

Wireless Management System

Everest Networks provides the industry's leading Wi-Fi solutions addressing today's most pressing ultra-high density (UHD) challenges, such as high user engagement, high network capacity, fast throughput, and low total cost of ownership (TCO). Our solutions leverage the Everest Wi-Fi platform, designed and built specifically for UHD venues such as stadiums, arenas, convention centers, shopping malls, transport hubs, auditoriums, campuses, and smart cities.

AN INDUSTRY FIRST

A foundational component of the Everest platform is Everest's WLAN controller, a fully-featured controller and wireless management system for WLAN networks. Available as a software-suite, Everest's WLAN controller is specifically designed for UHD networks with speed, simplicity, and efficiency in mind. Everest's WLAN controller's prominent benefits such as quick and ease of network deployment, effortless access point (AP) configuration and efficient network management, effective performance monitoring and tracking, and real-time network visualization, allow it to handle the smallest to the largest networks with 1,000 APs and 100,000 users.

BUILT FROM THE GROUND UP

For a speedy network deployment, Everest's WLAN controller enables APs to be auto-discovered and configured either automatically, in bulk, or using importable custom configurations, so that even the largest networks are operational in a few minutes.

For an effortless network configuration and management, Everest's WLAN controller features a simple browser-based single pane of glass interface, available on multiple platform including mobile devices. Everest's WLAN controller also provides an intuitive, clear, and tidy interface while integrating simple and efficient workflows

For an effective network performance monitoring and tracking, Everest's WLAN controller provides a visually-appealing and customizable dashboard for a real-time view of the network's analytics in a pre-configured, chart-based, and time-trending manner. Additionally, Everest's WLAN controller provides drill-down statistics from a network-level to the device-level for deep RF and data metrics analysis, and user-defined event-specific data archiving.

For real-time network visualization, Everest's WLAN controller includes a dynamic multi-floor maps view showing AP locations and key parameters, real-time network metrics



UNIQUE BENEFITS

- Web based intuitive 'Single pane of glass' management interface
- Auto discovery and configuration of Everest Wi-Fi access points
- High availability with data synchronization and automatic failover
- Bulk tools to configure and manage access points and software upgrades
- Customizable dashboard with pre-defined network reports and analytics
- Client performance data and analytics
- Multi-floor m APs view providing direct view of AP status and metrics, and direct access to configuration and monitoring
- Customizable alerts and event notification
- Advanced 'Event Analytics' for UHD environments such as stadiums, arenas, and concert halls
- Automatic event report generation with user-selectable time-based graphs such as network users, throughput, and total data
- Advanced features such as client load balancing, band steering, airtime fairness, fast roaming, and carrier WiFi offload
- RESTful APIs for 3rd party integration

using heat maps, and threshold-based AP color-coding for fault analysis.

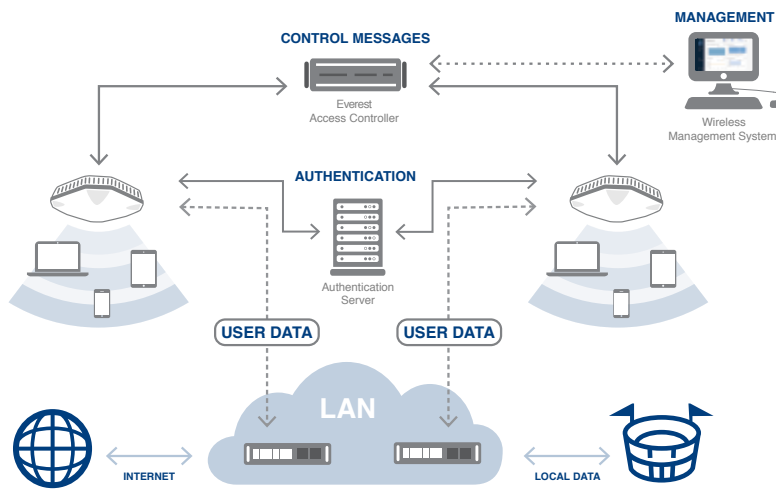
Empowered by Everest's WLAN controller's software architecture for fast, agile, and lag-free operation, Everest's WLAN controller provides all the necessary tools and data to manage, monitor, and optimize the network's performance via a clean and easy to navigate user interface.

SIMPLE AND INTUITIVE USER INTERFACE

Everest's WLAN controller, a browser-based wireless management system available as a software suite, offers a clean, modern, and sleek single pane of glass interface for managing Everest-based WLAN systems. In addition, Everest's WLAN controller simplifies the deployment and management of APs for both small (1 to 64 APs) and large networks (64 to 100 APs). Furthermore, network administrators can quickly configure all system, network, security and radio parameters including, transmit power, channel assignment, and antenna settings. Configurations for events requiring different network and radio parameters can also be conveniently stored and retrieved or archived for auditing and historical tracking.

