_wlc.17.06.06a.SPA.bin Latest	Bengaluru-17.6.6a Add On (N/A)	0	Download	0	0	1
C9800-40-universalk9_wlc.17.09.04a.SPA.bin Verified Suggested	17.09.04a.0.6 Add On (1)	0	Star	0	0	Role: All
C9800-40-universalk9_wlc.17.03.08a.SPA.bin Latest	Amsterdam-17.3.8a Add On (N/A)	0	Download	0	0	1
C9800-40-universalk9_wlc.17.09.03.SPA.bin Verified	17.09.03.0.4111 Add On (N/A)	0	Star	1	2	1

Image Upgrade Steps

The screenshot shows the Cisco Catalyst Center interface. The top navigation bar includes 'Provision / Inventory' and a user profile 'admin'. Below the navigation bar, there are tabs for 'All', 'Routers', 'Switches', 'Wireless Controllers', 'Access Points', and 'Sensors'. The 'Wireless Controllers' tab is active. A search bar is present with the text 'Click here to apply basic or advanced filters or view recently applied filters'. Below the search bar, there are links for 'Add Device', 'Image Update', 'Image Update Status', and 'Actions'. The main table displays a list of devices. The first device is 'AP01-1EE0' with IP '10.0.10.8' and status 'Reachable'. The second device is 'C9800-CL-2.homelab.local' with IP '10.0.0.7' and status 'Reachable'. The 'Software Image' column for the second device shows 'C9800-CL[17.09.04a.0.6]' with a green dot and the text 'Needs Update'. The 'OS Update Status' column for the second device shows 'Distribution Pending'. The 'Provisioning Status' column for the second device shows 'Success See Details'. The 'Manageability' column for the second device shows 'Managed'. The 'Device Series' column for the second device shows 'Cisco Catalyst 9800 Wireless C'. The bottom of the page shows '2 Record(s)' and 'Show Records: 25 1 - 2'.

Device Name	IP Address	Device Family	Reachability	Software Image	OS Update Status	Site	Provisioning Status	Manageability	Device Series
AP01-1EE0	10.0.10.8	Unified AP	Reachable	NA	NA	.../Home/Floor 3	Success See Details	Managed	Cisco Catalyst 9120AXI Series I
C9800-CL-2.homelab.local	10.0.0.7	Wireless Controller	Reachable	C9800-CL[17.09.04a.0.6] Needs Update	Distribution Pending	.../Munich/Home	Success See Details	Managed	Cisco Catalyst 9800 Wireless C

The sidebar menu includes the following items:

- Design
- Policy
- Provision
- Assurance
- Workflows
- Tools
- Platform
- Activities
- Reports
- System
- Explore

NETWORK DEVICES

- Inventory
- Plug and Play
- LAN Automation
- Inventory Insights

SD-WAN

- Zero-Trust Overview
- Fabric Sites
- Virtual Networks
- Transits

SERVICES

- Service Catalog
- Cisco User Defined Network
- Application Visibility
- Stealthwatch Security
- IoT Services
- App Hosting for Switches
- Umbrella
- Site to Site VPN

Image Upgrade Steps

The screenshot displays the Cisco Catalyst Center interface. On the left, the 'Devices (2)' list shows two devices: AP01-1EE0 (Unified AP) and C9800-CL-2.homelab.local (Wireless Controller). The main panel shows the 'Image Update Readiness Check' for the selected device C9800-CL-2.homelab.local. The check results table indicates that most checks passed, but there are two warnings related to service entitlement and file transfer.

