Connectors in Active-Active

Connector Active-Active

You can pair two Cisco Spaces: Connectors in an active-active mode to enable the uninterrupted flow of data to Cisco Spaces.

1. You retrieve a token from Cisco Spaces and configure the token on two different Connectors. Each Connector must have a unique IP address.
2. Both Connectors receive configurations from Cisco Spaces.
3. The Connectors can then connect to devices and send data back to Cisco Spaces.
4. Cisco Spaces then manages the redundant data.
5. If one Connector is down, the other Connector continues to send data.

Restrictions

- On the Cisco Spaces dashboard, there is no configuration required for two Connectors to be an active-active pair.
- Both Connectors connect to all Controllers and send traffic to Cisco Spaces. The traffic from Controllers to Cisco Spaces hence increases.
- To be an active-active Connector pair, two Connectors must run OVA version 2.3 or higher.
- There is no failover support for Hyperlocation, and IoT Service. Reprovision these services after a failover.

Note FastLocate is re-established after failover with a delay of three to four minutes.

- With CSCvv38762, there is no failover support for IoT Service. Reprovision these services after a failover.
- There is no support for monitoring the Connector active-active feature.
- With CSCvv34216, a Connector active-active pair has only one Connector managing the **Controller Channel** and the other Connector managing the **AP Channel**.

Figure 1: Connector managing Controller Channel only. AP Channel statistics is zero.

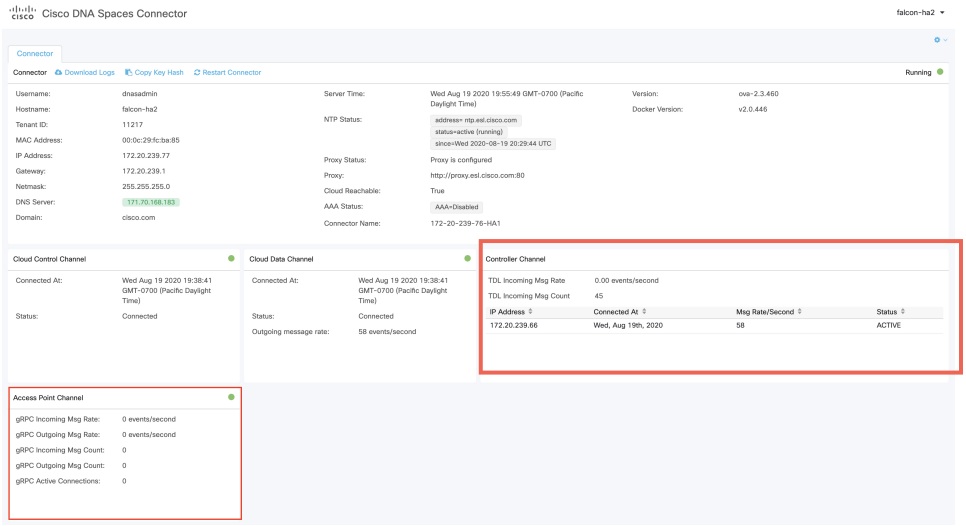
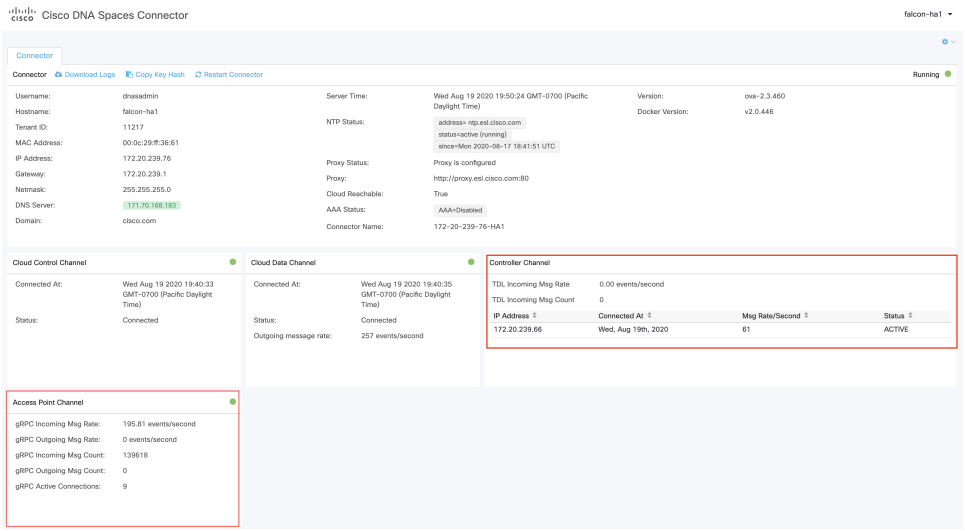