SYSTEM DASHBOARD

Everest's WLAN controller provides a rich, intuitive and visually appealing dashboard for network administrators to get an overall and comprehensive view of the entire wireless network. The dashboard displays a variety of pre-defined and customizable reports and analytics which can be easily re-arranged on the dashboard based on the user's preferences. Pre-defined dashboard chart-based and time-trending reports include for example AP and client health, concurrent clients and visitors over time, throughputs and data transferred over time.



SPLIT ARCHITECTURE

Everest's WLAN controller integrates seamlessly within the venue's existing network. Furthermore, a split control plane architecture is employed where all user traffic is switched locally at the access points allowing APs to serve users even in the event of losing connectivity with Everest's WLAN controller. Since only management and control traffic are sent to Everest's WLAN controller via a secure and encrypted tunnel, the split architecture provides significant scalability, flexibility, and reliability in deployment options.

FEATURES & BENEFITS

SCALABILITY AND REDUNDANCY

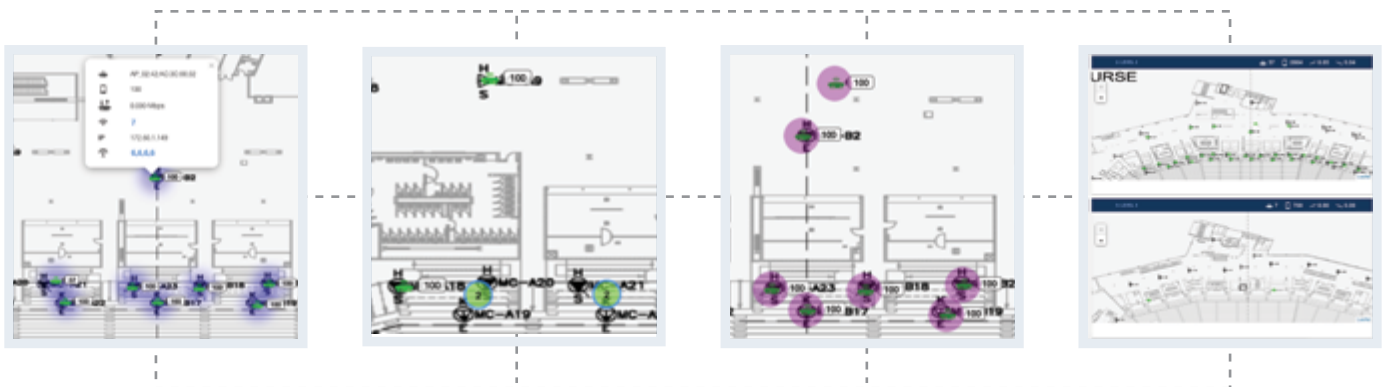
A single Everest's WLAN controller management system supports up to 1,000 access points and 100,000 clients while also supporting up to 256 wireless networks. Two Everest's WLAN controller's can be clustered, such that one is active while the other is the backup, to offer high availability and redundancy. The cluster keeps all configuration, monitoring and analytics data synchronized between the active and backup servers. In the event of active Everest's WLAN controller failure, backup Everest's WLAN controller seamlessly switches over to primary Everest's WLAN controller with no impact to WLAN data and minimal impact to control and management data.

MAPS

Everest's WLAN controller offers an exceptional maps feature providing a visual layer for users to efficiently manage and monitor a large number of APs.

Users can upload custom floor plans and directly import APs onto a map. The maps view provides a quick overview of the operational APs status via a color-coded system allowing users to quickly identify areas of concern.

Everest's WLAN controller's maps view also provides an intuitive and comprehensive visualization of the most important network performance metrics in real-time, such as client load and AP throughput, either on a per-AP basis for a detailed view or using heat maps for a broader view. In addition, Everest's WLAN controller's maps feature also simplifies monitoring a large set of APs by clustering nearby APs together with the ability to zoom in and out of each cluster to quickly identify APs that might require attention. When critical action is required, an APs configuration parameters and performance data are seamlessly accessible in a single pane of glass within the maps avoiding multiple navigation transitions and thus saving valuable time. Finally, the maps view provides a timeline and historical visibility into a network's performance for a powerful and fast behavioral analysis.



ALERTS

Everest's WLAN controller's alerts feature allows users to track specific pre-defined or customized alarms and events. The alert visualization interface allows network managers to historically view the type and frequency of configured alarms and events. Network managers can also customize how alarm notifications are received with the following built-in options: email, SMS, and a few popular enterprise collaboration tools and incident response systems.

