Creating Wireless Networks

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WLANs

Cisco Mobility Express solution supports a maximum of 16 WLANs. Each WLAN has a unique WLAN ID (1 through 16), a unique Profile Name, SSID, and can be assigned different security policies.

Access Points broadcast all active WLAN SSIDs and enforce the policies that you define for each WLAN.

A number of WLAN Security options are supported on Cisco Mobility Express solution and are outlined below:

1. Open
2. WPA2 Personal
3. WPA2 Enterprise (External RADIUS, AP)

For Guest WLAN, a number of capabilities are supported:

1. CMX Guest Connect
2. WPA2 Personal
3. Captive Portal (AP)
4. Captive Portal (External Web Server)

Creating Networks

Creating WLAN using WPA2 Personal

Procedure

Step 1 Navigate to **Wireless Settings > WLANs** and then click on **Add new WLAN** button. The **Add new WLAN** Window will pop up.

Step 2 In the **Add new WLAN** window, on the General page, configure the following:

a) Enter the **Profile Name**.

b) Enter the **SSID**.

Note Admin State is **Enabled** and Radio Policy is set to **ALL** by default. One can change this if needed.

Step 3 Click on the WLAN Security and configure the following:

a) Select **Security** as *WPA2 Personal*.

b) Enter the **Passphrase** and Confirm **PassPhrase**.

Step 4 Click the **Apply** Button.

Note If the WLAN users have to be put a specific vlan, click on **VLAN & Firewall** and configure the VLAN.

Creating Employee WLAN using WPA2 Enterprise with External Radius Server

Procedure

Step 1 Navigate to **Wireless Settings > WLANs** and then click on **Add new WLAN** button. The **Add new WLAN** Window will pop up.

Step 2 In the **Add new WLAN** window, on the General page configure the following:

a) Enter the **Profile Name**.

b) Enter the **SSID**.

Note Admin State is **Enabled** and Radio Policy is set to **ALL** by default. One can change this if needed.

Step 3 Click on the **WLAN Security** and configure the following:

a) Select **Security** as *WPA2 Personal*.

b) Select **Authentication Server** as *External Radius*.

c) Enter the Radius **IP Address**.

d) Enter the Radius **Port** number.

e) Enter the Shared Secret.

Step 4 Click on the Icon as pointed by the Red arrow to add the Radius server.

Note Optionally, a second Radius Server can be configured.

Step 5 Click the **Apply** Button.

Creating WLAN using WPA2 Enterprise with Local Authentication (AP)

Procedure

Step 1 Navigate to **Wireless Settings > WLANs** and then click on **Add new WLAN** button. The **Add new WLAN** Window will pop up.

Step 2 In the **Add new WLAN** window, on the General page configure the following:

a) Enter the **Profile Name**.

b) Enter the **SSID**.

Note Admin State is **Enabled** and Radio Policy is set to **ALL** by default. One can change this if needed.

Step 3 Click on the **WLAN Security** and configure the following:

a) Select **Security** as *WPA2 Personal*.

b) Select **Authentication Server** as *AP*.

Note For Authentication Server as AP, local user accounts have to created on the Master AP.

Step 4 Click the **Apply** Button.

Creating Guest Network on Mobility Express

Mobility Express controller can provide guest user access on WLANs which are specifically designated for use by guest users. To set this WLAN exclusively for guest user access, choose the Security as Guest. You can set the Guest Type by choosing one of the following options in the Guest Type drop-down list:

1 CMX Guest Connect

2 WPA2 Personal—This option stands for Wi-Fi Protected Access 2 with Pre-Shared Key (PSK). WPA2 Personal is a method of securing your network with the use of a PSK authentication. The PSK is configured separately both on the controller AP, under WLAN security policy, and on the client. WPA2 Personal does not rely on an authentication server on your network. This is used when you do not have an enterprise authentication server. If you choose this option, then specify the PSK in the Shared Key field.

3 Captive Portal (AP)

- Require Username and Password—This is the default option. Choose this option to authenticate guests using the username and password which you can specify for guest users of this WLAN, under Wireless Settings > WLAN Users.
- Display Terms & Conditions—Choose this option to allow guest access to the WLAN upon acceptance of displayed terms and conditions. This option allows guest users to access the WLAN without entering a username and password.
- Require Email Address—Choose this option, if you want guest users to be prompted for their e-mail address when attempting to access the WLAN. Upon entering a valid email address, access it provided. This option allows guest users to access the WLAN without entering a username and password.

