



Configuring Right-To-Use Licenses

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Restrictions for Configuring RTU Licenses

The following are the restrictions for configuring and using RTU licenses.

- To activate a license, you must reboot your switch after configuring the new license level.
- An expired evaluation license can not be reactivated after reboot.

Information About Configuring RTU Licenses

Right-To-Use Licensing

The software features available with Right-to-use (RTU) licensing falls under the base or add-on license levels. The license types available are:

- Base licenses—These can be ordered as a permanent license.
 - Network Essentials
 - Network Advantage (Contains Network Essentials plus more)
- Add-on licenses—These can be subscribed for a fixed term of 3, 5, and 7 years.
 - Digital Networking Architecture (DNA) Essentials
 - DNA Advantage (Contains DNA Essentials plus more)

After the initial term of the add-on license expires, you will be able to continue using the base license by deactivating the add-on license and reloading the device.

To activate a license, you must accept the End-User License Agreement (EULA) and reboot the device.

Cisco Smart Software Manager (CSSM) simplifies the licensing experience across the enterprise making it easier to purchase, deploy, track and renew Cisco software. It provides visibility into license ownership and consumption through a single user interface.

To find info about platform support and to know which license levels a feature is available with, use Cisco Feature Navigator. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

RTU licenses are available as per the following durations:

- Permanent licenses—Purchased with a specific feature set with no expiration date. It can be transferred from one device to another.
- Term licenses—Purchased with a feature set for a specific subscription period. You can verify the expiration date from Cisco Smart Software Manager (CSSM).
- Evaluation licenses—Pre-installed on the device and valid for a 90-day trial period. They cannot be ordered or transferred to another device. Once activated, this type of license cannot be deactivated until it expires. Warning system messages about the evaluation license expiry are generated 10 and 5 days before the 90-day period and everyday after that. After your evaluation period expires, at the next reload, the device returns to its default license and network operations are not impacted.

When ordering an add-on license with a base license, note the combinations that are permitted and those that are not permitted.

Table 1: License Combinations

Combinations	License Level
Permitted License Combinations	Network Essentials + DNA Essentials
	Network Advantage + DNA Essentials
	Network Advantage + DNA Advantage



Note

You cannot add a DNA Advantage license to Network Essentials base license.

How to Configure RTU Licenses

Activating a License

Procedure

	Command or Action	Purpose
Step 1	<p>Example:</p> <pre>Device# license right-to-use activate network-essentials all acceptEULA</pre>	<p>Activates the license level. Activation can happen on all switches and also include the EULA acceptance.</p> <p>Note If you do not accept EULA, the modified configuration will not take effect after reload. The default license (or a license that was not deactivated) becomes active after reload.</p>
Step 2	<p>license right-to-use {activate deactivate } addon {dna-advantage dna-essentials } [all evaluation subscription {all slot slot-number <1-8>}] [acceptEULA]</p> <p>Example:</p> <pre>Device# license right-to-use activate addon dna-essentials subscription all acceptEULA</pre>	<p>Activates the license level. Activation can happen on all switches and also include the EULA acceptance.</p> <p>Note If you do not accept EULA, the modified configuration will not take effect after reload. The default license (or a license that was not deactivated) becomes active after reload.</p>
Step 3	<p>reload [LINE at cancel in slot device-member-number standby-cpu]</p> <p>Example:</p> <pre>Device# reload slot 1 Proceed with reload? [confirm] y</pre>	<p>Reloads a specific device member to complete the activation process.</p> <p>When changing license level, you are not required to save the configuration. But, it is a good practice to ensure all the configuration is stored properly before reload. Changing from a higher license level to a lower license level on reboot will remove CLIs that are not applicable. Ensure that all features in the lower license level that are actively used are not removed.</p>
Step 4	<p>show license right-to-use usage [slot slot-number]</p> <p>Example:</p> <pre>Device# show license right-to-use usage Slot# License Name Type usage-duration(y:m:d) In-Use EULA</pre>	<p>Displays detailed usage information.</p>

