CIS Audience – User Manual

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Welcome to Custom Integration Solutions

Thank you for purchasing CIS devices. Our solutions make it easy for integrators to deploy networks in home and business settings with minimal configuration. Our support team is here to assist with setting up equipment and answering your network related questions.

Overview

The CIS Audience provides a high-speed mesh network for your home devices. Instead of mounting access points on the walls or ceiling, the Audience is placed throughout the home on surfaces such as a table or desk. With only one Audience device requiring an Ethernet connection, it is ideal for reaching rooms without Ethernet connectivity. You can connect wired devices to the Ethernet ports to receive connectivity.

- The CIS Audience provides high speed connectivity on the 2.4 and 5 GHz bands with support for wireless standards 802.11 a, b, g, n, and ac.
- A second 5 GHz network is used to form the backbone of the mesh network.

Package Contents

CIS Audience

Ethernet Cable

DC Adapter

Power

The CIS Audience is powered by via the DC Jack or PoE on ETH1. Use the included DC adapter or connect the device to a CIS router or PoE switch.

- The CIS Audience accepts 12-57v via the DC jack or 24-57v via PoE on ETH1. It accepts passive PoE only (802.3af/at not supported) and consumes a maximum of 27W.

Device Details

Ports

- ETH1 – On the main node, connect this port directly to a CIS router or switch. If your CIS router or switch can deliver PoE, it will power the audience.
- ETH2 – Acts a switched port. Use it to connect another device to the network.
- Power – Attach the included DC adapter when PoE isn't available.

LED Indicators

The LED indicator on the front of the CIS-Audience indicates the status of the device.

- Blue – The CIS Audience has not established a connection. When booting for the first time or after a reset, allow 2 minutes for the device to join the mesh network.
- Green – The CIS Audience has joined the mesh network. This does not mean the device is managed by the CIS router, however.
- Flashing Green – Do not press the WPS button. The device will still function during the WPS setup phase. Allow two minutes for the device to return to normal.
- Flashing Amber – Do not press the WPS button. The device is looking for other mesh networks. Allow two minutes for the device to return to normal.

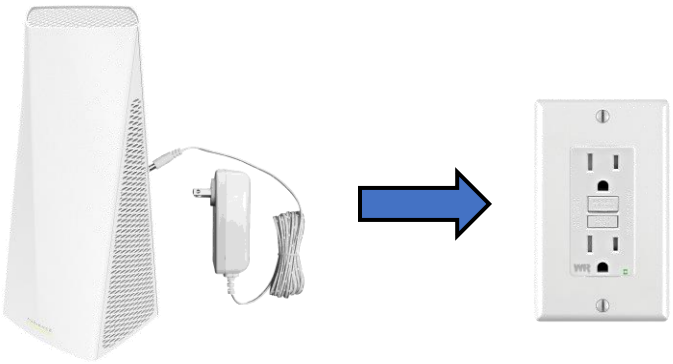
Buttons

- WPS | Sync – Do not use. Your CIS-Audience is preprogrammed to communicate with other CIS-Audience devices. If you see the light flashing amber or flashing green, wait 2 minutes for the device to exit WPS mode.

- Reset – If you can no longer see the other CIS Audience nodes in the **Wireless** tab and you are confident the node is no longer connecting, you may have to reset it. Unplug the CIS Audience node from the power source, then hold the reset button. Reconnect the power source and wait until the LED on the front of the device starts flashing green. Release the reset button. Allow up to 2 minutes for the device to return to normal operations.

Quick Setup

1. Connect one CIS Audience device to your CIS router or switch with an Ethernet cable.



2. If your CIS router or switch does not provide PoE power, connect the DC adapter.

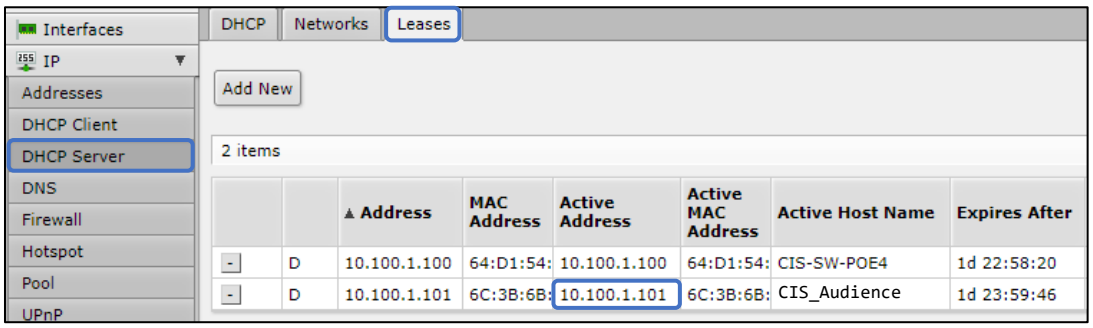
3. Power up additional CIS Audience nodes.

4. Access the web interface for each of the CIS Audience nodes (see next page for instructions).

Accessing the Web Interface

1. Connect your laptop or PC to the router.

2. Obtain the IP address of your CIS Audience access points. If you're using a CIS router, access the web configuration by typing 10.100.1.1 in a web browser (10.100.1.1 is the default, but some systems may be different). Once logged in with the default credentials of **cis** and **integration** as the password, select **IP** > **DHCP Server** and view the **Leases** tab.



