



Article ID: 5081

# Configuring MAC Filtering on the WAP131, WAP351, and WAP371

## Objective

MAC filtering lets the WAP block or allow clients that try to authenticate with a VAP (Virtual Access Point) based on their MAC address. This feature can be enabled or disabled on a per-VAP basis. In addition, a VAP can be configured to look at a MAC filter list on an external RADIUS (Remote Authentication Dial In User Service) or a list stored locally on the WAP itself.

The objective of this document is to show you how to configure the MAC filtering feature on the WAP131, WAP351, and WAP371.

## Applicable Devices

- WAP131
- WAP351
- WAP371

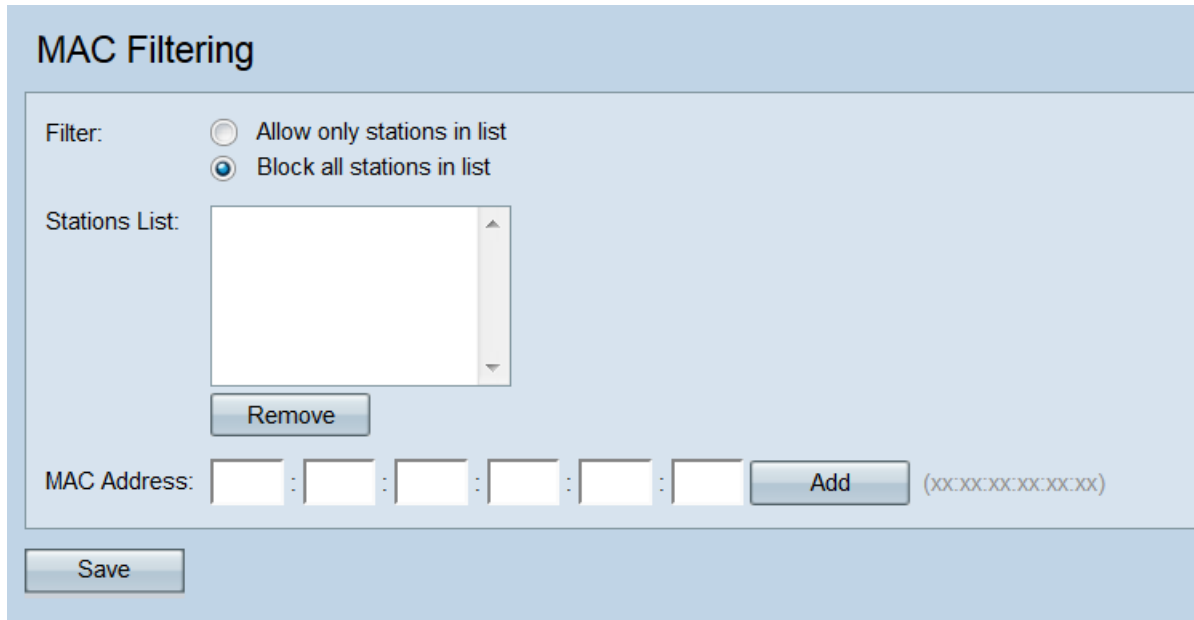
## Software Version

- v1.0.1.3 (WAP131, WAP351)
- v1.2.0.2 (WAP371)