Figure 2: Connector managing AP Channel only. Controller Channel statistics is zero.



Connector Active-Active vs Cisco CMX High Availability

The Connector active-active feature is similar to traditional high availability. But, high availability concepts such as virtual IP address, primary, and secondary are not implemented in this feature. The following is a comparison of the Connector active-active feature with the high availability feature of Cisco CMX.

Table 1: Connector Active-Active (High Availability) model

	Connector Active-Active **IoT Services App, Detect and Locate App**	**Cisco CMX Layer 2 VIP High Availability**
IP addressing	Both Connectors are configured with a unique IP address.	Two Cisco CMX devices are configured with a single IP address.
Operational state	Both Connectors are configured in the active state.	One Cisco CMX is the hot primary while the other is in cold standby.
Data before failover	Both Connectors have the same data set and it is the responsibility of Cisco Spaces to manage the data redundancy.	Both the hot primary and the cold standby have the same data set.
Failover support	In the event of a failure, FastLocate, Hyperlocation, and IoT Services need to be reprovisioned.	If the hot primary fails, the cold standby takes over seamlessly.
Version restriction	The same OVA version of 2.3 or higher is mandatory for a Connector active-active pair.	Same version of Cisco CMX is recommended for high availability.

Configuring Connectors in Active-Active

This task shows you how to configures two Connectors as active-active.

Before you begin

Install two different Cisco Spaces: Connectors of OVA version 2.3 or higher. Configure each Connector with a unique IP address.

SUMMARY STEPS

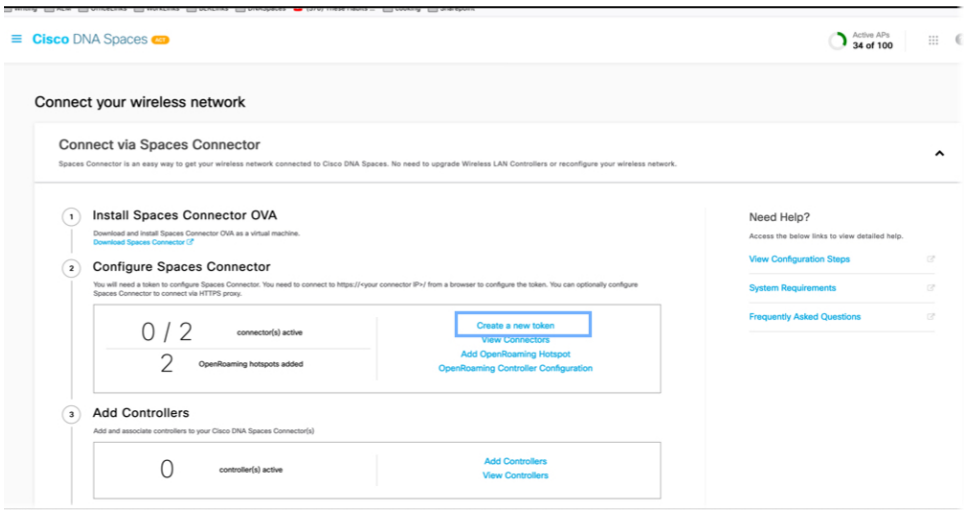
1. Login to **Cisco Spaces>Setup>Wireless Networks** and in the **Configure Spaces Connector** area, click **Create a new token**.
2. Enter a name for the Connector and click **Generate Token**. Copy the token displayed and save it for future reference.
3. Log in to the first Connector and configure the saved token there.
4. Log in to the second Connector and configure the saved token there.
5. On each Connector, observe that the value of the tenant ID is the same.

