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Smart Licensing on the Cisco Ultra-Reliable Wireless Backhaul for Catalyst IW Access Points and IEC6400 Gateway

Smart licensing

This document provides information on how to streamline and enhance your licensing experience using Smart Licensing on the Cisco Ultra-Reliable Wireless Backhaul for Catalyst IW Access Points and IEC6400 Gateway.

Benefits of using Smart Licensing are as follows:

- Smart license management provides a seamless experience across various licensing aspects.
- IIoT-specific seats cache a device list in mobility scenarios and reserve licenses based on the expected maximum number of devices in the network.
- Airgap mode allows manual syncing with Cisco Smart Software Manager (CSSM) using a downloaded file.
- The same license level must be configured on the primary and secondary Layer 2 Mesh End (ME) or Layer 3 Global Gateway (GGW).

The Smart license level determines the feature list. The three network licensing levels to manage the feature set and throughput are:

- Premier,
- Advantage, and
- Essentials.



Note

The unlocked features vary depending on the device model.

Table 1: Features tied to licenses for IW9165, IW9167E, and IEC6400

| License type | IW9167E | IW9165 | IEC6400 |
|--------------|---|---|---|
| Premier | <ul style="list-style-type: none"> • Unlimited fixed throughput • Unlimited mobility throughput • Multipath operations | <ul style="list-style-type: none"> • Unlimited fixed throughput • Unlimited mobility throughput • Multipath operations | <ul style="list-style-type: none"> • Upto 40 Gbps throughput • Multipath operations |

| License type | IW9167E | IW9165 | IEC6400 |
|--------------|---|--|--|
| Advantage | <ul style="list-style-type: none"> • Unlimited fixed throughput on mobility and fixed infrastructure • 50 Mbps mobility throughput (client-side only) • Multipath operations | <ul style="list-style-type: none"> • Unlimited fixed throughput (no mobility) • 50 Mbps throughput on mobility infrastructure AP and client • Multipath operations | <ul style="list-style-type: none"> • Up to 10 Gbps throughput • Multipath operations |
| Essentials | <ul style="list-style-type: none"> • Unlimited fixed throughput on mobility and fixed infrastructure • 500 Kbps mobility throughput (client-side only) | <ul style="list-style-type: none"> • Unlimited fixed throughput (no mobility) • 15 Mbps throughput on mobility infrastructure AP • 5 Mbps throughput on mobility client | <ul style="list-style-type: none"> • Up to 5 Gbps throughput • Multipath operations |



Note

- The license is not enforced, but a warning log will be generated if the device fails to report license usage to CSSM.
- Only Global Gateway (GGW) and Layer 2 Mesh End (L2-ME) devices have license-related configuration and show commands. Other devices in the network will synchronize the license from the primary GG/L2-ME.
- Ensure the device synchronizes with the Network Time Protocol (NTP) server to establish a successful connection with CSSM.

Configure Smart License

Use the **license iw-level {essential | advantage | premier}** command to configure smart license.

```
Device# license iw-level premier
```

Configure Smart License device number

Use the **license iw-network platform platform seats seats** command to configure smart license device number.

```
Device# license iw-network platform iw9165 seats 6
```

Configure Smart License online deployment

Step 1 Use the **license smart transport smart** command to set the transport mode to smart transport.

```
Device# license smart transport smart
```


- Step 2** Use the **license smart url smart *url*** command to configure the smart licensing URL for communication with CSSM.
- ```
Device# license smart url smart https://smartreceiver.cisco.com/licservice/license
```
- Step 3** (Optional) Use the **license smart proxy address *ip-address*** command to configure the smart licensing system to use a specific proxy server for license management.
- ```
Device# license smart proxy address 192.168.1.1
```
- Step 4** (Optional) Use the **license smart proxy port *port*** command to configure the smart licensing system to use a specific proxy server for license management.
- ```
Device# license smart proxy port 3128
```
- Step 5** Use the **license smart trust idtoken *token* local** command to configure the device to trust the locally stored identity token for smart licensing.
- ```
Device# license smart trust idtoken id_token_generated_from_CSSM local
```
- Step 6** (Optional) Use the **license smart usage interval *interval*** command to set the interval at which the device reports its license usage to the licensing server.
- ```
Device# license smart usage interval 50
```

