



# Configuring and Validating Smart Licensing

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## Overview of Smart Licensing Support

Smart licensing for access point running in URWB mode supports the following scenarios:

- Smart license management provides a seamless experience with the various aspects of licensing.
- License level controls the features by essential, advantage, and premier mode.
- IoT specific seats will cache a device list in the mobility scenario and seats reserves some license usage which is the expected maximum number of devices in the managed network.
- Smart transport mode connects to smart software manager (SSM) (formerly it was CSSM) directly to sync license usage.
- Airgap mode uses the downloaded file to sync with SSM manually.
- You should configure same license level on both primary and secondary Layer 2 ME (Mesh End) or Layer 3 Global Gateway (GGW).



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**Note** Ensure you to sync up the device for correct time with NTP server to establish connection with SSM successfully.

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From release 17.12.1, the smart licensing supports the following enhancements:

- Seats and license level management for both Catalysts IW9165 and IW9167
- CLI command to check configured and current seats values
- CLI command to check running license level

License level and seats configuration are available for the following device roles:

- ME (Mesh End) fixed infrastructure network
- ME Fluidity Layer 2 network
- Global Gateways (GGW) Fluidity Layer 3 network

A Resource Utilisation Measurement (RUM) report counts the number of devices using license seats for a specific feature to configure seats for each entitlement tag.

Smart license level for Catalysts IW9167 and IW9165 control the feature list using the following tables:

**Table 1: Smart license level for Catalyst IW9167**

License Type	Features
Essentials	<ul style="list-style-type: none"> <li>• Unlimited fixed throughput</li> <li>• Unlimited AP mobility throughput</li> <li>• 0.5 Mbps Mobility client throughput</li> </ul>
Advantage	<ul style="list-style-type: none"> <li>• Unlimited fixed throughput</li> <li>• Unlimited AP mobility throughput</li> <li>• 50 Mbps vehicle mobility throughput</li> <li>• Multipath Operation (MPO)</li> </ul>
Premier	<ul style="list-style-type: none"> <li>• Unlimited fixed throughput</li> <li>• Unlimited AP mobility throughput</li> <li>• Unlimited vehicle mobility throughput</li> <li>• MPO</li> </ul>

**Table 2: Smart license level for Catalyst IW9165**

License Type	Features
Essentials	<ul style="list-style-type: none"> <li>• Unlimited fixed throughput</li> <li>• 15 Mbps AP mobility throughput</li> <li>• 5 Mbps vehicle mobility throughput</li> </ul>
Advantage	<ul style="list-style-type: none"> <li>• Unlimited fixed throughput</li> <li>• 50 Mbps AP mobility throughput</li> <li>• 50 Mbps vehicle mobility throughput</li> <li>• MPO</li> </ul>

License Type	Features
Premier	<ul style="list-style-type: none"> <li>• Unlimited fixed throughput</li> <li>• Unlimited AP mobility throughput</li> <li>• Unlimited vehicle mobility throughput</li> <li>• MPO</li> </ul>

## Configuring and Validating Smart Licensing from CLI

To configure smart license, use the following CLI command:

```
Device# configure license iw-level [advantage | essentials | premier]

      advantage: Network Advantage for Radios
      essentials: Network Essentials for Radios
      premier:    Network Premier for Radios
```

To configure smart license device number, use the following CLI command:

```
Device# configure license iw-network seats 6
```

To configure smart license online deployment, use the following CLI command:

```
Device# configure license smart transport smart
Device# configure license
Device# configure license smart proxy address 192.168.1.1 (Optional)
Device# configure license smart proxy port 3128 (Optional)
Device# license smart trust idtoken <id_token_generate_from_SSM> local
Device# configure license smart usage interval 50 (Optional)
```

To configure smart license offline deployment, use the following CLI command:

```
Device# configure license smart transport off
Device# license smart save usage all tftp://192.168.216.201/rum_report_all.xml
Device# license smart import tftp://192.168.216.201/rum_report_ack.xml
```

To configure reset license configuration as default, use the following CLI command:

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




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**Note** Note: Use reload command to clear all license configurations, do not use the write command.

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To validate smart license type, use the following show command:

```
Device# show license usage
License Authorization Status: Not Applicable
IW9167_URWB_NW_A(IW9167_URWB_NW_A);
Description: Network Advantage for Catalyst Industrial Wireless CURWB Radios
Count: 1
Version: 0.1
Status: IN USE
Export Status: NOT RESTRICTED
Feature Name: IW9167_URWB_NW_A
```

To validate smart license device number, use the following show command:

```
Device# show license iw seats
6
```

To validate smart license usage count, use the following show command:

```
Device# show license summary
Account information:
Smart account <none>
Virtual account <none>
License Usage:
License : IW9167_URWB_NW_A
Entitlement Tag : (IW9167_URWB_NW_A)
Count Status : 6 IN USE
```




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**Note** License usage count = max (configured license seats and active devices).

