



CloudMax Access Points

Quick Config Guide

Introduction

This document explains the step by step procedure for configuring the CloudMax access points from Wifisoft. The guide covers both the indoor and outdoor models of the access points. CloudMax variants of Wifisoft access points are managed by the controller. The AP controller module can be installed either in the cloud or on UniBox network controller.

Technical Overview

The AP controller is responsible for central management, monitoring and configuration of the access points and provide a single console for the network administrator. This makes the task of setup and network management extremely easy since all the APs can be configured centrally.

CloudMax supports two options –

- Cloud AP Controller
- UniBox AP Controller

Cloud AP Controller is an integrated module with WiFi OSS/BSS solution and may be offered separately or with WiFi Hotspot OSS/BSS software.

The Cloud AP controller is designed to communicate with remote access point through a secure connection. The cloudmax access points also send a status or heartbeat message to the controller every 15 minutes. The two-way communication ensures that the settings made on the cloud controller are updated in the remote access points automatically and the status of each AP is updated in the cloud AP controller.

Please note that there is a 10-15 minutes delay between the changes done in the cloud and they getting updated on the controller.

In case of UniBox AP controller, the controller module is integrated with UniBox hardware appliance. The AP module will automatically detect the presence of CloudMax access points and provide a single-click provisioning of the access points.

Installation

CloudMax access points come in different variants like indoor and outdoor. Most of the models will provide two Ethernet ports on the backside of the access point. One of the them functions as a WAN port and the other functions as LAN port.

CloudMax access points can be powered in two ways –

DC Power – You can power the AP using the DC power adapter. Please make sure that you use compatible power supply. Most APs require 12V – 2A power supply. Please check the datasheet of the respective model before using the DC power supply.

Warning: Providing wrong power supply, especially wrong voltage will damage the access point.

POE Power – You can use the POE injector to power the access point. The POE injector may be supplied for some model. In case, the POE injector is not supplied, you need to purchase a POE

injector from the local store. Please check the POE power specifications to select the right injector. Most of the access point model support 48V POE injector and 802.3af or 802.3at standard.

Note: Please check the backside of the AP to find the right power rating needed for the access point.

Powering AP using POE

The photo below shows how to power the access point using POE injector.



The POE injector has two ports – POE and LAN. The POE port needs to be connected to the WAN port of the access point using a CAT-5 or CAT-6 cable. The LAN port of the POE injector needs to be connected to the switch from where the AP will be get Internet connectivity.

NOTE: If you are using POE switch then you don't need to use the POE injector. The POE switch will be responsible for powering the access point.

Cloud Controller Configuration

In this section, we will discuss how the CloudMax access points are configured from the cloud controller. There is no admin interface to configure the AP directly. Instead, the AP needs to be added on the controller and once the AP checks in, it will download the configuration from the cloud.

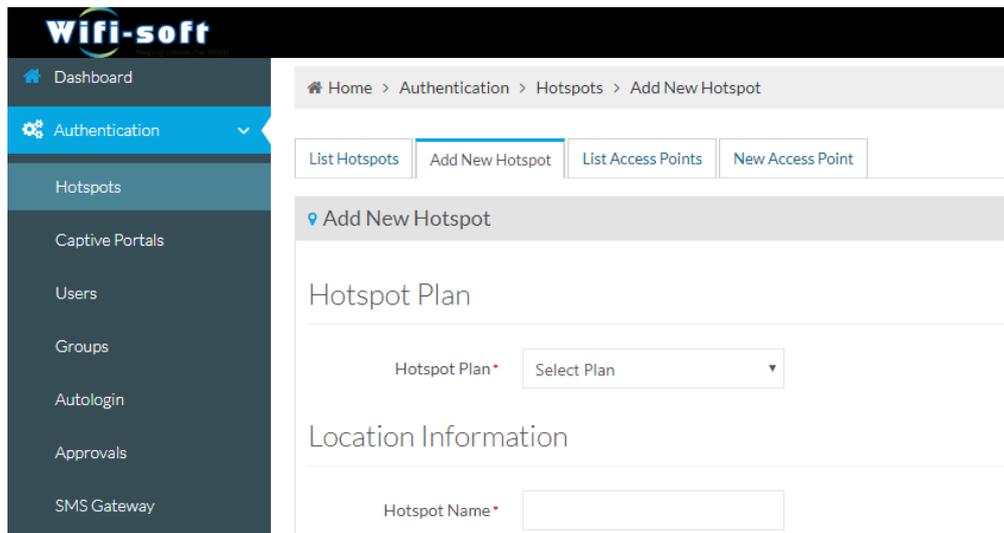
Since the AP needs Internet connection, the WAN port of the AP is configured as DHCP client. So, the WAN port can be connected in any DHCP network that provides direct access to the Internet. Once the AP is plugged into DHCP network and it is able to connect to the Internet, the AP will send the check-in message to the cloud controller.