4 Captive Portal (External Web Server)

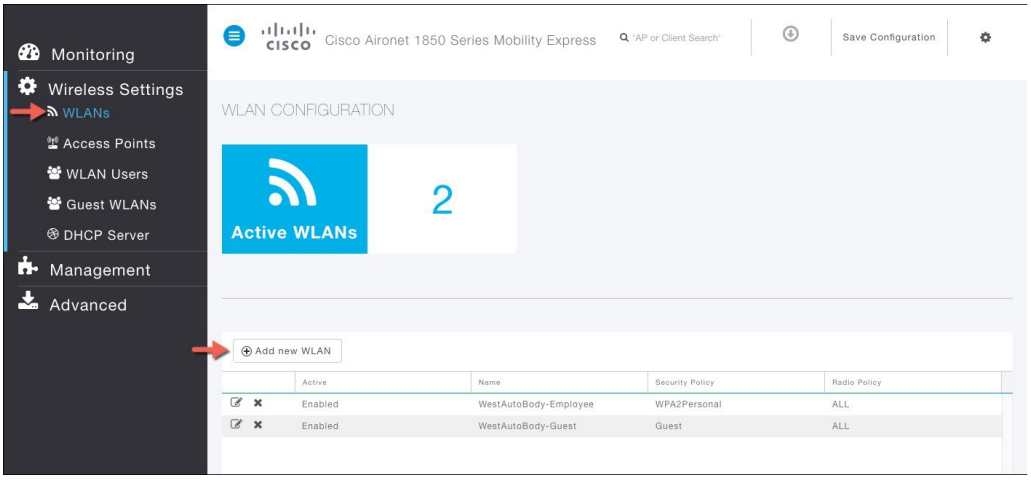
Guest Access using CMX Connect in the Cloud

Note In order to configure Guest Access using CMX Connect in the Cloud, you must have a CMX Cloud Account with subscription to the CMX Connect service. Also, Guest Portal have to be created in CMX Cloud so that when a client connects to the Guest WLAN which is configured for CMX Connect in the Cloud, the Guest Portal is presented to the client. To learn more about CMX Cloud, please refer to the chapter Cisco Mobility Express with Cisco CMX Cloud.

To configure a Guest WLAN with CMX Connect in the Cloud, follow the steps below:

Procedure

Step 1 Navigate to **Wireless Settings > WLANs** and then click on **Add new WLAN** button. The **Add new WLAN** Window will pop up.

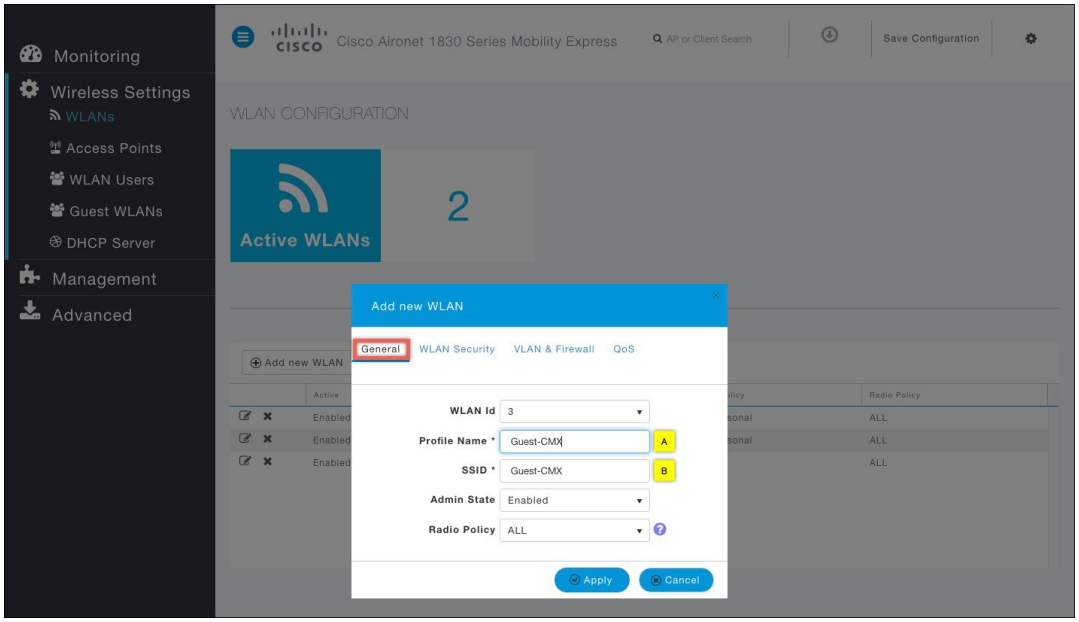


Step 2 In the **Add new WLAN** window, on the General page configure the following:

A. Enter the Profile Name

B. Enter the SSID

Note Admin State is **Enabled** and Radio Policy is set to **ALL** by default. One can change this if needed.



