Q&A

Wireless Access Point Right-to-Use Licensing on Cisco 5760 Wireless LAN Controllers and Cisco Catalyst 3850 Switches

Q. What is right-to-use (RTU) licensing?

A. An RTU license scheme is an honor-based model for licensing. Licenses that follow this model are not tied to a unique device identifier (UDI), product ID, or serial number. For the purpose of this Q&A, the relevant licenses are access point count licenses. Access point count licenses are required on a Cisco® wireless controller for access point connection and control.

Q. In converged access mode, do I need to install access point count licenses on both a Cisco Catalyst® 3850 Switch acting as a mobility anchor and a Cisco 5760 Wireless LAN Controller (WLC) acting as a mobility controller?

A. In converged access mode, access point count licenses need to be installed only on the mobility controller. The access point count licenses do not need to be installed on a mobility anchor.

Note: When a Cisco Catalyst 3850 boots up, it operates in mobility anchor mode by default. No access points can join without an access point count license. A reboot is required to become a mobility controller.

If the customers have license on both the mobility controller and mobility anchor box, the license on the mobility anchor box will not be counted or combined, unless they are manually transferred to the mobility controller.

Q. How is RTU licensing enabled?

A. Access point count licenses can be enabled through the command-line interface (CLI) with acceptance of an RTU end-user license agreement (EULA).

The ordering process is the same as before. Customers place an order for a controller with an embedded access point count license or a separate access point count adder license. For the access point count adder license, they will receive an e-license or paper license after payment. There is no license PAK or SWIFT, avoiding the need to access the Cisco.com portal or additional external license tools.

Q. What are the benefits with RTU licensing?

A. An RTU license scheme simplifies enabling access point adder licenses in the field by eliminating the need for an additional step or additional tools and access to Cisco.com for PAKs during installation of adder licenses or transfer of licenses from one controller to another during the RMA process.

Q. Which wireless controller products will have RTU licensing and when?

A. This document is applicable to the RTU access point count licensing on the Cisco Catalyst 3850 and Cisco 5760 WLC. The Cisco 5760 WLC and the Cisco Catalyst 3850 will support RTU-based access point count licensing.

The Cisco Flex 7500 Series Wireless Controllers and Cisco 8500 Series Wireless Controllers also use RTU licensing. For more information about these platforms, visit this RTU FAQ: http://www.cisco.com/en/US/prod/collateral/wireless/ps6302/ps8322/ps11635/qa_c67-713536.html.

Other wireless controller platforms such as the Cisco 5508 Wireless Controller, Cisco Wireless Services Module 2 (WiSM2), and Cisco 2500 Series Wireless Controller will continue to use the node-locked licensing model, in which the access point count licenses are tied to the hardware.

Q. Do I need a wireless access point license on both the mobility agent and the mobility controller?

A. The license to manage access points is only needed on the mobility controller.

Q. What types of licenses are available under the RTU licensing scheme?

A. The different types of licenses available are:

- **Permanent or base licenses:** These licenses are physically programmed into the controller hardware at manufacturing. For the Cisco 5760 WLC and Cisco Catalyst 3850, these base access point count licenses can be transferred from one controller to the other in any increment. Note that this is not the case for all other Cisco wireless controllers.
- **Adder licenses:** These are wireless access point count licenses that can be activated by the customer by accepting the RTU EULA. The EULA states that the customer/user is obliged to purchase the specified access point count licenses at the time of activation. Adder access point count licenses provide the customer with the flexibility to scale as the business grows.
- **Evaluation licenses:** These licenses are for demo or trial mode and are valid for 90 days. Fifteen days prior to the expiration of the 90-day period, notifications and messages will be generated to inform the customer to buy the adder license. These evaluation licenses are installed with the license image. The customer can activate the evaluation licenses anytime with a command. A EULA is presented to the user on executing the activation CLI. The EULA states that the customer is obligated to pay for the specified license count if required for more than within 90 days of usage. Countdown starts with the acceptance of the EULA.

Q. What does the EULA state, and what is the process to enable RTU?

A. Each time a user adds or deletes an access point adder license on the controller using the CLI or GUI, the following RTU EULA is presented. The user has the flexibility to accept or decline the RTU EULA for each add/delete operation.

Right-to-Use End-User License Agreement

Please read the following terms carefully. Installing the license or license key provided for any Cisco product feature or using such product feature constitutes your full acceptance of the following terms. You must not proceed further if you are not willing to be bound by all the terms set forth herein.

Use of this product feature requires an additional license from Cisco, together with an additional payment. You may use this product feature subject to the Cisco end-user license agreement at

http://www.cisco.com/en/US/docs/general/warranty/English/EU1KEN_.html, together with any supplements relating to such product feature.

It is your responsibility to make payment to Cisco for your use of the product feature if not already licensed to do so. Your acceptance of this agreement for the software features on one product shall be deemed your acceptance with respect to all such software on all Cisco products you purchase, which includes the same software. (The foregoing notwithstanding, you must purchase a license for each software feature you use, so that if you enable a software feature on 1000 devices, you must purchase 1000 licenses for use.)

