Ruije

Managed @ Cloud Center

FEATURE HIGHLIGHTS

Centralized Management

• RG-MACC-BASE can conduct configuration and manage of all AP, Switches and Gateway in one cloud management platform

Multi-tenancy Management

• Perfection for Managed Service Business, integrated with multi-tenant management feature

Comprehensive Wireless Site Survey Tool (Free Cloud Services)

- An easy-to-use simulation tool to generate wireless heat-map according to floor plan imported
- Support obstacle material and wall simulation

Advanced Troubleshooting

 Web CLI access to managed devices for complex troubleshooting scenarios

Marketing WiFi & Local Based Services

Optional integrated Marketing WiFi module
that provides user's experience

Zero-provisioning

 With plug-n-play, RG-MACC-BASE allows tenants to provision new Access Point in their existing network automatically without manual intervention

Ruijie RG-MACC-BASE Datasheet

The Ruijie RG-MACC (Managed @ Cloud Center) is a revolutionary cloud management platform which supports unified management and configuration of APs, switches and gateway devices¹, as well as value-added marketing features, site survey, etc. The RG-MACC is designed for education, retail chain stores, shopping malls, hotels, transportation, small and medium-sized enterprises, network operators and settings alike. The RG-MACC is consisted of various feature modules, such as management, marketing and AAA (authentication, authorization and accounting), site survey planner, diagnostic tools, etc. The platform significantly reduces the total cost of investment while ensuring high usability of the RG-MACC.

The RG-MACC-BASE is a key component of the RG-MACC, supports device planning, configuration, control, operation and maintenance on cloud, which provides an easy solution to centrally manage all the Wi-Fi devices. Traditionally, the AC implements close coupling for AP management, which is more suitable for large-scale AP control within the LAN. On the other hand, the RG-MACC-BASE platform deploys loose coupling to completely separate management and data for a better wireless environment. Teaming up with Ruijie AP Series, the RG-MACC-BASE does not only achieve AP management with ease, but also acts like a physical AC. The cloud platform supports wireless control features such as auto power and channel adjustment, RF management and optimization, L2/L3 roaming and beyond.

An increasing number of companies plan to spend more of their budget with managed service providers (MSP) in the whether an organization is experiencing exponential growth or it's so small that it doesn't have an IT staff, turning over the wired/wireless network to a trusted partner can translate into better service, sometimes at a lower cost than managing it in-house. The easy-to-use multi-tenancy feature powered by RG-MACC-BASE is designed to empower MSP's intend of building up private cloud option to cater the need from its subscribers. RG-MACC-BASE best-inclass multi-tenancy architecture accelerate MSP in rolling out from small deployment up to massive multisite or distributed site deployment in shortest time frame possible.



Figure 1: RG-MACC-BASE Main Monitoring Page

Note: ¹ Future release support

Product Features

Cloud Configuration

Flexible Device Group Architecture

The MACC-BASE manages devices based on group, and it can create group and sub groups, with the hierarchical group configuration, it makes customers manage their network devices more easy and clear.



Figure 2: RG-MACC-BASE Group Configuration

Intuitive Deployment on Map

The MACC-BASE achieves location and RF planning for power and channel auto organization and optimization. For projects of any sizes, careful deployment planning always plays a critical role. It provides clear and easy guidance for any technical staff to carry out the installation work. The MACC-BASE supports deployment design based on map, making it more intuitive and easier to master.

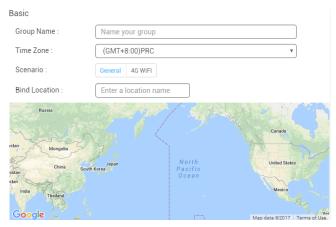


Figure 3: RG-MACC-BASE Map-based Deployment Page

Seamless Roaming

The platform supports seamless L2/L3 roaming for local APs. When roaming is enabled, any end device can smoothly and seamlessly switch among multiple wireless networks. No reconnection or extra configuration is required.

Simplified Multi-tenant RBAC (Role-based Access Control)

The platform supports flexbile multi-tenanted role-based access control. MSP can easily create and assigned designated user to managed and access to its assigned tenant.

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|-----------------------|----------|---------|-----------------------|------------------|-----------|-----------------------|--------------|
| Account List | Q Search | | | | | 0 | n - 5 |
| Usemame | Role | Group | Full Name | Expired | Mobile | Email | Action |
| network_admin@xyz.com | Admin | MTFL_AP | network_admin@xyz.com | 2999-01-01 08:00 | 112113114 | network_admin@xyz.com | 区言 |
| employee@xyz.com | Employee | MTFLAP | employee@xyz.com | 2999-01-01 08:00 | 123456 | employee@xyz.com | 白白 |
| read_only@xyz.com | Guest | MTFLAP | read_only@xyz.com | 2999-01-01 08:00 | 111222333 | read_only@xyz.com | 匕直 |
| | | First | Previous Page 1 of 1 | Next | | 10 - | 3 in total |
| | | | | | | | Add |

Figure 4: RG-MACC-BASE Multi-tenant RBAC

Smart Status Monitoring

Visualize and monitor all devices and user status in a unified manner. You can check and monitor global group status in real time, including devices, clients, traffic, and alarms, etc. Other multi-dimensional network quality details like 2.4G/5G channel usage, 2.4G/5G statistics, RSSI statistics and AP load over last 24 hours are also available for easy reference.