6. On the Cisco Spaces dashboard, observe both the Connector IP addresses.
7. On each Connector, observe that all controllers added are present.
8. On the Controller CLI, observe that all Connectors are in the NMSP state.

DETAILED STEPS

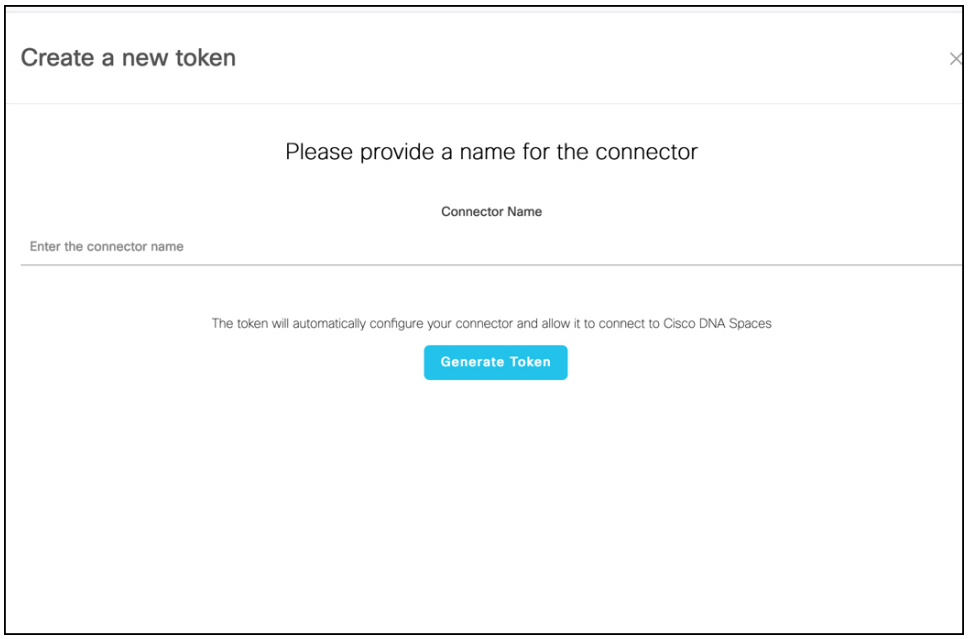
Step 1 Login to **Cisco Spaces>Setup>Wireless Networks** and in the **Configure Spaces Connector** area, click **Create a new token**.

Figure 3: Create a New Token



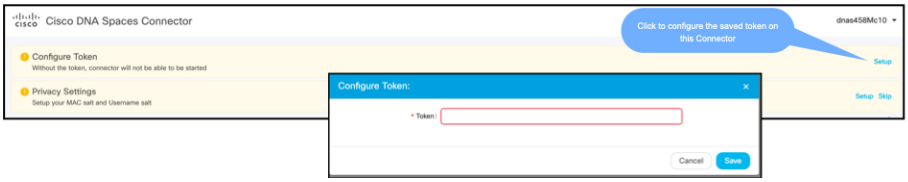
Step 2 Enter a name for the Connector and click **Generate Token**. Copy the token displayed and save it for future reference.

Figure 4: Connector Name



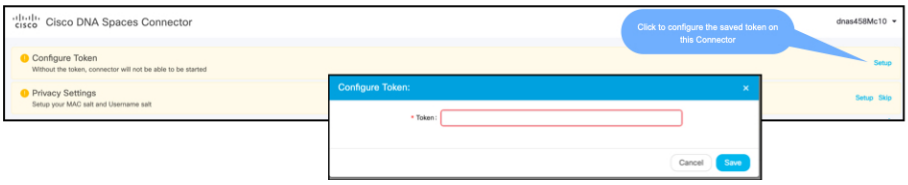
Step 3 Log in to the first Connector and configure the saved token there.