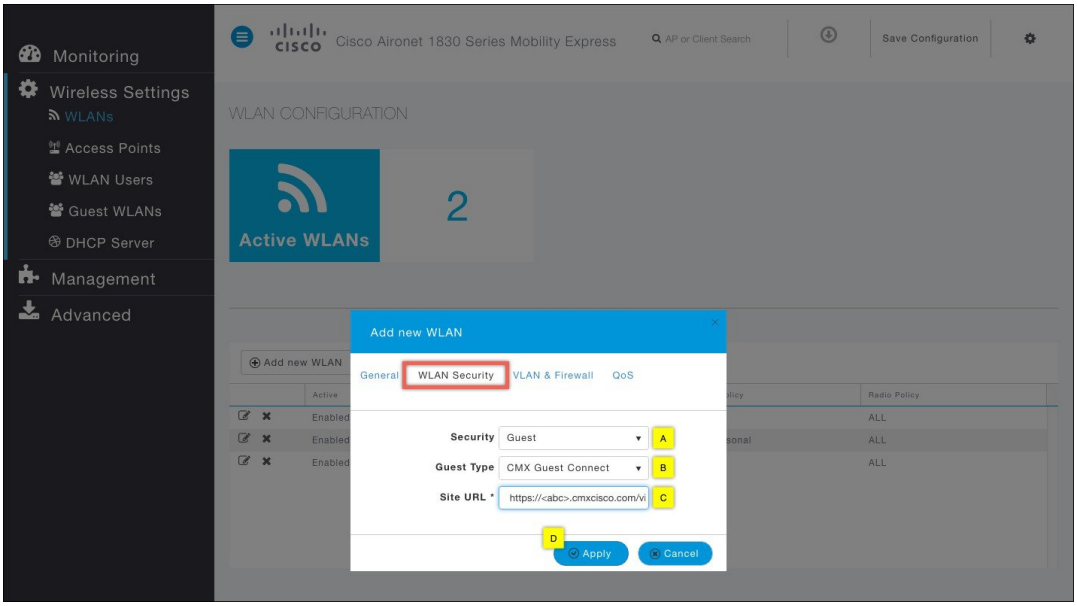
Step 3 Click on the WLAN Security and configure the following:
A. Select **Security** as *Guest*

B. Select **Guest Type** as *CMX Guest Connect*

C. Enter the **Site URL**. Site URL is the Guest Portal URL, which has been configured in CMX Connect in the cloud.

D. Click Apply button

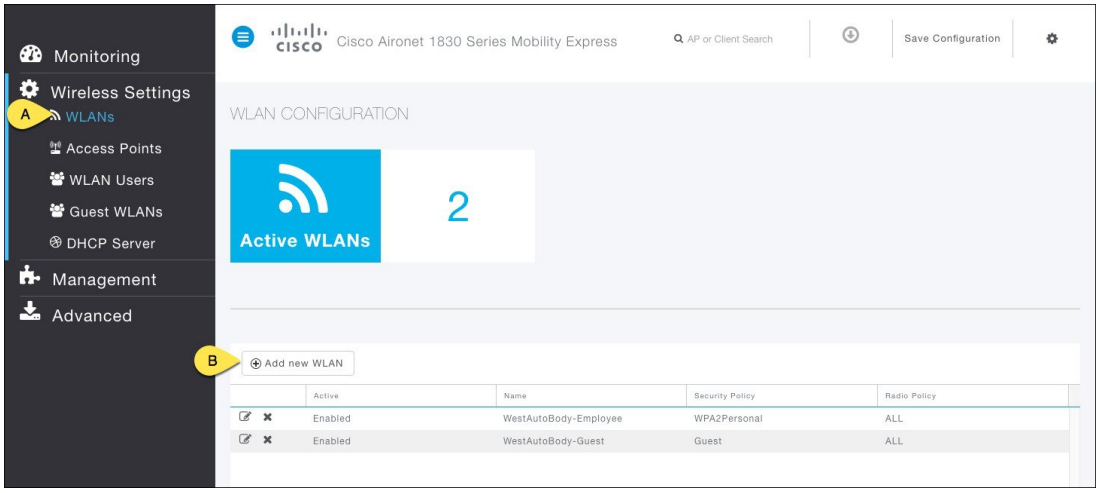
Note If the Guest users have to be put a specific vlan, click on **VLAN & Firewall** and configure the VLAN.



Guest Access using WPA2 Personal

Procedure

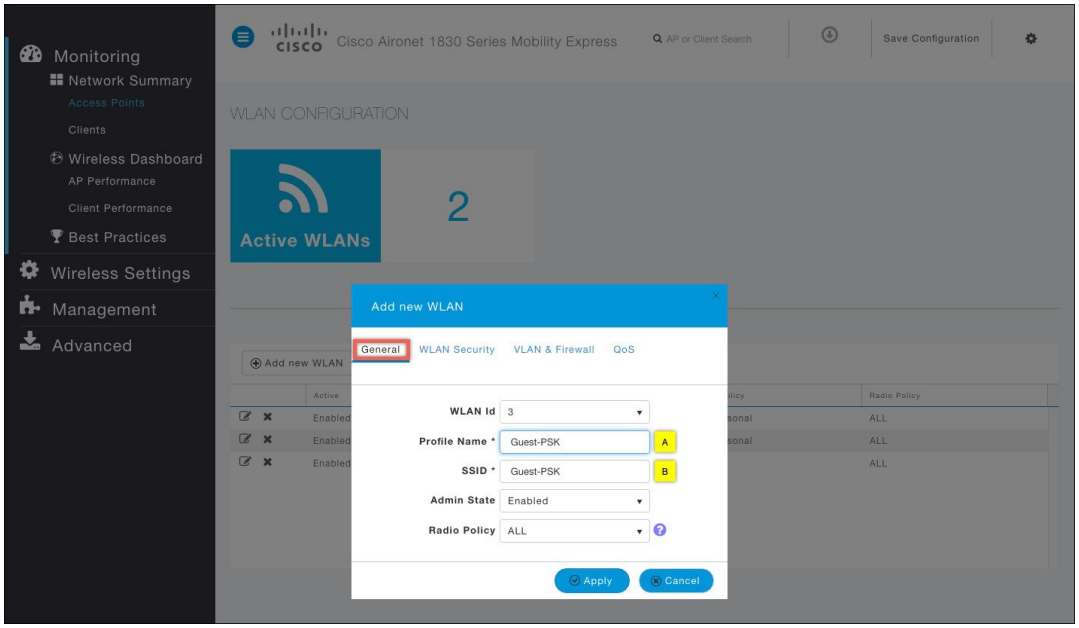
Step 1 Navigate to Wireless Settings > WLANs and then click on **Add new WLAN** button. The **Add new WLAN** Window will pop up.



