

Configuring URWB Operation Mode

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Configuring URWB Operation Mode

Catalyst Industrial Wireless access points support multiple wireless technologies, such as Catalyst Wi-Fi (AP), Cisco Ultra-Reliable Wireless Backhaul (URWB), and Workgroup Bridge (WGB). The modes supported vary by specific access point.

The access point OS supports two different software images: Catalyst Wi-Fi (AP) and Unified Industrial Wireless (UIW). Both URWB and WGB are part of the UIW software. The access point mode is determined at boot time based on the mode the access point is configured to operate in.

Determining from CLI

The access point OS supports two different software images: Catalyst Wi-Fi (AP) and UIW. Use the following show command to determine which software is running and look for the indicated platform code:

```
Device# show version
Cisco AP Software, (ap1g6j), C9167, RELEASE SOFTWARE
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2022 by Cisco Systems, Inc.
Compiled Thu Aug 18 01:01:29 PDT 2022
ROM: Bootstrap program is U-Boot boot loader
BOOTLDR: U-Boot boot loader Version 2022010100
APFC58. 9A16.E464 uptime is 1 days, 3 hours, 58 minutes
Last reload time : Wed Sep 7 11:17:00 UTC 2022
Last reload reason: reload command
```

If the show version displays ap1g6a or ap1g6b, it means that the access point OS is running. If the show version displays ap1g6j or ap1g6m, it means the UIW software is running.

To check if the access point is running in URWB mode, use the following CLI command:

Device# show iotod-iw status

If the command exists, then the access point is running in URWB mode, otherwise the access point is running in WGB mode.

Reset Button Settings

The following reset actions are performed in the URWB mode when the LED turns to blinking red (after the boot loader gets the reset signal). Ensure you to press the device's reset button before the device is powering on.

- If you press the reset button for < 20 seconds, it clears the existing configuration.
- If you press the reset button for > 20 seconds and < 60 seconds, it triggers the factory reset.
- If you press the reset button for > 60 seconds, it does not clear the configuration.

Configuring Image Conversion

To convert a Catalyst IW9167E access point either from Wi-Fi mode (CAPWAP AP) to URWB mode or from URWB mode to Wi-Fi mode (CAPWAP AP), follow these steps:

1. To convert from CAPWAP to URWB mode or from WGB/uWGB to URWB mode, use the following CLI command. The access point then reboots and starts up in URWB mode.

configure boot mode urwb

2. To convert from URWB to CAPWAP mode or from WGB/uWGB to CAPWAP mode, use the following CLI command. The access point then reboots and starts up in CAPWAP mode.

```
configure boot mode capwap
```

3. To convert from CAPWAP to WGB/uWGB mode or from URWB to WGB/uWGB mode, use the following CLI command:

configure boot mode wgb

```
Note
```

Image conversion performs a full factory reset which completely erases the configuration and data.

Instructions to Access the GUI

To access the Web UI (Web User Interface), use the following procedure:

 To access a Web UI, open the web browser and enter the following URL: https://<IP address of unit>/ The IW9167E or IW9165 Configurator window appears.

ULTRA RELIABLE WIRELESS BACKHAUL	Cisco URWB IW9167EH Configurator 5.21.201.112 - MESH END MODE
	Login
Usernam Enable Passwoi	re:
Show passwo	rd:
	Login
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- 2. To access the configuration page, use the credentials as follows: Username and Enable password.
- 3. Once you successfully log into the GUI, the URWB configurator displays:

ULTRA RELIABLE WIRELESS BACKHAUL	Cisco URWB IW91 5.21.201.72 - ME	67EH Configurator SH END MODE	
IOTOD IW Offline	GENERAL MODE		
FM-QUADRO	Genera	I Mode	
GENERAL SETTINGS - general mode	Select MESH POINT mode If you are attaching on IP edge device (i.e. network camera, encoder; etc.) to this Cisco Catalyst IW9167E Heavy Duty Access Point or If you are using this unit as a relay point in the mesh network.		
- wireless radio		 mesh point 	
- antenna alignment and stats	Mode:	O mesh end	
NETWORK CONTROL		⊖ gateway	
- advanced tools			
ADVANCED SETTINGS	Radio-off:		
- advanced radio settings		0	
- static routes	LAN Parameters		
- allowlist / blocklist			
- multicast	Local IP:	10.115.11.117	
- snmp			
- radius	Local Netmask:	255.255.255.0	
- ntp	D.(10 445 44 4	
- I2tp configuration	Default Gateway:	10.115.11.1	
- vlan settings	Local Dns 1:	8.8.8.8	
- Fluidity			
- misc settings	Local Dns 2:		
- smart license			
MANAGEMENT SETTINGS			
- remote access	Reset	Save	
- firmware upgrade			
- status			
- configuration settings			
- reset factory default			
- reboot			
- logout			
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URWB Catalyst IW9167E Configuration from GUI

The following image shows the configuration of the Catalyst IW9167E configurator:

ULTRA RELIABLE WIRELESS BACKHAUL	Cisco URWB IW9167EH Configurator 5.21.201.72 - MESH END MODE		
OTOD IW Offline	GENERAL MODE		
M-QUADRO	General Mode		
SENERAL SETTINGS	Select MESH POINT mode if you are attaching an IP edge device (i.e. network camera, encoder, etc.) to this Clicco Catalyst W9167E Heavy Duty Access Point or if you are using this unit as a relay point in the mesh network.		
wireless radio	 mesh point 		
antenna alignment and stats	Mode: O mesh end		
IETWORK CONTROL	⊖ gateway		
advanced tools			
DVANCED SETTINGS	Barlio.off:		
advanced radio settings			
static routes	LAN Parameters		
allowlist / blocklist			
multicast	Local IP: 10.115.11.117		
snmp			
radius	Local Netmask: 255.255.255.0		
ntp			
I2tp configuration	Default Gateway: 10.115.11.1		
vlan settings	Local Dns 1: 8888		
Fluidity			
misc settings	Local Dns 2:		
smart license			
IANAGEMENT SETTINGS			
remote access	Reset Save		
firmware upgrade			
status			
configuration settings			
reset factory default			
reboot			
logout			

Committing CLI Configuration

To save the current or running configuration settings to local storage or memory, type write CLI command. The modified value is in the cache configuration file, once the write command is entered, re-boot the device to take effect of the current configuration. To make the configuration effective, use the following CLI commands:

```
Device# write
or
Device# wr
write or wr: commit the current configuration settings to memory.
Device# reload
reload: reload the device.
Example:
Device# write
!!! Please reboot to take effect
Device# reload
```

Proceed with reload? [confirm]

(enter to confirm)

Configuring IoT OD Online and Offline Mode from CLI

IoT OD (IoT Operations Dashboard) is the cloud management portal, and the device is connected to the online cloud through the network. In offline mode the device is configured in local mode using CLI and GUI, and it is not connected to the cloud.

When the device is configured in offline mode, choose following options:

- Configure the device manually using CLI and GUI.
- Configure the device on IoT OD cloud service and select the configuration file exported from IoT OD IW and upload the configuration file using upload configuration button at the end of IoT OD IW management page.

To activate or deactivate IoT OD IW (IoT Industrial Wireless) configuration capability, use the following CLI command:

Device# configure iotod-iw {offline | online}

Online - To set up IoT OD IW mode to online. The device can be managed from IoT OD IW cloud server (if it is connected to the network).

Offline - To set up IoT OD IW mode to offline. The device is disconnected from IoT OD IW and must be manually configured using the CLI, or offline configurator interface.

Configuring Password (after first login) from CLI

Once the device switches to offline mode (after the initial login), you need to set up new login credential. To configure login credentials using GUI or CLI, the login credentials should follow these criteria:

- The username length must be from 1 to 32 characters.
- The password length must be from 8 to 120 characters.
- The password must include the following:
 - At least one uppercase letter
 - · At least one lowercase character,
 - At least one digit
 - · At least one special character
- The password can contain alphanumeric characters and special characters (ASCII decimal code from 33 to 126), but the following special characters are not allowed:
 - " [double quote]
- ' [single quote]
- ? [question mark]
- The password must not contain:
 - Three sequential characters or digits (ABC/CBA)

- The same three characters or digits consecutively (AAA) or (666)
- · Same as the current or existing password
- Same as or the reverse of the username

Example:

Default credentials:

username: Cisco password: Cisco enable password: Cisco

To reset the credentials, use the following sample credentials:

username: demouser password: DemoP@ssw0rd enable password: DemoE^aP@ssw0rd

Example of configuring password using CLI:

Device# configure iotod-iw {offline} Switching to IOTOD IW Offline mode... Will switch from Provisioning Mode to IOTOD IW offline Mode, device need to reboot:Y/N? Y User access verification. [Device rebooting...] User Access Verification: Username: Cisco Password: Cisco

After first login, reset the credentials:

Current Password:Cisco Current Enable Password:Cisco New User Name:demouser New Password:DemoP@ssw0rd Confirm New Password:DemoP@ssw0rd New Enable Password:DemoE^aP@ssw0rd Confirm New Enable Password:DemoE^aP@ssw0rd

Once the credentials are changed, re-login:

User access verification Username: demouser Password: DemoP@sswOrd Device> enable

Password:DemoE^aP@ssw0rd	
Device#	



In the above example, all passwords are in plain text. This is for demo purposes (sample credential). In the real scenario, they are hidden behind asterisks (*).

Configuring IoT OD IW from GUI

The following image shows the configuration of IoT OD IW:

IOTOD IW Contr	iguration Mode
Provisioning: initial radio configuration phase. The Centralized Web Interface (IOTOD Industrial Wirel connection is successful or manually if Offline conf	e radio MUST be configured using the less US, IOTOD Industrial Wireless EU) if nfiguration is selected.
Offline Configuration: it supports local parameter upload of a single file downloaded from IOTOD IW : Industrial Wireless US, IOTOD Industrial Wireless E	er changes through the radio Web UI / CLI or / section in IOTOD Industrial Wireless (<u>IOTOD</u> <u>EU</u>).
Online Cloud-Managed Configuration: the radio Interface (IOTOD IW section in <u>IOTOD Industrial Wi</u> connected to the Internet and can access IOTOD IV only.) can be configured from the Centralized Web <u>/ireless US</u> or [OTOD Industrial Wireless EU) if it IW Cloud Server. Radio Web UI and CLI are read-
Online Cloud-Manag	iged Offline
UPLOAD IOTOD IW CONFIGURATION	N FILE
Upload Confi	iguration File
Select configuration file exported from IOTOD Industrial Wireless:	Browse No file selected
Last configuration ID	34