EnGenius Cloud Network Management

Optimal Performance, Enterprise Features & Cloud Management

EnGenius Cloud provides reliable performance, predictive analysis, and real-time insights to allow companies to focus on growing their business. With the enterprise-class features, small to midsized organizations with limited budget and IT support quickly build reliable and efficiently managed networks.

Simple — With EnGenius Cloud's plug-and-play installation, administrators can deploy EnGenius Cloud quickly. There is no lengthy setup or complex integration required. By using the EnGenius Cloud app, businesses can easily create a network and configure access points from any location.

Smart — Artificial intelligence (AI) enables EnGenius Cloud to predict issues before they occur and provide accurate recommendations to proactively improve performance. EnGenius Cloud's Advisory Board uses AI to continuously analyze networks and report potential problems, often before issues occur.

Reliable — With the best service level agreement (SLA) of current cloud computing solutions, EnGenius Cloud guarantees 99.99 percent uptime for as many as 100,000 devices per account. By using the latest serverless computing technology and equipment, EnGenius Cloud keeps the network operating at top performance, even with hundreds of simultaneous tasks.

Secure — Built with the latest security protocols, EnGenius Cloud uses two-factor authentication to ensure only authorized devices are on the network. By encrypting data, EnGenius Cloud keeps managed data secure while it transmits over the network between devices.

Features & Benefits

- Latest Serverless FaaS Cloud Computing for providing truly scalable networks
- License-Free Cloud Management with a comprehensive line of wired and wireless networking products
- Artificial Intelligence (AI) to continuously analyze networks, report potential issues & make informed recommendations.
- Supports up to 100,000 devices per account
- Fast Deployment with Quick-Scan Device Registration & Configuration & Auto-Pairing Meshing
- Hierarchy View to quickly structure customer sites and organize networks
- Multi-Tenant User Login Privileges for hierarchy management
- Remote Maintenance, Monitoring & Troubleshooting with EnGenius Cloud App
- Embedded Wi-Fi site survey tool to streamline and successfully deploy Cloud APs
- Real-time system metrics, deep-dive analytics and remote configurations
- Device Two-Factor & non-sequential serial numbers and MAC address verification

Benefits to Help Grow Your Business

Easily Create & Structure All of Your Networks

EnGenius Cloud removes the complication of overseeing large networks and allows you to easily create and organize networks, add managed APs & switches, and assign team members levels of authority all in one place. Create organizations with networks in EnGenius Cloud to simplify your network workload. Organizations with complex branching network hierarchies can use a combination of central IT management and total access privileges to provide regional teams with grouped network access. You can then manage and monitor company networks with a hierarchy view based on different locations or business setups.

Simplified Deployment & Provisioning

With EnGenius Cloud's plug-and-play installation, administrators can deploy EnGenius Cloud quickly. There is no lengthy setup or complex integration required. The EnGenius Cloud automatically checks & updates firmware, download configurations and joins the assigned organization and network when an EnGenius Cloud access point is plugged in. Mesh auto-pairing takes it a step further and enables administrators to simply power up an access point with no cable run and automatically configures with a click of button. The centralized management makes it easy to deploy and manage multiple sites in different time zones and with different network policies. By using the EnGenius Cloud app, businesses can easily add devices to organizations and network and configure access points from any location.

Manage Your Workload with EnGenius Cloud

EnGenius Cloud's dashboard provides administrators a visual overview of their network health status. The Cloud dashboard highlights the top access points, SSID's, clients and applications being utilized to give administrators a snapshot of their overall network's performance and quick way to identify potential issues. Administrators can see access point health status and quickly click into views to review access points current status or jump to specific configurations such as radio configurations, IP addressing and system information.

EnGenius Cloud's dashboard also provides a quick health check status of all your switches in an organization and network. Simply click on the switch picture from the dashboard to dive into detailed switch configurations and system information. Conveniently & easily monitor and troubleshoot all of your network switches in one location. Quickly review switch list to compare resources and check overall configurations with other switches within the network. Further access individual switch information by clicking detail view to get real-time meters and configure system and port settings for easy setup and fine tuning of switches.