This license may be transferrable from another Cisco device of the same model for the same functionality if such license already is owned.

Activation of the software command line interface will be evidence of your acceptance of this agreement.

By clicking the “accept” button or typing “yes,” you are indicating you have read and agree to be bound by all the terms provided herein. ACCEPT (yes/no).

Q. Is RTU licensing the same as license pooling?
A. Yes. On the controllers based on Cisco 5760 WLC and Cisco Catalyst 3850, RTU licensing can be considered the same as pooling. Both the adder licenses and the base licenses on these controllers are transferrable in any increment.

Q. What is the behavior of access point licenses installed on switches within a stack?
A. Access point licenses within a stack are added up to the limit of the stack, which is 50. For example, if you purchase four Cisco Catalyst 3850 switches, each with 10 access point licenses, and deploy those as a part of a stack, then the stack will be able to support a total of 40 access points simultaneously.

Q. How is an RTU license migrated in case of a Cisco Catalyst 3850 hardware swap/RMA?
A. Both image-based and access point count licenses can be deactivated from the old/swapped-out hardware and activated on the new switch. Deactivation is done by the “license right-to-use deactivate” EXEC command and activation by the “license right-to-use activate” EXEC command.

Q. What is the command to add or remove access point licenses?
A. The following command activates the license level and also accepts the EULA:

- # license right-to-use activate apcount ### slot 1

The following command similarly shows how to disable the access point licenses:

- # license right-to-use deactivate apcount ### slot 1

Q. What happens after 90 days of activating an evaluation RTU license?
A. An evaluation RTU license EULA expects that customers will purchase a permanent license within 90 days.

After 90 days, the evaluation license will not be valid. Warning syslog messages about the evaluation license expiration are generated 10 and 5 days before the end of the 90-day window. Warning syslog messages are generated every day after the 90-day period. The expired evaluation license continues to function with the daily syslog messages until the switch is reloaded. The expired evaluation license cannot be reactivated after the reload. However, you can recreate another evaluation license as needed.

Q. May I transfer the RTU licenses between Cisco Wireless Controllers?

A. Yes, you can transfer the RTU licenses within IOS based wireless controller family, either partially or fully, in any count. For example, you may transfer wireless controller licenses from Catalyst 3850 to 5760 or vice versa.

The following examples show valid and invalid combinations.

First, here are possible controller and access point combinations:

- **Controller A with 4000 access points:** A Cisco 8510 Wireless Controller with 3000 access point license preinstalled (AIR-CT8510-3K-K9) plus 1000 access point adder license (LIC-CT8500-1000A).
- **Controller B with 10 access points:** A Cisco Catalyst 3850 with IP Base or IP Services functionality and wireless controller with 10 access point license preinstalled.
- **Controller C with 10 access points:** A Cisco Catalyst 3850 with IP Base or IP Services functionality and wireless controller with 10 access point license preinstalled.
- **Controller D with 350 access points:** A Cisco 5760 WLC with 250 access point license preinstalled plus one 100 access point adder license.
- **Controller E with 350 access points:** A Cisco 5760 WLC with 250 access point license preinstalled plus one 100 access point adder license.

Transfer of Licenses	Valid or Invalid
B->C	Valid
B->E	Valid
D->E	Valid
A->E	Invalid

Q. Does the RTU licensing affect the high-availability controller SKU?

A. No. RTU licensing and high-availability controller SKU are unrelated functionalities.

Q. How can a customer account for the licenses enabled in the wireless network?

A. Cisco will enable customers to monitor the access point licenses configured and access point licenses in use across their wireless network. Licenses can be viewed per controller from controller GUI or CLI or using the Cisco Prime™ infrastructure They can also be viewed networkwide across multiple wireless controllers with the Cisco Prime infrastructure.

The licenses are displayed by type: permanent or base, adder and evaluation.

The license state describes if:

- License is active (that is, EULA accepted and ready to use) or not
- License is currently in use or not