Image Update Readiness Check

DEVICE DETAILS

Device: C9800-CL-2.homelab.local (10.0.0.7)
Running Image: C9800-CL[17.09.04a.0.6]
Golden Image: C9800-CL-universalk9.17.12.02.SPA.bin
Reboot Required: Yes

Readiness Checks Results [Re-Execute Checks](#) [Export](#) As of: Jan 29, 2024 4:05 PM

Check Type	Description	Status	Last Checked
Image Version Support	The golden image is applicable to the device	Success	Jan 29, 2024 1:49 PM
Flash check	Flash check: SUCCESS Expected: 1223 MB Available Free space is: 9219 MB	Success	Jan 29, 2024 12:18 PM
Service Entitlement Check	Could not validate license service contract	Warning	Jan 29, 2024 12:18 PM
Startup config check	Startup configuration exist for this device	Success	Jan 29, 2024 12:18 PM
Config register check	Config-register verified successfully Expected: 0x2102,0x102 Actual: 0x2102 Action: No action required	Success	Jan 29, 2024 12:18 PM
File Transfer Check	HTTPS is NOT reachable / SCP is reachable Expected: Cisco DNA Center certificate has to be installed successfully and Device should be able to reach DNAC (192.168.199.100) via HTTPS. Action: Reinstall Cisco DNA Center certificate. DNAC (192.168.199.100) certificate installed automatically on device when device is assigned to a Site, please ensure device is assigned to a site for HTTPS transfer to work. Alternatively DNAC	Warning	Jan 29, 2024 12:18 PM

Image Upgrade Steps

The screenshot displays the Cisco Catalyst Center interface for managing network devices. The main view is titled "Provision / Inventory" and shows a list of devices under the "Germany" site. Two devices are selected: "AP01-1EE0" (Unified AP) and "C9800-CL-2.homelab.local" (Wireless Controller). The "Image Update" button is highlighted in the top toolbar. A dropdown menu is open, showing the "Image Update" option selected. The table below lists the devices and their details.

Device Name	IP Address	Device Family	Software Image	OS Update Status	Site	Provisioning Status	Manageability	Device Series
AP01-1EE0	10.0.10.8	Unified AP	Image Update	...	.../Home/Floor 3	Success See Details	Managed	Cisco Catalyst 9120AXI Series I
C9800-CL-2.homelab.local	10.0.0.7	Wireless Cont	Image Update	...	.../Munich/Home	Success See Details	Managed	Cisco Catalyst 9800 Wireless C

Image Upgrade Steps

Catalyst Center

Image Update

☆ 🔍 🔄 ⌚ 🔔 | 👤 admin ▾

Software Distribution Checks

You can enable prechecks and postchecks for your software distribution and determine the check order. If you don't see a check, you can [add a custom check](#).

2 PRE AND POST CHECKS

⋮

Weak Crypto Check

●

SYSTEM

PRE

⋮

Flash check

●

SYSTEM

PRE

Exit

All changes saved

Back

Next

Catalyst Center

Design >

Policy >

Provision >

Assurance >

Workflows >

Tools >

Platform >

Activities >

Reports

System >

Explore

NETWORK DEVICES

Inventory

Plug and Play

LAN Automation

Inventory Insights

TO ACCESS

Zero-Trust Overview

Fabric Sites

Virtual Networks

Transits

SERVICES

Service Catalog

Cisco User Defined Network

Application Visibility

Stealthwatch Security

App Hosting for Switches

IoT Services

Umbrella

Site to Site VPN

Image Upgrade Steps

The screenshot displays the Cisco Catalyst Center interface for the 'Image Update' process. The main heading is 'Software Activation Checks'. Below this, a paragraph explains that users can enable prechecks and postchecks for software activation and determine the check order. A link 'add a custom check' is provided. A 'Skip Activation' toggle switch is shown in the 'Off' position. Under the heading '3 PRE AND POST CHECKS', there are three items, each with a status indicator (blue dot) and a set of toggle switches:

- Weak Crypto Check: SYSTEM (Off), PRE (On)
- Config register check: SYSTEM (Off), PRE (On)
- Startup config check: SYSTEM (Off), PRE (On), POST (On)

At the bottom of the page, there is an 'Exit' button with the text 'All changes saved' and a 'Next' button.

