Configuring Mobility

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Configuring Mobility Controller

Configuring Converged Access Controllers

Creating Peer Groups, Peer Group Member, and Bridge Domain ID (CLI)

Before You Begin

- On the mobility agent, you can only configure the IP address of the mobility controller.
- On the mobility controller, you can define the peer group and the IP address of each peer group member.

SUMMARY STEPS

1. **wireless mobility controller**
2. **wireless mobility controller peer-group** *SPG1*
3. **wireless mobility controller peer-group** *SPG1* **member ip** *member-ip-addr* **public-ip** *public-ip-addr*
4. **wireless mobility controller peer-group** *SPG1* **member ip** *member-ip-addr* **public-ip** *public-ip-addr*
5. **wireless mobility controller peer-group** *SPG2*
6. **wireless mobility controller peer-group** *SPG2* **member ip** *member-ip-addr* **public-ip** *public-ip-addr*
7. **wireless mobility controller peer-group** *SPG1* **bridge-domain-id** *id*

DETAILED STEPS

	Command or Action	Purpose
Step 1	**wireless mobility controller** **Example:** `Switch(config)# wireless mobility controller`	Enables the mobility controller functionality on the device. This command is applicable only to the switch. The controller is by default a mobility controller.
Step 2	**wireless mobility controller peer-group** *SPG1* **Example:** `Switch(config)# wireless mobility controller peer-group SPG1`	Creates a peer group named SPG1.
Step 3	**wireless mobility controller peer-group** *SPG1* **member ip** *member-ip-addr* **public-ip** *public-ip-addr* **Example:** `Switch(config)# wireless mobility controller peer-group SPG1 member ip 10.10.20.2 public-ip 10.10.20.2`	Adds a mobility agent to the peer group. **Note** The 10.10.20.2 is the mobility agent's direct IP address. When NAT is used, use the optional public IP address to enter the mobility agent's NATed address. When NAT is not used, the public IP address is not used and the device displays the mobility agent's direct IP address.
Step 4	**wireless mobility controller peer-group** *SPG1* **member ip** *member-ip-addr* **public-ip** *public-ip-addr* **Example:** `Switch(config)# wireless mobility controller peer-group SPG1 member ip 10.10.20.6 public-ip 10.10.20.6`	Adds another member to the peer group SPG1.
Step 5	**wireless mobility controller peer-group** *SPG2* **Example:** `Switch(config)# wireless mobility controller peer-group SPG2`	Creates another peer group SPG2.
Step 6	**wireless mobility controller peer-group** *SPG2* **member ip** *member-ip-addr* **public-ip** *public-ip-addr* **Example:** `Switch(config)# wireless mobility controller peer-group SPG2 member ip 10.10.10.20 public-ip 10.10.10.20`	Adds a member to peer group SPG2.
Step 7	**wireless mobility controller peer-group** *SPG1* **bridge-domain-id** *id* **Example:** `Switch(config)# wireless mobility controller peer-group SPG1 bridge-domain-id 54`	(Optional) Adds a bridge domain to SPG1 used for defining the subnet-VLAN mapping with other SPGs.

This example shows how to create peer group and add members to it:

```
Switch(config)# wireless mobility controller
Switch(config)# wireless mobility controller peer-group SPG1
Switch(config)# wireless mobility controller peer-group SPG1
Switch(config)# wireless mobility controller peer-group SPG1 member ip 10.10.20.2 public-ip
 10.10.20.2
Switch(config)# wireless mobility controller peer-group SPG1 member ip 10.10.20.6 public-ip
 10.10.20.6
Switch(config)# wireless mobility controller peer-group SPG2
Switch(config)# wireless mobility controller peer-group SPG2 member ip 10.10.10.20 public-ip
 10.10.10.20
Switch(config)# wireless mobility controller peer-group SPG1 bridge-domain-id 54
```

Creating Peer Groups, Peer Group Member, and Bridge Domain ID (GUI)

Before You Begin

- Ensure that the device is in mobility controller state.
- On the mobility agent, you can only configure the IP address of the mobility controller.
- On the mobility controller, you can define the peer group and the IP address of each peer group member.

Step 1 Choose **Controller** > **Mobility Management** > **Switch Peer Group**.
The **Mobility Switch Peer Groups** page is displayed.

Step 2 Click **New**.

