



Simplifying the Cisco Software Experience

Application High Availability – Quick Reference Guide for Sales, Partners and Customers

Overview

To ensure accurate license consumption reporting for Smart Licensing enabled products, all user roles in Cisco Smart Software Manager are able to view correct entitlement consumption counts even when applications are immediately restarted on another system after a hardware or software fault.

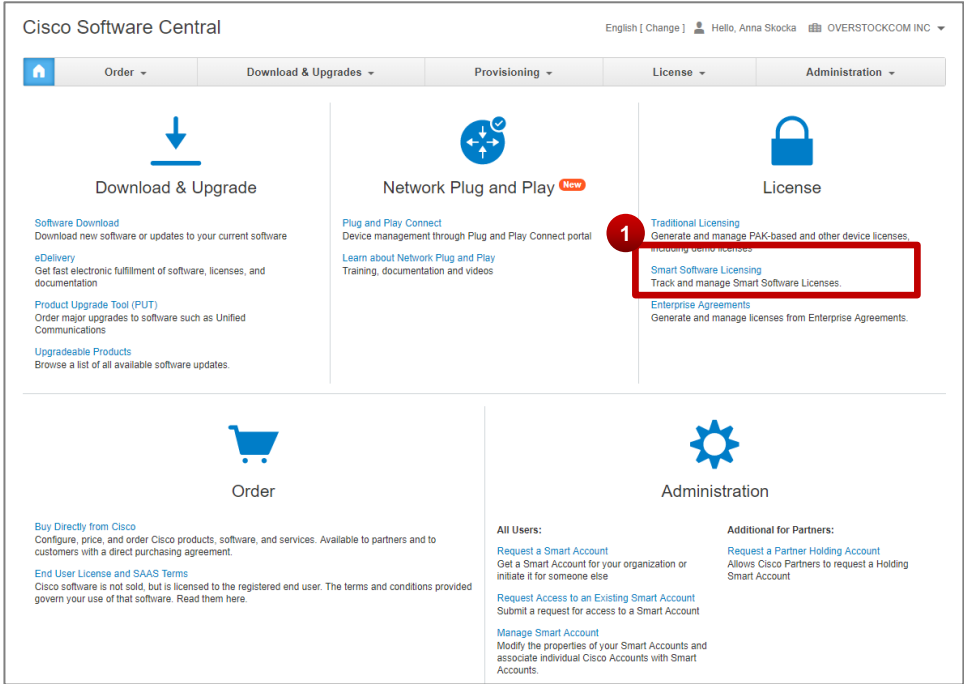
- Product instances in Cisco SSM that are configured for this functionality will be identifiable by a new icon.
- There are new sections in both the Product Instance and License tabs in Cisco SSM that detail out the list of applications configured on each product instance and the licenses that they are consuming.

Application High Availability (HA) is the foundation for supporting ASR1K and ISR4K.

To check this new functionality login to [Cisco Software Central](#) (CSC) and go to [Smart Software Licensing](#).


Application High Availability

1 From [Cisco Software Central](#), go to the **License** section and click on [Smart Software Licensing](#).



The screenshot shows the Cisco Software Central interface. The top navigation bar includes 'Order', 'Download & Upgrades', 'Provisioning', 'License', and 'Administration'. The 'License' section is active, displaying three main options: 'Download & Upgrade', 'Network Plug and Play', and 'License'. The 'License' section is further divided into 'Traditional Licensing' and 'Smart Software Licensing'. The 'Smart Software Licensing' option is highlighted with a red box and a red circle containing the number '1'. Below the 'License' section, there are 'Order' and 'Administration' sections. The 'Administration' section includes 'All Users' and 'Additional for Partners' sub-sections.

Inventory - Application High Availability

2 As part of the **Application High Availability (HA)** solution, the  icon appears in the **Product Instances** tab next to a product instance that is configured for High Availability.

Name	Product Type	Last Contact	Alerts	Actions
JMHA400	ASR1000	2016-May-25 19:53:45		Actions
JMHA400	ASR1000	2016-May-24 20:38:07		Actions
JMHA400	ASR1000	2016-Jun-09 20:42:15		Actions
JMHA500	ASR1000	2016-Jun-09 20:52:38		Actions
JMHA6	ASR1000	2016-May-20 23:27:08		Actions
JMHA7	ASR1000	2016-Jun-09 21:02:34		Actions
test1	3900ISR	2016-Jun-09 17:23:47		Actions

3 On the **High Availability** tab there is a list of applications and peers configured for high availability on the product instance and also **status information**.

