



# Smart Licensing Commands

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This module describes the commands used to configure Smart Licensing.

For detailed information about Smart Licensing concepts, configuration tasks, and examples, see the *Implementing Smart Licensing on Cisco IOS XR Software* module in *System Management Configuration Guide for Cisco ASR 9000 Series Routers*.

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# crypto ca http-proxy

To enable communication with the certification authority to retrieve the Certificate Revocation List (CRL) use the **crypto ca http-proxy** command in the Global Configuration mode. Use the **no** form of this command to disable the proxy.

**crypto ca http-proxy** *server-IP-Address* **portnumber**  
**no crypto ca http-proxy** *server-IP-Address* **portnumber**

## Syntax Description

<b>Syntax Description</b>	<b>http-proxy</b> <i>server-IP-address</i> Specifies the host IP address.
	<b>portnumber</b> http-proxy server port number. The range is from 1-65535.

## Command Default

No default.

## Command Modes

Global configuration

## Command History

Release	Modification
Release 7.0.2	This command was introduced.

## Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

## Task ID

Task ID	Operation
pkg-mgmt	Read, Write, Execute

## Example

This example shows how to run the command to enable communication with the certification authority to retrieve the Certificate Revocation List (CRL).

```
RP/0/RSP0/CPU0:router# configure
RP/0/RSP0/CPU0:router(config)# crypto ca http-proxy 10.10.10.1 port 1
```

# license smart enable

To enable Smart Licensing for your product, use the **license smart enable** command in the Administration Configuration mode. Use the **no** form of this command to disable Smart Licensing and return to the default traditional mode of licensing.

**license smart enable**  
**no license smart enable**

<b>Syntax Description</b>	This command has no keywords or arguments.
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<b>Command Default</b>	By default, traditional licensing mode is on.
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<b>Command Modes</b>	Administration configuration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
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Smart Licensing components are packaged into the asr9k mini image. By default, traditional licensing mode is on. Use the **license smart enable** command to switch to the Smart Licensing model.

<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read, Write, Execute

## Example

This example shows how to run the command to enable Smart Licensing, and the configuration with Smart Licensing enabled.

```
RP/0/RSP0/CPU0:router(admin)# configure
RP/0/RSP0/CPU0:router(admin-config)#license smart enable
RP/0/RSP0/CPU0:router(admin-config)#show config
Building configuration...
!! IOS XR Configuration 5.2.0.19I
license smart enable
end
```

# show license all

To display all entitlements in use the **show license all** command in the Administration mode.

**show license all**

<b>Syntax Description</b>	This command has no keywords or arguments.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Administration
----------------------	----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example displays the use of the **show license all** command.

```
RP/0/RSP0/CPU0:router(admin)#show license all
```

# show license certificate

To display details of the licensing certificate use the **show license certificate** command in the Administration mode.

**show license certificate**

<b>Syntax Description</b>	This command has no keywords or arguments.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Administration
----------------------	----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
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<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example shows the output of the **show license certificate** command.

```
RP/0/RSP0/CPU0:router(admin)#show license cert
Licensing Certificates:
ID Cert Info:
Start Date: Mon Mar10 2014 05:58:28 UTC.
Expiry Date:Tue Mar10 2015 05:58:28 UTC
Serial Number: 34506
Version: 3
Subject/SN: 144a76ed-75de-4a8e-969e-30cf683c
Common Name: 5daab5111895b37e21e164dacc::1,2
ID Cert Info:
Start Date: Fri Jun14 2013 20:18:52 UTC.
Serial Number: 3
Expiry Date:Sun Apr24 2033 21:55:42 UTC
Version: 3
```

# show license entitlement

To display the details of the various entitlements you own use the **show license entitlement** command in the Administration mode.

