Manage Smart Licensing on Catalyst IW Access Points for URWB

Contents

Introduction

This document describes Smart Licensing for Industrial Wireless APs operating in URWB mode, architecture, levels, CLI config, and troubleshooting.

License Levels:

There are three licensing levels to manage the feature set and throughput:

- Essential
- Advantage
- Premier

The feature set can vary depending on the device model.

Architecture

The URWB Network License is configured, monitored, and reported by the URWB Network Mesh End. Network Licenses are pooled with devices of the same type. For example, the Mesh End reports the number of IW9167E devices on the network configured with the premier licensing tier as “IW9167URWBNetworkPremier”. When multiple device types exist on the same network they are reported separately.

Networks with only fixed infrastructure requirements (no Fluidity) would only require Network Essentials as mobility throughput and Multi-Path Operation (MPO) are only applicable to Fluidity. Network Essentials is included by default. Mobility Throughput restrictions are applied for every access point in Fluidity mode.

All radio devices in the network use the network license level configured on the Mesh End. It is not possible to have radios in the network at different network license tiers. The network license tier for gateway devices is set individually on each gateway. For two gateways that are paired for high availability, the tier must be configured the same. When using Layer 3 fluidity with gateways as the mesh end on local segments, the configured network license tier can vary between other segments and from the tier configured on the global gateway.

License usage is the number of unique access points (of the specified type) seen on the network in the past 7 days. The Mesh End allows for a specified number of network licenses to be reserved to reduce the reporting requirements and the number of access points can fluctuate over time. The higher number (either actually used or reserved) are reported to the licensing system.

For deployments using two Mesh Ends in high availability, each Mesh End reports license usage separately to the licensing system along with HA status (active or standby). The license system only considers the active Mesh End to be using licenses for the purposes of compliance. For deployments where an access point (usually in Fluidity Vehicle mode) moves between Mesh Ends more often than every 7 days, usage is

reported on each mesh end for the access point. Additional network licenses must be purchased to remain within compliance.

CLI Configuration

Configure the license type, using this CLI command.

```
Device# configure license iw-level <advantage/essential/premier>
```

Configure the smart license device number, using this CLI command.

```
Device# configure license iw-network seats <count>
```

IOT-specific seats then cache a device list in the mobility scenario and the device counts are reserved for the number of radios. This is the expected maximum number of devices in the managed network.

CLI Config – For online Deployment

For this option, the device would need connectivity to the cloud directly or through a proxy.

Step 1	From the CLI, set the transport mode on the radio to smart transport. Device# license smart transport smart
Step 2	Configure the smart licensing URL for communication with Cisco Smart Software Manager (CSSM). Device# license smart url smart https://smartreceiver.cisco.com/licservice/license
Step 3	(Optional) If there is proxy in the network, configure the smart licensing system to use a specific proxy server for license management. Device# license smart proxy address <server IP>
Step 4	(Optional) Configure the license proxy port to configure the smart licensing system to use with proxy server configured. Device# license smart proxy port <port number>
Step 5	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) Configure the interval at which the device reports its license usage to the licensing server. Device# license smart usage interval 50

CLI Config – For offline Deployment

For this option, the device does not need any external access to Cisco Smart Software Manager (CSSM).

Procedure

Step 1	Configure to disable the smart transport feature for licensing. Device# license smart transport off
Step 2	Configure the device to trust the locally stored identity token for smart licensing. Device# license smart trust idtoken <token taken from CSSM> local
Step 3	Configure the tftp-link command to save all the license usage data for the smart licensing system. A Resource Utilization Measurement report (RUM report) is a license usage report, which fulfills reporting requirements as specified by the policy. RUM reports are generated by the product instance and consumed by CSSM. Device# license smart save usage all tftp://<local-tftp-server>/rum_report_all.xml
Step 4	A RUM acknowledgment (RUM ACK or ACK) is a response from CSSM and provides information about the status of a RUM report. Once the ACK for a report is available on the product instance, it indicates that the corresponding RUM report is no longer required and can be deleted. Configure the license smart import link command to import license information into the smart licensing system. Device# license smart import tftp://<local-tftp-server>//rum_report_ack.xml

Troubleshooting

Useful commands

```
show license summary

show license iw seats

show license tech support

show license status

show license type
```

```
show license usage count

show license tech events

show license udi

show logging | inc SMART
```

Reset Smart licensing

Use the ‘license smart factory reset’ command to reset the smart licensing configuration on the Access Point to its factory default settings.

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

Also, verify if the device is synchronized with the right NTP server to correctly establish communication with CSSM.