Step 3 Enter the following details:

a) **Switch Peer Group Name**
b) **Bridge Domain ID**
c) **Multicast IP Address**

Step 4 Click **Apply**.

Step 5 Click **Save Configuration**.

Configuring Local Mobility Group (CLI)

Configuration for wireless mobility groups and mobility group members where the mobility group is a group of MCs.

Before You Begin

MCs can belong only to one mobility group, and can know MCs in several mobility groups.

SUMMARY STEPS

1. **wireless mobility group name** *group-name*
2. **wireless mobility group member ip** *member-ip-addr* **public-ip** *public-ip-addr*
3. **wireless mobility group keepalive interval** *time-in-seconds*
4. **wireless mobility group keepalive count** *count*

DETAILED STEPS

	Command or Action	Purpose
Step 1	**wireless mobility group name** *group-name* **Example:** `Switch(config)# wireless mobility group name Mygroup`	Creates a mobility group named Mygroup.
Step 2	**wireless mobility group member ip** *member-ip-addr* **public-ip** *public-ip-addr* **Example:** `Switch(config)# wireless mobility group member ip 10.10.34.10 public-ip 10.10.34.28`	Adds a mobility controller to the Mygroup mobility group. **Note** When NAT is used, use the optional public IP address to enter the NATed IP address of the mobility controller.
Step 3	**wireless mobility group keepalive interval** *time-in-seconds* **Example:** `Switch(config)# wireless mobility group keepalive interval 5`	Configures the interval between two keepalives sent to a mobility member.
Step 4	**wireless mobility group keepalive count** *count* **Example:** `Switch(config)# wireless mobility group keepalive count 3`	Configures the keep alive retries before a member status is termed DOWN.

```
Switch(config)# wireless mobility group name Mygroup
Switch(config)# wireless mobility group member ip 10.10.34.10 public-ip 10.10.34.28
Switch(config)# wireless mobility group keepalive interval 5
Switch(config)# wireless mobility group keepalive count 3
```

Configuring Local Mobility Group (GUI)

Before You Begin

Mobility controllers can belong to only one mobility group and can know mobility controllers in several mobility groups.

Step 1 Choose **Controller** > **Mobility Management** > **Mobility Global Config**.

The **Mobility Controller Configuration** page is displayed.

Step 2 Enter the following details:

a) **Mobility Group Name**
b) **Mobility Keepalive Interval**
c) **Mobility Keepalive Count**
d) **Multicast IP Address** if you want to enable multicast mode to send mobile announce messages to the mobility members.

Note If you do not enable multicast IP address, the device uses unicast mode to send mobile announce messages.

Step 3 Click **Apply**.

Step 4 Click **Save Configuration**.

Adding a Peer Mobility Group (CLI)

Before You Begin

MCs belong to only one group, and can know MCs in several groups.

SUMMARY STEPS

1. **wireless mobility group member ip** *member-ip-addr* **public-ip** *public-ip-addr* **group** *group-name*

DETAILED STEPS

	Command or Action	Purpose
Step 1	**wireless mobility group member ip** *member-ip-addr* **public-ip** *public-ip-addr* **group** *group-name* **Example:** `Switch(config)# wireless mobility group member ip 10.10.10.24 public-ip 10.10.10.25 group Group2`	Adds the member as a peer MC in a different group than the Mygroup.

Adding a Peer Mobility Group (GUI)

Before You Begin

Mobility controllers belong to only one group, and can know several mobility groups.

Step 1 Choose **Controller** > **Mobility Management** > **Mobility Peer**.

The **Mobility Peer** page is displayed.

Step 2 Click **New**.

Step 3 Enter the following details:

a) **Mobility Member IP**
b) **Mobility Member Public IP**
c) **Mobility Member Group Name**
d) **Multicast IP Address**

Step 4 Click **Apply**.

Step 5 Click **Save Configuration**.

Configuring Optional Parameters for Roaming Behavior

Use this configuration to disable the sticky anchor. This command can also be used, if required, between all MA's and MC's where roaming is expected for the target SSID.

SUMMARY STEPS

1. **wlan** open21
2. **no mobility anchor sticky**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**wlan** open21 **Example:** `Switch(config)# wlan open20`	Configures a WLAN.
Step 2	**no mobility anchor sticky** **Example:** `Switch(config-wlan)# no mobility anchor sticky`	Disables the default sticky mobility anchor.

```
Switch(config)# wlan open20
Switch(config-wlan)# no mobility anchor sticky
```

Pointing the Mobility Controller to a Mobility Oracle (CLI)

Before You Begin

You can configure a mobility oracle on a known mobility controller.