By easily managing all Cloud devices from a central location, businesses can reduce management time.

Simplifies Initial Setup, Maintenance & Troubleshooting with EnGenius Cloud

Access Points — EnGenius Cloud provides tools to help manage Access Points and quickly solve any issues. The Access Point view gives administrators the ability to review all access points in one window to compare resources, radio configurations and IP settings as well as see details on specific APs. With the Map View administrators can see a Google Map or Satellite of their sites to locate deployed APs in larger, multi-site deployments. Administrators can use the view to create a visual representation of customer sites by using the drag and drop feature. To help design, implement, monitor and troubleshoot networks, administrators can use the Floor Plan feature, which accepts an upload of floor plan and simulates Wi-Fi coverage with a heat map.

Switches — With cloud-based technology, installation and configuration is quick and seamless. For quick and simple setup manage your switches using EnGenius Cloud. Scan and assign switches into an organization and network for device registration and configuration using the EnGenius Cloud app. Simply refine configurations under the list view for switches in the switch's detail page after initial setup and registration. By providing reliable network performance, predictive analytics and real-time insights, companies can focus on growing their business instead of managing switches. Companies can choose from four options based on Port and PoE needs.

Set maintenance schedules across times zones to improve up-time, enable remote system log to track system modifications or configuration changes, establish event-based email alerts and receive push notifications via the EnGenius Cloud app. By creating firmware upgrade tasks for groups of devices, administrators save time by scheduling firmware updates for multiple sites and networks based on region, local time zones and other parameters.

Enable Smart and Scalable Networks

EnGenius Cloud increases efficiency by reducing issues and allowing your team to focus on growing the business instead of managing networks. Instead of spending hours troubleshooting and planning network expansions, administrators can take on new projects focused on digital transformation and growing the business.

Provides truly scalable networks — With the latest serverless FaaS cloud computing technology, business can increase or decrease the network capability as a response to business needs without purchasing additional technology.

Predicts potential issues — The Advisory Board continually analyzes your network and alerts you before a potential problem occurs. Administrators can then proactively prevent the problem instead of a network outage causing lost productivity across the company.

Supports up to 100,000 devices per account — You need a network that lets you add devices as your network needs grow. EnGenius Cloud supports up to 100,000 APs and switches giving businesses flexibility to respond to customer needs and marketplace changes.
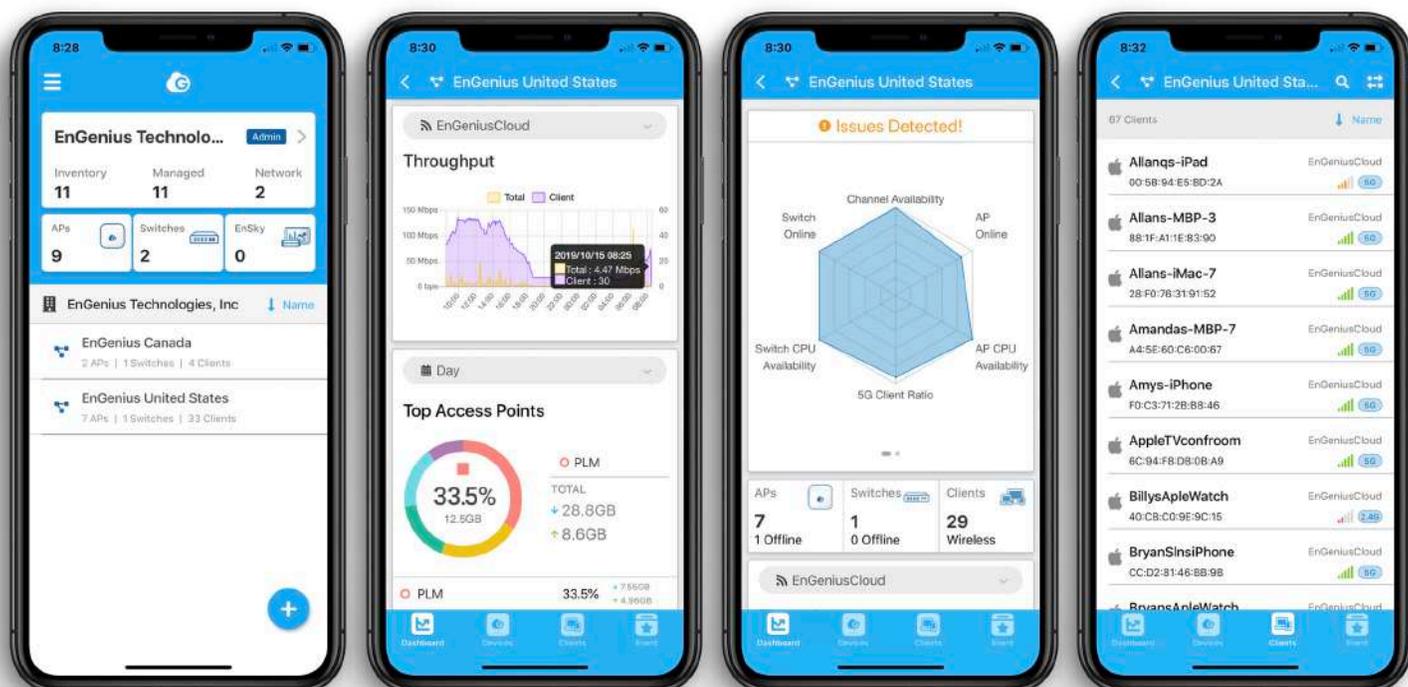
View Real-Time Status of Network Cloud Devices