Step 2 In the **Add new WLAN** window, on the General page configure the following:
A. Enter the Profile Name

B. Enter the SSID

Note Admin State is **Enabled** and Radio Policy is set to **ALL** by default. One can change this if needed.



Step 3 Click on the WLAN Security and configure the following:

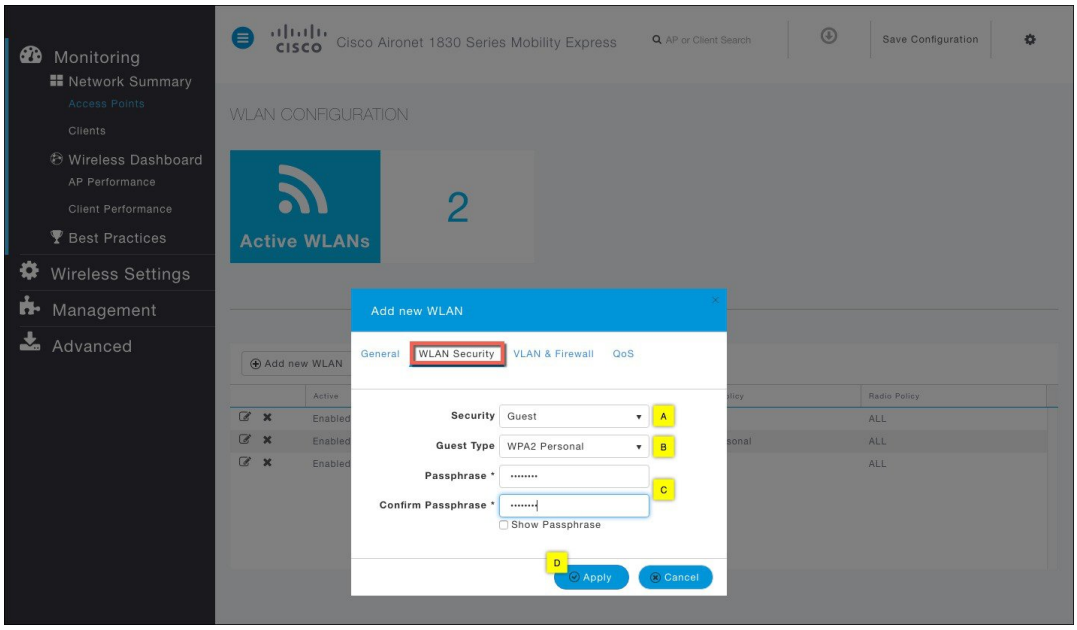
A. Select **Security** as *Guest*

B. Select **Guest Type** as *WPA2 Personal*

C. Enter the **Passphrase** and Confirm **PassPhrase**

D. Click Apply button

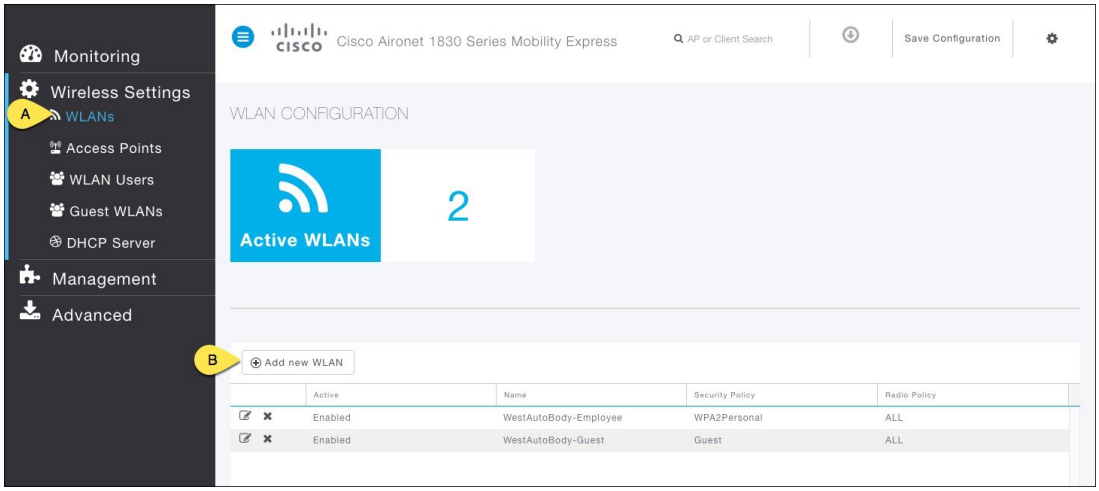
Note If the Guest users have to be put a specific vlan, click on **VLAN & Firewall** and configure the VLAN.