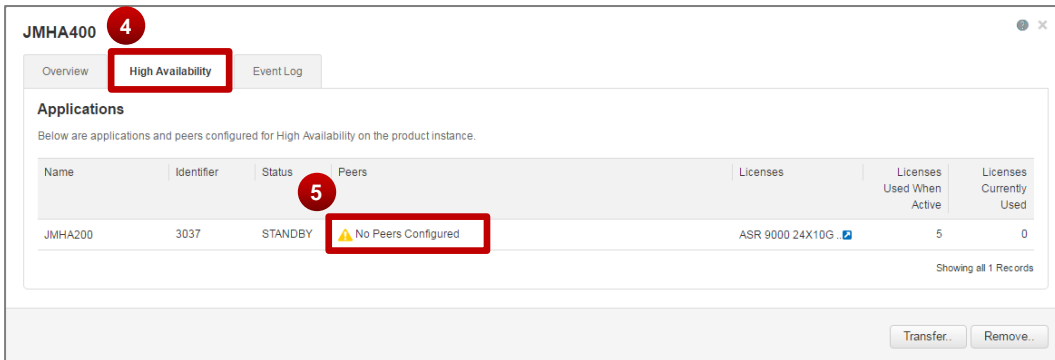
Name	Identifier	Status	Peers	Licenses	Licenses Used When Active	Licenses Currently Used
JMHA200	3037	STANDBY	No Peers Configured	ASR 9000 24X10G	5	0

Inventory - Application High Availability

4 Warning messages display in the **"Peers"** column of the Applications section in the **High Availability tab** of the product instance. You can check the current status of your applications and whether the applications have any peers configured and where those peers are located.

5 If there are no peers and the current application is active/standby, you will display a warning message **"No Peers configured"** along with a warning icon.

If you hover your mouse over the warning icon, you will display a message "There are no Peers configured for this Application."

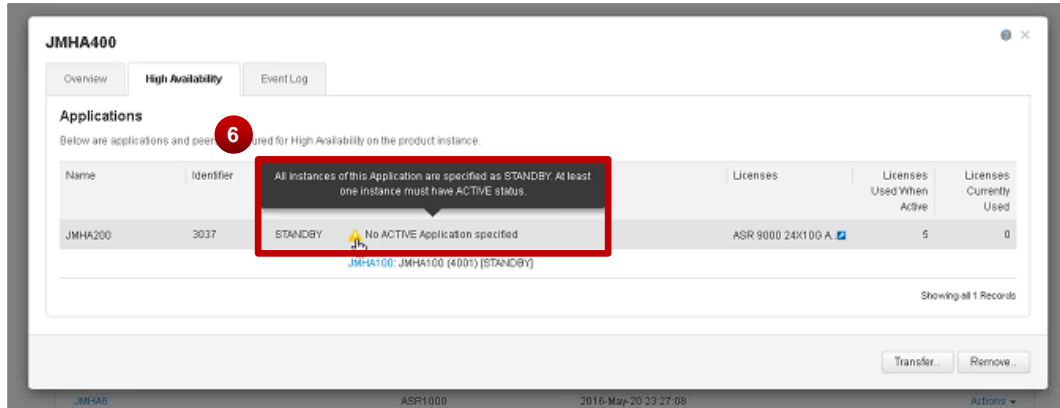


Name	Identifier	Status	Peers	Licenses	Licenses Used When Active	Licenses Currently Used
JMHA200	3037	STANDBY	⚠ No Peers Configured	ASR 9000 24X10G	5	0

Inventory - Application High Availability

- 6 If the application and all its peers are configured as "Standby", you will display a warning message "No ACTIVE Application specified" along with a warning icon. If you hover your mouse over the warning icon, you will display the following message:

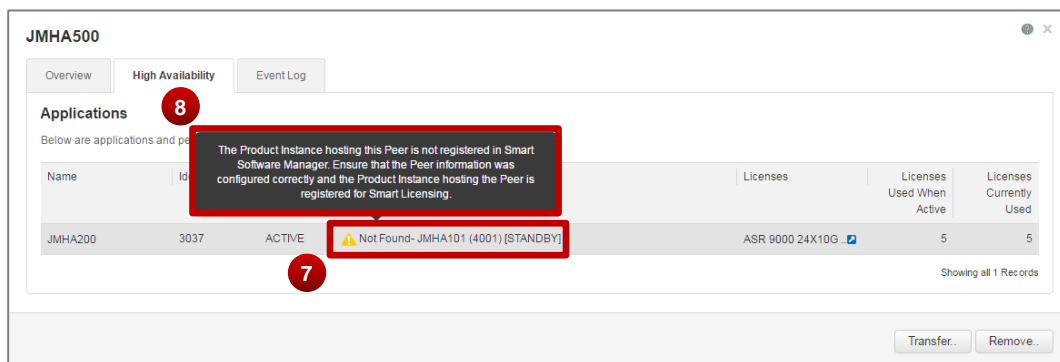
"All instances of this application are specified as STANDBY. At least one instance must have ACTIVE status."