In addition to managing access points and switches in one place, administrators have quick access to real-time meters, resource usage, client connection status and count and user traffic data. EnGenius Cloud allows administrators to see real-time CPU, memory and throughput usage of all cloud devices for systematic inquiry and investigation. Administrators have the ability to see client status, port connection states and PoE utilization to better evaluate or assess networks.

Every Cloud Device is Secure and Protected by Advanced Authentication

With EnGenius Cloud, your network devices are protected with two-factor authentication and non-sequential serial numbers and MAC address verification to ensure only authorized cloud devices are on the network. Once devices are authenticated, a secure tunnel is established between the device and the cloud with a unique certificate provided by the EnGenius Cloud to encrypt transmissions.

Multi-Tenant Provides User Access While Keeping the Network Secure

Organizations can assign each user either as administrator (full access privileges) or viewer (read only privileges). Administrators can also be assigned at either the organization or network level, giving full power to manage all aspects of the networks under that organization, or at the network level, which allows full changes to specific networks within organizations. With a hierarchal view, administrators have a clear picture of all users' access and privilege to make management as efficient as possible.

# EnGenius Cloud Structure & Features

Controlling Capability

- 100,000 of EnGenius access points/switches per account
- 7 Day Management Data Collection

⊞ EnGenius Cloud Administrative Settings

• Administrator User Settings

- Profile Settings
- Password Reset
- Remote Support
- Language Setting
- Cloud Tutorial
- Logout
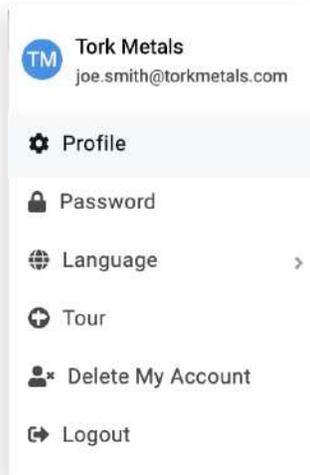
• Administrator Resources

- User Manual
- Remote Support
  - Generate Passcode
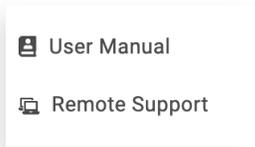
• Administrator Notifications – administrators can define & receive email and app alerts

- Recent Notification Organization List
  - Read/Unread Notifications for Organizations/Networks
- Recent Notification Settings
  - Network Subscription List
  - Notification Settings

• Account Management (Multi-Tenant) Settings

Organization Team Members - user permissions for Organization and Networks

- Viewer – viewing rights for the assigned organization or networks
- Admin – view and edit rights for the assigned organization or networks
- Front Desk – the ability to add wireless users for a limited time