Just by scanning through the groups, devices and clients details, you can quickly master if the whole system is operating normally.

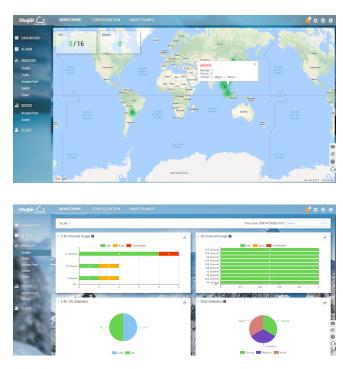


Figure 5: RG-MACC-BASE Monitoring Page

Master Real-time Online User Experience

Analyze operating status of the system from the end user perspective. The MACC-BASE also enables you to find out the user experience at each hotspot, providing details of signal quality during various time slots and overall experience indicators.

Operating Status / Offline Alerts and Other Warnings

The MACC-BASE shows the current alert messages in a list. Trace the cause of each alert with ease based on warning level, content and time. You can also filter the alerts in terms of serial number and time range.

Alert Setup: The MACC-BASE offers a wide range of alerts, you can enable only those you need and receive notifications of key alerts anytime, anywhere via email.

Advanced Troubleshooting

The MACC-BASE shows the Web CLI access. Debugging command over management portal complex troubleshooting environment without accessing to individual managed devices

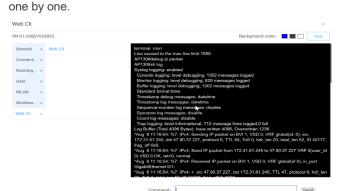


Figure 6: Advanced Troubleshooting on RG-MACC-BASE

Cloud Operation and Maintenance

Diversified Data Reports

The MACC-BASE can generate data reports of various systems. For example, you can export a report on accumulated daily user statistics, daily user traffic details, activity analysis and device analysis, etc. You can easily create a report of your own for periodic work summary.

Centralized Upgrade Control

With MACC-BASE, you can easily manage hardware version and upgrade devices in batch. Select devices that need to be upgraded, click the "Upgrade" button and that's it. You can also observe the whole executing process and read device logs for upgrade history in full details.

| 'op 5 | Versions | | | | Firmware Ve | ersion List | | |
|--------|----------------------------------|--|-------------------------|---------------------|--------------------|--|----|---------------------|
| | | | | | Firmware V | ersion | QS | earch |
| | | | AP RGOS 11.1(5)B. | | | Firmware Version | | AF |
| | | | | | AP_R005 11.1(| (5)D9P2, Release(04141704) | | 4 |
| | | | | | | | | |
| Device | e List ware Version | SN, Description | QSearc | h | Previous | Page 1 of 1 Next | Ð | # · |
| | | | | ħ | Model | Page 1 of 1 Next | ÷ | - |
| | ware Version | SN, Description | QSearc | - | | | | - |
| | ware Version Status | SN, Description | QSearc | SN | Model | Firmware Version |) | - |
| Firm | ware Version Status Online | SN, Description Group Pasar, Pagi_Mangga_Dua | CSearc Location - | SN G1KQCJR14355A | Model AP520(W2) | Firmware Version AP_B00511.1(5)8992, Release(04141704 |) | ₽₽ ▼ Description |

Figure 7: Centralized Upgrade on RG-MACC-BASE

Management with Ease

The MACC-BASE platform supports multiple tenants. Each can manage several levels of sub-accounts. Various degrees of management and viewing privileges can hence be granted to different users, enhancing cloud control usability.