# Configure MAC Filtering

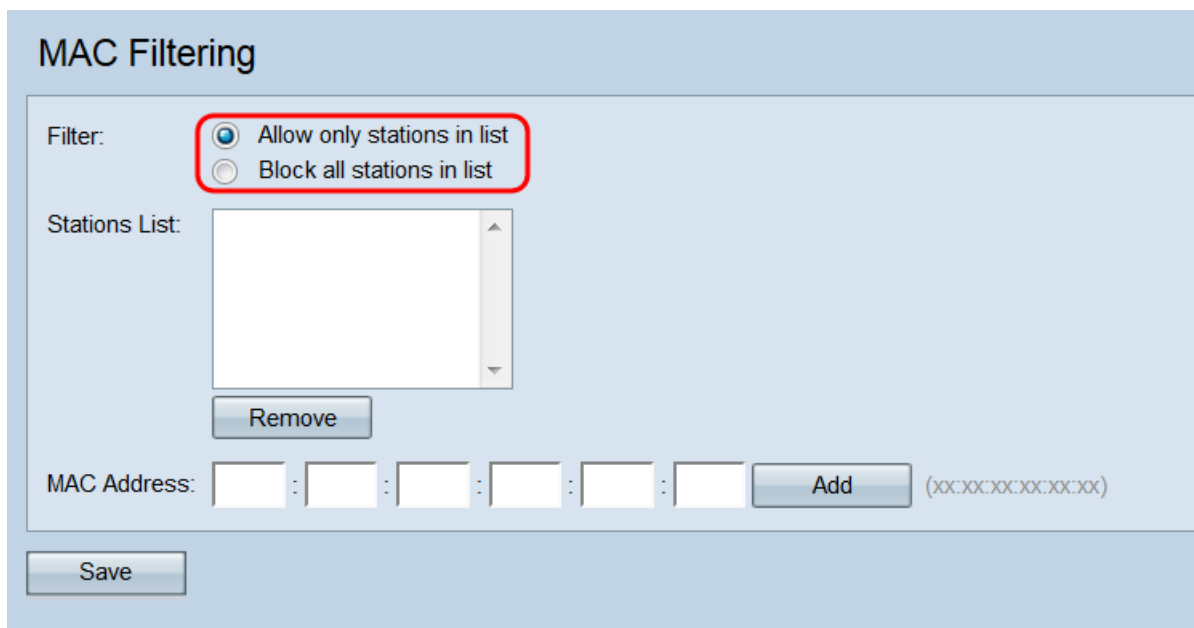
## Configuring Local MAC Filtering List

Step 1. Log in to the web configuration utility and choose **Wireless > MAC Filtering**. The *MAC Filtering* page opens.



The screenshot shows the 'MAC Filtering' configuration page. At the top, the title 'MAC Filtering' is displayed. Below it, the 'Filter:' section contains two radio buttons: 'Allow only stations in list' (unselected) and 'Block all stations in list' (selected). Underneath is a 'Stations List' field, which is currently empty, with a 'Remove' button below it. At the bottom of the form, there is a 'MAC Address:' field with six input boxes separated by colons, followed by an 'Add' button and a placeholder '(xx:xx:xx:xx:xx:xx)'. A 'Save' button is located at the bottom left of the page.

Step 2. In the *Filter* field, choose one of the radio buttons to determine how the WAP uses the filter list.

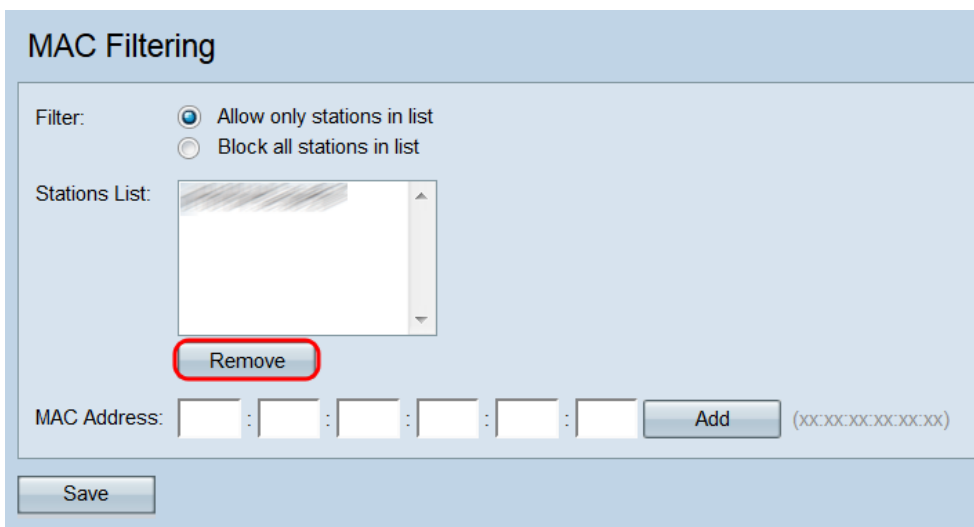


This screenshot is identical to the previous one, but the 'Allow only stations in list' radio button is now selected and highlighted with a red rectangular box. The 'Block all stations in list' radio button remains unselected. All other elements, including the 'Stations List' field, 'Remove' button, 'MAC Address' input fields, 'Add' button, and 'Save' button, are in the same state as in the first screenshot.