Network Team Members - user permissions for Network/s

- Viewer – viewing rights for the assigned networks
- Admin – view and edit rights for the assigned networks
- Front Desk – the ability to add wireless users for a limited time
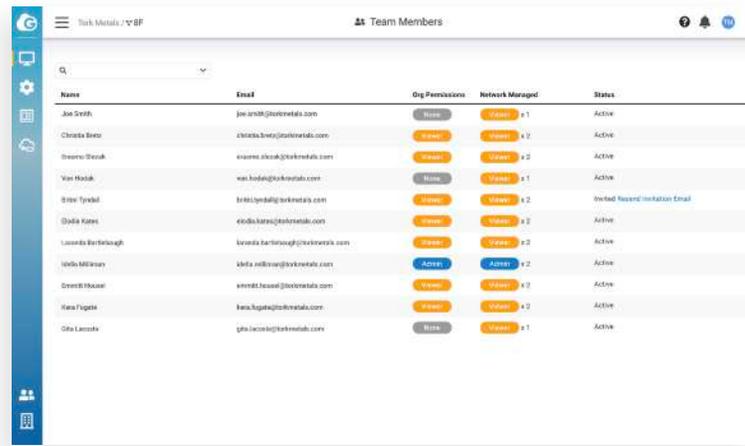
• Management Directory Structure (Organization Tree) – company site and network directory structure

- Add/Edit/Delete Organization by Country & Time Zone
- Add/Edit/Delete Network by Country & Time Zone
- Add Hierarchy Views
- Search Hierarchy List
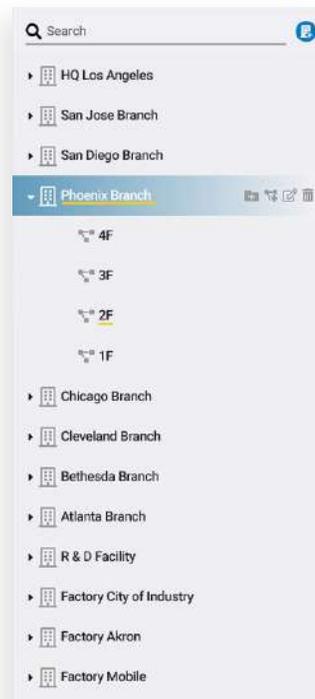
⊞ Manage

- **Dashboard** – high-level overview of an organization or network.

  - Network Health Check Spider Chart
  - Network Health Check Topology Display
  - Throughput Usage Graph by Day/Week/Month
  - Percentage Graph by Day/Week/Month
  - Top L7 Applications List
  - Top Device Operating Systems List
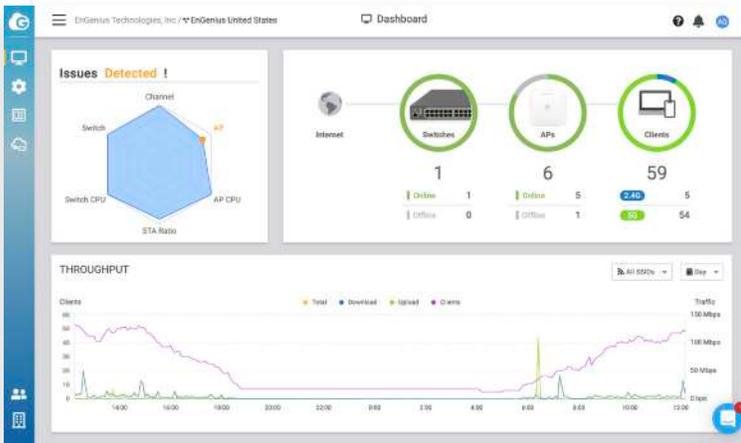
- **Access Points** – provides AP statuses & allows configuration changes to individual access points in an organization or network.

  - **List -** view of all access points within an organization or network.

