



InFinite Possibilities



CLOUD NETWORK MANAGEMENT SYSTEM

iCon



FEATURES OF CLOUD NETWORK MANAGEMENT SYSTEM

- iCon cloud network management system (cNMS) provides centralized visibility and control over the entire wired and wireless network, without the cost and complexity of wireless LAN controllers and element management systems. Integrated with the entire 10 product portfolio, cNMS provides feature rich, scalable and intuitive centralized management for networks of any size.

FUNCTIONALITIES

- IO cNMS combines WLC and EMS functionalities on cloud
- Virtual Machine (VM) based modular architecture makes it suitable for cloud deployments

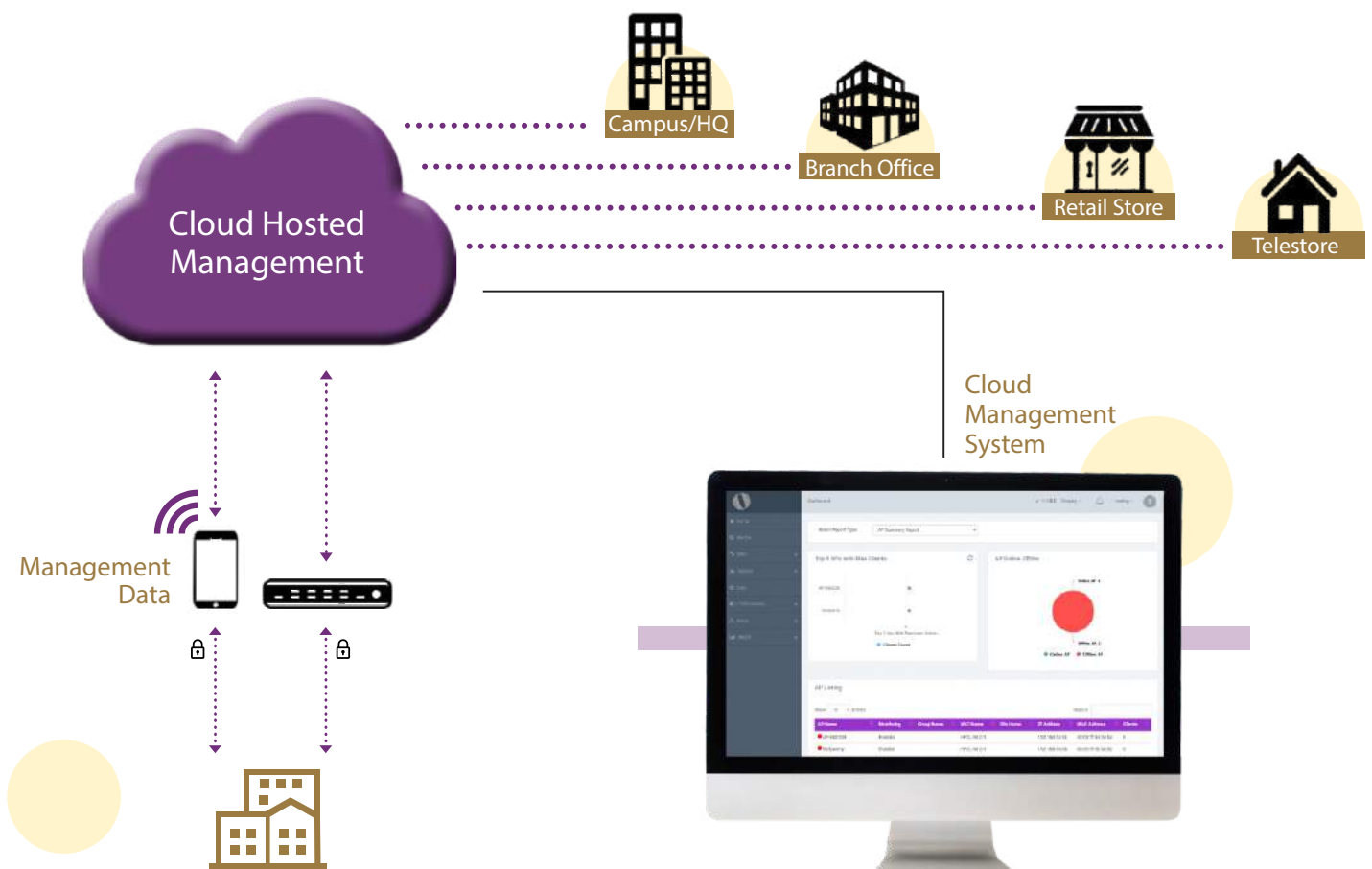
FLEXIBILITY AND SCALABILITY

- Easy portability on existing cloud infrastructure like AWS, Microsoft Azure, Google Cloud, etc.
- Enables Plug-n-play deployments
- Offers massive scalability with practically no limit on number of Access Points and clients supported
- Optional integration with DHCP server, AAA server, Captive Portal, Security, Firewall and Big Data analytics tools