3. Enter the IP address of the CIS Audience node in the address bar of your web browser.

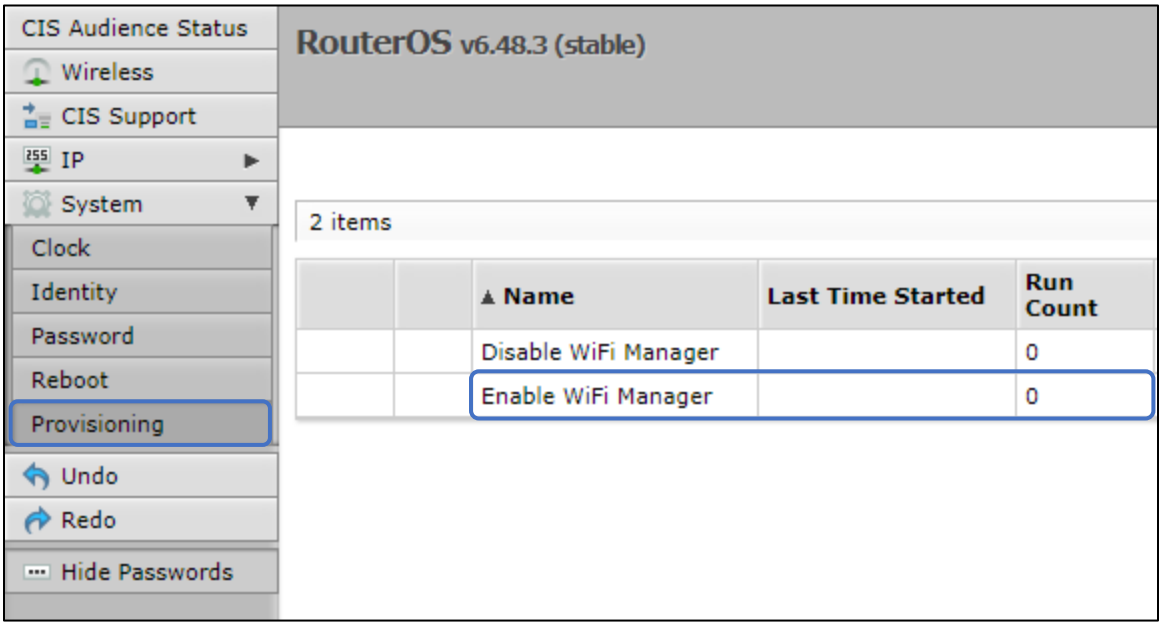
4. To login, use the default credentials **cis** and **integration** as the password.

5. Integrators may use the Get TeamViewer link if remote assistance is required.

Managing the CIS Audience

Linking the CIS Audience to the WiFi Manager

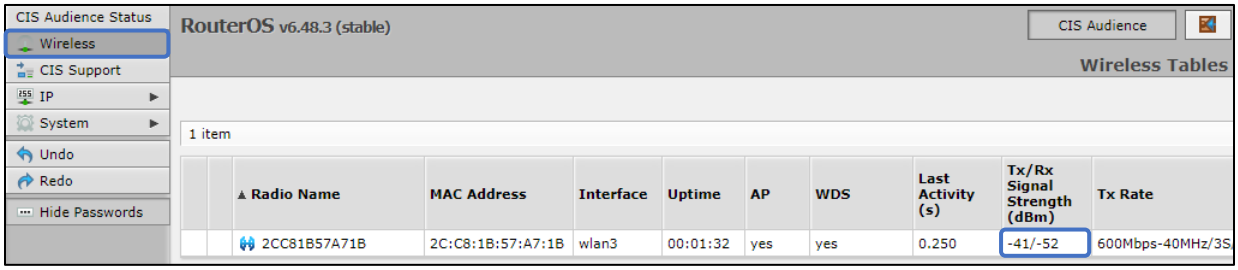
From the toolbar on the left, select **System**, then **Provisioning**. You will see two actions below. Select **Enable WiFi Manager**.



Click **Run**. You can click Close when finished.

View the Strength of the Mesh Network

Select the **Wireless** section from the left toolbar. You can see important information such as the uptime of the mesh network link, and the signal strength.



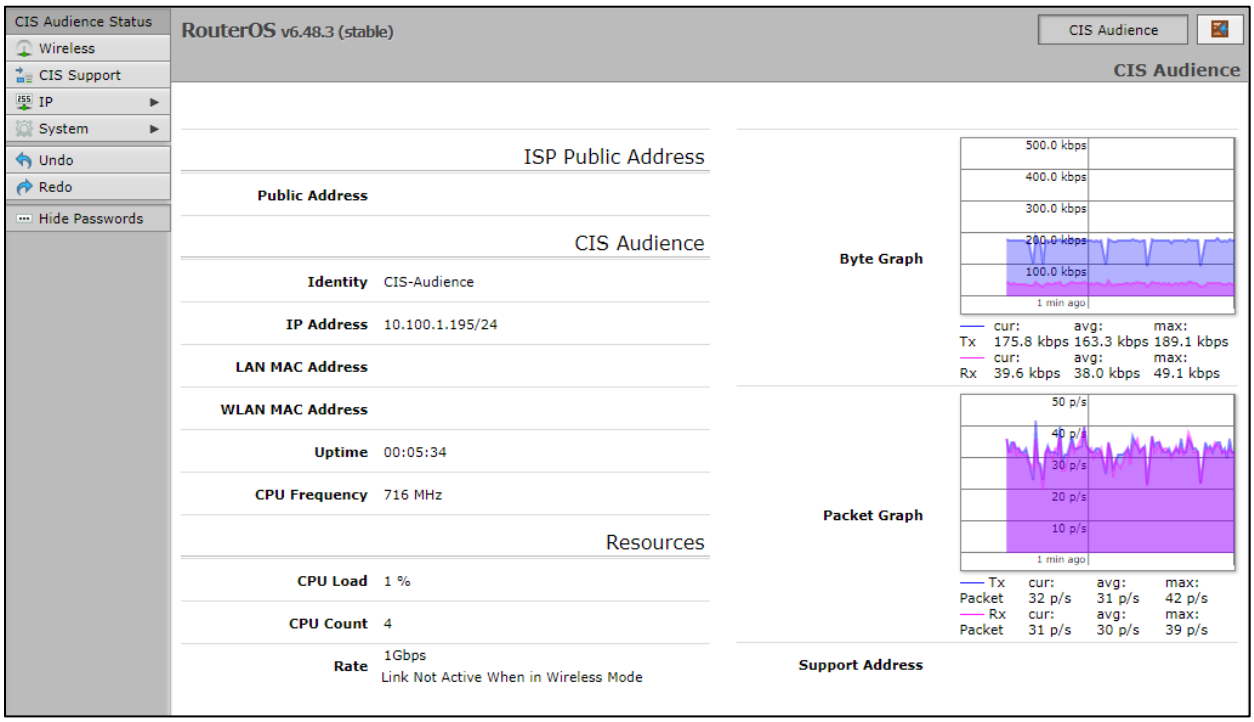
Use the **Tx/RX Signal Strength** to determine the appropriate location for the secondary CIS Audience nodes. Use the chart below for reference:

Signal Strength (dB)	Comment
-1 to -30	Very strong signal. Consider moving the secondary node further away.
-31 to -72	Normal signal range.
-73 to -77	Signal is weakening.
-78 and above	Signal is weak. Devices become less likely to communicate with each other.

The Web Interface

The Status Page

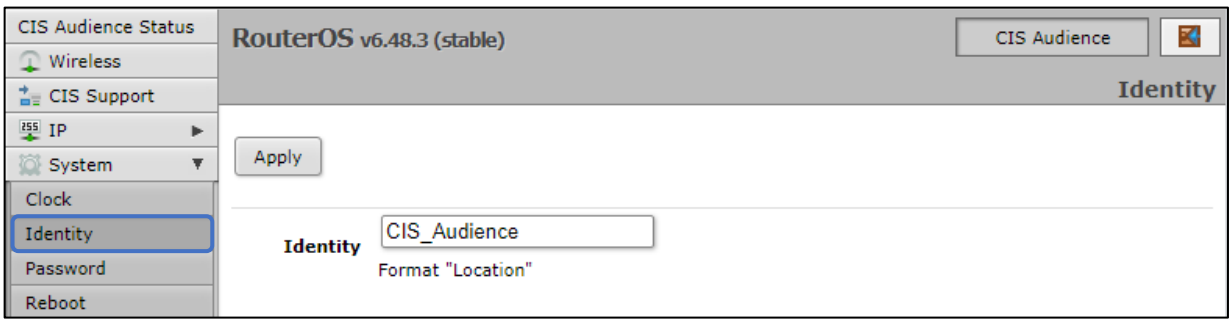
The status page provides basic diagnostic information. There is a CIS Support Address should you require assistance. You can view the identity (name) of the access point you are connected to, view it's public address, the traffic flowing through the device, and identify the MAC addresses of its interfaces.



Setting the CIS Audience's Identity

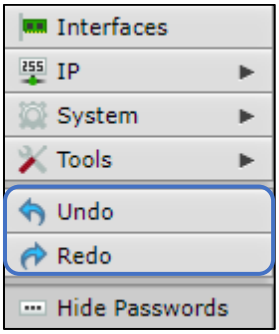
The identity is used to identify your device on the network. Troubleshooting will become easier when you set the identity correctly. Set the identity of the access point based on its location E.g., Basement.

The **Identity** setting can be found in the **System** tab in the left toolbar.



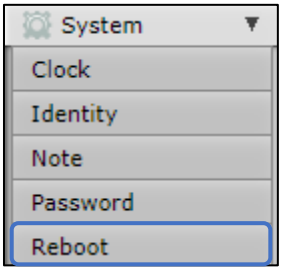
Undo / Redo

Undo and Redo buttons are located in the left toolbar. You may use them to quickly undo/redo any changes made to configuration.



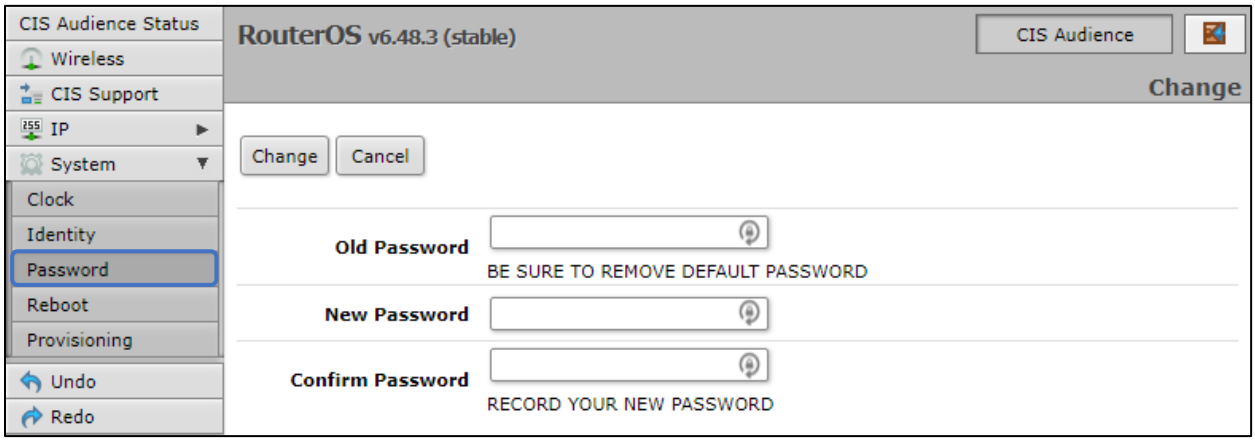
Rebooting the Device

If you are having ongoing issues with your network and suspect a reboot will help, the **Reboot** option can be found in the **System** tab in the left toolbar. Clicking reboot will ask for confirmation before proceeding.



