



WAS-308N

Network Access Control Gateway for user / device management

(Authentication, Authorization, Accounting) (Concurrent Users:500) (2WAN + 4 LAN Giga Ethernet)

- 2 WAN Load, Balance/Fall Over
- Bandwidth Management/QoS/Firewall
- 8 Service Domains
- 500 Concurrent users/5000 Local Accounts
- User Management by Pregenerated/On-Demand/Local Radius/Remote Radius
- PayPal On-Demand charge option
- 60-100 AP Management (specific AP models only)
- User log and traffic stats. Notification
- Supports up to four network based ticket printers for instant User access

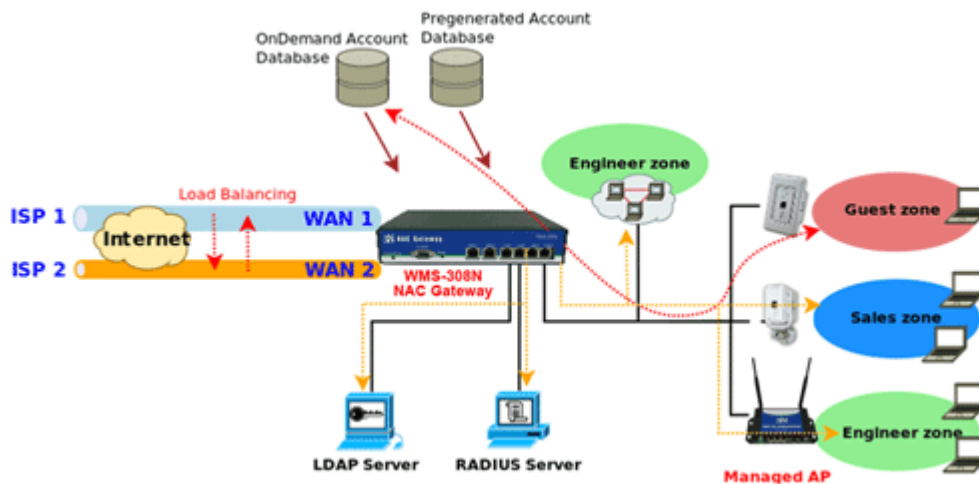
PheeNet WAS-308N – applies to public access network such as WiFi-Hotspot, network management guest access, hospitality deployments – which requires reliability, efficiency, and security. It combines an IP Router / Firewall, Multi-WAN / QoS enforcement and Access Controller for use in wireless environments. One single WAS-308N can serve up to 500 simultaneous users, takes control over authentication, authorization, accounting and routing to the Internet as well as to the operating central. Built-in AAA system allows the owners set up public access services without extra RADIUS server.

WAS-308N Network Access Gateway / Controller provides authentication, authorization and accounting for a wired/or wireless networks. Hotspot technology allows Internet providers to offer Internet access to customers, while applying certain Internet use rules and limitation. It is convenient for Internet cafes, hotels, airports, schools and universities. The Internet provider gets complete tracking records of per customer time spent on the network, data amount sent/ received, real-time accounting and more.

To begin browsing, a client must go through a registration process with the provider, and then

enter a Passcode/Username of access ticket in a browser Login window that appears on the attempt to open a webpage. Hotspot technology proposes providers to establish and administrate a user database, which can be useful for enterprise such as airports, hotels or universities that offer wireless or Ethernet Internet connectivity to employees, students, guests or other groups of users. Tickets can be issued from dedicated (optional) ticket printers and from tickets generated and printed locally by the administrator.

APPLICATION



Features

Access Point Management and Support

WAS-308N Network Access Gateway / Controller Support

Max: 60 Access Points per Controller.

Supports AP management and control for

indoor WAP-854NP, WAP-1954NP-C

outdoor WLO-12410N , WLO-12400N, WLO-15802N and WLO-15814N

Max: 500 wireless client per Controller

Provide Local Account : 5000

AP Management – Control - Monitoring

Centralized AP Management

AP Group management –use setting templates that simplify the task to assign the same setting

AP-Automatic configuration and provisioning by WAS-308N

Locally maintained configuration profiles for managed APs

Auto discovery for managed APs

Automatic recovery of APs in case of system failure

Central firmware Upgrade-Select multiple APs and upgrade their firmware at the same time

Remote Firmware upgrade

Zero Configuration technology to restore defective AP's setting onto the replacement AP

Central AP Control

Provides MAC address Control list of client stations for each managed APs

Access Filter

Time-based AP access control
Single UI for upgrading and restoring managed APs' firmware
WLAN Partition – if enabled, WLAN clients are not allowed to exchange data through the AP (WAP-854NP, WAP-1954-C, WLO-12410N , WLO-12400N, WLO-15814N, WLO-15802N)
Max allowed APs
Support Roaming – Intra-Switch , Inter-band , Inter-Switch