Guest Access using Captive Portal (AP)

Procedure

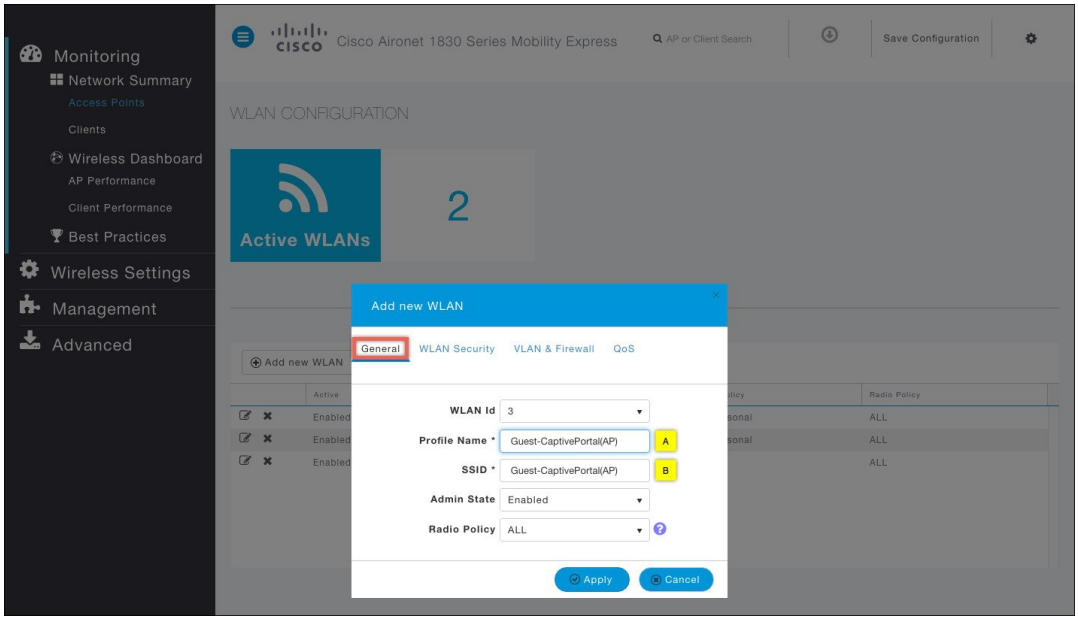
Step 1 Navigate to Wireless Settings > WLANs and then click on **Add new WLAN** button. The **Add new WLAN** Window will pop up.



Step 2 In the **Add new WLAN** window, on the General page configure the following:
A. Enter the Profile Name

B. Enter the SSID

Note Admin State is **Enabled** and Radio Policy is set to **ALL** by default. One can change this if needed.



Step 3 Click on the WLAN Security and configure the following:
A. Select **Security** as *Guest*

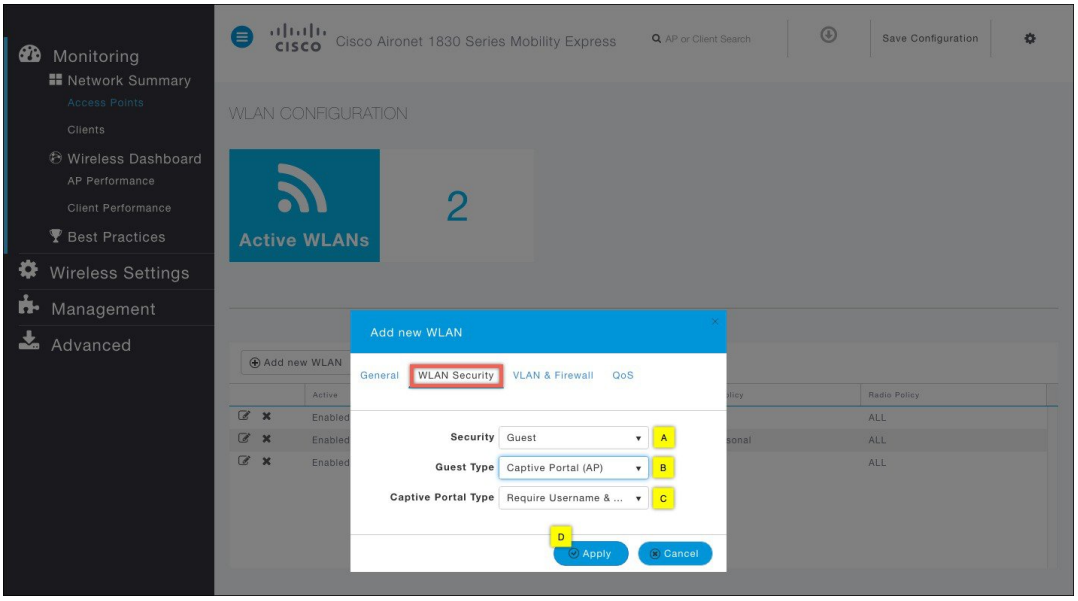
B. Select **Guest Type** as *Captive Portal (AP)*