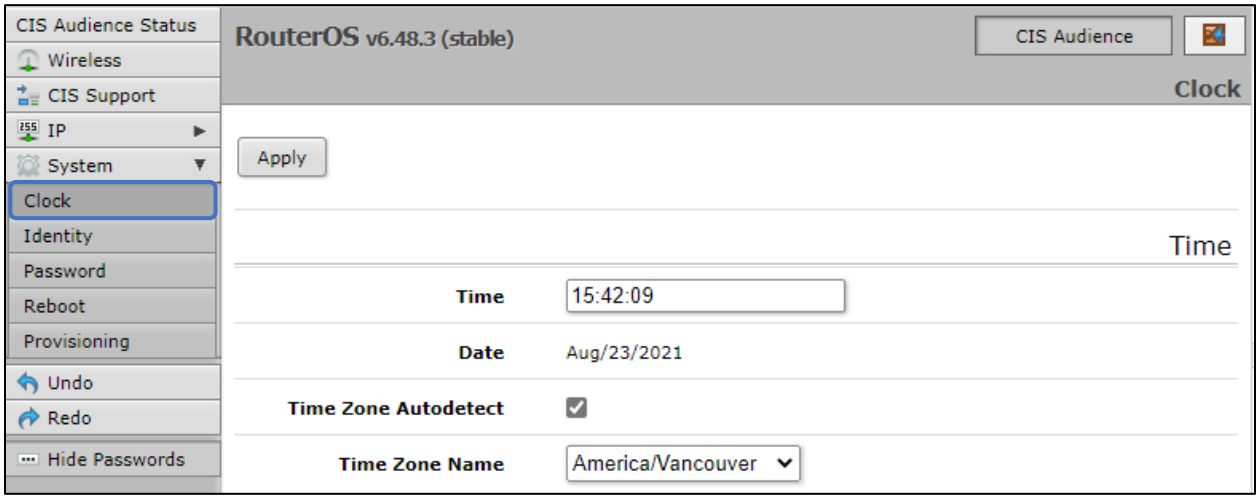
Changing the Default Password

After you log in for the first time, please create a new a password to increase the security of the device. Enter the old password in the top field and a secure password in the new and confirm password fields.



Setting the Time Zone

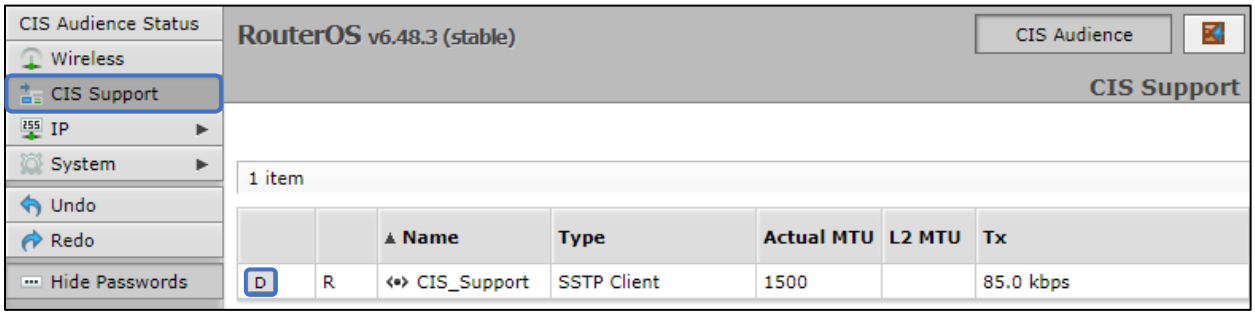
You can find the Clock settings under the System tab in the left toolbar. Select your time zone from the drop-down menu.



The CIS Support Tunnel

The CIS Support tunnel is used to create a VPN tunnel that the CIS technicians can use to configure your CIS devices remotely. Once you have your CIS Audience set up and functioning, you can turn it off by selecting **CIS Support** from the left toolbar, then clicking the **D** button to disable it.

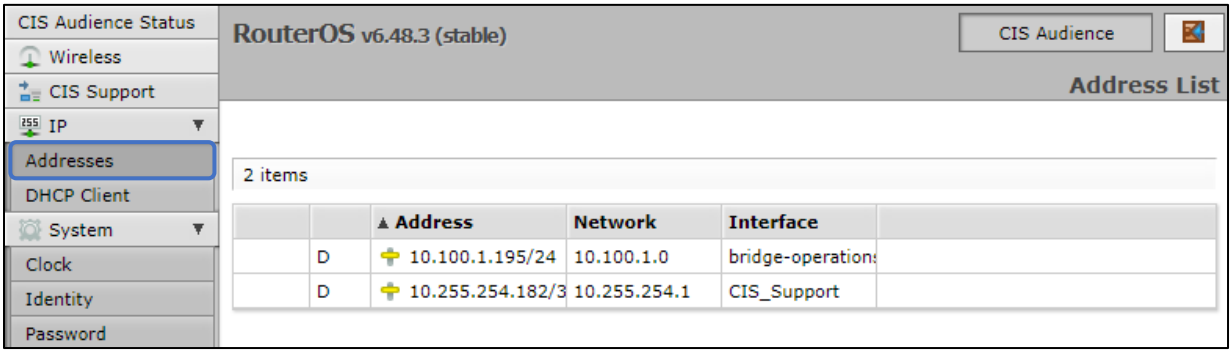
You can re-enable the CIS Support tunnel by clicking the same button, which will read **E** when the tunnel is disabled.