## show license entitlement

<b>Syntax Description</b>	This command has no keywords or arguments.				
<b>Command Default</b>	None				
<b>Command Modes</b>	Administration				
<b>Command History</b>	<table> <tr> <th>Release</th><th>Modification</th></tr> <tr> <td>Release 5.2.0</td><td>This command was introduced.</td></tr> </table>	Release	Modification	Release 5.2.0	This command was introduced.
Release	Modification				
Release 5.2.0	This command was introduced.				
<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.				
<b>Task ID</b>	<table> <tr> <th>Task ID</th><th>Operation</th></tr> <tr> <td>pkg-mgmt</td><td>Read</td></tr> </table>	Task ID	Operation	pkg-mgmt	Read
Task ID	Operation				
pkg-mgmt	Read				

## Example

This example shows the output of the **show license entitlement** command.

```
RP/0/RSP0/CPU0:router(admin)#show license entitlement
Entitlement:Tag: regid.2014-04.com.cisco.S-A9K-IVRF-LIC,1.0_0bb7,
Version: 1.0, Enforce Mode: Authorized
Requested Time : Mon May 19 2014 16:59:24 PST,
Requested Count: 1 Vendor String:
Tag: S-A9K-ivRF-LIC, Version: 1.0, Enforce Mode: Waiting
Requested Time : Mon Mar 10 2014 11:33:12 UTC,
Requested Count: 1 Vendor String:
Tag: regid.2014-04.com.cisco.S-A9K-IVRF-LIC,1.0_1bealf,
Version: 1.0, Not In Use
Requested Time : NA, Requested Count: NA
Vendor String:
Tag:S-A9K-9001-AIP-LIC,Version:1.0,Enforce Mode:Eval period
```

# show license features (chassis)

To display the licenses that are supported on a given chassis, use the **show license features** command in the Administration mode.

## show license features

<b>Syntax Description</b>	This command has no keywords or arguments.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Administration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
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<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example shows the output for the **show license features** command.

```
RP/0/RSP0/CPU0:router(admin)#show license features
Platform Feature ID:
A9K-ivRF-LIC
A9K-9001-AIP-LIC
A9K-9001-OPT-LIC
A9K-9001-VID-LIC
A9K-NVSAT1-LIC
A9K-NVSAT5-LIC
A9K-NVSAT20-LIC
A9K-NVSAT1S-LIC
A9K-NVSAT5S-LIC
A9K-NVSAT20S-LIC
A9K-NV-CLUSTER-LIC
A9K-9001-MOB-LIC
```

# show license ha

To display the Smart Licensing high availability status, whether it is in active or standby mode, use the **show license ha** command in the Administration mode.

**show license ha**

<b>Syntax Description</b>	This command has no keywords or arguments.
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<b>Command Default</b>	None
------------------------	------

<b>Command Modes</b>	Administration
----------------------	----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example shows the output of the **show license ha** command.

```
RP/0/RSP0/CPU0:router(admin)#show license ha
HA Info:
RP Role: Active
Chassis Role: Active
HA Sudi:
Role: Active PID:ASR-9001,SN:FOC1741NC0Z
```



# show license pool

To display the pool to which the device belongs, use the **show license pool** command in the Administration mode.

**show license pool**

<b>Syntax Description</b>	This command has no keywords or arguments.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Administration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example shows the output of the **show license pool** command.

```
RP/0/RSP0/CPU0:router(admin)#show license pool
Assigned Pool Info: IMC0_POOL
```

# show license register-status

To display the Smart Licensing registration status, use the **show license register-status** command in the Administration mode.

**show license register-status**

<b>Syntax Description</b>	This command has no keywords or arguments.	
<b>Command Default</b>	None	
<b>Command Modes</b>	Administration	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.
<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.	
<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example shows the output for the **show license register-status** command.

```
RP/0/RSP0/CPU0:router(admin)#show license register-status
Registration Status: Completed
Step 3
for connectivity issues with the Cisco license
manager or register the device with a new token
ID.
Registration Start Time: Fri May 02 2014 17:19:53 PST
Next ID Cert Renew Time: Wed Oct 29 2014 17:21:55 PST
Next ID Cert Expiration Time: May02 2015 17:18:50 PST
Last Response Time: Fri May 02 2014 17:20:11 PST
Last Response Message: OK
```

# show license scheduler

To display the Smart Licensing scheduler information use the **show license scheduler** command in the Administration mode.