C. Select **Captive Portal Type**. Options are:

- Require Username & Password (Note, local users would have to be created. To create local users, go to the WLAN Users section)
- Web Consent
- Require Email Address

D. Click Apply button

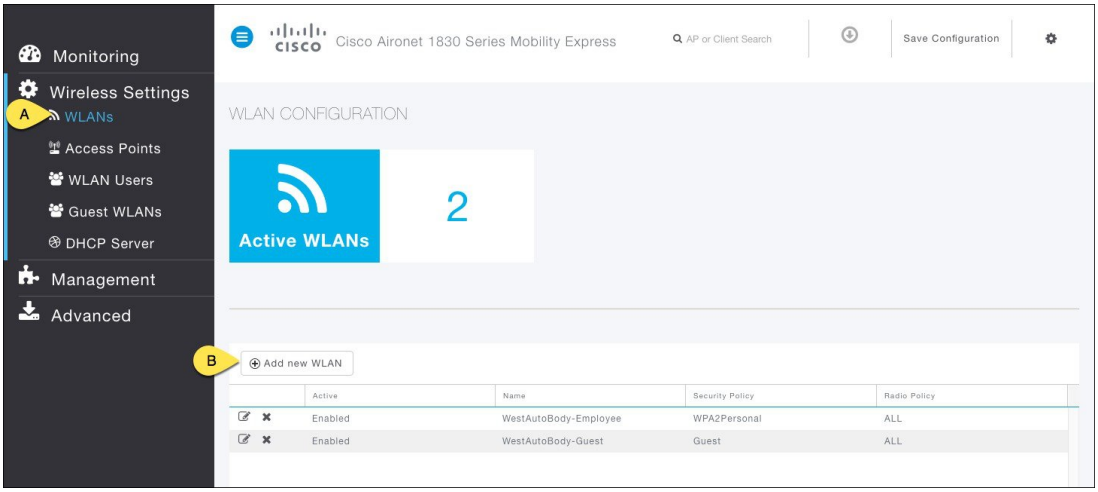
Note If the Guest users have to be put a specific vlan, click on **VLAN & Firewall** and configure the VLAN.



Guest Access using Captive Portal (External Web Server)

Procedure

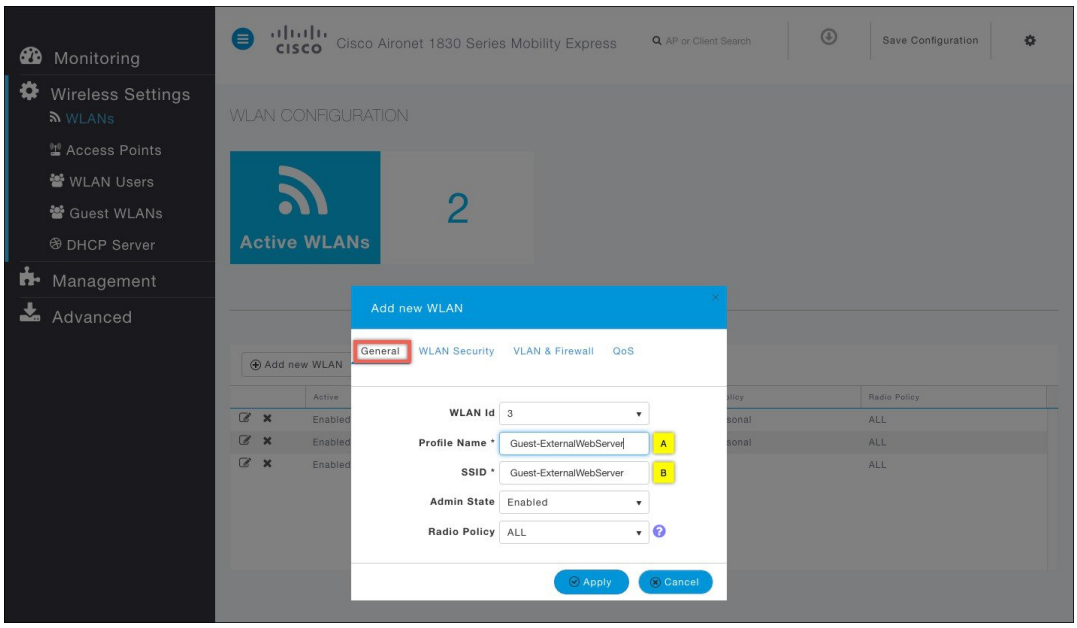
Step 1 Navigate to Wireless Settings > WLANs and then click on **Add new WLAN** button. The **Add new WLAN** Window will pop up.