Figure 5: Connector Name



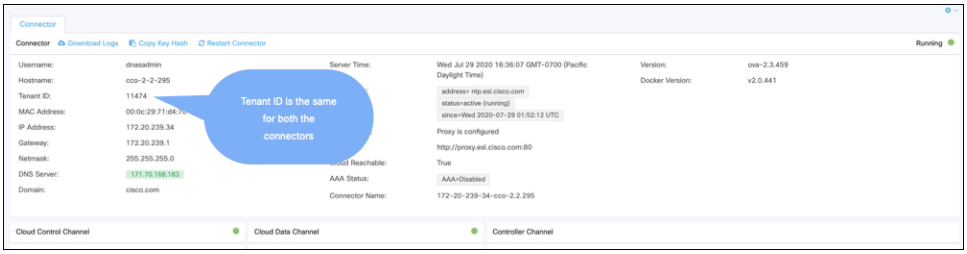
Step 4 Log in to the second Connector and configure the saved token there.

Figure 6: Connector Name



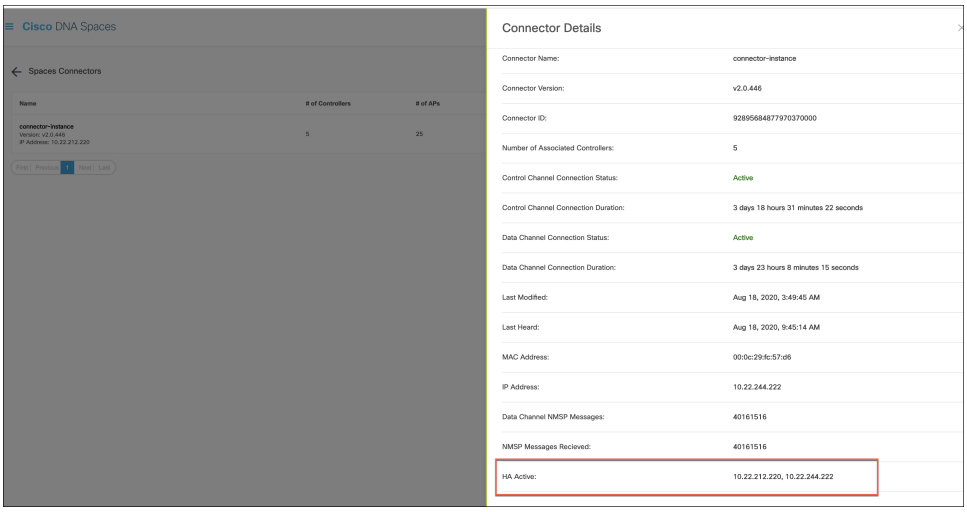
Step 5 On each Connector, observe that the value of the tenant ID is the same.

Figure 7: Connector



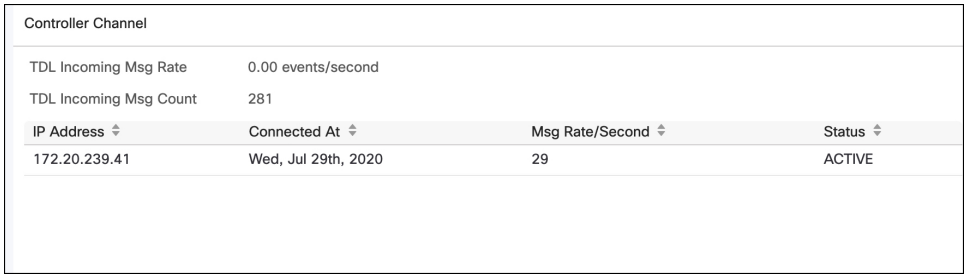
Step 6 On the Cisco Spaces dashboard, observe both the Connector IP addresses.

Figure 8: Cisco Spaces dashboard



Step 7 On each Connector, observe that all controllers added are present.

Figure 9: Connector: Controller Channel Area



Step 8 On the Controller CLI, observe that all Connectors are in the NMSP state.

