LigoWAC

Wireless Access Controller Platform

Product Overview

Working as a unified cloud platform for centralized management and monitoring, LigoWAC is the brain of LigoWave's Cloud Wi-Fi solution. It manages and monitors AP equipment, Wi-Fi rules, security rules, network resources, clients' role and rights, location and content service. LigoWAC provides great convenience for enterprises and ISPs to access all the information about their clients and networks in real-time; based on this information, enterprises and ISPs only need to work on LigoWAC platform to configure and adjust their networks and service instantly, sparing the need to travel around and touch any other network equipment. This facilitates enterprises and ISPs to create a new management model for user service and creates new business model. Under LigoWAC's centralized management, APs become truly plug-and-play, and the establishment and expansion of the network become very easy. Once the LigoWAC is configured, ISPs and enterprises can gradually increase number of APs deployed based on need, and seamlessly expand Wi-Fi network without changing network architecture.

Client and device information is collected in LigoWAC. ISPs use this information to provide users with customized services based on location, such as portal customization, and content push. An enterprise can use its employees' location information to control their network access rights; this particularly applies to network access control of the enterprise with different partners.

Cloud based central management provide leveled-account based management and network leasing possible. Under LigoWAC's management, it becomes very convenient for a network owner to create multiple virtual Wi-Fi networks, which can be managed and operated by different operators, to carry out the business of network leasing. The network owner can instantly lease a virtual network on demand, and adjust network-wide resources in real-time, without the need to directly configure each AP. This cloud based central management model creates an account for each virtual network operator to facilitate their management of the network resources which they rent from the network owner; this account also makes it possible for them to manage the clients who only connect to their virtual network.

LigoWAC's functions include access control for APs and clients, safety rules enforcement, firewall, NAT, VPN, QoS, and other network functions such as switching and routing.

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Key Features

✧ Cloud based, easy to deploy

LigoWave Wi-Fi network can be established across LAN, WAN and the Internet (NAT). Designing this centrally managed Wi-Fi network, the only requirement must be met is that AP and LigoWAC are routable between each other (across NAT). Since this solution does not rely on any specific network access method，LigoWave Wi-Fi network can be built over various media, such as 3G、4G、FTTH、Ethernet、CMTS、cable and so on. In this solution, APs are plug-and-play and can automatically form a network under the centralized management of LigoWAC. User management can also cross LAN、WAN and Internet. Under the control of LigoWAC, user management for enterprises can overcome regional and equipment limitations for many enterprise IT departments.

✧ Centralized Management

Centralized Management : Under the centralized control of LigoWAC, designing and extending of the network become very simple. Once the LigoWAC is configured, ISP and enterprise can extend their Wi-Fi network seamlessly without changing their network topology.

✧ Dynamic Wi-Fi VPN

With the surge of smart mobile device usage in exhibitions, conferences, celebrations and other public events, private information exchange through mobile devices becomes necessary, but it is not doable without a secure private Wi-Fi network. LigoWave's Wi-Fi solution can dynamically create virtual Wi-Fi VPN on demand to fulfill this requirement.

With LigoWave's Wi-Fi solution, an enterprise's VPN can be extended with LigoWave's portable APs carried by employees who travel around.

✧ Content push based on AP's physical location

When an AP registers to a LigoWAC, its location information is saved by the LigoWAC; based on the APs' location information, LigoWAC can define different strategies to push useful content to the clients who access the APs at different locations.

✧ Zero Configuration

Deploying our AP is very simple and needs zero configuration. The user does not need to configure AP as the AP can be registered automatically and receives wireless rules set by LigoWAC automatically – as long as LigoWAC can be reached by IP routing.

✧ Network Virtualization

The owner of a LigoWave Wi-Fi network can virtualize one physical network into multiple virtual networks, which can be managed and operated by different operators. Each virtual network operator can manage his virtual network through his account on LigoWAC.

Each virtual network has its own DHCP, Portal, and authentication service.

✧ Logging

User login log, access log, online status, etc. can be accurately queried in real-time, this fully meets the auditing requirement of the Ministry of Public Security.

✧ Role based bandwidth control

Each user account on LigoWAC has its own network bandwidth attribute, which controls how to allocate bandwidth based on the user's role.

✧ Role based network access control

In LigoWave's solution, the user's role is the foundation for user management. Each user account on LigoWAC has a role attribute and corresponding right to access network resources. The user's role and right can be dynamically adjusted based on time and physical location.

✧ Location tracking and location-based services

LigoWAC can associate user identity with the physical location information of the AP, which the user is accessing, to track the user's location and provide location-based services.