Step 2 In the **Add new WLAN** window, on the General page configure the following:
A. Enter the Profile Name

B. Enter the SSID

Note Admin State is **Enabled** and Radio Policy is set to **ALL** by default. One can change this if needed.



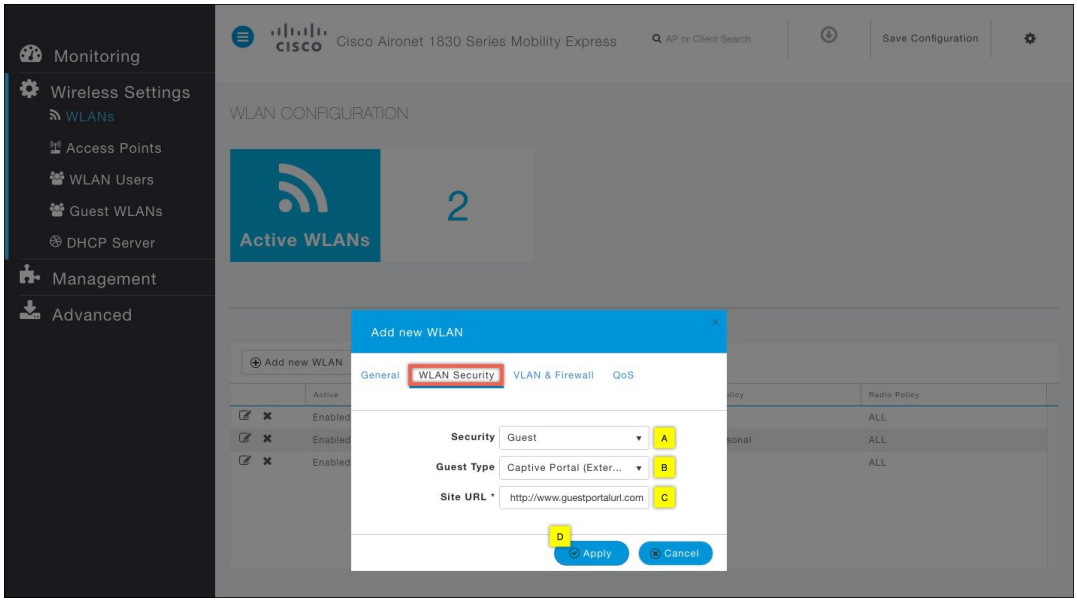
Step 3 Click on the WLAN Security and configure the following:
A. Select **Security** as *Guest*

B. Select **Guest Type** as *Captive Portal (External Web Server)*

C. Enter the **Site URL.** Site URL is the Guest Portal URL, which has been configured on the External Web Server

D. Click Apply button

Note If the Guest users have to be put a specific vlan, click on **VLAN & Firewall** and configure the VLAN.



Guest Portal Page for Internal WebAuth

Cisco Mobility Express supports a default Guest Portal Page that comes built-in and also a customized page, which can be imported by the user.

Note The internal Guest Portal Page will be used for Guest WLANs with Guest Type as Captive Portal (AP) only.

To use the default Guest Portal Page or import a customized Guest Portal page, follow the procedure below:

Using Default Guest Portal Page

Procedure

Step 1 Navigate to **Wireless Settings > Guest WLANs.** The Guest WLAN page will be displayed showing the count of Guest WLANs configured on the Mobility Express controller.

Step 2 Configure the following:

A. **Page Type—**Select as *Internal (Default)*.

B. **Preview—**You can Preview the page by clicking on the **Preview** button.

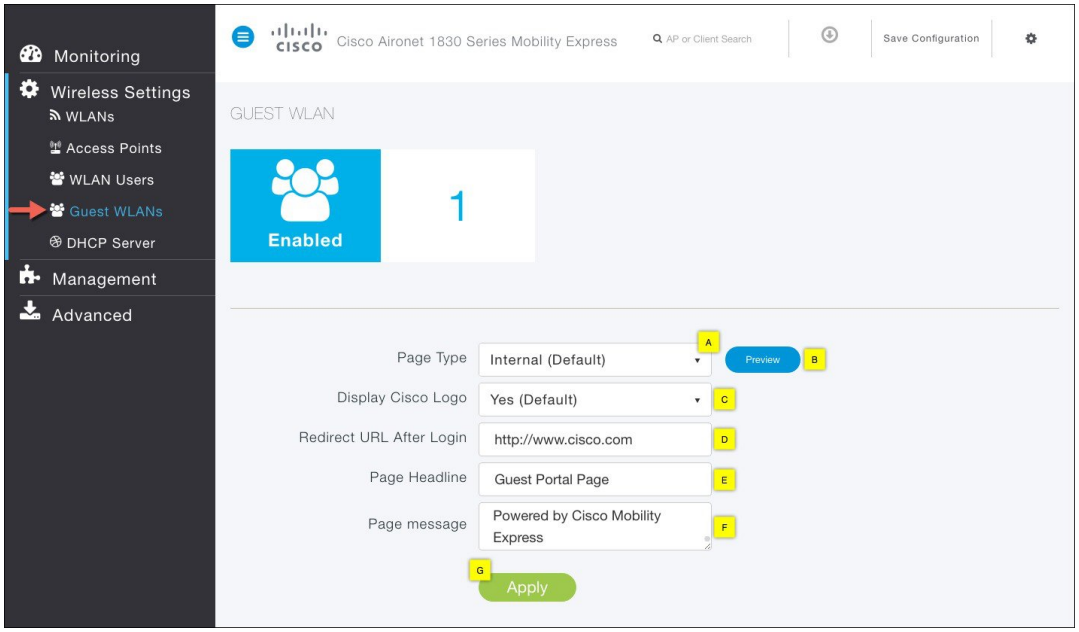
C. **Display Cisco Logo—**To hide the Cisco logo that appears in the top right corner of the default page, you can choose No. This field is set to Yes by default.