IP Addressing

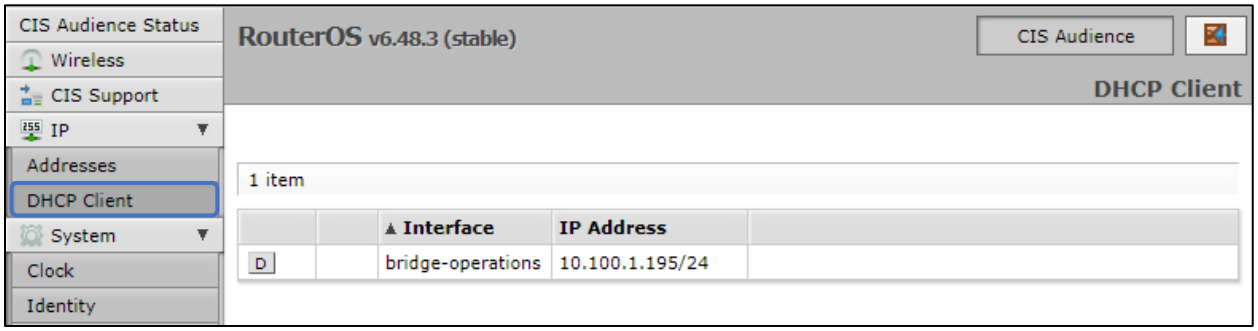
View the Device's IP Addresses

To view the IP address of the CIS Audience node, select **IP** from the left toolbar and select **Addresses**. You will see the IP address the CIS router has assigned to the Audience node, as well as an IP address for the support tunnel (if activated). You may provide this IP address to the CIS technician when requesting support.



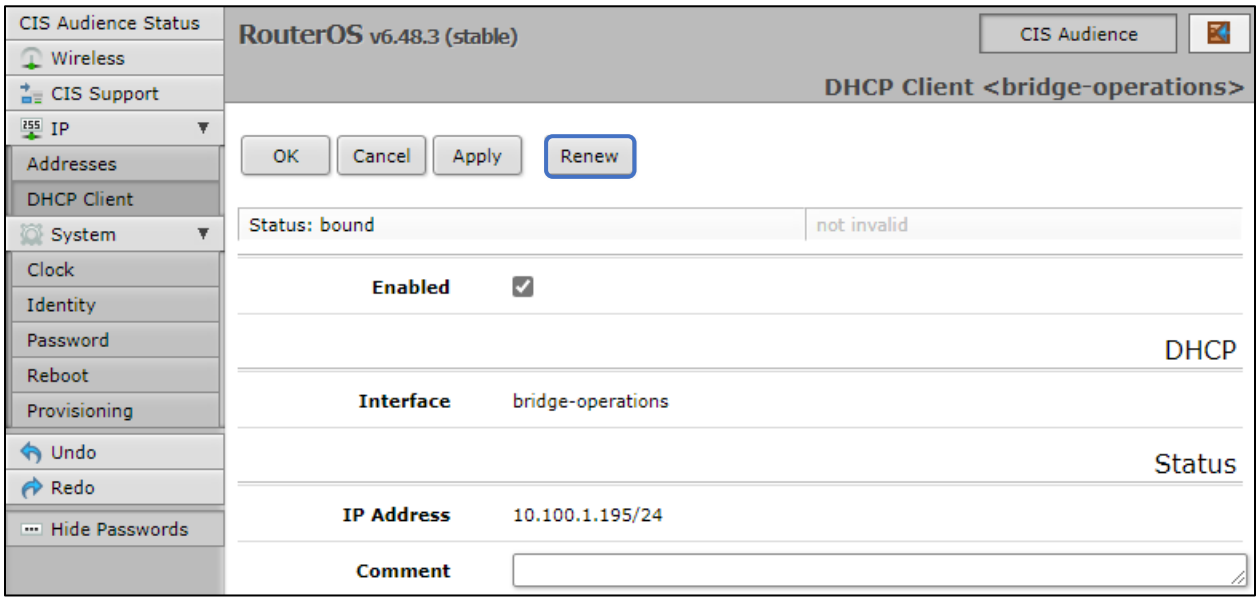
The DHCP Client Tab

The DHCP client tab can be used to obtain a new IP address from the CIS router, if needed.

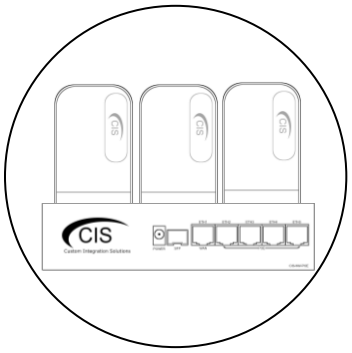


Renewing the IP Address

Once you've clicked the entry under the **DHCP Client** option, click the **Renew** button to obtain a new lease.



