



TURN IT UP

CISCO *Live!*

#CiscoLive



The bridge to possible

Understanding and configuring Smart Licensing on Nexus switches

Nexus 3000 and 9000 series

Cesar Campos

@cescampo1

Technical Consulting Engineer

BRKDCN-2004

CISCO *Live!*

#CiscoLive





Agenda

- What is Smart Licensing (SL)?
- Which Nexus platforms support it
- How Smart Licensing works
- Smart Licensing configuration
- Demo
- Resources

What is Smart Licensing / Smart Account

- Smart Licensing is a flexible software licensing model that simplifies the way you activate and manage licenses across your organization
- A Smart Account allows you to centrally organize your licenses, devices, and specific license agreements based on your business needs
- Cisco Smart Software Manager (CSSM) is an intuitive portal where you can activate and manage all your Cisco licenses
- An On-Prem version is available for security-sensitive environments

Traditional vs Smart Licensing

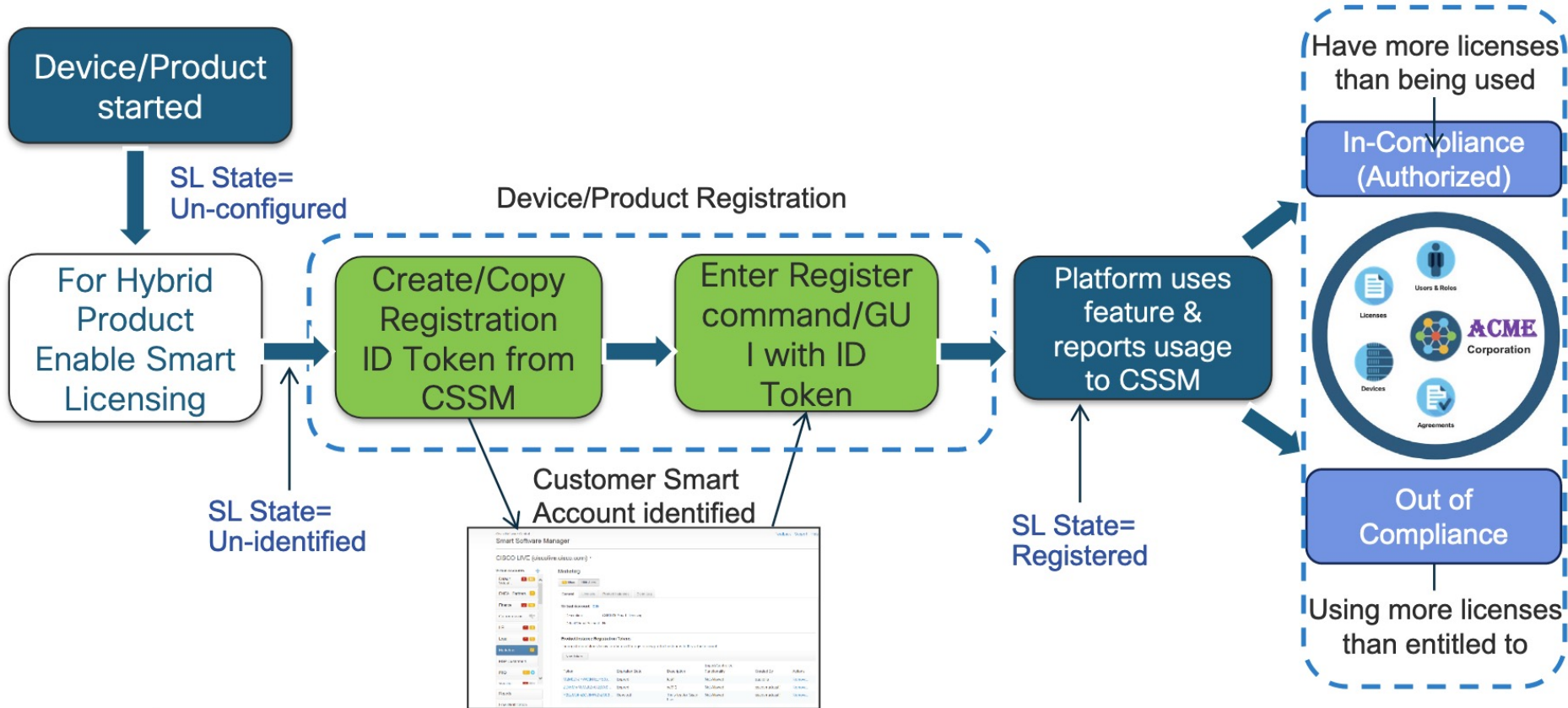
- Unique license, **based on serial number**
- Product Activation Key (PAK)
- **One license per device**, manual registration
- **Flexible and Scalable** deployments
- Consistent configuration – works the same across all devices
- Can be easily transferred to a new device (RMA)
- **BRKARC-2034**

Smart Licensing Requirements

Keywords:

- **Smart Account**
- Virtual Account
- Smart Call Home (SCH)
- **CSSM vs SSM** (on-prem or satellite)
- Smart Licensing relies on SCH as main transport (for now)
- Requires **NXOS 9.3(3)** or newer on N3K and N9K
- Must be able to **communicate** directly to CSSM or SSM (on-prem)

Smart Licensing Workflow



Configuration Example

N9K-C93240YC-FX2

NXOS: version 9.3(6)