CLOUD SECURITY

- **Resource Level Security:** All the servers are kept within a separate VPC (Virtual Private Cloud) enabling resource level security
- **Application Level Security:** Use of latest stable cloud version ensures application level security
- **Cloud Compliance Certification:** Every major cloud service provider is PCI DSS Level 1 and SOC 1/2/3 compliant

TARGET APPLICATIONS



TECHNICAL SPECIFICATIONS

PARAMETERS

DESCRIPTION

RF Management and Control	<ul style="list-style-type: none">• Auto channel selection and optimization• Interference management
Multiple SSIDs per Radio	16
Authentication Method	Local, POP3, RADIUS, LDAP, Voucher, USER-ID, OTP, and EAP-SIM
WIDS/WIPS System	<ul style="list-style-type: none">• Rogue AP detection and prevention• Prevention from MAC spoofing, Man-in-the-middle attack, denial of service attack and unauthorized associations
Management Interface	Web-based user interface
Hotspot Features	<ul style="list-style-type: none">• Built-in support for voucher-based authentication• Built-in hotspot manager for voucher creation and guest management
Captive portal and access	<ul style="list-style-type: none">• Captive portal feature for on-boarding clients• Customization of Captive portal to show content and ads

SECURITY

IPv4/v6

- Web authentication, 802.1x authentication, MAC address authentication, WAPI authentication

802.11

- Multiple SSIDs, SSID hiding, 802.11i-2004

Security and Encryption

- Authentication Compliance: PSK, WEP, WPA, WPA2, WPA - Enterprise/Personal WPA2-Enterprise/Personal, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/ EAP-GTC, EAP-SIM, EAP-AKA, EAP-AKA Prime, EAP-Fast, Protected Management Frames
- WAPI, TKIP, CCMP, protection against ARP spoofing
- Supports IP/MAC binding via DHCP SNP, supports IP/MAC/WLAN binding via RADIUS server
- De-authentication and null probe attack detection
- Supports rogue AP detection and prevention
- Encryption without deferring the performance

AAA

- RADIUS client authentication server backup, ESS-based authentication server selection, Binding of SSID and user account

WLAN

Roaming

- Roaming option for roaming across different Access Points

Forwarding

- Local forwarding, Centralized forwarding, AP-based bandwidth control

Wireless QoS

- User/SSID-based rate limit (granularity: 8Kbit/s), WMM (802.11e), Wireless priority to wired priority projection

STA

- User-based bandwidth limit

Management

- User-based access control, Port mirroring

Adjusting Transmit Power of Beacon and Probe Response

- Yes

Offline Syslog

- Yes

RF Management

- Proactively identifies and mitigates signal interference within 30 seconds for better performance
- RF management can be done through: Country codes, manually setting transmit power, manually setting working channel, automatically setting working channel, automatically adjusting transmission rate
- Optimal bandwidth utilization with single multicast session
- AP load balancing based on traffic and number of users
- Continuously monitors nearby RF environment quality and interference per radio and per channel

LAN

802.1Q VLAN

- Yes

ACL

- Standard IP ACL, Extended IP ACL, MAC extended ACL

SOFTWARE FEATURES

Smart Fault Management

- Wireless AP, Ethernet and multi-technology network health monitoring
- Event and fault management by notification which includes wired port down, wireless port down, STA abnormal drop, AC master backup switch, device online and offline, AP online user list, system CPU and memory alarms
- Instant alerts of degraded performance and faults
- Support for alarm filter, confirmation, clear, delete, etc.
- Alarm filtration options for displaying and sorting alarms based on alarm sources, category, priority, time, etc.

Smart Configuration Management

- Management and provisioning is centralized with an intuitive Graphical User Interface that visually displays all NIDs on the network
- Tasks can be characterized by either single command or scripts that combine a sequence of commands to one compound task
- Account and Inventory Management
- One touch provisioning of newly installed NIDs for management
- Maintains record of all the NE Resources that are installed in subnetwork

Software Management

- Remote web-based management
- High availability is achieved with both server level redundancy and database level redundancy
- NE configuration settings can be backed up and restored on demand or at user defined periodic intervals

Performance Management

- Performance management of NEs Wi-Fi Hotspot sites
- Load over NEs/Sites/Zones, number of active user connections, sessions, session terminations, Access Point restarts, positioning events, access denied, online site usage monitoring, etc.
- Analysis of captured data and representation through graphs
- Performance reports by different time cuts (hour, day, week, month, etc.)
- Option to export the reports in Excel, .csv format etc.

Security Management

- Daily management, operation, log, browsing, etc. functions for admin user
- Secure Northbound and Southbound interfaces
- Access privilege profiles can be assigned and customized for each user
- User activities are logged for future inspection

Network Management

- Topology generation of network elements to display connected network devices, giving a complete view of the network without physically checking each device at remote sites
- Graphs are available on dashboard to check the status of all the network elements. Colored icons are used for Network Element showing their alarm state, e.g. the red icon displays an alarm
- Site-based graphical maps represent the topology of the managed network, organized in a hierarchical manner
- Device status pooling feature
- Dynamic status, statistics and comprehensive configuration information for managed devices

ORDERING INFORMATION

MODEL NUMBER	PRODUCT DESCRIPTION
iCon	iCon Cloud Network Management System



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