Central AP Monitoring

Monitor AP Status
The number of associated clients to the AP
The AP RF information
Associated Station List
Monitoring IP List
Load balancing based on number of users
Load balancing based on utilization
AP User Statistic – Maintain all wireless clients connection history and depict statics in diagrams
Support Monitor IP on third-party APs
System alarms and status reports on managed APs
Topology Monitor-list monitored device; periodically updates devices' status
AP life check-real time tracking monitors APs status (AP Health Checking)
Provide centralized remote management via HTTP/SNMP interface
Support MIB's: 802.11, 802.1X, MIBII, RADIUS authentication, RADIUS Accounting
SYSLOG support including remote servers
Log-system log: operator action log

Radio Resource Management

Automatic Channel Assignment and power setting for controlled APs
Simultaneous air monitoring and end user service
Self-healing coverage based on dynamic RF condition
Dense deployment options for capacity optimizations
Multiple BSSID per Radio: 8
Hot Standby at AP mode (supports fail-over as a standby AP)
Load Balance with another available AP (Real-time users limitation)
Radio Management
Coverage interference detection

Convergence

8 Hardware queues per port
IEEE802.11p Class of Service/Quality of Service (CoS/QoS)
IEEE802.11e Wi-Fi Multimedia (WMM)
DiffServ Codpoint (DSCP)

Wireless Encryption

WPA personal and enterprise
WPA2 personal and enterprise
AES(CCMP): 128bit (FIP-197)
WEP40/64 and 104/128-bit
TKIP: RC4-40
SSL and TLS: RC4 128-bit and RSA1024 and 2048 bit EAP-TLS, EAP-TTL/MSCHAPv2

Wireless Security

IEEE802.1X network login user authentication (EAP-MD5/TLS/TTLs)
EAP over LAN (EAPoL) transport with PEAP and EAP-TLS authentication
RADIUS server authentication (RFC2618)
IEEE802.1X user authentication of controller management on controller Telnet and console sessions
Multiple access privilege levels
Hierarchical management and password protection for management interface
EAP offload for AAA server scalability and survivability
Stateful 802.1X authentication for standalone APs
SSID and Location based authentication
Multi-SSID support for operation of Multiple WLANs
Simultaneous Centralized and distributed WLAN support

Identity –Based Security

802.1X Authentication with WPA,WAP2 and 802.11i
Local Accounts of 802.1X Authentication
Support RADIUS /LDAP for AAA server
User Name and encryption key binding for strong network identity creation
Local User Data Base for AAA fail-over protection

Wireless Roaming Support

Inter AP roaming
Fast roaming
L2 roaming

User Management

Support 500 simultaneous authentication users
Max 5000 Pregenerated/ On-Demand/ Local RADIUS/ authentication users
Users Session Management
Configurable user Black list (with schedule)
Allows MAC address and user identity binding for local user authentication
Authentication methods supported: Pregenerated/ On-Demand, Local RADIUS, LDAP, and Remote RADIUS and POP3
SSL protected login portal page
Session idle timer
Login Session idle time out setting
Session and account expiration control
User Log and traffic statistic notification via automatically email service
Login time frame control
Session limit
Real-Time Online Users Traffic Statistic Reporting
Support local account roaming
Seamless Mobility: User-centric networking manages wired and wireless users as they roam between ports or wireless APs

Service Domain

Integrating with support Aps to give Service Domain feature
Each Service Domain can have its own settings:
The network is divided into maximum of 8 groups, each defined by VLAN Tag
Each Domain has its own

- (1) login portal page
 - (2) authentication options
 - (3) LAN/VLAN interface IP address range
 - (4) Session number limit control
 - (5) Traffic shaping
 - (6) IP Plug and Play (IP PnP)
 - (7) Multiple Authentication
- Enable DHCP or not, and DHCP address range
- Enable authentication or not
- Types of authentication options (Local, RADIUS, LDAP, On-Demand and Pregenerated)
- Web login/ logout/ redirected page (customizable)
- Default Policy
- NAT or Route Mode
- Specific Route (WAN1 or WAN2 , or a specified gateway)
- Login schedule
- Bandwidth (max/min)

Authentication

Authentication : single sign-on (SSO) client with authentication integrated into the local authentication environment through local/domain, LDAP, RADIUS, MAC authentication, and 802.1X

