RUCKUS ° Cloud





Al-enabled converged network management-as-a-service



YOUR RUCKUS CLOUD SUBSCRIPTION INCLUDES:

- · AP and switch management
- · Instant availability of new features
- Free native mobile app for anywhere management
- · 24x7 phone/chat/web technical support
- · Choice of 1-, 3- or 5-year subscriptions
- Management portal for MSPs and VARs
- · RESTful Open APIs



RUCKUS Cloud, our Al-enabled converged network management-as-a-service platform, simplifies deployment, monitoring and management of your single-site or geographically distributed multi-site wired and wireless network. Manage all of your wired and wireless networks from anywhere using the intuitive web interface or our native mobile app. Administrators get a unified ("single pane of glass") view of all venues, as well as connected access points (APs), switches and clients.

SIMPLE AND INTUITIVE CONVERGED MANAGEMENT

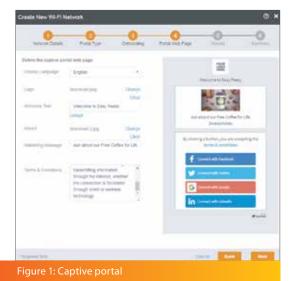
Radically simplify wired and wireless network administrative tasks—from day-to-day management to setting up new venues and creating guest networks using built-in multi-site management tools. Expedite provisioning, management, and control via intuitive intent-based workflows. Leverage configure once, deploy everywhere model to provision and manage your multi-site networks with speed and accuracy. RESTful Open APIs lets you automate using programming language of your choice. Native mobile app lets you provision, manage, and monitor the whole network from anywhere, anytime. Improve responsiveness to organizational needs while reducing IT overhead.

AI AND MACHINE LEARNING-DRIVEN NETWORK ANALYTICS AND ASSURANCE

Using advanced artificial intelligence (AI) and patented machine learning techniques, RUCKUS Cloud gives you the troubleshooting tools to react quickly to service-affecting issues and to stop network anomalies from rising to the service-affecting level. It even classifies incidences by severity, so you know where to focus first. Moreover, it not only identifies and surfaces incidents that are already service affecting but also provides root cause analyses and specific recommendations for resolving such incidents. This helps you in troubleshooting with speed and precision. Simply put, RUCKUS Cloud enables you to meet SLAs that your business demands.

EXCEPTIONAL END USER EXPERIENCES

RUCKUS APs are known for exceptional Wi-Fi performance even under the most challenging network conditions. Low-latency, non-blocking architecture of multigigabit RUCKUS ICX switches ensures excellent throughput for the most demanding applications. RUCKUS Cloud lets you address the end user experience challenge from both angles: Industry-leading Wi-Fi APs and multigigabit ICX switches give you a rock-solid foundation. Machine learning and AI take care of the rest.





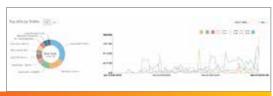




Figure 4: Application

RUCKUS CLOUD HIGHLIGHTS

HIGH PERFORMANCE WI-FI 6 (802.11ax) AND 802.11ac APs

- Patented BeamFlex® and ChannelFly® technologies in RUCKUS APs deliver better performance in challenging RF environments (high client density, high interference, and/or high loss)
- Superior capacity and coverage than competitive solutions (30% to 50% more clients supported per AP) lower total cost of ownership
- Automatic client load balancing and band balancing ensure QoS for all clients
- SmartMesh, enabled with a click on the RUCKUS Cloud UI, reduces cabling and installation costs

SIMPLE, SECURE AND SCALABLE FIXED FORM-FACTOR RUCKUS SWITCHES

- Zero-touch deployment and configuration
- Upgradable, flexible architecture
- Industry-leading price/performance
- Unique stacking capabilities simplify management
- Switch stacking creation and management
- Multigigabit Ethernet enables next generation wireless deployment

INTUITIVE UI AND INTENT-BASED WORKFLOWS

- Single-pane-of-glass web UI provides centralized visibility and control of venues, APs, switches, client details, and applications
- View historical client data and trends
- See the health of your network at a glance
- Intuitive UI makes management easy for administrators, reducing dependence on specialized IT resources
- Wizard-guided, intent-based workflows save time on everyday tasks

REDUCED UNPLANNED DOWNTIME

- Al-enabled detection and prioritization of complex network issues without IT intervention
- ML-powered network intelligence enables troubleshooting with speed and precision
- End-to-end client to AP to switch visibility and trace routing enable IT to quickly detect and react to potential user experience degradation
- Elasticsearch for comprehensive lookup
- Instant notification of network status via SMS, mobile app push notification, or email