## show license scheduler

<b>Syntax Description</b>	This command has no keywords or arguments.				
<b>Command Default</b>	None				
<b>Command Modes</b>	Administration				
<b>Command History</b>	<table> <tr> <th>Release</th><th>Modification</th></tr> <tr> <td>Release 5.2.0</td><td>This command was introduced.</td></tr> </table>	Release	Modification	Release 5.2.0	This command was introduced.
Release	Modification				
Release 5.2.0	This command was introduced.				
<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.				
<b>Task ID</b>	<table> <tr> <th>Task ID</th><th>Operation</th></tr> <tr> <td>pkg-mgmt</td><td>Read</td></tr> </table>	Task ID	Operation	pkg-mgmt	Read
Task ID	Operation				
pkg-mgmt	Read				

## Example

This example shows how to use the **show license scheduler** command, and its output.

```
RP/0/RSP0/CPU0:router(admin)#show license scheduler
Upcoming Scheduled Jobs:
  Job Name: Daily Job
    Recurring: Yes,      Cancelled: No
    Next Run Time : Sat May 31 2014 03:58:02 PST
  Job Name: Authorization Renewal Job
    Recurring: No,      Cancelled: Yes
    Next Run Time : NA
  Job Name: Init Flag Check Job
    Recurring: No,      Cancelled: Yes
    Next Run Time : NA
  Job Name: Evaluation Expiration Check Job
    Recurring: No,      Cancelled: No
    Next Run Time : Wed Aug 20 2014 11:18:42 PST
  Job Name: Register Period Expiration Check Job
    Recurring: No,      Cancelled: No
    Next Run Time : Fri May 30 2014 04:15:06 PST
```

# show license status (compliance)

To display the compliance status of Smart Licensing, use the **show license status** command in the Administration mode.

**show license status**

<b>Syntax Description</b>	This command has no keywords or arguments.
---------------------------	--

<b>Command Default</b>	None
------------------------	------

<b>Command Modes</b>	Administration
----------------------	----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example shows you to use show license status command to display the current status of your license.

```
RP/0/RSP0/CPU0:router(admin)#show license status
Compliance Status: Eval period
```

## show license udi (smart)

To display the Smart Licensing UDI, use the **show license udi** command in the Administration mode.

**show license udi**

<b>Syntax Description</b>	This command has no keywords or arguments.
---------------------------	--

<b>Command Default</b>	None
------------------------	------

<b>Command Modes</b>	Administration
----------------------	----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
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<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

### Example

This example shows you how to use the **show license udi** command, and a sample output.

```
RP/0/RSP0/CPU0:router#admin
RP/0/RSP0/CPU0:router(admin)#show license udi
UDI:
PID:ASR-9001, SN:FOC1741NC0Z
```

# show license version

To display the Smart Licensing version information, use the **show license version** in the Administration mode.

## show license version

<b>Syntax Description</b>	This command has no keywords or arguments.
---------------------------	--

<b>Command Default</b>	None
------------------------	------

<b>Command Modes</b>	Administration
----------------------	----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 5.2.0	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
-------------------------	---

<b>Task ID</b>	<b>Task ID</b>	<b>Operation</b>
	pkg-mgmt	Read

## Example

This example displays how to use the **show license version** command, and the output.

```
RP/0/RSP0/CPU0:router(admin)#show license version
Cisco Smart Licensing Agent, Version 1.1.0_dev/240
```

# show license status

To display the registration details, status of license, and authorization details of license, use the **show license status** command in the Administration mode.

## show license status

<b>Usage Guidelines</b>	This command has no keywords or arguments.
-------------------------	--

<b>Command Default</b>	None
------------------------	------

<b>Command Modes</b>	Administration
----------------------	----------------

<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 5.3.3</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 5.3.3	This command was introduced.
Release	Modification				
Release 5.3.3	This command was introduced.				