Figure 10: Controller command output

```
show nmsp status

NMSP Status
-----------

DNA Spaces/CMX IP Address                          Active    Tx Echo Resp  Rx Echo Req   Tx Data
  Rx Data     Transport
------------------------------------------------------------------------------------------------------------------
10.x.212.xxx                              Inactive  13            13            161         6
  TLS
10.x.212.xxx                              Inactive  0             0             17          6
  TLS
10.x.212.xxx                              Active    45070         45070         1378446     574
  TLS
10.x.244.xx                               Inactive  7             7             79          6
  TLS
10.x.244.xx                               Active    56111         56111         1714241     286
  TLS
10.x.244.xx                               Inactive  7             7             104         6
  TLS
10.x.244.xxx                              Active    23056         23056         683908      298
  TLS
```

Configuring Connectors in Active-Active (Wired)

This task shows you how to configures two Connectors as active-active.

Before you begin

Install two different Cisco Spaces: Connectors of OVA version 2.3 or higher. Configure each Connector with a unique IP address.

SUMMARY STEPS

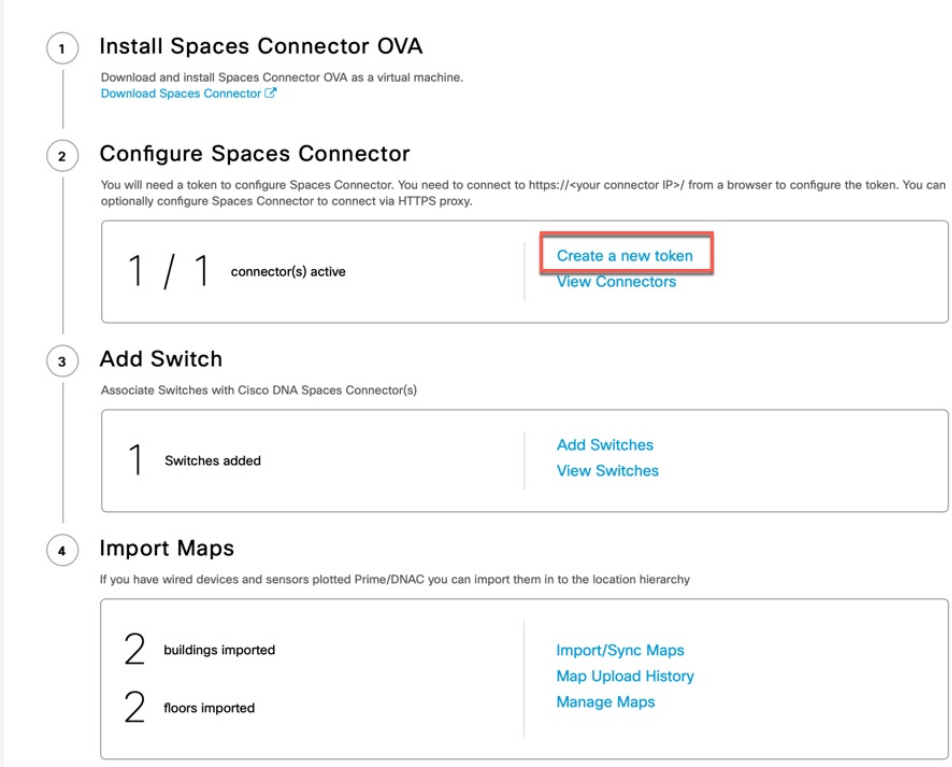
1. Login to **Cisco Spaces>Setup>Wired Networks** and in the **Configure Spaces Connector** area, click **Create a new token**.

2. Enter a name for the Connector and click **Generate Token**. Copy the token displayed and save it for future reference.
3. Log in to the first Connector and configure the saved token there.
4. Log in to the second Connector and configure the saved token there.
5. On each Connector, observe that the value of the tenant ID is the same.
6. On the Cisco Spaces dashboard, observe both the Connector IP addresses.
7. On each Connector, observe that all Connectors added are present.

DETAILED STEPS

Step 1 Login to **Cisco Spaces>Setup>Wired Networks** and in the **Configure Spaces Connector** area, click **Create a new token**.