EASY, FLEXIBLE GUEST AND EMPLOYEE NETWORK SETUP

- Self-help or sponsored guest WLANs
- Customized, branded captive portal for guests in six easy steps
- Guest captive portal can be customized in 20+ languages
- Integration with multiple RUCKUS validated third-party captive portal solutions
- Multiple options to secure guest networks: Social login, SMS, email, clickthrough, passcode
- Secure employee access using PSK, DPSK, Cloudpath or 802.1X with AAA

NATIVE MOBILE APP

- Provision, monitor and manage your networks using the RUCKUS Cloud by CommScope mobile app
- Get push notifications to alert you of network issues or changes
- Scan AP or switch barcodes with your smartphone camera to register devices
- Scan business cards to generate guest passes
- Set up and configure new employee and guest networks
- Customize captive portal messages and images on the go

BUILT-IN REPORTING AND ANALYTICS

- Extensive report options, including traffic reports (by venue, AP, switch, SSID, radio), application visibility and unique clients
- Up to 12 months of stored data to support long-term trending analysis
- Reports available at granular intervals
- Customizable data dashboards using Data Explorer

COMPLETE INVESTMENT PROTECTION

- Operational LAN, APs and switches even when RUCKUS Cloud subscription is no longer active
- Complete flexibility to migrate from one management architecture to another without losing use of your RUCKUS APs or switches

ADDITIONAL FEATURES AND SPECIFICATIONS

High-performance APs	 Management of a wide range of indoor, outdoor, and specialty RUCKUS APs Automatic load balancing (between APs and radios) 	 Airtime fairness Easy-to-configure, secure and reliable mesh networking
Network devices supported	See https://www.commscope.com/cloud-supported-ne	etwork-devices for a list of supported network devices.
Switch models supported	 RUCKUS ICX 7150 Series RUCKUS ICX 7550 Series RUCKUS ICX 7650 Series 	 RUCKUS ICX 7850 Series Requires ICX FastIron software 8.0.90d or later
Network analytics and assurance	RUCKUS Analytics (subscription sold separately)	
Native mobile app	Scan to register multiple APs and switches to the RUCKUS Cloud by CommScope	Customize captive portal elements (images and message)
	Push notifications for alarms	Schedule SSIDs by day of the week and time of day
	Monitor status of AP, WLAN, switches and clients	Native support for iOS and Android
	Create and configure new SSIDs (enterprise or guest)	Configure switch port settings
Zero-touch provisioning	 Zero-touch switch deployment and configuration Zero-touch AP provisioning and bulk scanning 	 Auto update of AP and switch firmware once connected to RUCKUS Cloud
Employee Wi-Fi	 Multiple employee authentication options available: Traditional PSK (WPA/WPA2/WPA3) 	 Fast BSS Transition (802.11r) to reduce handoff times between APs while providing security and QoS
	– 802.1X with AAA and dynamic VLAN support	802.11k support to facilitate efficient roaming
	Ability to set bandwidth rate limit per client and per AP	
Guest Wi-Fi	· Flexible login options:	Ability to force DHCP IP addressing
	– Open, SMS, email, click-through, passcode	· Guest manager (front desk) admin portal
	 Social networking login (Google, LinkedIn, Facebook, Twitter) 	 MAC caching to allow repeat customers quick access to guest Wi-Fi
	 PSK, captive portal, sponsored guest 	 Easily customizable built-in captive portal
	Bulk creation of guest credentials	Integration with third-party guest Wi-Fi marketing
	Control access to network resources:	platforms including Linkyfi, Purple Wi-Fi, Cloud4Wi, GoZone WiFi and more
	 Time-based scheduling of SSIDs 	Support for any WISPr provider with custom settings
	 Free Wi-Fi with lock-out period and simple unblock options 	for guest portal configuration
	Granular administrative controls:	 Captive portal languages: Chinese (Traditional), Danish, Dutch, English, Finnish, French, German,
	– Per WLAN aggregate bandwidth limit	Greek, Italian, Japanese, Norwegian, Polish,
	– Per AP and per client bandwidth limit	Portuguese, Romanian, Swedish, Spanish, and Turkish
Dynamic Pre-shared key	Enhanced DPSK features supported natively in the	Supports these types of DPSK:
(DPSK)	Cloud	- Bound DPSK: End device MAC address is required at
	 No additional appliance or license required to deploy DPSK 	the time of DPSK creation - Unbound DPSK: End device MAC address is not
	Up to 10,000 DPSKs can be automatically generated in bulk or individually added on the clients page	required at the time of DPSK creation. - Unbound Group DPSK: Can be used with unlimited
	Each DPSK can be assigned a Username and VLAN, and DPSKs can be bulk exported via .csv	MAC addresses and does not require MAC addresses at creation