Managing Access Points with the Wireless Manager



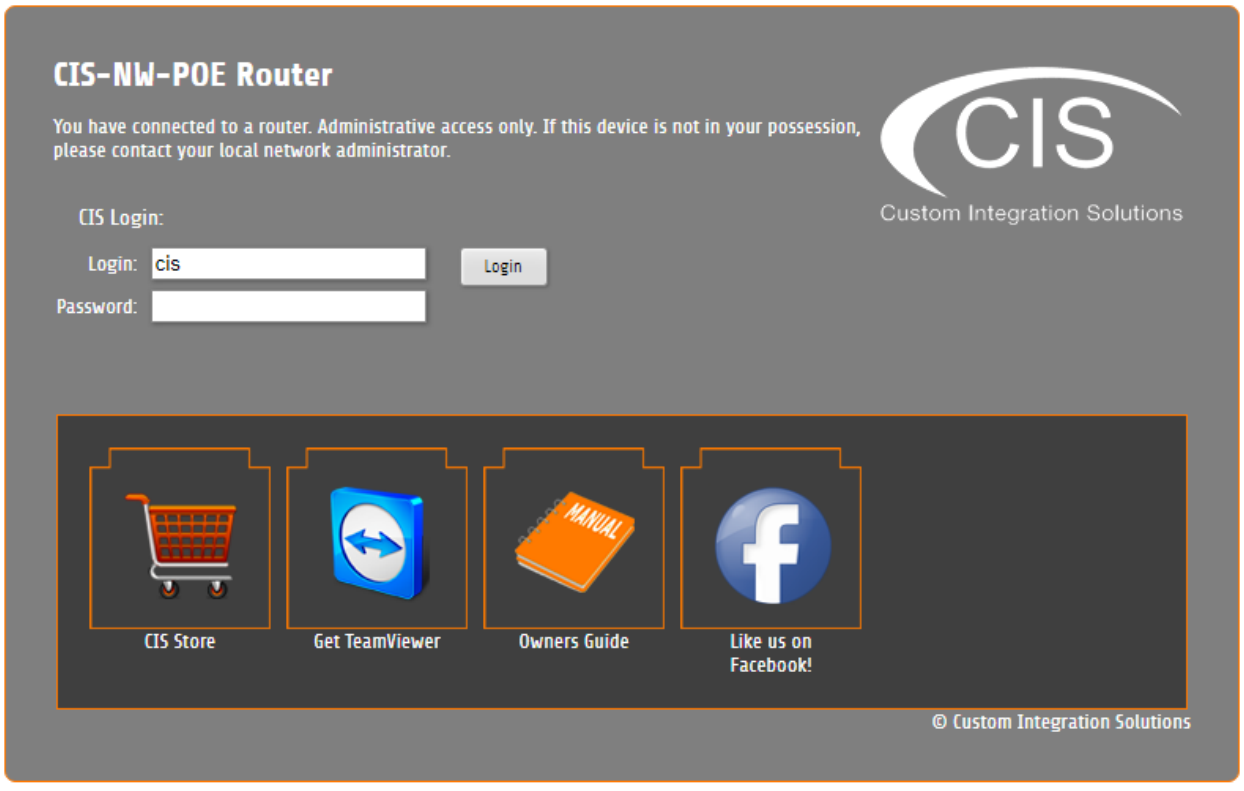
All CIS routers include a Wireless Manager that allows you to manage your access points from a single location. All changes to SSIDs, passwords and other options will be propagated to all CIS access points on the network. The CIS Audience is meant to be joined to the Wi-Fi manager, just like other CIS access points.

Step 1 – Link the CIS Audience nodes to the Wi-Fi Manager

View *Linking the CIS Audience to the WiFi Manager* (page 10). Repeat the process for each CIS Audience node that will be joined.

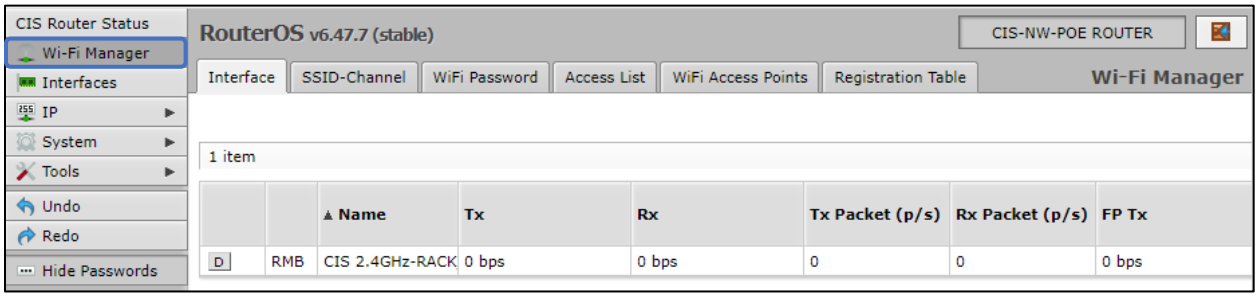
Step 2 – Configure the Wi-Fi Manager on the CIS router

Access the web interface for the CIS router. The default address is **10.100.1.1**, however some systems may have a different IP scheme. Find your default gateway using the *ipconfig* command in a command prompt window.

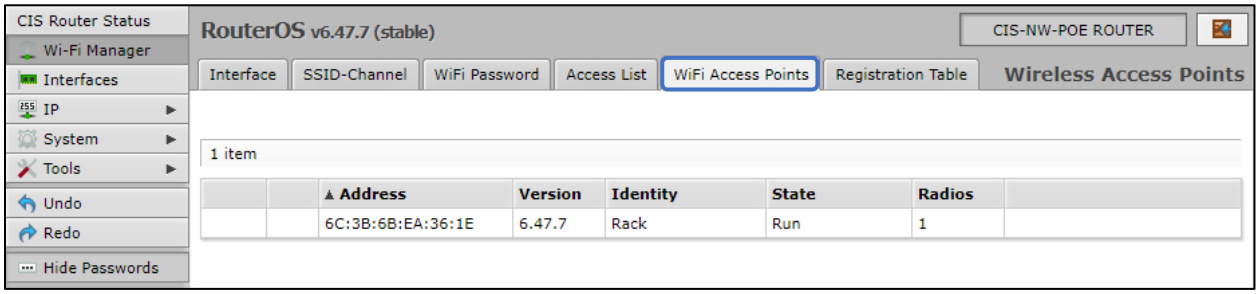


Viewing the Connected Access Points

On your CIS router, select the **Wi-Fi Manager** section in the left toolbar. The active Wi-Fi radios will be displayed.