- Customizable Login and Logout Portal Pages
- Customizable Advertisement Links on Login Portal Page
- User authentication with UAM (Universal Access Method), 802.1X/EAPoLAN, MAC address
- Allow MAC address and user identity binding for local user authentication
- No. Of Registered RADIUS Servers: 2
- Support MAC control list (ACL)
- Support Multiple Login service on one Accounts
- Support auto-expired guest accounts
- Users can be divided into user groups
- Each group (role) may get different network policies in different service zones
- Max simultaneous user session (TCP/UDP) limit
- Configurable user black list
- Export/Import local users list to/from a text file
- Web-based Captive Portal for SSL browser-based authentication
- Authentication Type
 - IEEE802.1X (EAP, LEAP, EAP-TLS, EAP-TTLS, EAP-GTC, EAP-MD5)
 - RFC2865 RADIUS Authentication
 - RFC3579 RADIUS Support for EAP
 - RFC3748 Extensible Authentication Protocol
 - MAC Address authentication
 - Web-based captive portal authentication

Authorization

Authorization: access control to network resource such as protected network with Intranet, Internet, bandwidth, VPN, and full stateful packet firewall

Accounting

- Provides billing plans for Pregenerated accounts
- Provides billing plans for On-Demand accounts

Enables session expiration control for On-Demand accounts by time (hour) and data volume (MB)
Detailed per-user traffic history based on time and data volume for both local and on-demand accounts
Support local on-demand and external RADIUS server
Contain 10 configurable billing plans for on-demand accounts
Support credit card billing system by PayPal
Provide session expiration control for on-demand accounts
Support automatic email network traffic history

Dual WAN

Load Balancing
Outbound Fault Tolerance
Outbound load balance
Multiple Domain Support
By Traffic
Bandwidth Management by individual and distribution on different network(Service Domain)
WAN Connection Detection

QoS Enforcement

Packet classification via DSCP (Differentiated Services code Point)
Diff/ToS
IEEE802.11p/CoS
IEEE 802.1Q Tag VLAN priority control
IEEE 802.11e WMM
Automatic mapping of WMM priorities to 802.1p and IP DSCP
IGMP Snooping for efficient multicast delivery
Upload and Download Traffic Management

Firewall

Built-in DoS attack protection
Inspection Full stateful packet filter
Access Control List
Layer 7 Protocol Blocking
Multiple Domain Support
Active Firewall Session – 16,000

Network

Support NAT or Router Mode
Support Static IP, Dynamic IP (DHCP Client), PPPoE and PPTP on WAN connection
DHCP Server per Interface; Multiple DHCP Networks
802.3 Bridging
Proxy DNS/Dynamic DNS
IP/Port destination redirection
DMZ server mapping
Virtual server mapping
H.323 pass-through
Built-in with DHCP server
Support Static Routing
Binding VLAN with Ethernet interface
Support MAC Filter

- Support IP Filter
- Support Walled garden (free surfing zone)
- Support MAC-address and IP –address pass through
- Support IP Plug and Play (IP PnP)

System Administration

- Three administrator accounts
- Provide customizable login and logout portal page
- CLI access (Remote Management) via Telnet and SSH
- Remote firmware upgrade (via the Web)
- Utilities to backup and restore the system configuration
- Full Statistics and Status Reporting
- Real-time traffic monitoring
- Ping Watchdog

Network Management

- Event Syslog
- Status monitoring of on-line users
- IP-based monitoring of network devices
- Interface connection status
- Support Syslog for diagnosing and troubleshooting
- User traffic history logging
- User's session log can be sent to Syslog server
- Remote Syslog reporting to external server
- Traffic Analysis and Statistics
- SNMP v1, v2c, v3
- SNMP Traps to a list of IP Addresses
- Support MIB-II
- NTP Time Synchronization
- Administrative Access : HTTP / HTTPS

Specification

Base Platform	32-bit , MIPS24K Processor
CPU Clock Speed	680 MHz
Serial Port	1 (DB-9)
Ethernet Configuration	10/100/1000 BASE-TX auto-negotiation Ethernet port x 6 (RJ45 connector) WAN * 2 LAN * 4
DRAM	On board : 256Mbytes
Flash	On board : 32 Mbytes
Built-In LED Indicators	1 * Power ; 1 * Status, 1 * Net Status (This is for AP management, when system can't detect managed AP)
Operating Temperature	0 °C ~ 55 °C
Storage Temperature	-20 °C ~ 75 °C
Operating Humidity	10% to 80% Non-Condensing
Storage Humidity	5% to 90% Non-Condensing
Power Supply	110 – 220V AC Power; 12 VDC, 1.5A input.
Unit Dimensions	243 x 150 x 45.5 (mm) (Width x Depth x Height)
Unit Weight	1.4 Kg
Form Factor	Wall Mountable , Metal case
Certifications	FCC/CE