Technical Specifications

Feature List

| | RG-MACC-BASE |
|---|--------------|
| Deployment Mode: | |
| (i) Single-Tenant (suitable for local premises deployment) | \checkmark |
| (ii) Multi-Tenant (suitable for private/ cloud deployment) | \checkmark |
| Planning: | |
| (i) Location Planning (Google Map) | \checkmark |
| (ii) AP Layout Planning | \checkmark |
| (iii) Auto RF Planning | \checkmark |
| (iv) Power & Channel Optimization | \checkmark |
| (v) WLAN Site Survey Planner (RG-MACC-SSP) | \checkmark |
| Configuration: | |
| (i) SSID Configuration | \checkmark |
| (ii) Radio Configuration | \checkmark |
| (iii) Web Authentication Configuration | \checkmark |
| (iv) 802.1X Authentication Configuration | \checkmark |
| (v) Wireless Location Configuration | \checkmark |
| (vi) Wireless Security Configuration | \checkmark |
| (vii) Rate Limit Configuration | \checkmark |
| (viii) Blacklist/Whitelist Configuration | \checkmark |
| (ix) Bluetooth Configuration | \checkmark |
| Load Balancing | |
| (i) AP load balancing | \checkmark |
| (ii) Band Steering | \checkmark |
| Wireless Roaming: | |
| (i) Layer 2 Roaming | \checkmark |
| (ii) Layer 3 Roaming | \checkmark |
| Monitoring: | |
| (i) Global View (Dashboard) | \checkmark |
| (ii) User Overview | \checkmark |
| (iii) AP Overview | \checkmark |
| (iv) Swtich Overview | \checkmark |
| Maintenance: | |
| (i) Firmware Upgrade | \checkmark |
| (ii) Server Manual Upgrade | \checkmark |
| (iii) Server Online Upgrade | \checkmark |
| (iv) Reports | \checkmark |
| (v) Logs | \checkmark |
| (vi) Disk Monitoring & Automated Cleanup | \checkmark |
| (vii) Database Backup | \checkmark |
| Alarm: | |
| (i) Alarm Customization | \checkmark |
| (ii) Alarm Pushes (Email) | \checkmark |
| System Management: | |
| (i) Tenant Management | \checkmark |
| (ii) Role-based Privilege Management (Account Classification) | ✓ |
| (iii) License Management | ✓ |
| (iv) Account Language Support | ✓ |
| Support | |
| (i) Online Document Support | ✓ |
| (ii) Online 24-hour Support | \checkmark |

Supported Models

Supporting Ruijie Hardware Models

| Product Type | Product Series | Hardware Model |
|--------------|----------------|--|
| | AP130 Series | AP130(W2), AP130(L), AP130-W |
| | AP500 Series | AP520-I(G2), AP520(W2), AP520(BT), AP520(DA), AP530-I V2 |
| AP (RGOS AP) | AP700 Series | AP740-I, AP720-I, AP740-I(C) |
| | AP630 Series | AP630(IDA) , AP630(IODA), AP630(CD) |
| | MTFI Series | RG-MTFI-M520(IZEAA), RG-MTFI-M520(ILEAA) |
| | RG-S2910 | RG-S2910-24GT4SFP-UP-H |
| Switch | RG-S2910C | RG-S2910C-24GT2XS-HP-E |
| | RG-S2928G | RG-S2928G-E V3.0 |

System Requirements

RG-MACC-BASE System Requirements

| Scale | Recommended System Specifications | | | | |
|----------------------------|---|-------|--------|------------------------------|-------------------|
| Number of APs ² | CPU | RAM | HDD | Internet Bandwidth (minimum) | Number of Servers |
| < 1,000 | 4 | 8 GB | 256 GB | 1MB | 1 |
| 1,000 to 4,000 | 8 | 16 GB | 512 GB | 2MB | 1 |
| 4,000 to 10,000 | 8 | 16 GB | 512 GB | 4MB | 2 |
| Above 10,000 | If cluster solution is required, please contact Ruijie local sales representative for details | | | | |

Ordering Information

| Model | Description |
|----------------------|---|
| RG-MACC-BASE | Ruijie MACC Solution Framework Base Module - providing cloud-based device planning, monitoring, troubleshooting and reporting, multi-tenant edition for Managed Service Provider (MSP) (including: 3-year software support service with software upgrade, patches and online technical support service) |
| RG-MACC-BASE License | |
| RG-MACC-BASE-LIC-25 | RG-MACC-BASE Licenses for 25 registered devices |
| RG-MACC-BASE-LIC-50 | RG-MACC-BASE Licenses for 50 registered devices |
| RG-MACC-BASE-LIC-100 | RG-MACC-BASE Licenses for 100 registered devices |
| RG-MACC-BASE-LIC-500 | RG-MACC-BASE Licenses for 500 registered devices |
| RG-MACC-BASE-LIC-1K | RG-MACC-BASE Licenses for 1K registered devices |

Note:

² Assumption: 1 AP with 30 concurrent clients

| Model | Description | | | |
|---|--|--|--|--|
| RG-MACC-BASE-LIC-5K | RG-MACC-BASE Licenses for 5K registered devices | | | |
| RG-MACC-BASE-LIC-10K | RG-MACC-BASE Licenses for 10K registered devices | | | |
| RG-MACC Software Support Service | | | | |
| RG-MACC-SSS-Service | RG-MACC Annual Software Support Service (Including software upgrade, patches and online technical support service) | | | |
| RG-MACC 3 rd Party Integration & Development Service | | | | |
| RG-MACC-INT-Service | RG-MACC 3 rd party integration & development service | | | |



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