The AP needs to be registered with the cloud controller. The registration of the AP is explained step-by-step below. Please note that you will need access to WiFiLAN OSS account to perform the configuration. If you don't have WiFiLAN OSS account, please contact Wifisoft support team to create your OSS account.

Create Hotspot

The first step is to add a hotspot or network to your WiFiLAN OSS account. To add a new hotspot, click on Authentication -> Hotspot menu.

Click on the "New Hotspot" Tab.



The screenshot displays the Wifisoft web interface. On the left is a dark sidebar menu with the following items: Dashboard, Authentication (selected), Hotspots, Captive Portals, Users, Groups, Autologin, Approvals, and SMS Gateway. The main content area shows a breadcrumb trail: Home > Authentication > Hotspots > Add New Hotspot. Below the breadcrumb are four tabs: List Hotspots, Add New Hotspot (active), List Access Points, and New Access Point. The 'Add New Hotspot' section contains a 'Hotspot Plan' field with a dropdown menu labeled 'Select Plan'. Below that is a 'Location Information' section with a 'Hotspot Name' text input field.

Select the size of the hotspot in terms of number of concurrent users. If in doubt, select 100 concurrent users. This option will not have any effect on the AP management.

Next enter the name of the network or hotspot along with the information of the location. Most of the fields are self-explanatory. The Auto-MAC register field can be enabled only if you want to enable MAC authentication on your hotspot. Leave the field blank if you don't plan to use the hotspot management functions in WiFiLAN OSS.

Location Information

Hotspot Name *	<input type="text" value="Austin Convention Center"/>	✓
Address	<input type="text" value="167, South Lane"/>	
City - State	<input type="text" value="Austin"/> - <input type="text" value="Texas"/>	
Zipcode	<input type="text" value="78704"/>	
Country *	<input type="text" value="United States"/>	▼
Latitude - Longitude	<input type="text"/> - <input type="text"/>	
Venue	<input type="text" value="Convention Center"/>	▼
Hotspot Status	<input type="text" value="Active"/>	▼
Auto MAC Register	<input type="checkbox"/>	

Lastly configure the gateway information for the hotspot. Select the device type as “Wifisoft CloudMax AP”. If you know the public IP address of your Internet connection, please enter it in the next field. If you don’t know the public IP, enter some dummy values. Similarly, if you are planning to use the hotspot function of the CloudMax AP, enter the shared secret (password for encrypting the data between AP and RADIUS server). Leave the other fields as defaults.

Gateway Information

Device Type *	<input type="text" value="Wifisoft CloudMax AP"/>	✓ View Setup Guides
Public IP Address *	<input type="text" value="198.10.188.47"/>	✓ (For dynamic IP, enter the current public IP)
Shared Secret *	<input type="text" value="somesecret"/>	✓
NAS ID *	<input type="text" value="KHL9683"/>	
Mac Address	<input type="text"/>	
Description	<input type="text"/>	

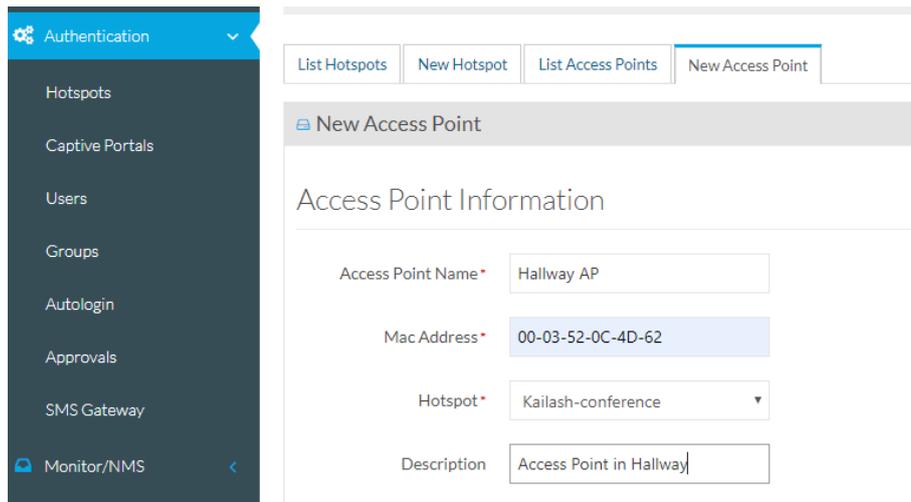
Click on the submit button to add the hotspot.