ADDITIONAL FEATURES AND SPECIFICATIONS

Switch configuration	VLANs , Spanning Tree, Multicast snooping, DHCP Snooping, member ports Port settings, PoE control Inter VLAN routing, Static routes Host name, Jumbo mode, DNS	Direct access to configuration via remote CLI, console or SSH Configuration backup and restore Automatically dataset member switch addition
Switch stacking	Create and manage stacks	 Automatically detect member switch addition, removal and replacement
Location services	· Integration with RUCKUS SPoT™ location services	 Integrations with location services by RUCKUS ecosystem partners
Security, privacy and data protection	 All traffic to and from the cloud is encrypted Only management traffic are sent to the cloud Client data traffic stays local (broken out to local LAN and sent through existing firewall) All data stored in RUCKUS Cloud is encrypted at rest RUCKUS offers EU-located datacenters for European customers and APAC-located datacenters for APAC customers Latest security patches are automatically updated. Configurable client inactivity timeout interval Role-based access control is provided for administrative privileges Admin is able to grant and revoke access to partners and RUCKUS support 	 Client isolation is enabled by default for guest SSID SSID scheduling prevents unauthorized use of Wi-Fi network Advertise only certain SSIDs within a venue Auto-discovery of APs and switches L3/L4 access control for traffic policies L2 device policy to control network access View Ruckus Cloud privacy policy Ability to control the number of devices or even specific devices that are able to use use a particular DPSK (Dynamic Pre-shared key) Support for MFA for administrator access
Cloudpath support (subscription sold separately)	 Add-on service enables self-service onboarding and granular per user, per device-based policy Multi-factor authentication support for admin access via Email, SMS, or Authenticator app 	 Muse* multiple certificate sources, including built-in public key infrastructure (PKI), Microsoft CA and InCommon, provide stronger security than passwords/ PSKs
Built-in reporting	 Switch traffic Switch resource utilization (CPU, Memory) Switch port status: Up/Down; Port speed; PoE usage; Alarms; LLDP Neighbors Switch details: MAC Address; IP Address; Uptime; Firmware Nearly 40 different report options, including: Traffic per AP, per switch, per SSID, per venue, per radio Top N applications Top clients by traffic Session details Unique client reports (tracking 2.4 vs. 5GHz clients over time) 	 Up to 12 months data storage for trending with big data analytics: Big data architecture using Hadoop multi-node clusters Indexed structured reporting for fast access

ADDITIONAL FEATURES AND SPECIFICATIONS

Other management highlights	 Ability to select RF policies, WLAN types (PSK, 802.1X, Captive Portal, Cloudpath), guest access options, QoS, VLANs and DPSK Flexibility to segment APs within a venue into different AP groups Channel and power control per venue, per AP group and per AP Ability to customize Bonjour services per AP Ability to select an upgrade window RESTful Open APIs for automation Automatic or selectable band balancing (between 2.4 and 5GHz radios on the same AP) 	 Global full and partial search by MAC address, username, hostname, OS type, IP address, AP name; resulting logs pre-filtered by venue, WLAN, APs, clients Google Maps integration Ability to import floor plans to visualize physical location of APs LAN port management for all RUCKUS APs with two or more Ethernet ports DHCP/NAT support on APs Wi-Fi calling configuration support Ability to select a time window for RUCKUS Cloud service upgrade including AP and switch firmwares
Troubleshooting	 Remotely reboot APs and switches, pull diagnostics information Get notifications of network status via SMS, mobile app push notification, or email Event logs are sorted by venue, SSID, AP, client, event severity, and event type related to AP, client, network, admin Alarms are generated for AP and switch status View historical client data to troubleshoot issues that happened in the past 	 Configure and enable an external syslog server per venue to capture AP and switch events Test connectivity from AP to endpoints or any internet host Elasticsearch for rapid and comprehensive lookup Remote PING and Trace route APs can perform remote packet captures that can be downloaded via the Cloud UI
Partner admin delegation	Delegate management of your Wi-Fi network to a RUCKUS authorized VAR (value added reseller) by invitation	Revoke VAR administrative privileges at any time
Value Added Reseller	Branded RUCKUS Cloud management portal	 Advanced troubleshooting by enabling SSH based CLI access to APs
Cloud datacenter	Hosted in North America, Europe, and Asia on world-class IAAS provider with: ISO 27001 information security certification SSAE-16, SOC 1, SOC 2 and SOC 3 certifications Stringent physical, data access, data disposal security measures Per-tenant migration capabilities Green carbon-neutral facilities Dedicated inter-DC fiber connectivity	Ability to choose the hosting region for your service. (North America, Europe, or Asia)
SLA	 99.9% network availability (does not include planned maintenance, including periodic software upgrades and other pre-announced activities) 	