When the device is offline, its record paging time is two days.

When active devices are more than configured license seats, ME sends the license usage report to SSM once in eight days.

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To validate smart license HA (High Availability) role, use the following show command:

```
Primary_ME# show license tech support
License Usage
=====
Handle 1
.....
Measurements:
ENTITLEMENT:
Interval: 00: 15: 00
Current value: 0
Application Name: UrwbSLP
Application id: UrwbHA
Application Role: Active
Peer info:
Application Name: UrwbSLP
Application id: UrwbHA
Application Role: Standby
PID: 'nullPtr'
UDI: P: IW9167EH-B, S: KWC26330HMR
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
Application Name: UrwbSLP
Application id: UrwbHA
Application Role: Standby
Peer info:
Application Name: UrwbSLP
Application id: UrwbHA
Application Role: Active
PID: 'nullPtr'
UDI: P: IW9167EH-B, S: KWC26330HLF
```

```
Smart Account Name: 'nullPtr'  
Virtual Account Name: 'nullPtr'
```

To validate smart license SSM connection, use the following show command:

```
Device# show license status  
.....  
Account information  
Smart Account SA-IOT-Polaris As of Sep 28 2022 11: 04:03 CST  
Virtual Account: CURWB  
Transport:  
Type: Smart  
Proxy:  
Address: 192.168.216.201  
Port: 3128  
.....  
Policy  
Policy in use: Installed on Sep 28 2022 11: 04:03 CST  
Policy name: Test policy  
Reporting ACK required: no (Customer Policy)  
First report requirement (days): 94 (Customer Policy)  
Report on change (days): 100 (Customer Policy)
```

## Configuring Smart Licensing from GUI

To configure smart licensing using GUI, follow these steps:

1. Select the network license level for the URWB network.
2. Verify that the licence level is controlled by SSM and is connected to software features.
3. Set the network seats to consume usage for particular license level (example: Network Essentials for Radios).
4. To download a usage, go to **Download Usage** section, choose an option **ALL** from the **Usage range** drop-down list and then click **Download**.
  - Save all RUM reports (license usage information) using an option **All**.
  - Save RUM report for the last n number of days (excluding the current day) use an option in the **Days** field.
5. In the **Upload CSSM Ack** section, for sync license usage, click **BROWSE** to import the ACK (Acknowledge) that downloaded from SSM on the production instance when smart agent is in Airgap (Offline) Mode.

The following images are the examples of configuring smart licensing (both online and offline mode):

**Cisco URWB IW9167EH Configurator**  
5.21.201.88 - MESH END MODE

**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

Smart Agent is set to Online Mode

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**Cisco URWB IW9167EH Configurator**  
5.21.201.88 - MESH END MODE

**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: 0

Platform IW9167 License Seats: 0

Reset Save

Smart Agent is set to Online Mode

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## Configuring Smart License Seats Management using CLI

To configure a smart license seats, use the following show command:

```
Device# configure license iw-network seats platform
        iw9165 iw9167
        WORD Select one above platform (case sensitive) to configure seats.
```

Example:

```
Device# configure license iw-network seats platform iw9165 12
Device# configure license iw-network seats platform iw9167 15
```

### Verifying license iw-seats using CLI

To verify the license seats, use the following show command:

```
Device# show license iw seats
        Platform Configured Current
        IW9167         0         15
        IW9165         0         12

Device# write
Device# reload

Device# show license iw seats
        Platform Configured Current
        IW9167         15         15
        IW9165         12         12
```

## Configuring Smart License Seats Management using GUI

To select the network license level for URWB stack, follow these steps:

1. In the **Advanced Settings**, click **smart license**.
2. In the **Smart License Settings**, choose **License level**.
3. Enter **Platform IW9165 License Seats** value.
4. Enter **Platform IW9167 License Seats** value.
5. Click **Save**.

## Configuring Running License Level using CLI

The license level is configured by the primary ME or GGW device (based on network configuration) then the license level is distributed and applied to all the devices connected to the network.

To configure a license level for ME and GGW (license distributor), use the following CLI command:

```
Device# configure license iw-level
      Advantage: Network Advantage for Radios
      essentials: Network Essentials for Radios
      premier: Network Premier for Radios
```

Example:

```
Device# configure license iw-level [ premier | essentials | Advantage ]
```

To verify the license level for ME and GGW, use the following show command:

```
Device# show license iw level
      Configured IW Network License: ESSENTIALS
      Running IW Network License: PREMIER
Device# write
Device# reload

Device# show license iw level
      Configured IW Network License: PREMIER
      Running IW Network License: PREMIER
```

To verify the license level for MP (license receiver), use the following show command:

```
Device# show license iw level
      Running IW Network License: PREMIER
```




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**Note** License level configuration is not allowed.

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