



Cisco Spaces

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Cisco Spaces

A Cisco Connected Mobile Experience (CMX) deployment is a cloud-based indoor location services platform that

- provides real-time location analytics and engagement capabilities for indoor environments
- enables integration with Cisco wireless controllers through secure protocols such as HTTPS, and
- supports scalable, cloud-delivered access to location-based services.

The Network Mobility Services Protocol (NMSP) cloud-service of the wireless controller communicates with Cisco Spaces using HTTPS as a transport protocol.

Configure Cisco Spaces

Ensure successful operation of NMSP cloud-services by configuring DNS, importing root CAs, and registering to Cisco Spaces.

To configure, Cisco Spaces, perform these procedures. These steps enable the controller to communicate securely with cloud services and Cisco Spaces.

Before you begin

- *Configure DNS*: To resolve fully qualified domain names used by NMSP cloud-services, configure a *DNS* server using the **ip name-server** *server_address* configuration command as shown in Step 2.
- *Import 3rd party root CAs*: The controller verifies the peer and host based on the certificate sent by the CMX when a connection is established. Root CA certificates are not preinstalled on the controller. Import a set of root CAs trusted by Cisco to the trustpool of the crypto PKI using the **crypto pki trustpool import url** <url> configuration command as shown in Step 3.
- Successful registration to Cisco Spaces is required before configuring the **server url** and **server token** parameters to complete setup.

Procedure

Step 1 Enter the global configuration mode.

Example:

```
Device# configure terminal
```

Step 2 Configure the DNS on the controller to resolve the FQDN names used by the NMSP cloud-services.

Example:

```
Device(config)# ip name-server 10.10.10.205
```

Step 3 Import the 3rd party root CA.

Example:

```
Device(config)# crypto pki trustpool import url http://www.cisco.com/security/pki/trs/ios.p7b
```

The controller verifies the peer using the imported certificate.

Step 4 Configure the URL used for cloud services.

Example:

```
Device(config)# nmsp cloud-services server url https://cisco.com
```

Use the *no* form of the command to delete the server url from the configuration.

Step 5 Configure the authentication token for the NMSP cloud service.

Example:

```
Device(config)# nmsp cloud-services server token test
```

Use the *no* form of the command to delete the server token from the configuration.

Step 6 (Optional) Configure HTTP proxy details for the NMSP cloud service.

Example:

```
Device(config)# nmsp cloud-services http-proxy 10.0.0.1 port 10
```

Use the *no* form of the command to disable the use of a HTTP proxy.

Step 7 Enable NMSP cloud services.

Example:

```
Device(config)# nmsp cloud-services enable
```

Use the *no* form of the command to disable the feature.

Verify Cisco Spaces configuration

Use the commands to verify the Cisco Spaces configuration.

To view the status of active NMSP connections, use the command:

```
Device# show nmsp status
```

MSE IP Address	Tx Echo Resp	Rx Echo Req	Tx Data	Rx Data	Transport
192.0.2.1	0	0	1	1	TLS
198.51.100.1	0	0	1230	2391	HTTps

To view the NMSP cloud service status, use the command:

```
Device# show nmsp cloud-services summary
```

```
CMX Cloud-Services Status
```

```
-----
Server:                               https://yenth8.cmxcis.com
IP Address:                            198.51.100.1
Cmx Service:                           Enabled
Connectivity:                          https: UP
Service Status:                        Active
Last Request Status:                   HTTP/1.1 200 OK
Heartbeat Status:                       OK
```

To view the NMSP cloud service statistics, use the command:

```
Device# show nmsp cloud-services statistics
```

```
CMX Cloud-Services Statistics
```

```
-----
Tx DataFrames:                         3213
Rx DataFrames:                         1606
Tx HeartBeat Req:                      31785
Heartbeat Timeout:                     0
Rx Subscr Req:                         2868
Tx DataBytes:                          10069
Rx DataBytes:                          37752
Tx HeartBeat Fail:                     2
Tx Data Fail:                          0
Tx Conn Fail:                          0
```

To view the mobility services summary, use the command:

```
Device# show nmsp subscription summary
```

```
Mobility Services Subscribed:
```

```
Index Server IP Services
```

```
-----
1 209.165.200.224 RSSI, Info, Statistics, AP Monitor, AP Info
2 209.165.200.224 RSSI, Statistics, AP Info
```