Technical support	 All ICX switches have limited lifetime warranty, except for the extended temperature switch which as a 13-month warranty Easy button access to support 24x7 chat/online ticketing system/phone support 	 U.Sbased RUCKUS NOC AP hardware warranty is covered separately with the AP purchase (refer to AP datasheet); advanced hardware replacement for each AP is sold separately (SKUs starting with 803-)
Cloud SKUs	 1-year RUCKUS Cloud license for 1 AP – CLD-RKWF-1001 3-year RUCKUS Cloud license for 1 AP – CLD- RKWF-3001 1-year RUCKUS Cloud license for 1 ICX7150-C08P switch – CLD-S08M-1001 3-year RUCKUS Cloud license for 1 ICX7150-C08P switch – CLD-S08M-3001 1-year RUCKUS Cloud license for 1 ICX7150 switch – CLD-S71M-1001 3-year RUCKUS Cloud license for 1 ICX7150 switch – CLD-S71M-3001 1-year RUCKUS Cloud license for 1 ICX7550 switch – CLD-S75M-1001 3-year RUCKUS Cloud license for 1 ICX7550 switch – CLD-S75M-3001 1-year RUCKUS Cloud license for 1 ICX7650 switch – CLD-S76M-1001 3-year RUCKUS Cloud license for 1 ICX7650 switch – CLD-S76M-3001 1-year RUCKUS Cloud license for 1 ICX7850 switch – CLD-S78M-3001 1-year RUCKUS Cloud license for 1 ICX7850 switch – CLD-S78M-1001 3-year RUCKUS Cloud license for 1 ICX7850 switch – CLD-S78M-1001 3-year RUCKUS Cloud license for 1 ICX7850 switch – CLD-S78M-1001 3-year RUCKUS Cloud license for 1 ICX7850 switch – CLD-S78M-3001 	 5-year RUCKUS Cloud license for 1 AP CLD- RKWF-5001 5-year RUCKUS Cloud EDU license for 1 AP CLD- RWED-5001 5-year RUCKUS Cloud license for 1 ICX7150-C08P switch CLD-S08M-5001 5-year RUCKUS Cloud EDU license for 1 ICX7150-C08P switch CLD-S08E-5001 5-year RUCKUS Cloud license for 1 ICX7150 switch CLD- S71M-5001 5-year RUCKUS Cloud EDU license for 1 ICX7150 switch CLD- S71E-5001 5-year RUCKUS Cloud license for 1 ICX7550 switch CLD-S75M-5001 5-year RUCKUS Cloud EDU license for 1 ICX7550 switch EDU SKU CLD-S75E-5001 5-year RUCKUS Cloud license for 1 ICX7650 switch CLD- S76M-5001 5-year RUCKUS Cloud EDU license for 1 ICX7650 switch CLD- S76E-5001 5-year RUCKUS Cloud EDU license for 1 ICX7850 switch CLD- S78E-5001 5-year RUCKUS Cloud EDU license for 1 ICX7850 switch CLD- S78M-5001 5-year RUCKUS Cloud EDU license for 1 ICX7850 switch CLD- S78E-5001

A PARTNER AND PLATFORM FOR THE FUTURE

RUCKUS Cloud is our platform for innovation—with planned support of breakthrough wired/wireless technologies, IoT, big data and continued advances in management automation. Our open architecture also allows us to integrate a wide variety of complementary third-party services that enhance the value of your network and provide greater user insight. We're working on every level—on the ground and in the cloud—to support your business initiatives.



Figure 5. RUCKUS Cloud Web UI and mobile app

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

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