	Command or Action	Purpose
	<pre> 1 network-essentials Permanent 0 :0 :3 no yes 1 network-essentials Evaluation 0 :0 :0 no no 1 network-essentials Subscription 0 :0 :0 no no 1 network-advantage Permanent 0 :0 :6 yes yes 1 network-advantage Evaluation 0 :0 :0 no no 1 network-advantage Subscription 0 :0 :0 no no 1 dna-essentials Evaluation 0 :0 :0 no no 1 dna-essentials Subscription 0 :0 :0 no no 1 dna-advantage Evaluation 0 :0 :0 no no 1 dna-advantage Subscription 0 :0 :6 yes yes </pre>	
	Device#	

Rehosting a License

To rehost a license, you have to deactivate the license from one device and then activate the same license on another.

Procedure

	Command or Action	Purpose
Step 1	<p>license right-to-use deactivate [license-level] slot <i>slot-num</i></p> <p>Example:</p> <pre>Device# license right-to-use deactivate network-essentials slot 1</pre>	Deactivates the license on one device. The network-essentials license is considered for the example.
Step 2	<p>license right-to-use activate [license-level] slot <i>slot-num</i> [acceptEULA]</p> <p>Example:</p> <pre>Device# license right-to-use activate network-essentials slot 2 acceptEULA</pre>	Activates the license on another device. The network-essentials license is considered for the example.

Upgrading a Network Essentials License to Network Advantage

Procedure

	Command or Action	Purpose
Step 1	<code>license right-to-use activate network-advantage slot <i>switch-ID</i> acceptEULA</code>	Activates Network Advantage license. Enter the switch ID. Enter acceptEULA to indicate acceptance.
Step 2	<code>show license right-to-use summary</code>	Check the reboot license level is Network Advantage.
Step 3	<code>reload</code>	Reboots the switch to boot with Network Advantage.

Activating DNA Essentials License on a SKU with a Network Essentials License

Procedure

	Command or Action	Purpose
Step 1	<code>license right-to-use activate addon dna-essentials subscription slot <i>switch-ID</i> acceptEULA</code>	Activates DNA Essentials license. Enter the switch ID. Enter acceptEULA to indicate acceptance.
Step 2	<code>show license right-to-use summary</code>	Check the reboot license level is DNA Essentials.
Step 3	<code>reload</code>	Reboots the switch to boot with DNA Essentials.

Evaluating a Network Advantage License on a SKU with a Network Essentials License

Procedure

	Command or Action	Purpose
Step 1	<code>license right-to-use activate network-advantage evaluation slot <i>switch-ID</i> acceptEULA</code>	Activates the Network Advantage evaluation license. Enter the switch ID. Enter acceptEULA to indicate acceptance.
Step 2	<code>show license right-to-use summary</code>	Check the reboot license level is Network Advantage evaluation.

	Command or Action	Purpose
Step 3	reload	Reboots the switch to boot with Network Advantage evaluation license.

Deactivating an Evaluation Network Advantage License on a Network Essentials SKU

Procedure

	Command or Action	Purpose
Step 1	license right-to-use deactivate network-advantage evaluation slot <i>switch-ID</i> acceptEULA	Deactivates the Network Advantage evaluation license. Enter the switch ID.
Step 2	show license right-to-use summary	Check the reboot license level is Network Essentials.
Step 3	reload	Reboots the switch to boot with Network Essentials.