D. **Redirect URL After Login—**To have thee guest users redirected to a particular URL (such as the URL for your company) after login, enter the desired URL in this text box. You can enter up to 254 characters.

E. **Page Headline—**To create your own headline on the login page, enter the desired text in this text box. You can enter up to 127 characters. The default headline is Welcome to the Cisco Wireless Network.

F. **Page Message—**To create your own message on the login page, enter the desired text in this text box. You can enter up to 2047 characters. The default message is Cisco is pleased to provide the Wireless LAN infrastructure for your network. Please login and put your air space to work**.**

G. Click Apply button



Using Customized Guest Portal Page

If a customized Guest Portal page has to be presented to guest users, a sample page can be downloaded from cisco.com which can then be edited and imported to the Cisco Mobility Express controller.

To download the sample bundle, navigate to

Once the page has been edited and ready to be uploaded to the Cisco Mobility Express controller, follow the steps below.

Procedure

Step 1 Navigate to **Wireless Settings > Guest WLANs.** The Guest WLAN page will be displayed showing the count of Guest WLANs configured on the Mobility Express controller.

Step 2 Configure the following:

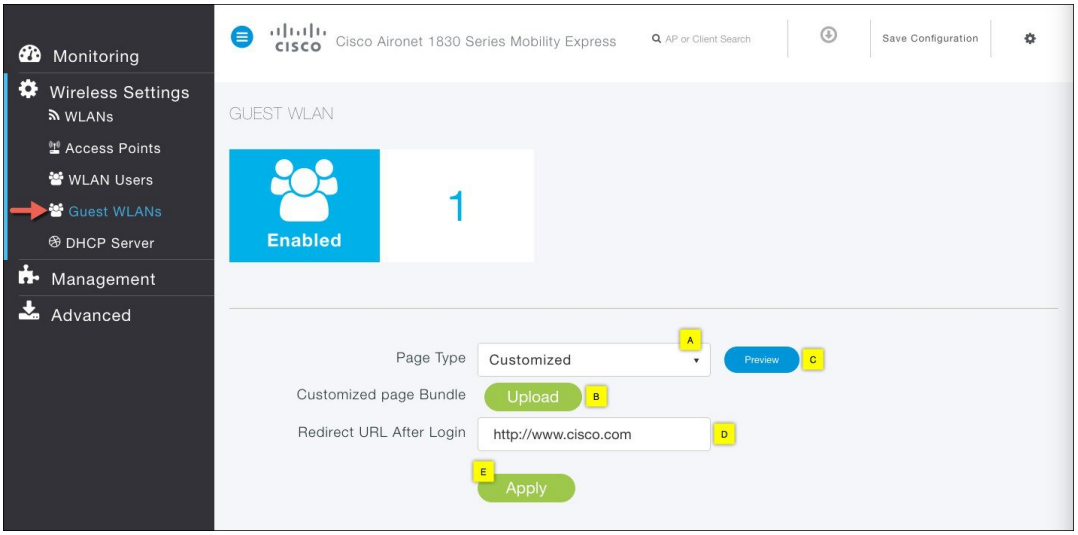
A. **Page Type—**Select as *Internal (Default)*.

B. **Customized page Bundle—**Upload the customized page bundle to the Mobility Express controller.

C.**Preview—**You can Preview the page by clicking on the **Preview** button.

D. **Redirect URL After Login—**To have thee guest users redirected to a particular URL (such as the URL for your company) after login, enter the desired URL in this text box. You can enter up to 254 characters.

E. Click Apply button


Monitoring
Wireless Settings
WLANs
Access Points
WLAN Users
Guest WLANs
DHCP Server
Management
Advanced
Cisco Aironet 1830 Series Mobility Express
AP or Client Search
Save Configuration
GUEST WLAN
Enabled
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Customized
Preview
C
Customized page Bundle
Upload
B
Redirect URL After Login
http://www.cisco.com
D
E
Apply