The sidebar menu on the right side of the interface lists various navigation options:

- Design >
- Policy >
- Provision >
- Assurance >
- Workflows >
- Tools >
- Platform >
- Activities >
- Reports >
- System >
- Explore

Under the 'NETWORK DEVICES' section, there is a list of links: Inventory, Plug and Play, LAN Automation, Inventory Insights, Zero-Trust Overview, Fabric Sites, Virtual Networks, Transits, and Site-to-Site VPN.

Image Upgrade Steps

The screenshot displays the Cisco Catalyst Center 'Image Update' configuration page. The interface is divided into a left sidebar with navigation options (Design, Policy, Provision, Assurance, Workflows, Tools, Platform, Activities, Reports, System, Explore) and a main content area. The main content area is titled 'Image Update' and shows the 'Schedule Task and Clean Up' step. This step includes a description: 'You can schedule software distribution, activation, and cleanup of device memory.' Below this, there are two main sections: 'Software Distribution' and 'Software Activation'. The 'Software Distribution' section has a 'Now' button and a 'Later' button (selected), with a 'Start Date/Time' of 'Aug 28, 2024' at '3:21 PM' and a 'Time Zone' of 'Australia/Sydney'. The 'Software Activation' section has a 'Now' button and a 'Later' button (selected), with a 'Start Date/Time' of 'Aug 29, 2024' at '1:21 AM' and a 'Time Zone' of 'Australia/Sydney'. Below these sections, there is a section titled 'INITIATE FLASH CLEANUP AFTER ACTIVATION' with a description: 'Flash clean up will store only the running image and remove all previous images saved on the device.' A checkbox labeled 'Initiate Flash Cleanup After Activation' is present and is highlighted with a yellow box. At the bottom of the page, there are 'Exit', 'Back', and 'Next' buttons.

Schedule Task and Clean Up

You can schedule software distribution, activation, and cleanup of device memory.

The time zone of the site to which the device belongs will be used as the default site time zone.

Software Distribution

☐ Now ☒ Later

Start Date/Time
Aug 28, 2024

3:21 PM

Time Zone
Australia/Sydney

Software Activation

After Distribution ☒

☐ Now ☒ Later

Start Date/Time
Aug 29, 2024

1:21 AM

Time Zone
Australia/Sydney

INITIATE FLASH CLEANUP AFTER ACTIVATION

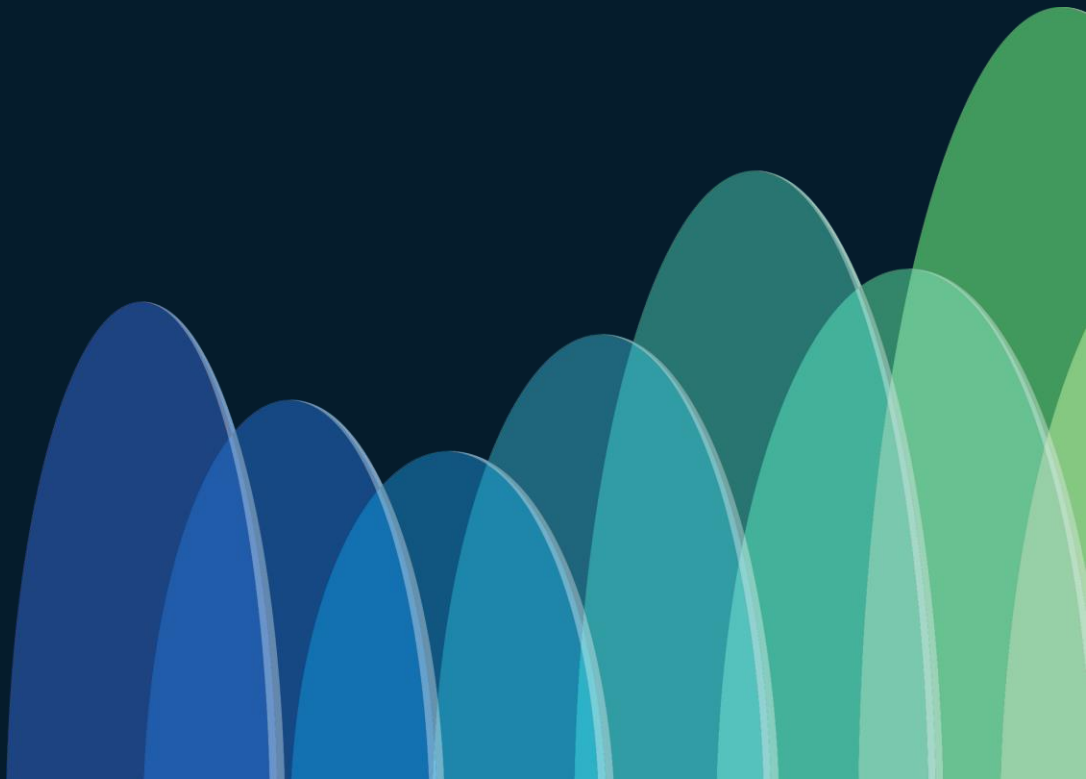
Flash clean up will store only the running image and remove all previous images saved on the device.