! Enable SL feature and DNS

```
switch# configure terminal
```

```
switch(config)# license smart enable
```

```
switch(config)# ip domain-lookup
```

```
switch(config)# vrf context management
```

```
switch(config-vrf)# ip domain-name  
cisco.com
```

```
switch(config-vrf)# ip name-server 8.8.8.8
```

```
switch(config-vrf)# exit
```

```
switch(config)# callhome
```

```
switch(config-callhome)# transport http  
use-vrf management
```

```
switch(config-callhome)# exit
```


Validate Callhome Configuration

```
switch# show run callhome
```

```
!Command: show running-config callhome
```

```
callhome
```

```
email-contact sch-smart-licensing@cisco.com
```

```
destination-profile CiscoTAC-1 transport-method http
```

```
destination-profile CiscoTAC-1 index 1
```

```
http https://tools.cisco.com/its/service/oddce/services/DDCEService
```

```
transport http use-vrf management
```

```
enable
```

```
switch# show run license
```

```
!Command: show running-config license
```

```
feature license smart
```

Validate Communication

```
switch# ping tools.cisco.com vrf management
```

```
PING tools.cisco.com (72.163.4.38): 56 bytes <<< validates DNS!
```

```
64 bytes from 72.163.4.38: icmp_seq=0 ttl=237 time=29.992 ms
```

```
64 bytes from 72.163.4.38: icmp_seq=1 ttl=237 time=29.757 ms
```

```
64 bytes from 72.163.4.38: icmp_seq=4 ttl=237 time=29.823 ms
```

```
--- tools.cisco.com ping statistics ---
```

```
3 packets transmitted, 5 packets received, 0.00% packet loss
```

```
round-trip min/avg/max = 29.679/29.8/29.992 ms
```

```
switch# telnet tools.cisco.com 443 vrf management
```

```
Trying 72.163.4.38...
```

```
Connected to tools.cisco.com. <<< successful TCP handshake!
```

```
dcos-telnet> quit
```

```
Connection closed.
```

Perform Registration

```
switch(config)# license smart register idtoken <mytoken>  
register status: Registration process is in progress. Use the 'show license  
status' command to check the progress and result
```

```
switch(config)# show license status  
Smart Licensing is ENABLED
```

Registration:

Status: REGISTERED

Smart Account: My Smart Account

Virtual Account: DEFAULT

Export-Controlled Functionality: Allowed

Initial Registration: SUCCEEDED on Oct 13 01:11:30 2020 UTC

Next Renewal Attempt: Apr 11 01:11:30 2021 UTC

Registration Expires: Oct 13 01:06:29 2021 UTC

License Authorization:

Status: **OUT OF COMPLIANCE** on Oct 13 01:11:35 2020 UTC

Last Communication Attempt: SUCCEEDED on Oct 13 01:11:35 2020 UTC

Next Communication Attempt: Oct 13 13:11:35 2020 UTC

Communication Deadline: Jan 11 01:06:34 2021 UTC

Smart Licensing Tokens

A Token:

- Can be used once or reused multiple times
- Can be created or revoked at any time
- Expires after a period of time (default is 30 days); Minimum of 1 day and a maximum of 365 days)

A Token is NOT:

- Product specific
- Licenses or keys or PAKs
- Stored on the Cisco Product
- Needed after the product is registered

Smart Licensing Portal

CISCO *Live!*



https://software.cisco.com/#SmartLicensing-Inventory

Virtual Account: [REDACTED]

2 Major

1 Minor

Hide Alerts

General

Licenses

Product Instances

Event Log

Available Actions ▾

Manage License Tags



☒ Show License Transactions

Search by License



By Name | By Tag

Advanced Search ▾

<input type="checkbox"/>	License	Billing	Purchased	In Use	Substitution	Balance	Alerts	Actions
	ACI Essential License for 10+G Leaf	Prepaid	24	0	To Lower: -15	+ 9		Actions ▾
	ASR_1000_Advlpervices	Prepaid	6	1	-	+ 5		Actions ▾
	ASR_1001X_10GE	Prepaid	12	2	-	+ 10		Actions ▾
	C9200 DNA Essentials, 48-port Term licenses	Prepaid	4	4	-	0		Actions ▾
	C9200 Network Essentials, 48-port license	Prepaid	4	4	-	0		Actions ▾
	Cisco AnyConnect Apex License	Prepaid	10	2	-	+ 8	Licenses Expiring	Actions ▾
	Cisco FPR2140 Threat Defense Threat Protection License	Prepaid	8	4	-	+ 4		Actions ▾
	Firepower Threat Defense Base Features	Prepaid	4	4	-	0		Actions ▾
	LAN license for Nexus 9300-XF	Prepaid	0	16	From Higher: +15	-1	Insufficient Licenses	Actions ▾
	LAN license for Nexus 9500-M4	Prepaid	0	2	-	-2	Insufficient Licenses	Actions ▾

10 ▾

Showing Page 1 of 2 (11 Records)



Demo



Discussion and takeaways

Resources



Resources

<https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2020/pdf/BRKARC-2034.pdf>

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/nx-os/licensing/guide/b_Cisco_NX-OS_Licensing_Guide/m-smart-licensing-for-cisco-nexus-3000-and-9000-series-switches.html

https://software.cisco.com/software/cswws/platform/home?locale=en_US#

<https://www.cisco.com/c/en/us/products/software/smart-accounts/software-licensing.html>

<https://www.cisco.com/c/en/us/support/index.html>



The bridge to possible

Thank you

CISCO *Live!*

#CiscoLive





TURN IT UP

CISCO *Live!*

#CiscoLive