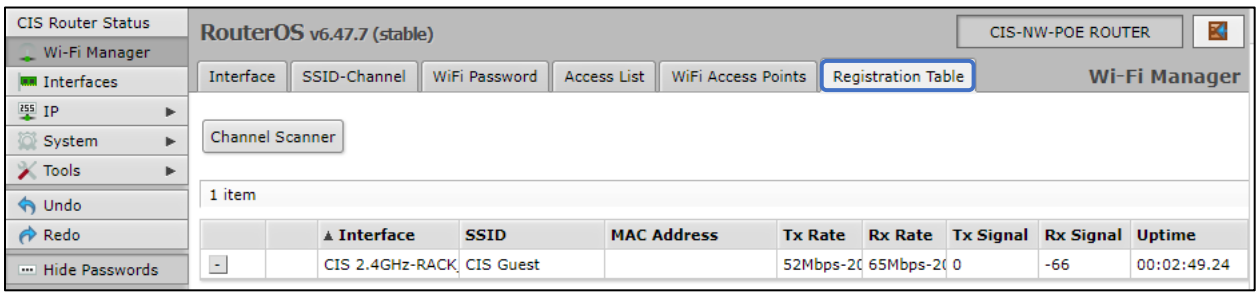


If you select the **WiFi Access points tab**, you'll be able to view the identity, MAC address and other information of the individual access points.



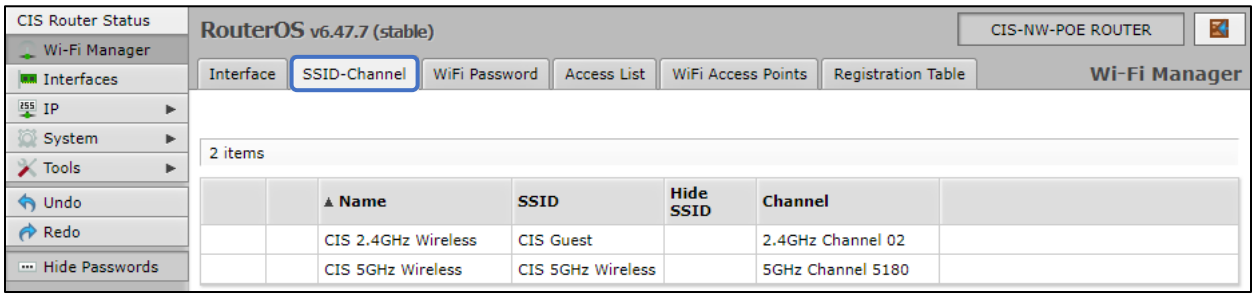
Viewing Connected Devices

Select the **Registration Table** tab to view the connected devices.

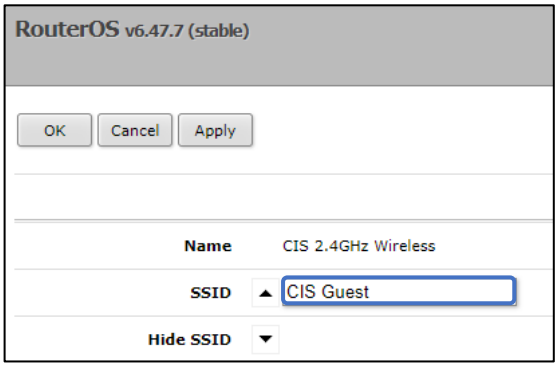


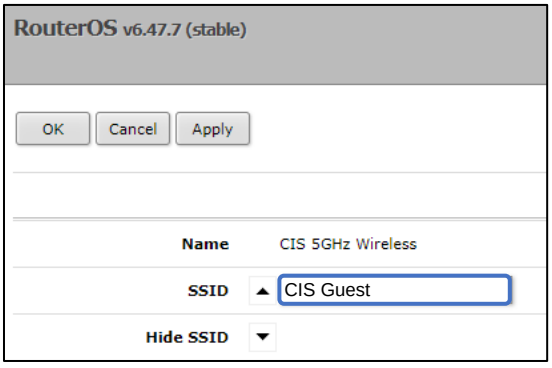
Changing the SSID of Managed Access Points

Select the **SSID-Channel** tab in the **Wi-Fi Manager** section. Click on the 2.4GHz network.



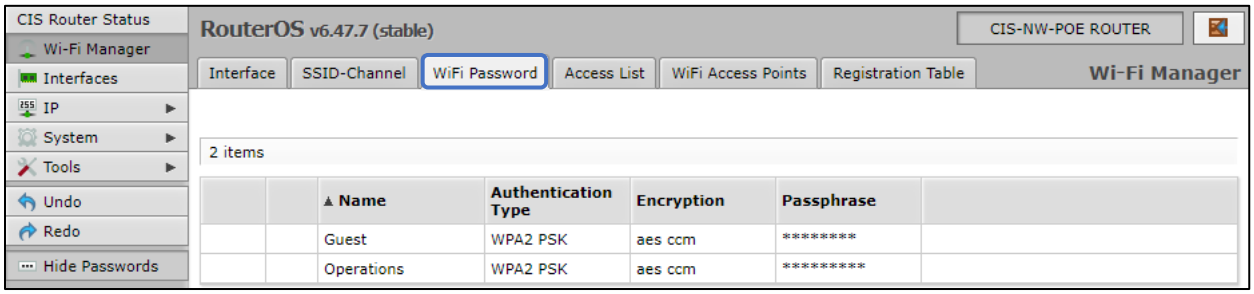
Enter the name of the SSID in the field. Copy and paste the SSID so that the 5GHz network has the same SSID.