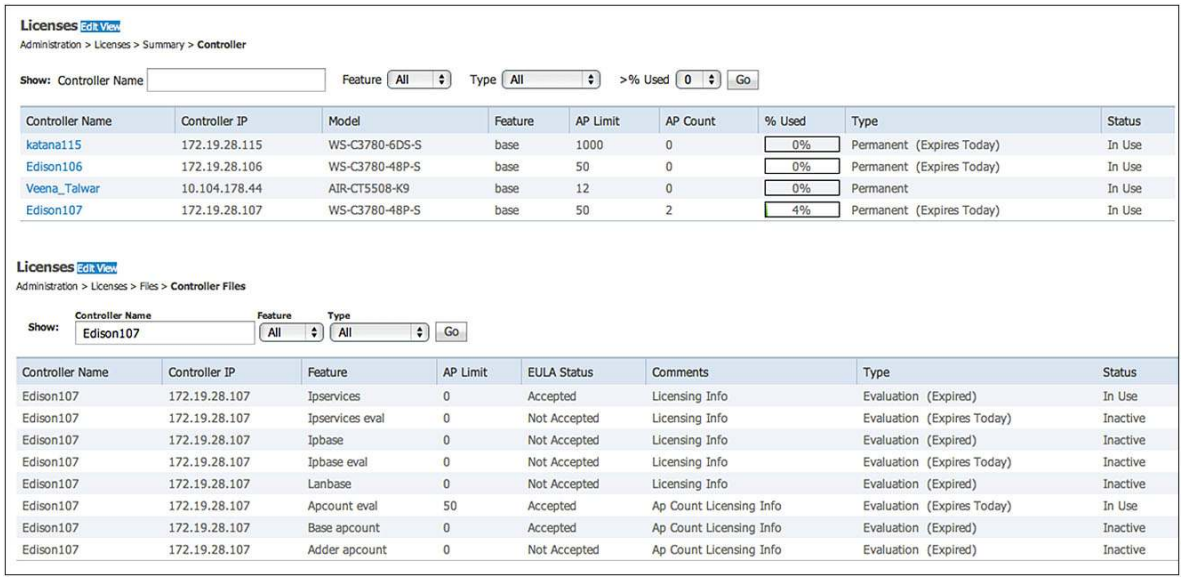
Figure 1 shows RTU license summary via CLI display example.

Figure 1. RTU License Summary output via CLI

```
p3-5#sh lic right-to-use summary
  License Name    Type   Count   Period left
-------------------------------------------
  ipservicesk9 permanent   N/A      Lifetime
  apcount      evaluation  50       90 <------ Evaluation apcount is currently In-use

-------------------------------------------

License Level In Use: ipservicesk9
License Level on Reboot: ipservicesk9
Evaluation AP-Count: Enabled <------ Evaluation apcount is Enabled/In-use
Total AP Count Licenses: 50
AP Count Licenses In-use: 1  <------ In-Use Apcount licenses
AP Count Licenses Remaining: 49


p3-5#sh lic right-to-use usage
 Switch# License Name     Type    usage-duration (y:m:d)  In-Use  EULA
-------------------------------------------------------------------------
 2      ipservicesk9   permanent    0 :0 :1                yes   yes
 2      ipservicesk9   evaluation   0 :0 :0                no    no
 2      ipbasek9       permanent    0 :0 :0                no    no
 2      ipbasek9       evaluation   0 :0 :0                no    no
 2      lanbasek9      permanent    0 :0 :0                no    no
 2      apcount        evaluation   0 :0 :0                yes   yes <------ Evaluation apcount is In-use
 2      apcount        base         0 :0 :0                no    yes
 2      apcount        adder        0 :0 :0                no    no
```

Figure 2 shows a Cisco Prime infrastructure example.

Figure 2. RTU License Summary output via Cisco Prime Infrastructure



Licenses Edit View

Administration > Licenses > Summary > **Controller**

Show: Controller Name | Feature All | Type All | >% Used 0 | Go

Controller Name	Controller IP	Model	Feature	AP Limit	AP Count	% Used	Type	Status
katana115	172.19.28.115	WS-C3780-6DS-S	base	1000	0	0%	Permanent (Expires Today)	In Use
Edison106	172.19.28.106	WS-C3780-48P-S	base	50	0	0%	Permanent (Expires Today)	In Use
Veena_Talwar	10.104.178.44	AIR-CT5508-K9	base	12	0	0%	Permanent	In Use
Edison107	172.19.28.107	WS-C3780-48P-S	base	50	2	4%	Permanent (Expires Today)	In Use

Licenses Edit View

Administration > Licenses > Files > **Controller Files**

Show: Controller Name: Edison107 | Feature: All | Type: All | Go

Controller Name	Controller IP	Feature	AP Limit	EULA Status	Comments	Type	Status
Edison107	172.19.28.107	Ipservices	0	Accepted	Licensing Info	Evaluation (Expired)	In Use
Edison107	172.19.28.107	Ipservices eval	0	Not Accepted	Licensing Info	Evaluation (Expires Today)	Inactive
Edison107	172.19.28.107	Ipbase	0	Not Accepted	Licensing Info	Evaluation (Expired)	Inactive
Edison107	172.19.28.107	Ipbase eval	0	Not Accepted	Licensing Info	Evaluation (Expires Today)	Inactive
Edison107	172.19.28.107	Lanbase	0	Not Accepted	Licensing Info	Evaluation (Expired)	Inactive
Edison107	172.19.28.107	Apcount eval	50	Accepted	Ap Count Licensing Info	Evaluation (Expires Today)	In Use
Edison107	172.19.28.107	Base apcount	0	Accepted	Ap Count Licensing Info	Evaluation (Expired)	Inactive
Edison107	172.19.28.107	Adder apcount	0	Not Accepted	Ap Count Licensing Info	Evaluation (Expired)	Inactive

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Printed in USA C67-726397-00 01/13