



Intuitive, Real-time Monitoring and Management of Distributed Devices

Automated provisioning and remote management of CPEs are vital service delivery activities of ISPs, operators and carriers - helping to reduce costs, lead times and complexity as well as to deploy new customer services.

The ZyXEL WLAN Management System (ZWMS) leveraging the cutting edge Device Management solution platform - deployed and productive at more than 100 Service Providers worldwide.

The ZWMS is a carrier grade provisioning and management solution for TR-069 / CWMP devices. With the ACS, zero touch provisioning, real time subscriber support and mass operations on devices are available from the start, helping to improve customer service experience.

The ZWMS is designed to manage ZyXEL WLAN controllers to form a high-performance and versatile WLAN solution. The WLAN controller works ZyXEL managed APs featuring advanced RF management functions, flexible tunnel and distributed traffic forwarding modes, and robust security for the wireless edge. The architecture is truly the ultimate WLAN management and security solution for large and distributed deployments in enterprises, campuses and hotel chains.

Benefits

Intuitive Management of Distributed Devices

The ZWMS (WLAN Network Management System) is for centralized management of ZyXEL networking equipment for businesses; it's a comprehensive network management tool that can be quickly installed and easily accessed across the IP networks. It provides a comprehensive set of capabilities for configuration, fault management, performance management, and reporting of network devices.

Access Anytime, Anywhere

The ZWMS provides Web-based access for IT administrators to facilitate network monitoring and management without requiring dedicated client installation. The IT staff can manage the network devices with a browser, wherever an IP network is available, without the limitation of time and physical location.

ZWMS

WLAN Network Management System

Batch Configuration, Provisions and Firmware Upgrades

The configuration management capabilities of the ZWMS allow administrators to perform automatic maintenance, backup and restoration of network device configurations to eliminate inefficiency and error associated with manual operations. The ZWMS also centralizes firmware management, with which firmware versions can be deployed to individual devices or groups of devices.

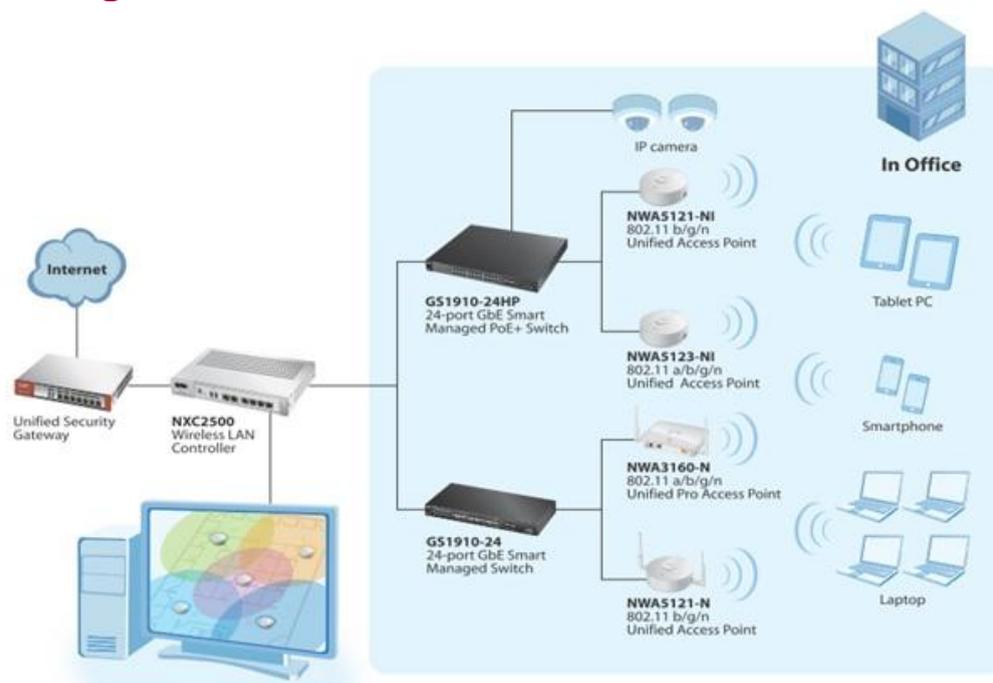
Monitoring and Reporting

The ZWMS supports in-depth correlation, alarming and troubleshooting. It offers customizable notification and alarm setting via multiple methods to escalate correcting actions to the appropriate administrators. A threshold can be set to generate alarms on any monitor to quickly alert the operators of any issue.