✧ Flexible user data forwarding mode

AP supports both local forwarding mode and LigoWAC centralized forwarding mode, and AP can work in these two modes simultaneously.

✧ Intelligent RF Management

LigoWAC can manage RF channel, transmit power

and other AP attributes across Internet.

✧ Layer 2 Seamless Roaming

Users can roam between APs.

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Hardware Specification

Items	WAC32	WAC128	WAC512	WAC2048	WAC2048-10G
Capacity	32 APs	128 APs	512 APs	2048 APs	2048 APs
Default license	16 APs	16 APs	16 APs	16 APs	16 APs
Console port	1	1	1	1	1
Ethernet port	4	6	6	2	2
Optical port	N/A	N/A	N/A	2* G （SFP）	2×G（SFP） 2×10G（SFP+）
USB 2.0 port	2	2	2	2	2
Weight	4 kg	4.5 kg	10 kg	22kg	22.5kg
Power supply	AC 220V,				
Working temperature	0°C~40°C (32°F~104°F)				
Storage temperature	-20°C~80°C (-68°F~176°F)				
Humidity	10% ~ 90%, Non condensation				
Dimensions (1U=4.445cm)	1U	1U	1U	2U	2U

Software specification

Items	Specification
Cloud based	Connection between LigoWAC and AP can cross internet
AP management	RF channels, RF transmit power, AP security policy, AP Remote Registry, AP location.
LigoWAC management	DHCP，Portal，NAT，Firewall，VPN，Bandwidth control，VLAN，Network virtualization
Authentication	Portal，Radius，LDAP, support both local and remote mode
Client management	Bandwidth，Billing by time and bytes，Location，Network access control
Content Service	Advertising push based on AP location
VPN	Manage L2TP/IPSEC connection between LigoWAC and AP
Access Control	User role based, IP/MAC address based
Bandwidth Control	User role based, Protocol based, IP/MAC address based
Security	Firewall, VPN between LigoWAC and AP
Roaming	Roaming between APs
AP management	Download WLAN policies to APs
Statistic	Time, bytes and packets
Multicast	IGMP Snooping
Administration	HTTPS，CLI, SSH, Console and SNMP
Logging	Syslog，based on user identity, MAC/IP address，User location，AP Location
White/Black List	Based on IP address、MAC address and physical port
other	NAT、policy routing、VLAN、DHCP、ACL、white/black list etc.

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Network topology
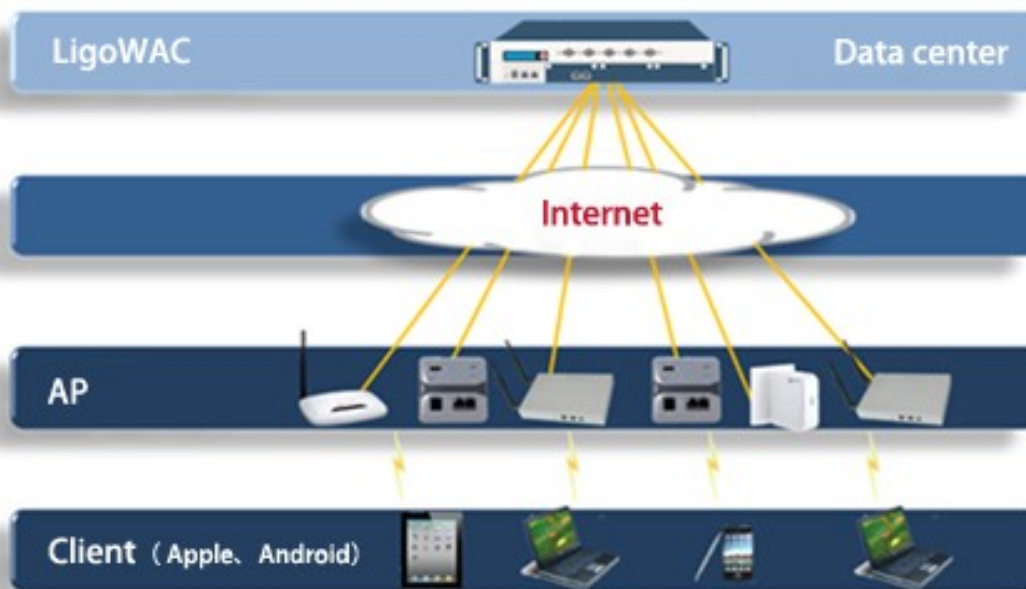
Typical Application: Chain Enterprise