    - Online/Offline Status Bar – single click expands the view for more information.
    - Online Status
    - Client Count
    - Download Speed
    - Upload Speed
    - Throughput Graph
    - Channel Utilization Graph
    - Radio Configuration Overview

      - Radio Frequency
      - Configuration Change Unlocked/Locked
      - Radio Enabled
      - Channel Selection
      - Transmit Power
      - Channel Width
      - Forbid Legacy Device

Access Points – continued

- WLAN Overview

  - SSID Name
  - Status
  - Enabled
  - Hide

- Mesh Enable/Disable
- Location Map – displays location of access point.
- Access Point Action – wireless configuration page under **Detail**.

  - Reboot/Replace/Details

- Access Point Detail & Configuration

  - Access Point Name
  - Model Name
  - Firmware Version
  - Serial Number
  - MAC Address
  - IP Address
  - Subnet Mask
  - Gateway
  - 2.4 GHz / 5 GHz Current Settings
  - LED Enable/Disable
  - Summary (SSID Summary) View

    - SSID Information
    - Throughput Graph by SSID by Day/Week/Month
    - Radio Settings
    - Network Settings

  - Logs View – real-time client authentication for a specific access point.
  - Clients View – real-time client association for a specific access point.

Map View - displays organizations and access points on a map.

- Map/Satellite View
- Building Icon
- AP Icon

Floor Plan View - Wi-Fi Site Survey Tool

- Building
- Layer
- Ruler
- Heat Map
- Channel
- Access Point Map Display
- Frequency Band
- Available Access Point List

- **Switches** – provides switch statuses & allows configuration changes to individual switches in an organization or network.

  List

  - Online/Offline Status Bar - single click expands the view for more information.
  - 100/10 Mbps Indicator
  - 1 Gbps Indicator
  - 10 Gbps Indicator
  - Disconnected Indicator
  - Disable Indicator
  - PoE Indicator
  - Uplink Indicator
  - VLAN View
    - VLAN ID View

  Status View

  - PoE Usage
  - STP Status
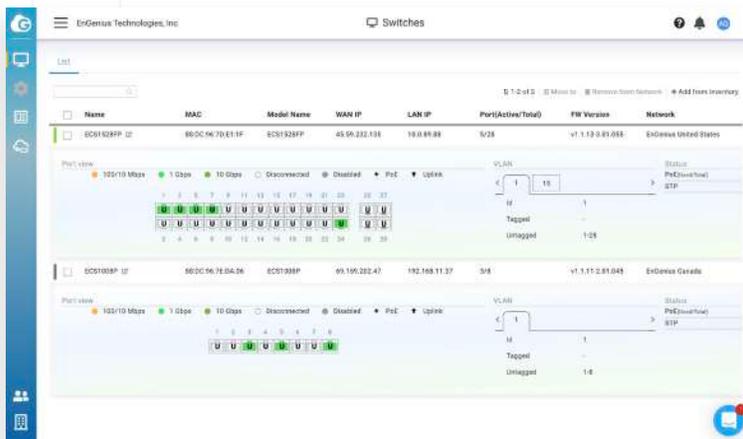
Switch Actions - Configuration Pages Under Details

Reboot/Replace/Details

Switch Detail & Configuration

- Switch Name
- Model Name
- Firmware Version
- Serial Number
- MAC Address
- IP Address
- Subnet Mask
- Gateway
- Topology View (Show)
- Voice VLAN Enabled
- Jumbo Frame Enabled
- IGMP Snooping Enabled
- STP Enabled
- LLDP Enabled
- QoS Enabled

Summary View

- Port Graphical Display
- Total PoE Usage Meter
- Total PoE Utilization By Port/s Meter
- VLAN ID List

System Setting

- Spanning Tree Protocol Enable/Disable
- Multiple Spanning Tree Protocol/Rapid Spanning Tree Protocol
- Bridge Priority
- LLDP Enable/Disable
- Voice VLAN Enable/Disable
- Quality of Service (QoS) Enable/Disable
- IGMP Snooping Enable/Disable
- Jumbo Frames Enable/Disable

Port Setting

- 100/10 Mbps Indicator
- 1 Gbps Indicator
- 10 Gbps Indicator
- Disconnected Indicator
- Disable Indicator
- PoE Indicator
- Uplink Indicator
- Graphical Port List View
- Individual Port Configurations
  - Link Enable/Disable
  - Port Label
  - Speed/Duplex Mode
  - PoE Budgeting /Limit Setting/Priority Level
  - VLANs /PVID/Tagged/Untagged/Voice
  - Isolation Enable/Disable
  - Rate Limit /Receive/Transmit
  - Flow Control Enable/Disable
  - QoS /CoS Value/Trust Cost

- **Topology** – displays relationships between networked devices.