## Configure Smart License offline deployment

- Step 1** Use the **license smart transport off** command to disable the smart transport feature for licensing.
- ```
Device# license smart transport off
```
- Step 2** Use the **license smart trust idtoken *token* local** command to configure the device to trust the locally stored identity token for smart licensing.
- ```
Device# license smart trust idtoken id_token_generated_from_CSSM local
```
- Step 3** Use the **license smart save usage all *tftp-link*** command to save all the license usage data to the smart licensing system.
- ```
Device# license smart save usage all tftp://192.168.216.201/rum_report_all.xml
```
- Step 4** Use the **license smart import *link*** command to import license information into the smart licensing system.
- ```
Device# license smart import tftp://192.168.216.201/rum_report_ack.xml
```

## Configure Smart License from GUI

- Step 1** Select the network license level for the Cisco URWB stack.



ULTRA RELIABLE  
WIRELESS BACKHAUL

# Cisco URWB IW9167EH Configurator

5.21.201.88 - MESH END MODE

IOTOD IW
Offline

IW-MONITOR
Disabled

FM-QUADRO

GENERAL SETTINGS

- general mode
- wireless radio
- antenna alignment and stats

NETWORK CONTROL

- advanced tools

ADVANCED SETTINGS

- advanced radio settings
- static routes
- allowlist / blocklist
- multicast
- snmp
- radius
- ntp
- ethernet filter
- l2tp configuration
- vlan settings
- Fluidity
- misc settings
- smart license

MANAGEMENT SETTINGS

- remote access
- firmware upgrade
- status
- configuration settings
- reset factory default
- reboot
- logout

## SMART LICENSE

### Smart License Settings

Select the network license level for Cisco URWB stack.  
The license level is bound to software features and monitored by the CSSM.  
Set the network seats to consume usage for particular license level.

License Level: Network Essentials for Radios

Platform IW9165 License Seats: 0

Platform IW9167 License Seats: 0


Reset Save

*i* Smart Agent is set to Online Mode

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The license level is bound to software features and monitored by CSSM.

**Step 2** Set the network seats to consume usage for a particular license level, for example, Network Essentials for Radios.



ULTRA RELIABLE  
WIRELESS BACKHAUL

# Cisco URWB IW9167EH Configurator

5.21.201.88 - MESH END MODE

**IOTOD IW** Offline

**IW-MONITOR** Disabled

**FM-QUADRO**

GENERAL SETTINGS

- general mode
- wireless radio
- antenna alignment and stats

NETWORK CONTROL

- advanced tools

ADVANCED SETTINGS

- advanced radio settings
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- smart license

MANAGEMENT SETTINGS

- remote access
- firmware upgrade
- status
- configuration settings
- reset factory default
- reboot
- logout

## SMART LICENSE

### Smart License Settings

Select the network license level for Cisco URWB stack.  
The license level is bound to software features.  
Set the network seats to consume usage for

License Level: Network Advantage for Radios  
✓ Network Essentials for Radios  
 Network Premier for Radios

Platform IW9165 License Seats:


Platform IW9167 License Seats:

Reset Save

**i** Smart Agent is set to Online Mode

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**Step 3** To Download a usage, Save RUM (Resource Utilization Measurement) reports (license usage information) and save all RUM reports using All options. Save the RUM report for the last n number of days (excluding the current day) using the Days option.



ULTRA RELIABLE  
WIRELESS BACKHAUL

Cisco URWB IW9167EH Configurator

5.21.201.88 - MESH END MODE

IOTOD IW Offline

IW-MONITOR Disabled

FM-QUADRO

GENERAL SETTINGS

- general mode
- wireless radio
- antenna alignment and stats

NETWORK CONTROL

- advanced tools

ADVANCED SETTINGS

- advanced radio settings
- static routes
- allowlist / blacklist
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MANAGEMENT SETTINGS

- remote access
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- logout

### SMART LICENSE

#### Smart License Settings


Select the network license level for Cisco URWB stack.  
The license level is bound to software features and monitored by the CSSM.  
Set the network seats to consume usage for particular license level.

License Level: Network Essentials for Radios

Platform IW9165 License Seats:

Platform IW9167 License Seats:

Reset Save



Smart Agent is set to Airgap(Offline) Mode

#### Download Usage

Save RUM reports (license usage information). Save all RUM reports using *All* options. Save RUM report for the last n number of days (excluding the current day) using *Days* option. Save all unreported RUM reports using *Unreported* option.