SUMMARY STEPS

1. **wireless mobility group member ip** *member-ip-addr* **group** *group-name*
2. **wireless mobility oracle ip** *oracle-ip-addr*

DETAILED STEPS

	Command or Action	Purpose
Step 1	**wireless mobility group member ip** *member-ip-addr* **group** *group-name* **Example:** `Switch(config)# wireless mobility group member ip 10.10.10.10 group Group3`	Creates and adds a MC to a mobility group.
Step 2	**wireless mobility oracle ip** *oracle-ip-addr* **Example:** `Switch(config)# wireless mobility oracle ip 10.10.10.10`	Configures the mobility controller as mobility oracle.

```
Switch(config)# wireless mobility group member ip 10.10.10.10 group Group3
Switch(config)# wireless mobility oracle ip 10.10.10.10
```

Pointing the Mobility Controller to a Mobility Oracle (GUI)

Before You Begin

You can configure a mobility oracle on a known mobility controller.

Step 1 Choose **Controller** > **Mobility Management** > **Mobility Global Config**.
The **Mobility Controller Configuration** page is displayed.

Step 2 Enter the **Mobility Oracle IP Address**.

Note To make the mobility controller itself a mobility oracle, select the **Mobility Oracle Enabled** check box.

Step 3 Click **Apply**.

Step 4 Click **Save Configuration**.

Configuring Guest Controller

A guest controller is used when the client traffic is tunneled to a guest anchor controller in the demilitarized zone (DMZ). The guest client goes through a web authentication process. The web authentication process is optional, and the guest is allowed to pass traffic without authentication too.

Enable the WLAN on the mobility agent on which the guest client connects with the mobility anchor address of the guest controller.

On the guest controller WLAN, which can be Cisco 5500 Series WLC, Cisco WiSM2, or Cisco 5700 Series WLC, configure the IP address of the mobility anchor as its own IP address. This allows the traffic to be tunneled to the guest controller from the mobility agent.

SUMMARY STEPS

1. **wlan** *wlan-id*
2. **mobility anchor** *guest-anchor-ip-addr*
3. **client vlan** *vlan-name*
4. **security open**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**wlan** *wlan-id* **Example:** `Switch(config)# wlan Mywlan1`	Creates a WLAN for the client.
Step 2	**mobility anchor** *guest-anchor-ip-addr* **Example:** `Switch(config-wlan)# mobility anchor 10.10.10.2`	Enables the guest anchors (GA) IP address on the MA. **Note** To enable guest anchor on the mobility controller, you need not enter the IP address. Enter the **mobility anchor** command in the WLAN configuration mode to enable GA on the mobility controller.
Step 3	**client vlan** *vlan-name* **Example:** `Switch(config-wlan)# client vlan gc_ga_vlan1`	Assigns a VLAN to the client's WLAN.
Step 4	**security open** **Example:** `Switch(config-wlan)# security open`	Assigns a security type to the WLAN.

```
Switch(config)# wlan Mywlan1
Switch(config-wlan)# mobility anchor 10.10.10.2
Switch(config-wlan)# client vlan gc_ga_vlan1
Switch(config-wlan)# security open
```

Configuring Guest Anchor

SUMMARY STEPS

1. **wlan** Mywlan1
2. **mobility anchor** <guest-anchors-own-ip-address>
3. **client vlan**<vlan-name>
4. **security open**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**wlan** Mywlan1 **Example:** `Switch(config)# wlan Mywlan1`	Creates a wlan for the client.
Step 2	**mobility anchor** <guest-anchors-own-ip-address> **Example:** `Switch(config-wlan)# mobility anchor 10.10.10.2`	Enables the guest anchors IP address on the guest anchor (GA). The GA assigns its own address on itself.
Step 3	**client vlan**<vlan-name> **Example:** `Switch(config-wlan)# client vlan gc_ga_vlan1`	Assigns a vlan to the clients wlan.
Step 4	**security open** **Example:** `Switch(config-wlan)# security open`	Assigns a security type to the wlan.

```
Switch(config)# wlan Mywlan1
Switch(config-wlan)# mobility anchor 10.10.10.2
Switch(config-wlan)# client vlan gc_ga_vlan1
Switch(config-wlan)# security open
```