Adding Access Point

The next step is to add the access points to the added network or hotspot. To add a new access point, click on the “Add Access Point” tab. Enter the name of the AP. Usually it is a good idea to enter the AP name so its location will be easily understood. E.g. Hallway or Reception Area AP.

Next enter the MAC address of the AP. You will find the MAC address printed on the backside of the AP. Please enter the MAC address in XX-XX-XX-XX-XX-XX format. E.g. 00-03-52-0C-4D-62.

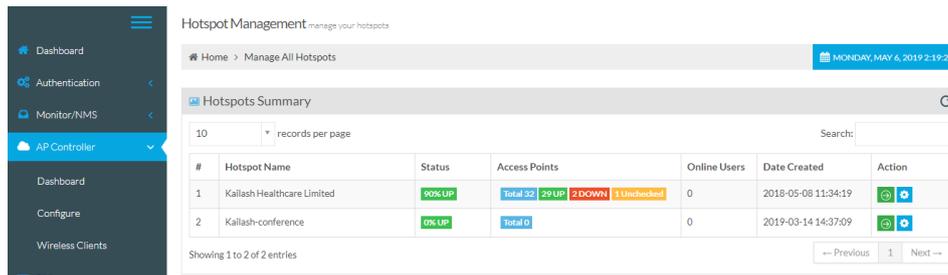
Next select the hotspot to which the AP belongs and finally enter the short description of the AP.



You can add multiple APs to the same hotspot or network. You will need to select the same hotspot for each newly added access point.

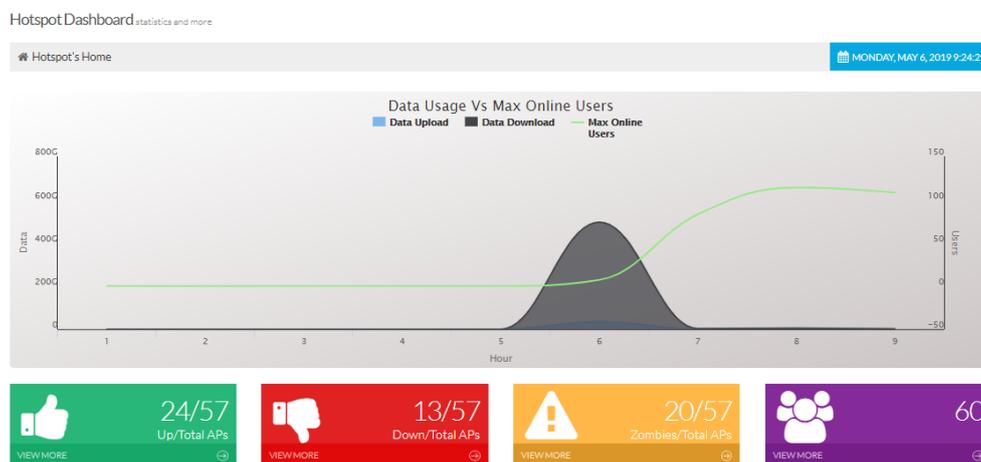
Configuring Network

The next step is to configure the network settings. To configure the network settings, click on the “AP Controller” menu. The main interface for AP manager will be displayed.



The page will display all the networks or hotspots currently running along with their current status and number of online users.

Click on the -> icon to manage the given network. The network dashboard is displayed which displays the data usage and online users since midnight. It also displays the number of APs currently online and offline.



In addition, it also displays the map of the network. The admin will be able to check the status of individual AP on the map.