Inventory - Application High Availability

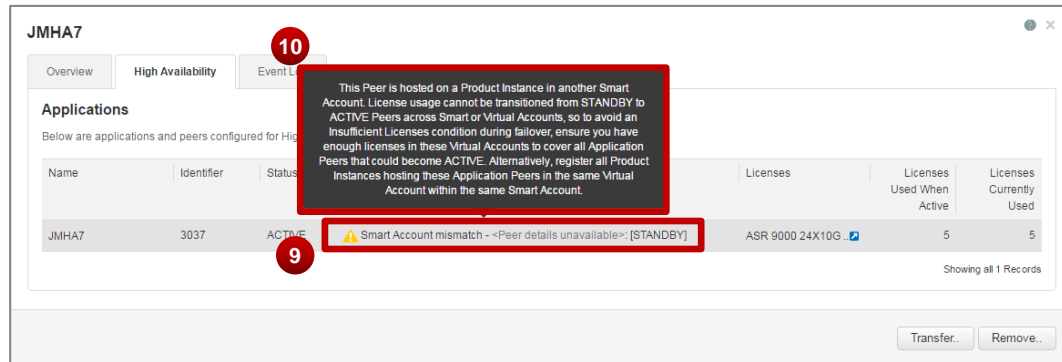
- 7 If the Product Instance hosting the peer cannot be found, you will display the warning message "Not Found - PI Name: Peer Application Peer Name (Peer Application Peer ID) & Peer Application Status" along with a warning icon.

- 8 Upon hovering the mouse over the warning icon, you will display the message: "The Product Instance hosting the Peer "<appname> (<local-identifier>)" is not registered in Smart Software Manager. Ensure that the Peer information was configured correctly and the Product Instance hosting the Peer is registered for Smart Licensing".



Inventory -Application High Availability

- 9 If the peer instance PIID is configured on a PI in a different Smart Account, you will display a warning message "**Smart Account Mismatch - <Peers details unavailable>**" along with the application status and warning icon.
- 10 Hovering the mouse over the warning icon, will display the message: *"This peer is hosted on a Product Instance in a Smart Account than this Product Instance. License usage cannot be transitioned from STANDBY to ACTIVE Peers across Smart or Virtual Accounts, so to avoid an Insufficient Licenses condition during failover, ensure you have enough licenses in these Virtual Accounts to cover all Application Peers that could become ACTIVE. Alternatively, register all Product Instances hosting these Application Peers in the same Virtual Account within the same Smart Account."*



The screenshot shows the 'JMHA7' application configuration page. The 'High Availability' tab is selected. A table lists the application details, and a warning icon is present next to the status 'ACTIVE'. A tooltip is displayed over the warning icon, providing detailed information about the license mismatch.

Name	Identifier	Status	Licenses	Licenses Used When Active	Licenses Currently Used
JMHA7	3037	ACTIVE	ASR 9000 24X10G...	5	5

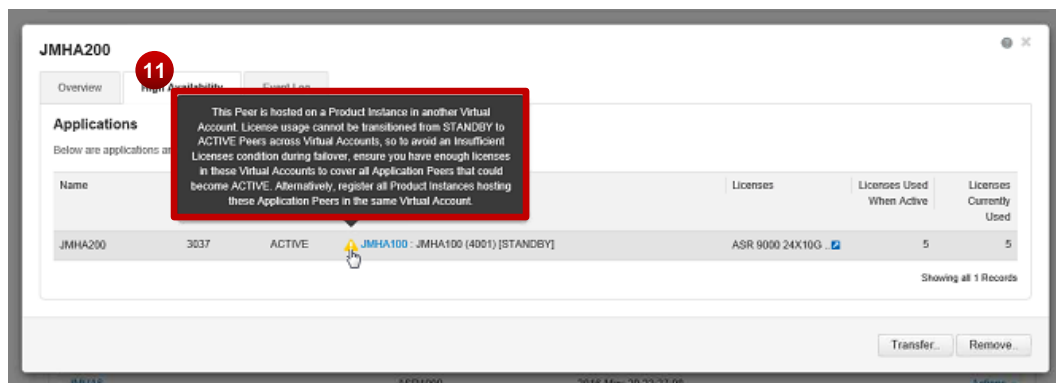
Warning Message: **Smart Account mismatch - <Peers details unavailable>** - [STANDBY]