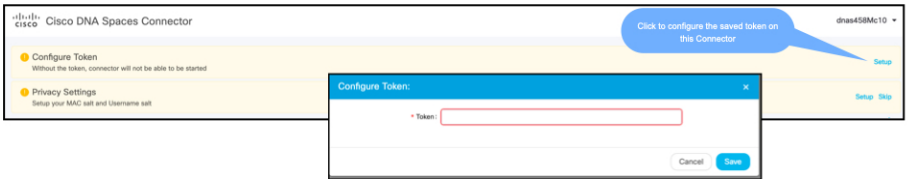
Figure 11: Create a New Token



Step 2 Enter a name for the Connector and click **Generate Token**. Copy the token displayed and save it for future reference.

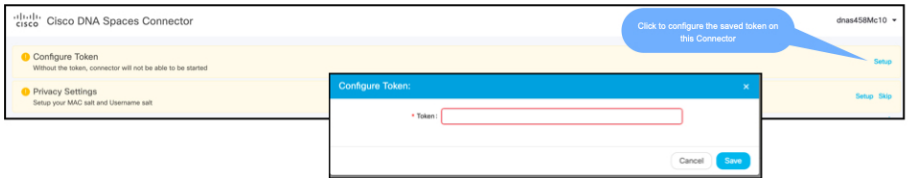
Step 3 Log in to the first Connector and configure the saved token there.

Figure 12: Connector Name



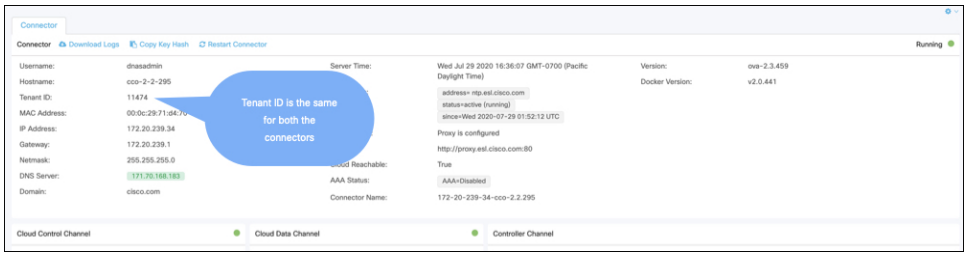
Step 4 Log in to the second Connector and configure the saved token there.

Figure 13: Connector Name



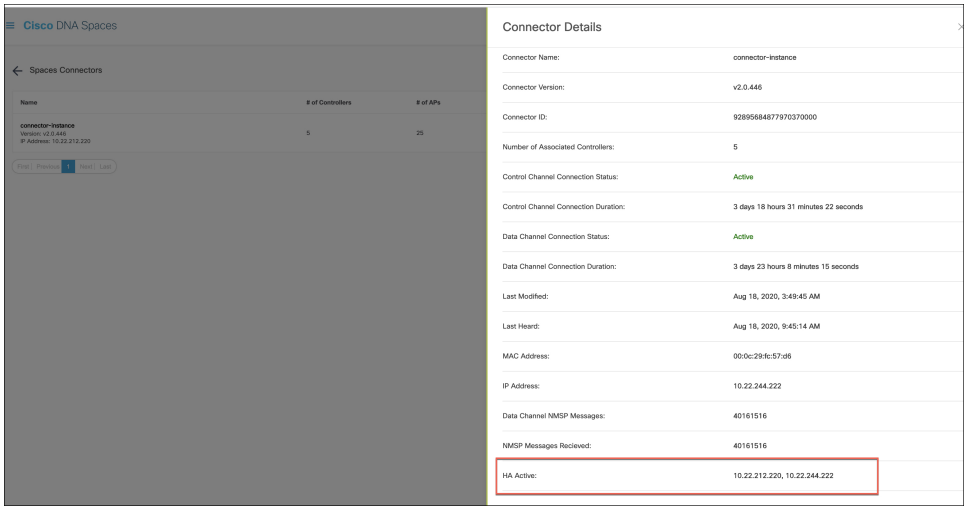
Step 5 On each Connector, observe that the value of the tenant ID is the same.

Figure 14: Connector



Step 6 On the Cisco Spaces dashboard, observe both the Connector IP addresses.

Figure 15: Cisco Spaces dashboard



Step 7 On each Connector, observe that all Connectors added are present.

Figure 16: Connector: Controller Channel Area