☐ Initiate Flash Cleanup After Activation

[Exit](#) All changes saved

[Back](#) [Next](#)

Day-N Operations



Workflows

Catalyst Center Workflows

Library [Choose An Intent](#)

- Configure Cisco UDN**
Configure Cisco User Defined Network which enables users to define their own personal network in a shared Wireless network.
Wireless
- Umbrella Deployment**
Configure Cisco Umbrella on network elements, which send DNS queries for Umbrella to enforce security/content policies.
Wireless Wired
- Create Sensor Test**
Build a wireless test template for monitoring real-world client experiences.
Wireless
- Replace Device**
Replace your device in a few quick easy steps.
Wired Wireless
- Access Point Refresh**
Replace Your Access Points with New ones.
Wireless
- Enable IoT Services**
Deploy IoT apps like Zigbee, BLE on Access Points.
Wireless
- Configure Access Points**
Configure AP and Radio Parameters.
Wireless
- Configure RLAN**
Configure Remote LAN Ports on Access Points.
Wireless
- Configure AI-Enhanced RRM**
Deploy AI-Enhanced RRM with or without provisioning your wireless controllers and access points.
Wireless
- Learn Device Configuration (BETA)**
Learn working configurations from a WLC to create reusable design entities in Catalyst Center.
Wireless
- Provision Template**
Provision templates directly to devices.
Wired Wireless
- Create Allowed AP List**
This workflow is for security / network admin to process bulk update of allowed list of selected rogue access point MAC addresses.
Wireless
- Create Allowed Vendor List**
Create a list of allowed vendors, so that Rogue Threats from these vendors are not marked as High Threats.
Wireless
- Create a Rogue Rule**
This workflow is for creating custom rogue rule.
Wireless
2 Dependent Workflows
- Create Rogue Rule Profile**
This workflow is for creating a Rogue Rule Profile.
Wireless
2 Dependent Workflows
- Create an aWIPS Profile**
This workflow is for security / network admin to create an aWIPS Profiles.
Wireless
2 Dependent Workflows
- Assign an aWIPS Profile**
This workflow is for security / network admin to assign an aWIPS Profiles to Devices.
Wireless
2 Dependent Workflows
- Create IP & URL-Based Access Control Policy**
Create IP-based and/or URL-based post-auth access control list for your network.
Wireless

Configure Access Points

 Catalyst Center

Configure Access Points

☆ 🔍 🌐 ⓘ 🔔 | 👤 Demo ▾

How do you want to configure APs?

Choose how you want to configure the AP and Radio parameters.

