



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 `aplg6a` or `aplg6b`, it means that the access point OS is running. If the `show version` displays `aplg6j` or `aplg6m`, 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 iw-service 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:

1. 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.

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:

The screenshot displays the Cisco URWB IW9165DH Configurator interface. At the top, the Cisco logo and 'ULTRA RELIABLE WIRELESS BACKHAUL' are on the left, and the title 'Cisco URWB IW9165DH Configurator' with the IP '5.81.160.216 - MESH POINT MODE' is on the right. A left sidebar contains navigation links for 'IW Service' (Offline), 'IW Monitor' (Disabled), and a list of settings categories: GENERAL SETTINGS (general mode, wireless radio, antenna alignment and stats), NETWORK CONTROL (advanced tools), ADVANCED SETTINGS (advanced radio settings, static routes, allowlist / blocklist, snmp, radius, ntp, ethernet filter, IZtp configuration, vlan settings, Fluidity, misc settings), and MANAGEMENT SETTINGS (remote access, firmware upgrade, status, configuration settings, reset factory default, reboot, logout). The main area is titled 'GENERAL MODE' and contains a 'General Mode' section with a note about selecting MESH POINT mode. Below this, the 'Mode' is set to 'mesh point' (selected), with options for 'mesh end' and 'gateway'. A 'Radio-off' checkbox is present. The 'LAN Parameters' section includes input fields for 'Local IP' (10.58.56.56), 'Local Netmask' (255.255.255.0), 'Default Gateway' (10.58.56.1), 'Local Dns 1' (1.1.1.1), and 'Local Dns 2'. An 'Enable IPv6' checkbox is also shown. At the bottom are 'Reset' and 'Save' buttons.

URWB Catalyst IW9167E Configuration using GUI

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

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)
```

Configure IW Service Cloud-Managed and Offline Mode using CLI

IW Service is the cloud management portal, and the device is connected to the Cloud-Managed through the cloud 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 IW Service cloud service and select the configuration file exported from IW Service and upload the configuration file using upload configuration button at the end of IW Service management page.

To activate or deactivate IW Service configuration capability, use the following CLI command:

```
Device#configure iw-service {offline | cloud-managed}
```

Cloud-Managed - To set up IW Service mode to Cloud-Managed. The device can be managed from IW Service cloud server (if it is connected to the network).

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

Configuring Password (after first login) using 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 between 3 to 32 characters long.
- The password length must be between 8 to 32 characters long.
- 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 iw-service {offline}
Switching to IW Service  Offline mode...
Will switch from Provisioning Mode to IW Service  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@ssw0rd
Device> enable
Password: DemoE^aP@ssw0rd
Device#

```



Note 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 (*).

Configure IW Service using GUI

This image shows the configuration of IW Service:

IW Service Management

IW Service Configuration Mode

Provisioning: This is the initial configuration phase. The access point is configured using IW Service ([Industrial Wireless \(IW\) Service US](#), [Industrial Wireless \(IW\) Service EU](#)) if connected successfully or locally if *Offline* mode is selected.

Offline Configuration: This mode allows for location configuration changes locally using the access point WebUI (this interface) or CLI. Configuration is also possible by downloading a single-file configuration from IW Service ([Industrial Wireless \(IW\) Service US](#), [Industrial Wireless \(IW\) Service EU](#)).

Online Cloud-Managed Configuration: in this mode the access point is configured using IW Service ([Industrial Wireless \(IW\) Service US](#) or [Industrial Wireless \(IW\) Service EU](#)). The local WebUI and CLI are read-only.

☐ Online Cloud-Managed ☒ Offline

UPLOAD IW SERVICE CONFIGURATION FILE

Upload Configuration File

Select configuration file exported from IW Service: No file selected