Tooltip Text: *This Peer is hosted on a Product Instance in another Smart Account. License usage cannot be transitioned from STANDBY to ACTIVE Peers across Smart or Virtual Accounts, so to avoid an Insufficient Licenses condition during failover, ensure you have enough licenses in these Virtual Accounts to cover all Application Peers that could become ACTIVE. Alternatively, register all Product Instances hosting these Application Peers in the same Virtual Account within the same Smart Account.*

Inventory - Application High Availability

- 11** As a Virtual Account Admin/Virtual Account User, if the peer instance PIIID is configured on a PI in a different Virtual Account to which you do not have access, you will display the warning message along with the application status and warning icon.

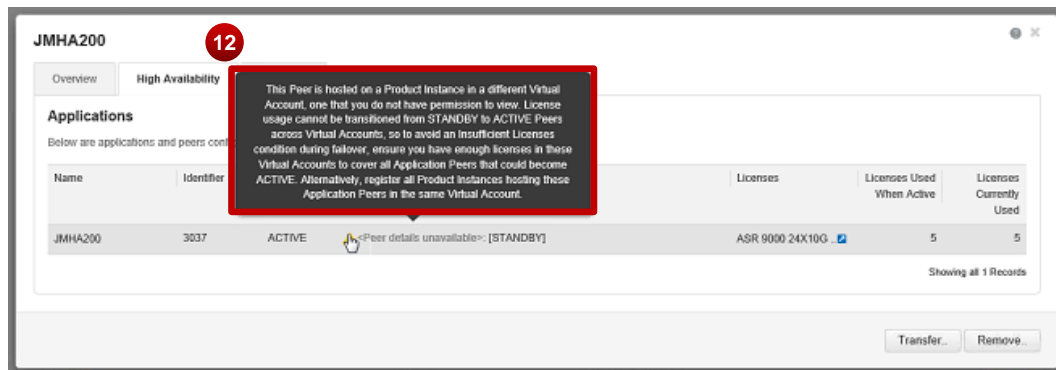
On mouse over the icon the message will be: *"This peer is hosted on a Product Instance in a different Virtual Account than this Product Instance. License usage cannot be transitioned from STANDBY to ACTIVE Peers across Virtual Accounts, so to avoid an Insufficient Licenses condition during failover, ensure you have enough licenses in these Virtual Accounts to cover all Application Peers that could become ACTIVE. Alternatively, register all Product Instances hosting these Application Peers in the same Virtual Account."*



Inventory - Application High Availability

- 12** If the peer instance PIID is configured on a PI in a different Virtual Account, a warning icon along with peer details (PI Name, Peer Application Name & Id and Peer Application Status) will be displayed. Hovering the mouse over the warning icon you will display the following message:

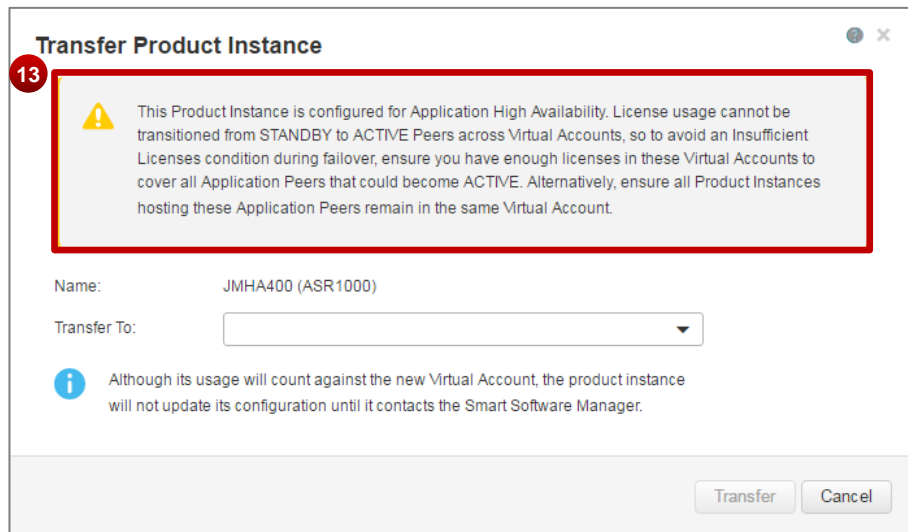
"This peer is hosted on a Product Instance in a different Virtual Account than this Product Instance. License usage cannot be transitioned from STANDBY to ACTIVE Peers across Virtual Accounts, so to avoid an Insufficient Licenses condition during failover, ensure you have enough licenses in these Virtual Accounts to cover all Application Peers that could become ACTIVE. Alternatively, register all Product Instances hosting these Application Peers in the same Virtual Account."