Configure AP And Radio Parameters ☒

Schedule Recurring Events For AP And Radio Parameters ☐

Configure AP Parameters Using Existing Templates. ☐

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.

You can use existing templates for AP configuration.

☐ Select All Steps

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

Create and Save a Reusable Template for Selected Configuration(s)

☐ Create Template

[Exit](#)[Review](#)[Back](#)[Next](#)

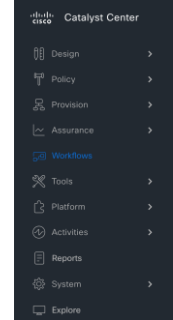
Configure Access Points

Configure AP Parameters

Select parameters to configure. These parameters will be applied to all the selected APs.

☐ Admin Status <div>Enable Disable</div>	☒ AP LED Status <div>Enable Disable</div>
☐ AP Mode ⓘ Select AP Mode	☐ LED Brightness Level ⓘ Select Brightness Level 4
☐ AP Location ⓘ ☐ Use currently assigned site location ⓘ Enter Location	☐ AP Failover Priority Select AP Failover Priority
CleanAir Pro / CleanAir / Spectrum Intelligence ⓘ ☐ 2.4 GHz Radio Band <div>Enable Disable</div> ☐ 5 GHz Radio Band <div>Enable Disable</div> ☐ 6 GHz Radio Band	☐ High Availability ⓘ Select Primary Controller Name Inherit from site / Clear Select Secondary Controller Name Inherit from site / Clear Select Tertiary Controller Name Clear Primary Controller IP Address

[Exit](#) All changes saved Review Back Next



Configure Access Points

Configure Dual-Band (XOR) Radio Parameters

You can configure Dual-Band (XOR) radio on Access Points with series 2800, 3800, 4800, 9120, 9166, IW9167EH, IW9165E and IW9165DH from selected AP list.

Applicable APs: 1 [View Devices](#)

☒ **Admin Status**

☐ **Radio Role Assignment**

Radio Band

☐ 2.4 GHz ☒ 5 GHz ☐ 6 GHz

☐ **Power Assignment**

Select Custom Power

☐ **Channel Assignment**

Select Custom Channel

☐ **Antenna Gain**

Select Antenna

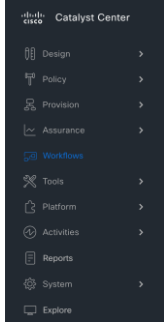
Antenna Gain (in dBi) (for Antenna-Other)

☐ **Antenna Cable**

Select Antenna Cable

Cable Loss (in dBi) (for Cable-Other)

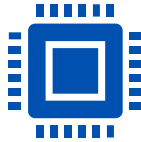
[Exit](#) [Review](#) [Back](#) [Next](#)



Wrapping things up



Scale and
standardise your
wireless
deployments



Onboard
Wireless
Controllers, AP's
effortlessly with
PnP



Manage Day N
operations &
compliance to
ensure reliability



Shall we mention
SDA? API's?

Meet the Expert

Wednesday 9:30 – 11:30 in World of Solutions



Keynote Deep Dives

Wednesday
10:30am – 11:30am



Experiences Amplified:
How AI Can Fuel
Better Employee
and Customer
Experiences

Level 1
Room 106



Smart, Secure,
Seamless:
Transforming
Experiences with
Next-Generation
Networking

Level 2
Room 204



Harness a Bold
New Era:
Transform Data
Centre and
Service Provider
Connectivity

Level 2
Room 203



Securing User to
Application and
Everything in
Between

Level 2
Melbourne Room 2



Unlocking
Digital Resilience
through Unified
Observability

The HUB
Centre Stage

Complete Your Session Evaluations



Complete a minimum of 4 session surveys and the Overall Event Survey to claim a **Cisco Live T-Shirt**.



Complete your surveys in the **Cisco Live mobile app**.



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- Book your one-on-one Meet the Expert meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand



Thank you



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