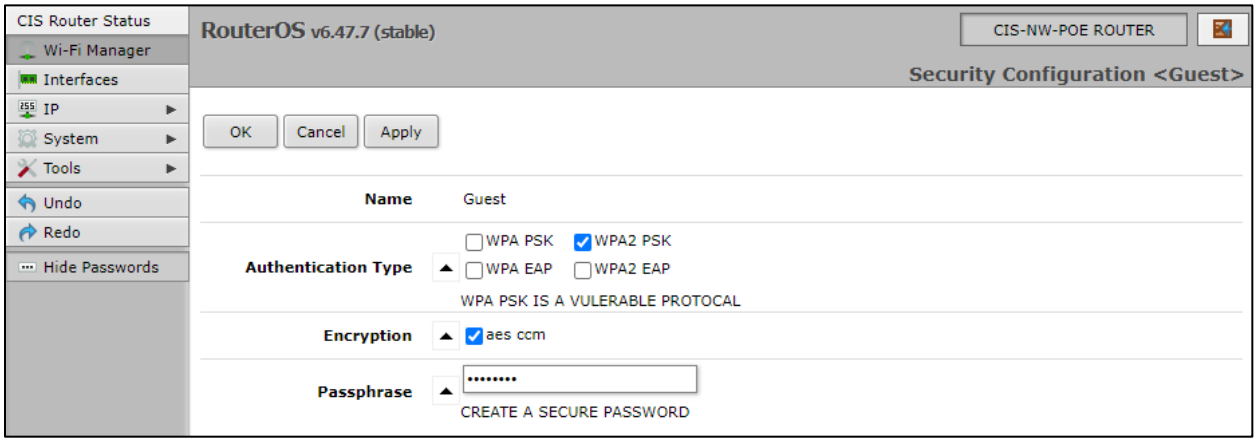


Changing the Wi-Fi Password of Managed Access Points

Select the **Wi-Fi Password** tab. Click on the network that you'd like to change the password for. If you've purchased a guest network, it will appear here.



Click on the network you'd like to set the password for, then enter the passphrase in the box below. It is highly recommended you use only **WPA2 PSK** for security purposes. WPA is vulnerable to password cracking.



Troubleshooting

Symptom	Possible causes
The CIS Audience light is blue.	• A blue light indicates the CIS Audience node is not connected to the mesh network. Normal when only a single CIS Audience is used. • If the device has been recently powered on, wait 2 minutes for the device to rejoin the mesh network. • The device may be out of range of the other CIS Audience nodes. Try moving the node closer and see if it joins the network (light turns green). • If the light remains blue after ruling out range issues and allowing enough time for it to join the network, perform a reset. Unplug the power source, then hold the reset button. Apply power and keep holding the button until the light on the front flashes green. Release the button and allow two minutes for the device to return to normal.
My devices are having trouble maintaining a connection to the wireless network.	• Check the signal strength in the registration table. A healthy signal range is between -30 and -75 dB. • Avoid using the 2.4 GHz network when possible, as it is more prone to interference. Use the Scanner tool to detect interfering networks if necessary. • Try changing the channel of the access points. You can do this in the Wi-Fi manager by clicking on the Interface tab, then choose an access point radio. Click the down arrow to show the channel box.
My device won't connect to the wireless network at all.	• Ensure the device is in range of the access point. • Temporarily disable all access points except the one closest to the device. Some devices have issues with multiple access points with the same SSID. • If this is the case, contact CIS and we will make a separate SSID for these devices that is only broadcast on one access point.

<table>
<tr><td>My device won't connect to the wireless network at all. (cont'd)</td><td>

802.11b is disabled by default. If you have devices that require 802.11b you can enable it in the Wi-Fi manager or contact CIS for assistance.
Ensure that the passphrase is correct.

</td></tr>
<tr><td>I am not receiving the speed that I am expecting.</td><td>

Test the speed of your device when it is plugged into the wired network if possible. Compare the results.
Access points and client devices will not provide or support the full throughput of a 1 Gbps internet connection at the time of this manual's publishing.

</td></tr>
<tr><td>The speed is particularly slow.</td><td>

Ensure there is adequate coverage throughout the building.
We recommend one access point for every 1000 sq ft for adequate 5 GHz coverage.
The placement of the access point can have a significant impact on performance as well as the nearby materials. The following materials can cause issues with reflecting or absorbing radio frequencies:

<table>
<tr><th>Type of Barrier</th><th>Interference Potential</th></tr>
<tr><td>Wood</td><td>Low</td></tr>
<tr><td>Synthetic material</td><td>Low</td></tr>
<tr><td>Glass</td><td>Low</td></tr>
<tr><td>Water</td><td>Medium</td></tr>
<tr><td>Bricks</td><td>Medium</td></tr>
<tr><td>Marble</td><td>Medium</td></tr>
<tr><td>Plaster</td><td>High</td></tr>
<tr><td>Concrete</td><td>High</td></tr>
<tr><td>Bulletproof glass</td><td>High</td></tr>
<tr><td>Metal</td><td>Very high</td></tr>
</table>
The following are sources of interference that can affect Wi-Fi performance:

Microwave ovens.
Power sources – breaker boxes, etc.
Cordless home phones.
Wireless video transmitters.
Wireless speakers.
Poorly shielded cabling.

</td></tr>
</table>

Warranty Information

Custom Integration Solutions™ products have a 2-Year Limited Warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products that have been abused, modified, or disassembled. Products to be repaired under this warranty must be returned to Custom Integration Solutions™ or a designated service center with prior notification and an assigned return authorization (RA) number.

Contact Information

Web: www.custom-integration-solutions.com

Phone: Technical Support - (888) 976-3651

Email: activations@custom-integration-solutions.com

The CIS Audience is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EC.