Scalability and Growth

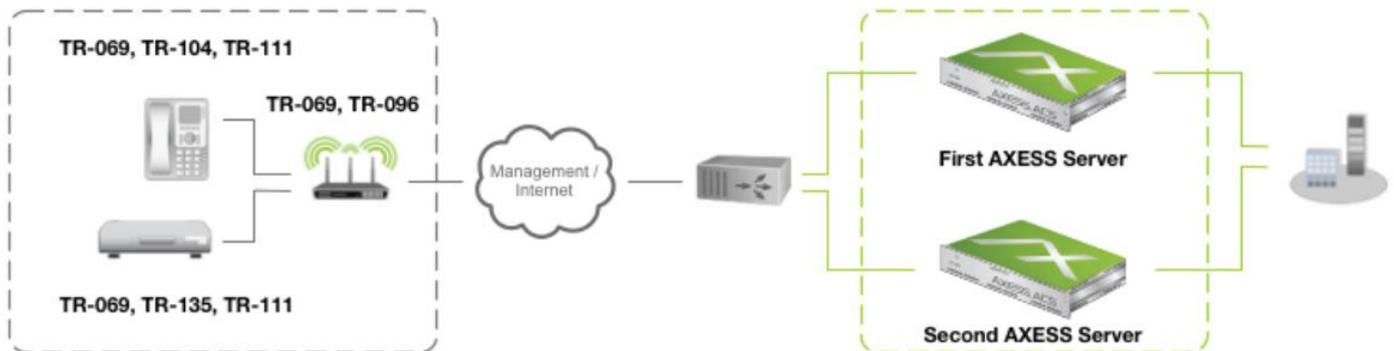
The ZWMS architecture is designed to be scalable and reliable. It grows as more network device deployed. Evolving from small-scale server deployments aimed at meeting the initial demand, to high availability architectures that serve the needs of large amount of devices.

Application Diagram



The ZWMS is a middle-ware solution for device management tasks, which offers interfaces to OSS/BSS backend systems to manage network devices / CPEs. It also shields the complexity of device specifics and offers a service abstraction layer for attached backend systems.

On the ZWMS a workflow engine translates the business process steps into device specific workflows. It takes care of the device specific features and can target multiple devices in complex management scenarios. The device side of the ZWMS implements Broadband Forum's different TRs. TR-069 as the prominent representative of the standards and management transfer protocol and of course all of the TRs for specific management tasks. WLAN access points and WLAN access controllers with TR-069 support can be managed by the ZWMS out of the box.



System Requirements

Database Support

The ZWMS is equipped with an internal storage and database system. The default database which is included in the deployment is MySQL.

System Hardware (ACS + DB Server)

- Standard x86 compatible systems
- CPU: AMD/Intel (x86 compliant)
- RAM: 1GB per ACS process
- HDD: RAID (depending on requirements), on ACS application node min. 20GB on DB node min. 30 GB
- 2x Gbit/s Ethernet

System Software

- Debian GNU/Linux 5.0 (Lenny) Operating System, 64 Bit, or Red Hat and SuSE
- Supported Browsers: Firefox, Internet Explorer (> IE7), Google Chrome

Features

- Policy Management
- OSS/BSS integration via Web Services Northbound Interface
- Active and standby system handover
- Manual and Automatic Reporting
- Availability of integration with several authentication mechanisms (SQL, Radius, LDAP, 3a parte Systems)
- Accounting on data access and management operations available also through NBI calls
- Hierarchical access control system to the data - based on roles and inheritance
- Workflow engine and support for arbitrarily complex multi-step workflows
- Adaptable and extensible northbound interfaces with multiple protocol support
- Administrative graphical front end for ACS management and configuration
- Intuitive and extensible support portal
- IPv4 and IPv6 address support
- Full TR-069 support
- WLAN controller and AP Configuration Management
 - Batch provisioning
 - Configuration backup/restore
 - WLAN controller and AP Activation / Deactivation
 - WLAN Controller and AP tagging for friendly grouping and management
- WLAN coverage and healthiness management
 - WLAN base map for WLAN AC/AP location indication
 - WLAN Heat Map providing WLAN AP coverage
 - WLAN Coverage Planning via 3rd party tool
- WLAN performance management and reporting
 - WLAN controller and AP system CPU loading monitoring
 - WLAN AP and user traffic tx/rx statistics
 - Radio resource monitoring
 - Rogue AP information
 - Heavy user information
 - Auto notification when threshold crossing
 - WLAN event alarm Notification