  - Search Option
  - Export Option
  - Show Label Menu
  - PoE Status
  - **Internet Icon -** displays relationships between networked devices.
  - **Switch Icon -** switch representation that provides switch information.
    - Online/Offline Status
    - Model Name
    - MAC Address
    - IP Address
    - Detail Page
    - Collapse
  - **Access Point Icon -** switch representation that provides switch information.
    - Online/Offline Status
    - Model Name
    - MAC Address
    - IP Address
    - Client Count
    - Detail Page
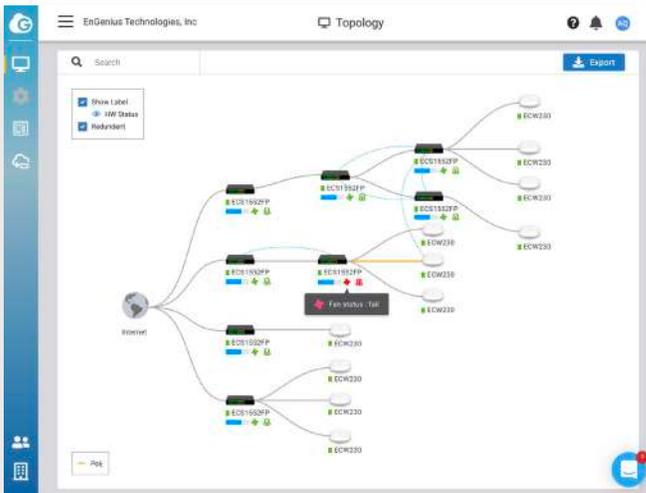
- **Clients List Dashboard**

  - **Client List View -** associated client devices to an organization or network.
    - Day Filter
    - Week Filter
    - Month Filter
    - Client Traffic Graph
    - Client Top 10 Applications
    - Client Name List
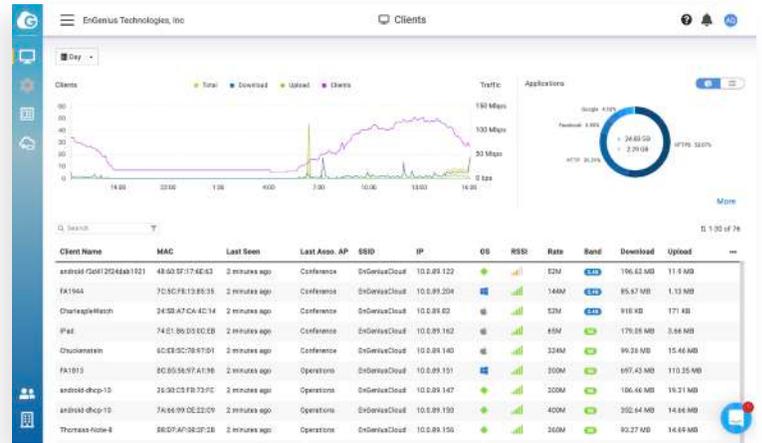
Clients List Dashboard – continued

  - Client Name
  - MAC
  - Last Seen
  - Last Associated AP
  - SSID (Service Set Identifier)
  - OS (Operating System)
  - RSSI (Received Signal Strength Indicator)
  - Rate
  - Band
  - Download
  - Upload

⊞ **Configure**

- **SSID** – supports a total of 8 SSID's on 2.4 GHz & 5 GHz radios.