Inventory - Application High Availability

13 As part of the new Application High Availability (HA) solution, anytime a Product Instance with High Availability Applications is transferred between Virtual Accounts you will display a warning message on top of the transfer modal to alert you that you need to have sufficient licenses in the target Virtual Account to cover all applications that could become active when the product instance is transferred. Otherwise, they will be out of compliance due to insufficient licenses.

Alternatively, you are directed to ensure that all your Product Instances and their Application Peers remain in the same Virtual Account together.



Inventory - Application High Availability

13 Upon confirming the transfer:

- The entitlement consumption is released from the Source Virtual Account.
- Entitlements are consumed from the Target Virtual Account.
- High Availability relationships with peer applications will remain intact.

ASR 9000 24X10G Advanced Video in DEFAULT

Overview | **High Availability** | Product Instances | Event Log | Transaction History

Applications
Below are applications configured for High Availability that can use this license type. Only ACTIVE applications are currently consuming a license.

Name (Identifier)	Product Instance	Status	Licenses Used When Active	Licenses Currently Used
JMHA200 (3037)	JMHA400	STANDBY	5	0
JMHA200 (3037)	JMHA500	ACTIVE	5	5
JMHA7 (3037)	JMHA7	ACTIVE	5	5
app71 (3037)	JMHA8	ACTIVE	5	5

Showing All 4 Records

Transfer License...

ASR 9000 24X10G Advanced Video in DEFAULT

Overview | **High Availability** | Product Instances | Event Log | Transaction History

Applications
Below are applications configured for High Availability that can use this license type. Only ACTIVE applications are currently consuming a license.

Name (Identifier)	Product Instance	Status	Licenses Used When Active	Licenses Currently Used
JMHA200 (3037)	JMHA500	ACTIVE	5	5
JMHA200 (3037)	JMHA200	ACTIVE	5	5
JMHA200 (3037)	JMHA400	STANDBY	5	0
JMHA7 (3037)	JMHA7	ACTIVE	5	5
app71 (3037)	JMHA8	ACTIVE	5	5

Showing All 5 Records

Transfer License...

JMHA200

Overview | **High Availability** | Event Log

Applications
Below are applications and peers configured for High Availability on the product instance.

Name	Identifier	Status	Peers	Licenses	Licenses Used When Active	Licenses Currently Used
JMHA200	3037	ACTIVE	⚠ JMHA100 : JMHA100 (4001) [STANDBY]	ASR 9000 24X10G-A	5	5

Showing all 1 Records

Transfer... Remove...

Inventory - Application High Availability

14 As part of the new Application High Availability (HA) solution, when a Product Instance (PI) with HA applications is de-registered, three things will occur:

- All High Availability Applications associated to the PI are removed.
- Entitlements are released to the customer's license pool and the entitlement summary information is updated.
- Any High Availability relationships with peer applications are removed.

JMHA8

Overview | **High Availability** | Event Log

Applications

Below are applications and peers configured for High Availability on the product instance.

Name	Identifier	Status	Peers	Licenses	Licenses Used When Active	Licenses Currently Used
app71	3037	ACTIVE	JMHA2: Peer1 app71 (4001) [STANDBY]	ASR 9000 24X10G A	5	5

Showing all 1 Records

Transfer... Remove...

ASR 9000 24X10G Advanced Video in DEFAULT

Overview | **High Availability** | Product Instances | Event Log | Transaction History

Applications

Below are applications configured for High Availability that can use this license type. Only ACTIVE applications are currently consuming a license.

Name (Identifier)	Product Instance	Status	Licenses Used When Active	Licenses Currently Used
JMHA200 (3037)	JMHA400	STANDBY	5	0
JMHA200 (3037)	JMHA500	ACTIVE	5	5
JMHA7 (3037)	JMHA7	ACTIVE	5	5
app71 (3037)	JMHA8	ACTIVE	5	5

Showing All 4 Records

Transfer License...

Inventory - Application High Availability

- 15** As part of the new Application High Availability (HA) solution, for any licenses that are being used by HA applications a new tab is available in the **Licenses** modal in Smart Software Manager.

This tab is called "**High Availability**" and provides access to High Availability application peer setup and status information.