Usage range: All

Days:

Download

#### Upload CSSM ACK

Import the ACK that downloaded from CSSM on the production instance.

Browse No file selected

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**Step 4** To Upload CSSM Acknowledge and sync license usage, import the ACK (Acknowledge) that was downloaded from CSSM on the production instance when Smart agent is in Airgap (Offline) Mode.

## Reset Smart License

Use the **license smart factory reset** command to reset the smart licensing configuration on a device to its factory default settings.

```
Device# license smart factory reset
```



### Note

Do not run the **write** command. Device reload is not required to clear all the license configuration.

# Verify Smart License configuration

## Verify Smart License usage

```
Device# show license usage
```

```
License Authorization:
 Status: Not Applicable
```

```
IW9167_URWB_NW_P (IW9167_URWB_NW_P):
 Description: Network Premier for Catalyst Industrial Wireless CURWB Radios
 Count: 1
 Version: 01
 Status: IN USE
 Export status: NOT RESTRICTED
 Feature Name: IW9167_URWB_NW_P
 Feature Description: Network Premier for Catalyst Industrial Wireless CURWB Radios
 Enforcement type: NOT ENFORCED
 License type: Perpetual
```

## Verify Smart License device number

```
Device# show license iw seats
```

| Platform | Configured | Current |
|----------|------------|---------|
| IW9167   | 1          | 1       |
| IW9165   | 0          | 0       |

## Verify Smart License usage count

```
Device# show license summary
```

```
Account Information:
 Smart Account: <none>
 Virtual Account: <none>
```

```
License Usage:
 License Entitlement Tag Count Status

 IW9167_URWB_NW_P (IW9167_URWB_NW_P) 1 IN USE
```



### Note

- License usage count reflects the maximum number of configured license seats and active devices.
- For offline devices, the system retains the device record for 2 days.
- If active devices exceed the configured license seats, a license usage report is sent to CSSM every 8 days.

## Verify Smart License HA role

```
Primary_ME# show license tech support
```

```
License Usage
```

=====

Handle: 1

...

Measurements:

ENTITLEMENT:

Interval: 00:15:00

Current Value: 0

Current Report: 0 Previous: 0

Application HA Info:

Application Name: UrwbSLP

Application Id: UrwbHA

Application Role: Active

Info For Peer: 197

Peer Info:

Application Name: UrwbSLP

Application Id: UrwbHA

Application Role: Standby

Hostname: 'nullPtr'

PIID: 620f78ec-fae9-4a56-929e-69a4ca07ad9b

UDI: P:IEC-6400-URWBT,S:WZP26220Q5Z

Smart Account Name: 'nullPtr'

Virtual Account Name: 'nullPtr'

Standby\_ME# show license tech support

License Usage

=====

Handle: 1

...

Measurements:

ENTITLEMENT:

Interval: 00:15:00

Current Value: 0

Current Report: 0 Previous: 0

Application HA Info:

Application Name: UrwbSLP

Application Id: UrwbHA

Application Role: Standby

Info For Peer: 199

Peer Info:

Application Name: UrwbSLP

Application Id: UrwbHA

Application Role: Active

Hostname: 'nullPtr'

PIID: 566e9ed0-132d-4f70-90cc-526692a96e22

UDI: P:IEC-6400-URWB,S:WZP262304VR

Smart Account Name: 'nullPtr'

Virtual Account Name: 'nullPtr'

## Verify Smart License CSSM connection

Device# show license status

.  
. .  
.

Account Information:

Smart Account: SA-IOT-Polaris As of Sep 21 2023 11:04:03 CST

Virtual Account: CURWB

...

Transport:

Type: Smart

URL: <https://smartreceiver.cisco.com/licservice/license>

Proxy:



Address: 192.168.216.201  
Port: 3128

...

Policy:

Policy in use: Installed On Sep 21 2023 11:03:46 CST  
Policy name: Test Policy  
Reporting ACK required: no (Customer Policy)  
Unenforced/Non-Export Perpetual Attributes:  
First report requirement (days): 94 (Customer Policy)  
Reporting frequency (days): 100 (Customer Policy)  
Report on change (days): 100 (Customer Policy)

...

Trust Code Installed: Sep 21 2023 11:03:46 CST