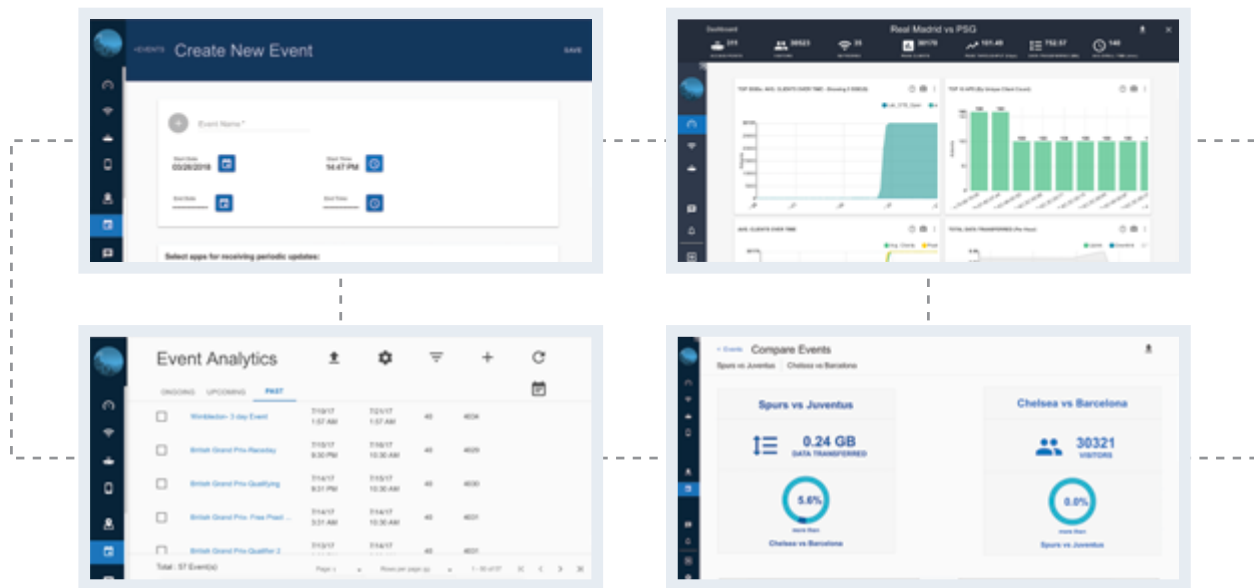
REAL-TIME CLIENT MONITORING

Everest's WLAN controller provides detailed client information in real-time including, device type, association time, signal strength and throughput. Everest's WLAN controller also provides operators the ability to track particular clients and gather their data analytics such as recent AP associations, time stamps, and roaming analysis.

FEATURES & BENEFITS

EVENTS ANALYTICS

Everest's WLAN controller introduces a novel and powerful event analytics feature, built specifically for venues hosting events such as stadiums, convention centers and arenas. Administrators can upload events calendar once, and let Everest's WLAN controller track, analyze, report and store analytics for each event. At the end of each event, a dashboard and detailed reports are instantly available for review, analysis, comparison, and report generation. The event analytics feature also allows network managers to setup periodic notifications of key metrics via email, SMS, and enterprise collaboration tools such as Slack and HipChat.



CLIENT LOAD BALANCING

Everest's WLAN controller integrates, together with the access points, an advanced client load balancing solution to optimize the network performance and ensure best quality of experience to each user. The solution features dynamic discovery of neighboring access points to optimize client connectivity and AP load.

CARRIER OFFLOAD

Everest's WLAN controller provides a carrier offload feature that allows traffic to be offloaded to the Wi-Fi network from the MNO anchor network. The mobile device in the carrier network automatically detects the presence of carrier's specific SSID, then connects to the Wi-Fi network and gets authenticated by the carrier's authentication infrastructure. Finally, various metering reports are provided for the carrier.

NORTHBOUND APIS

Everest's WLAN controller provides a well-defined RESTful API set for third party applications to integrate. The APIs provide detailed information on network wide status, statistics and analytics, and can be used to build or integrate with powerful third-party reporting and alerting applications. The payloads are encoded in JSON, and APIs offer a compressed payload version as well to optimize network bandwidth consumption when fetching statistics in large deployments.

Everest's WLAN controller also supports asynchronous notifications of system alerts and events via syslog and NETCONF protocols. Third party applications can couple this with APIs to build powerful reporting and troubleshooting solutions.

Capacity

Access Points

Up to 1,000

Concurrent Devices

Up to 100,000

Wireless Networks

Up to 256

Applications

Captive Portal

Integrates with well-known 3rd party captive portal providers

Hotspot

802.11u

Voice

802.11e

WMM

Carrier Offload (on-boarding)

Supported

User Analytics

Pre-defined integration with popular 3rd party user analytics providers

Security

Standards

WPA-2

802.11i

Encryption

AES

Authentication

802.11X

Captive portal

Access Control

Client isolation

Client blacklist

Quality of Service

Traffic Prioritization

Supported (DSCP to wireless queues mapping)

Client Load Balancing

Supported

Wireless Multi-media

Supported

Management

Configuration

Out of the box web based UI (http/https), CLI (Telnet/SSH), SNMP

Tools for bulk configuration of APs

AP Provisioning

Layer-2 and layer-3 auto-discovery

M APs

Upload multiple custom floor plans

One-click AP configuration and monitoring

Search and filter by AP name

Heat maps for client density, throughput, radio utilization

Timeline

Analytics

Granular data available

Daily

Persistent event analytics reports

APIs

REST APIs with JSON encoding

Compression support for bulk fetches

Alerts

Integration with email, Twilio, Slack, and HipChat

Minimum Server Appliance Requirements

CPU

12 core Intel® Xeon® 2.40GHz processor

RAM

16 GB

Hard Disk

480 GB