CLI for Permissible License Combinations

Table 2: Base Licenses

Network Essentials
license right-to-use [activate deactivate] network-essentials [acceptEULA]
license right-to-use [activate deactivate] network-essentials evaluation [acceptEULA]
license right-to-use [activate deactivate] network-essentials subscription [acceptEULA]
Network Advantage
license right-to-use [activate deactivate] network-advantage [acceptEULA]
license right-to-use [activate deactivate] network-advantage evaluation [acceptEULA]
license right-to-use [activate deactivate] network-advantage subscription [acceptEULA]

Table 3: Add-on Licenses

DNA Essentials
license right-to-use [activate deactivate] addon dna-essentials subscription [acceptEULA]
license right-to-use [activate deactivate] addon dna-essentials evaluation [acceptEULA]

DNA Essentials
DNA Advantage
license right-to-use [activate deactivate] addon dna-advantage subscription [acceptEULA]
license right-to-use [activate deactivate] addon dna-advantage evaluation [acceptEULA]

Monitoring and Maintaining RTU Licenses

Command	Purpose
show license right-to-use default	Displays the default license information.
show license right-to-use detail	Displays detailed information of the licenses on the device.
show license right-to-use eula {evaluation permanent subscription}	Displays the end user license agreement.
show license right-to-use mismatch	Displays the license information that does not match.
show license right-to-use summary	Displays a summary of the license information on the device.

Configuration Examples for RTU Licensing

Example: Displaying RTU Licensing Information

This example shows the RTU licensing information on the device.

Example Output with Base (Permanent) License

```
Switch# show license right-to-use summary

      License Name           Type      Period left
-----
network-essentials         Permanent      Lifetime
-----
```

```
License Level In Use: network-essentials
License Level on Reboot: network-essentials
```

Example Output with Add-on (Term) License

```
Switch# show license right-to-use summary

Switch#show license right-to-use summary
```

Example: Displaying RTU License Details

```

      License Name      Type      Period left
-----
network-advantage    Permanent    Lifetime
dna-advantage        Subscription CSSM Managed
-----

```

```

License Level In Use: network-advantage+dna-advantage Subscription
License Level on Reboot: network-advantage+dna-advantage Subscription

```

Example Output with Evaluation License

```
Switch# show license right-to-use summary
```

```

Switch#show license right-to-use summary
      License Name      Type      Period left
-----
network-advantage    Evaluation    90
dna-advantage        Evaluation    90
-----

```

```

License Level In Use: network-advantage Evaluation+dna-advantage Evaluation
License Level on Reboot: network-advantage Evaluation+dna-advantage Evaluation

```

Example: Displaying RTU License Details

This example shows all the detailed information for the RTU licenses

```

Switch#show license right-to-use detail
Index 1
  License Name      : network-essentials
  Period left      : Lifetime
  License Type      : Permanent
  License State     : Not Activated
Index 2
  License Name      : network-essentials
  Period left      : 56
  License Type      : Evaluation
  License State     : Active, In use
Index 3
  License Name      : network-essentials
  Period left      : Not Active
  License Type      : Subscription
  License State     : Not Activated
Index 4
  License Name      : network-advantage
  Period left      : Lifetime
  License Type      : Permanent
  License State     : Not Activated
Index 5
  License Name      : network-advantage
  Period left      : 90
  License Type      : Evaluation
  License State     : Not Activated
Index 6
  License Name      : network-advantage
  Period left      : Not Active
  License Type      : Subscription

```

```

License State : Not Activated
Index 7
License Name : dna-essentials
Period left  : 90
License Type  : Evaluation
License State : Not Activated
Index 8
License Name : dna-essentials
Period left  : Not Active
License Type  : Subscription
License State : Not Activated
Index 9
License Name : dna-advantage
Period left  : 90
License Type  : Evaluation
License State : Not Activated
Index 10
License Name : dna-advantage
Period left  : Not Active
License Type  : Subscription
License State : Not Activated

```

Additional References for RTU Licensing

Related Documents

Related Topic	Document Title
For complete syntax and usage information for the commands used in this chapter.	System Management Command Reference

MIBs

MIB	MIBs Link
Object ciscoLicenseMIB OID 1.3.6.1.4.1.9.9.359 CISCO-LICENSE-MGMT-MIB ; - View Supporting Images	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Feature History and Information for RTU Licensing

Release	Feature Information
Cisco IOS XE 16.5.1a	This feature is introduced.