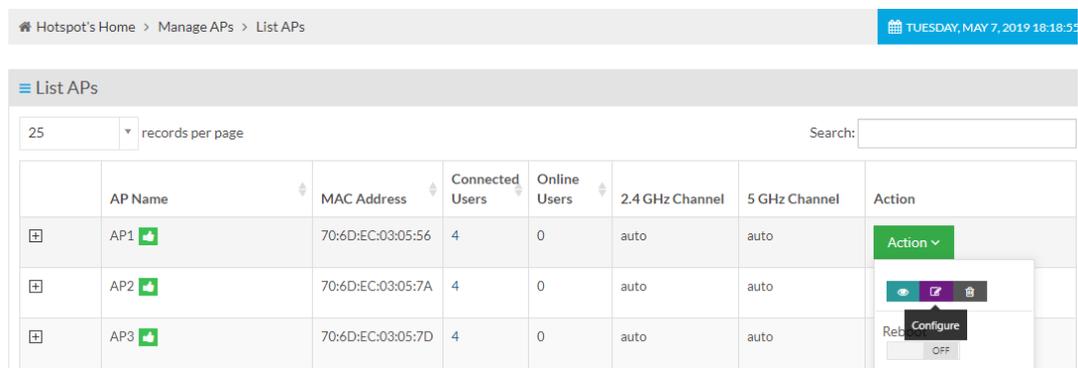
WiFiLAN OSS allows admin to configure the settings at two levels – network and AP level.

When the settings are done at AP level, all the APs under the network will automatically inherit the settings. So if the network has 10 access points, all 10 access points will get the settings of the network. This makes the task of configuring the access points really easy.

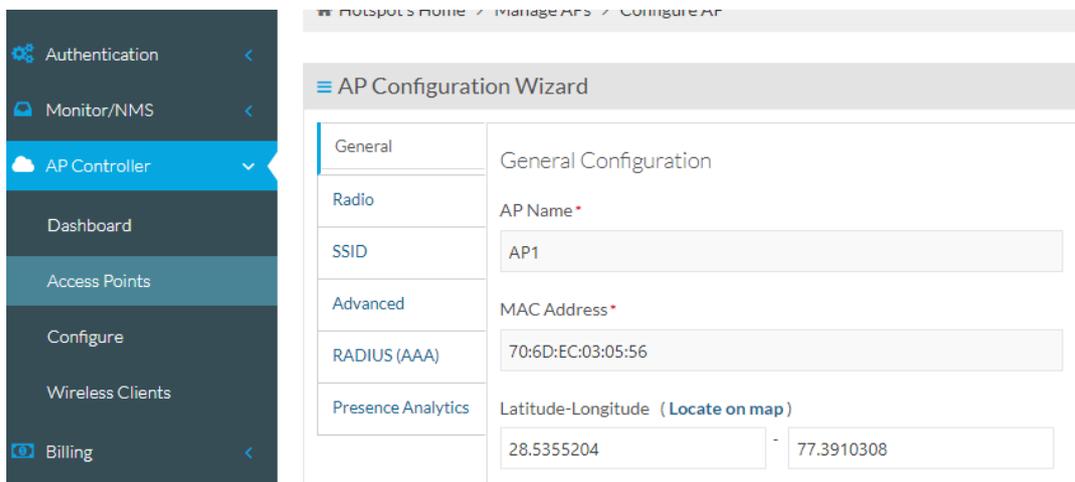
Once the network settings are done, the admin can go to each AP configuration and override the network settings.

To override the network settings for a particular AP under a network, you need to click on the “Access Point” menu after selecting the network. The list of all the APs in the network are shown in a table.

You need to click on the Action button and then select the Configure option as shown below.



The edit AP page is displayed as shown



The admin can edit the different tabs in the AP configuration wizard.

General Tab	This tab is used to configure the general settings like AP Name, MAC address, Lat-Long of the AP
Radio Tab	This tab will provide options to configure the Radio on the access point. Settings like channel, transmit power will be selected. If the AP has

	multiple radios (2.4 and 5 GHz), then both Radios can be configured.
SSID Tab	This tab provides options to configure the SSID on the AP. Upto 4 SSIDs can be configured. One of the SSIDs can be setup as hotspot. The security settings can be configured for each SSID
Advanced Tab	This tab has settings for configuring the WAN port. By default, WAN port is configured as DHCP client. However, these settings can be changed in this section. The AP firmware can be also upgraded through this tab.
RADIUS Tab	Use this tab to configure the hotspot settings. If the hotspot SSID is enabled, all its settings can be done on this tab. The RADIUS server IP addresses, redirect/splash URL, passthrough list are configured here
Presence Tab	This is optional feature and can be used only if the presence feature is enabled on the AP. These settings allow admin to configure the server for accepting the presence data from the AP.

Each AP configuration page will display the settings inherited from the network settings. Admin can override these settings.

The changes will be pushed to the AP when it checks into the controller. Generally the APs are designed to connect to the server once in 15 minutes, so the changes take upto 15 minutes to take effect.