



# Cisco Spaces

Cisco Spaces is the next generation indoor location services platform. The Network Mobility Services Protocol (NMSP) cloud-service of the wireless controller communicates with Cisco Spaces using HTTPS as a transport protocol.

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## Configuring Cisco Spaces

Follow the procedure given below to configure Cisco Spaces:

### Before you begin

- **Configure DNS**—To resolve fully qualified domain names used by NMSP cloud-services, configure a DNS 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 the host based on the certificate that is sent by the CMX when a connection is established. However, root CAs are not preinstalled on the controller. You have to import a set of root CAs trusted by Cisco to the trustpool of the crypto PKI by using the **crypto pki trustpool import url <url>** configuration command as shown in Step 3.
- A successful registration to Cisco Spaces is required to enable **server url** and **server token** parameters configuration which is needed to complete this setup.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# <code>configure terminal</code>	Enters global configuration mode.
<b>Step 2</b>	<b>ip name-server <i>namesvr-ip-addr</i></b> <b>Example:</b> Device(config)# <code>ip name-server 10.10.10.205</code>	Configures the DNS on the controller to resolve the FQDN names used by the NMSP cloud-services.

	Command or Action	Purpose
Step 3	<b>crypto pki trustpool import url <i>url</i></b> <b>Example:</b> <pre>Device(config)#crypto pki trustpool import url http://www.cisco.com/security/pki/trs/ios.p7b</pre>	Imports the 3rd party root CA. The controller verifies the peer using the imported certificate.
Step 4	<b>[no] nmsp cloud-services server url <i>url</i></b> <b>Example:</b> <pre>Device(config)# nmsp cloud-services server url https://cisco.com</pre>	Configures the URL used for cloud services. Use the <b>no</b> form of the command to delete the server url from the configuration.
Step 5	<b>[no] nmsp cloud-services server token <i>token</i></b> <b>Example:</b> <pre>Device(config)# nmsp cloud-services server token test</pre>	Configures the authentication token for the NMSP cloud service. Use the <b>no</b> form of the command to delete the server token from the configuration.
Step 6	<b>[no] nmsp cloud-services http-proxy <i>proxy-server port</i></b> <b>Example:</b> <pre>Device(config)# nmsp cloud-services http-proxy 10.0.0.1 10</pre>	(Optional) Configures HTTP proxy details for the NMSP cloud service. Use the <b>no</b> form of the command to disable the use of a HTTP proxy.
Step 7	<b>[no] nmsp cloud-services enable</b> <b>Example:</b> <pre>Device(config)# nmsp cloud-services enable</pre>	Enables NMSP cloud services. Use the <b>no</b> form of the command to disable the feature.

## Verifying Cisco Spaces Configuration

Use the following commands to verify the Cisco Spaces configuration.

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

```
Device# show nmsp status
```

```
MSE IP Address Tx Echo Resp Rx Echo Req Tx Data Rx Data Transport
-----
9.9.71.78 0 0 1 1 TLS
64.103.36.133 0 0 1230 2391 HTTPs
```

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

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

```
CMX Cloud-Services Status
-----
```

```
Server: https://yenth8.cmxcisco.com
IP Address: 64.103.36.133
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 following 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 following command:

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

```
Mobility Services Subscribed:
```

```
Index Server IP Services
-----
```

```
1 209.165.200.225 RSSI, Info, Statistics, AP Monitor, AP Info
2 209.165.200.225 RSSI, Statistics, AP Info
```