  - **SSID Configuration -** Wireless AP Group Settings
    - SSID Name
    - SSID Enabled
    - SSID Hidden
    - Radio Configurations
    - Client IP Mode Configurations
    - App Detection Enabled
    - 802.11r Enabled
    - L2 Isolation
    - Band Steering

  - **Association**
    - Security Type
      - Open Enable
      - WPA2 PSK Enable
      - WPA2 Enterprise Enable
      - Radius Server
    - Wi-Fi Access QR Code

Traffic Shaping

- Download Limit/Per User
- Upload Limit/Per User

Captive Portal

- Click-Through
- EnGenius Authentication
- Custom Radius
- Voucher Service
- Social Login
- Redirect URL
- Session Timeout Setting
- Idle Timeout Setting
- Wall Garden Redirect
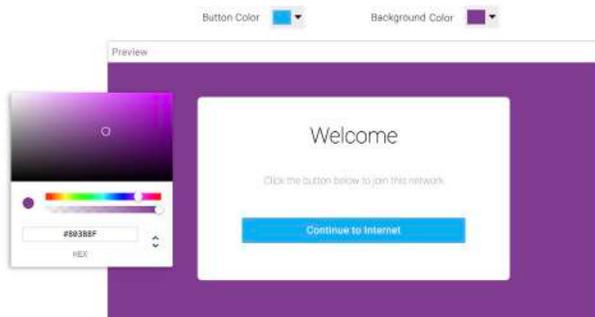
Splash Page

- External Splash Page URL
- Local Splash Page Configuration

Schedule - enable Wi-Fi availability.

- Always available
- Available at 8:00 AM to 5:00 PM everyday
- Available at 8:00 AM to 5:00 PM every day except weekend
- Custom Schedule
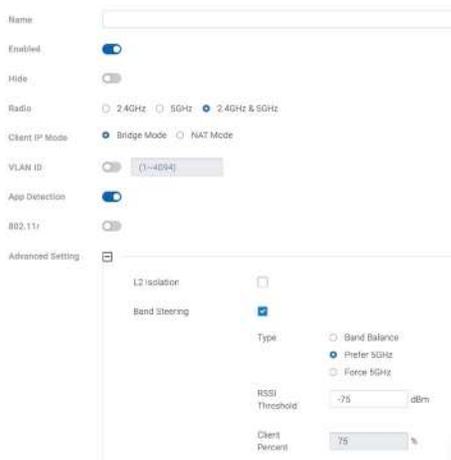
• Radio Settings

Indoor/Outdoor Radio Settings

- 2.4/5 GHz Frequency Bands
- Channel Setting
- Channel HT Mode Setting
- Tx Power Setting
- Min. Bitrate Setting
- Client Limit Setting
- Mesh Enable
- Disable 802.11 b/g/n Enable

• Cloud Radius Users

Radius Users List

- Unblock
- Block
- Delete
- Authorize
- Add Radius User

Authorized SSIDs List

- De-authorize
- SSID Selection

• Firmware Upgrade

- Access Point/Switch Firmware Release
- Day/Time Maintenance Window
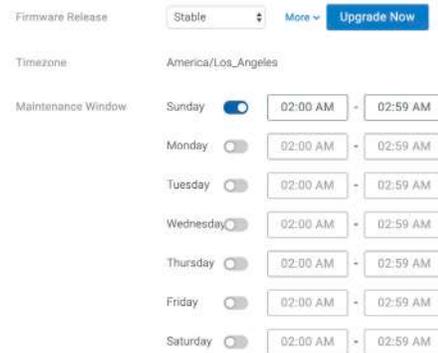
• Remote System Log

- Access Point/Switch Logs

• Alert Settings

- Access Point /Changes/Offline/Severity Level
- Switch /Changes/Offline/Port, STP, LPD Changes/ Severity Level

⊞ Analyze

- **Event Log**
  - Device Event/System Event/Config Log

⊞ EnSky

- **SkyKey** – remote connect to SkyKey and/or ezMaster instances from the Cloud.
  - Add from Inventory
  - Remove from Network
  - Move to
  - SkyKey Information List View
  - Remote Connect

⊞ Team Member

- **Team Members** – assign user permissions for organizations and networks.
  - Invite New Member
    - User Email
    - Organization/Network Select
    - Set Permissions
  - Delete Member
  - Member List View

⊞ Organization

- **Inventory** – assign, remove, register or de-register devices from an organization or network.
  - All/Used/Unused
    - Assign to Network
    - Remove from Network
    - De-register Device
    - Register Device
    - Inventory List View