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
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<b>Task ID</b>	<table border="1"> <thead> <tr> <th>Task ID</th> <th>Operation</th> </tr> </thead> <tbody> <tr> <td>pkg-mgmt</td> <td>read</td> </tr> </tbody> </table>	Task ID	Operation	pkg-mgmt	read
Task ID	Operation				
pkg-mgmt	read				

## Example

The following example shows output from the **show license status** command:

```
RP/0/RSP0/CPU0:router(admin)# show license status
```

```
Smart Licensing is ENABLED
```

```
Initial Registration: SUCCEEDED on Thu Nov 12 2015 22:05:18 PDT
```

```
Last Renewal Attempt: None
```

```
Registration Expires: Fri Nov 11 2016 21:59:04 PDT
```

```
License Authorization:
```

```
Status: EVAL MODE
```

```
Evaluation Period Remaining: 87 days, 8 hours, 19 minutes, 11 seconds
```

```
Last Communication Attempt: SUCCEEDED on Thu Nov 12 2015 22:05:30 PDT
```

```
Next Communication Attempt: Thu Nov 12 2015 23:05:30 PDT
```

```
Communication Deadline: Wed Dec 31 1969 17:00:00 PDT
```

# show license summary

To display the license summary, use the **show license summary** command. On Cisco IOS XR, this command runs in Administration mode, and on Cisco IOS XR 64-bit, it runs in EXEC mode.

## show license summary

### Usage Guidelines

This command has no keywords or arguments.

### Command Default

None

### Command Modes

Administration for Cisco IOS XR

EXEC for Cisco IOS XR 64-bit

### Command History

Release	Modification
Release 6.1.1	This command was introduced.

### Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

### Task ID

Task ID	Operation
pkg-mgmt	read

## Example

The following example shows output from the **show license summary** command:

```
RP/0/RSP0/CPU0:router# show license summary
```

**Smart Licensing is ENABLED**

Registration:

```
Status: REGISTERED
Smart Account: Smart-Account-Name
Virtual Account: ASR9K-SL-eXR
Last Renewal Attempt: None
Next Renewal Attempt: Mon Apr 09 2018 12:52:44 UTC
```

License Authorization:

```
Status: AUTHORIZED on Wed Oct 11 2017 12:55:24 UTC
Last Communication Attempt: SUCCEEDED
Next Communication Attempt: Thu Oct 12 2017 00:55:24 UTC
```

License Usage:

License	Entitlement tag	Count	Status
ASR 9000 Consumption Model LC	(A9K-8X100GE-CM)	1	AUTHORIZED



ASR 9K 48x10-1G Consumption Model Line Card License	(A9K-48X10-1-CM-LIC)	1	AUTHORIZED
ASR9000 IP Basic 10G	(S-A9K-IP-10G)	48	AUTHORIZED

# show license usage

To display the license usage count, use the **show license usage** command. On Cisco IOS XR, this command runs in Administration mode, and on Cisco IOS XR 64-bit, it runs in EXEC mode.

## show license usage

<b>Usage Guidelines</b>	This command has no keywords or arguments.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Administration for Cisco IOS XR EXEC for Cisco IOS XR 64-bit
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<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 6.1.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 6.1.1	This command was introduced.
Release	Modification				
Release 6.1.1	This command was introduced.				

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.
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<b>Task ID</b>	<table border="1"> <thead> <tr> <th>Task ID</th> <th>Operation</th> </tr> </thead> <tbody> <tr> <td>pkg-mgmt</td> <td>read</td> </tr> </tbody> </table>	Task ID	Operation	pkg-mgmt	read
Task ID	Operation				
pkg-mgmt	read				

## Example

The following example shows output from the **show license usage** command:

```
RP/0/RSP0/CPU0:router(admin)# show license usage

License Authorization:
  Status: AUTHORIZED on Thu Nov 12 2015 22:05:41 PDT

ASR 9000 Lawful Intercept License (A9K-LI-LIC):
  Description: ASR 9000 Lawful Intercept License
  Count: 1
  Version: 1.0
  Status: AUTHORIZED

ASR 9000 Consumption Model LC (A9K-8X100GE-CM):
  Description: ASR 9000 Consumption Model LC
  Count: 1
  Version: 1.0
  Status: AUTHORIZED
```

In the above show command output, notice that the status of two licenses (A9K-LI-LIC and A9K-8X100GE-CM) is Authorized.

show license usage