The options are:

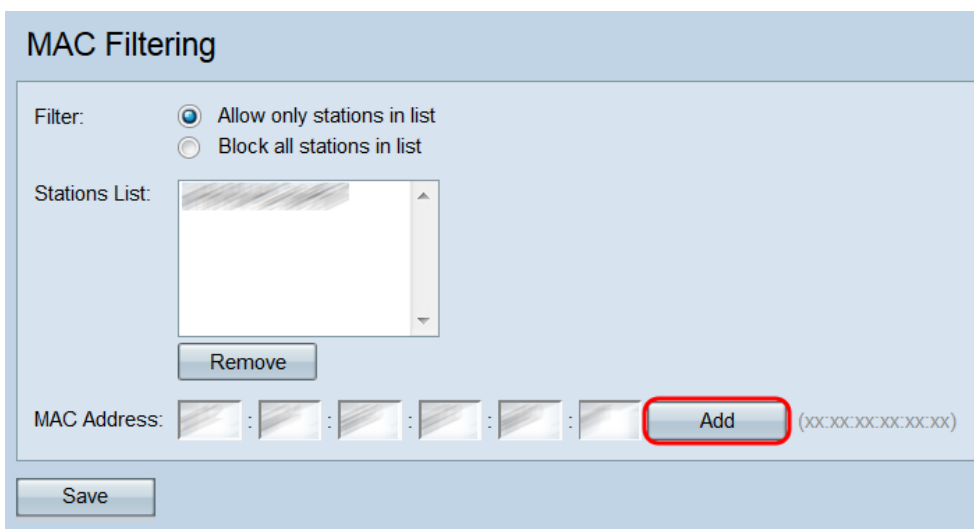
- Allow only stations in list — When selected, the WAP will deny access to any client whose MAC address isn't in the list; only clients on the list will be allowed.
- Block all stations in list — When selected, the WAP will deny access to any client whose MAC address is on the list; all other clients will be allowed.

Step 3. The *Stations List* contains all of the MAC addresses that the WAP will check when authenticating a client. To remove an address from the list, click on it and then click the **Remove** button.



The screenshot shows the 'MAC Filtering' configuration page. Under the 'Filter:' section, the radio button for 'Allow only stations in list' is selected. Below this is a 'Stations List' area with a scrollable list box that is currently empty. A 'Remove' button is positioned below the list box and is highlighted with a red rectangle. At the bottom of the configuration area, there is a 'MAC Address:' field with six input boxes separated by colons, followed by an 'Add' button and a placeholder '(xx:xx:xx:xx:xx:xx)'. A 'Save' button is located at the bottom of the page.

Step 4. To add a MAC address to the list, enter it in the *MAC Address* field, then click the **Add** button. The address will appear in the *Stations List*.

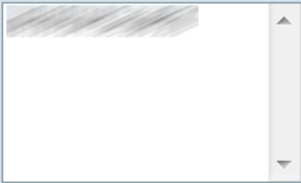


The screenshot shows the 'MAC Filtering' configuration page. Under the 'Filter:' section, the radio button for 'Allow only stations in list' is selected. Below this is a 'Stations List' area with a scrollable list box that is currently empty. A 'Remove' button is positioned below the list box. At the bottom of the configuration area, there is a 'MAC Address:' field with six input boxes separated by colons, followed by an 'Add' button and a placeholder '(xx:xx:xx:xx:xx:xx)'. The 'Add' button is highlighted with a red rectangle. A 'Save' button is located at the bottom of the page.

Step 5. Click **Save**.

### MAC Filtering

Filter:  Allow only stations in list  
 Block all stations in list

Stations List: 

MAC Address:  :  :  :  :  :   (xx:xx:xx:xx:xx:xx)

Step 6. In order for the MAC Filtering list to be used, each VAP that you want to use MAC filtering must be configured. Go to the **Wireless > Networks** page in the web configuration utility.

### Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| Virtual Access Points (SSIDs) |         |                                     |                                         |           |                                     |          |            |                          |                          |  |
|-------------------------------|---------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|--|
|                               | VAP No. | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |  |
| <input type="checkbox"/>      | 0       | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |  |

Step 7. Check the checkbox(s) of the VAP(s) you want to use MAC filtering.

### Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| Virtual Access Points (SSIDs)       |         |                                     |                                         |           |                                     |          |            |                          |                          |  |
|-------------------------------------|---------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|--|
|                                     | VAP No. | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |  |
| <input checked="" type="checkbox"/> | 0       | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |  |

Step 8. Click **Edit**. The VAP(s) selected will now be available for editing.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| Virtual Access Points (SSIDs)       |                                     |                                         |           |                                     |          |            |                          |                          |  |  |
|-------------------------------------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|--|--|
| VAP No.                             | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |  |  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |  |  |

Step 9. In the *MAC Filter* drop-down list, select which list the WAP will use during MAC filtering: the one stored locally on the WAP itself (Local) or the list stored remotely on a RADIUS server (RADIUS). Select **Local**.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| Virtual Access Points (SSIDs)       |                                     |                                         |           |                                     |          |            |                          |                          |  |  |
|-------------------------------------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|--|--|
| VAP No.                             | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |  |  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |  |  |

Step 10. Click **Save**.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| Virtual Access Points (SSIDs)       |                                     |                                         |           |                                     |          |            |                          |                          |  |  |
|-------------------------------------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|--|--|
| VAP No.                             | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |  |  |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | Local      | <input type="checkbox"/> | <input type="checkbox"/> |  |  |

## Configuring Remote RADIUS Filtering List

Step 1. Log in to the web configuration utility and choose **Wireless > MAC Filtering**. The *MAC Filtering* page opens.

**MAC Filtering**

Filter:  Allow only stations in list  
 Block all stations in list

Stations List:

MAC Address:  :  :  :  :  :   (xx:xx:xx:xx:xx:xx)

Step 2. In the *Filter* field, choose one of the radio buttons to determine how the WAP uses the filter list.

**MAC Filtering**

Filter:  Allow only stations in list  
 Block all stations in list

Stations List:

MAC Address:  :  :  :  :  :   (xx:xx:xx:xx:xx:xx)

The options are:

- Allow only stations in list — When selected, the WAP will deny access to any client whose MAC address isn't in the list; only clients on the list will be allowed.
- Block all stations in list — When selected, the WAP will deny access to any client whose MAC address is on the list; all other clients will be allowed.

Step 3. Log into the RADIUS server, and navigate to where users can be entered into the server.

Step 4. Add a new user to the RADIUS server. The user entered here represents an entry in the MAC filtering list the WAP looks at when filtering. Enter a valid Ethernet MAC address as the new user's username, and "NOPASSWORD" as the user's password. Repeat this step for each entry you wish to add to the list.

Step 5. Save your changes on the RADIUS server, then navigate to **Wireless > Networks** on the WAP's web configuration utility.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| VAP No.                  | Enable                              | VLAN ID | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |
|--------------------------|-------------------------------------|---------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |

Add Edit Delete

Save

Step 6. Check the checkbox(s) of the VAP(s) you want to use MAC filtering.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| VAP No.                             | Enable                              | VLAN ID | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |
|-------------------------------------|-------------------------------------|---------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |

Add Edit Delete

Save

Step 7. Click **Edit**. The VAP(s) selected will now be available for editing.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| VAP No.                             | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |
|-------------------------------------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |

Step 8. In the *MAC Filter* drop-down list, select which list the WAP will use during MAC filtering: the one stored locally on the WAP itself (Local) or the list stored remotely on a RADIUS server (RADIUS). Select **RADIUS**.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| VAP No.                             | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |
|-------------------------------------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | Disabled   | <input type="checkbox"/> | <input type="checkbox"/> |

Step 9. Click **Save**.

Networks

Select the radio interface first, and then enter the configuration parameters.

Radio:  Radio 1 (2.4 GHz)  
 Radio 2 (5 GHz)

| VAP No.                             | Enable                              | VLAN ID<br><a href="#">Add New VLAN</a> | SSID Name | SSID Broadcast                      | Security | MAC Filter | Channel Isolation        | Band Steer               |
|-------------------------------------|-------------------------------------|-----------------------------------------|-----------|-------------------------------------|----------|------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 1                                       | ciscosb   | <input checked="" type="checkbox"/> | None     | RADIUS     | <input type="checkbox"/> | <input type="checkbox"/> |