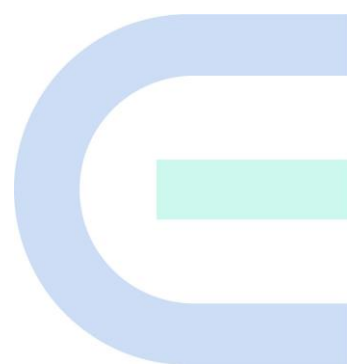


# Ruijie Reyee RG-OCE Network Manager

## Installation Guide



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# Preface

## Intended Audience

This document is intended for:

- Network engineers
- Technical support and servicing engineers
- Network administrators

## Technical Support

- The official website of Ruijie Reyee: <https://reyee.ruijie.com>
- Technical Support Website: <https://reyee.ruijie.com/en-global/support>
- Case Portal: <https://www.ruijie.com/support/caseportal>
- Community: <https://community.ruijienetworks.com>
- Technical Support Email: [service\\_rj@ruijie.com](mailto:service_rj@ruijie.com)
- Online Robot/Live Chat: <https://reyee.ruijie.com/en-global/rita>

## Conventions

### 1. Signs

The signs used in this document are described as below:

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#### **Danger**

An alert that calls attention to safety operation instructions that if not understood or followed when operating the device can result in physical injury.

---

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#### **Warning**

An alert that calls attention to important rules and information that if not understood or followed can result in data loss or equipment damage.

---

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#### **Caution**

An alert that calls attention to essential information that if not understood or followed can result in function failure or performance degradation.

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#### **Note**

An alert that contains additional or supplementary information that if not understood or followed will not lead to serious consequences.

---

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#### **Specification**

An alert that contains a description of product or version support.

---

## **2. Note**

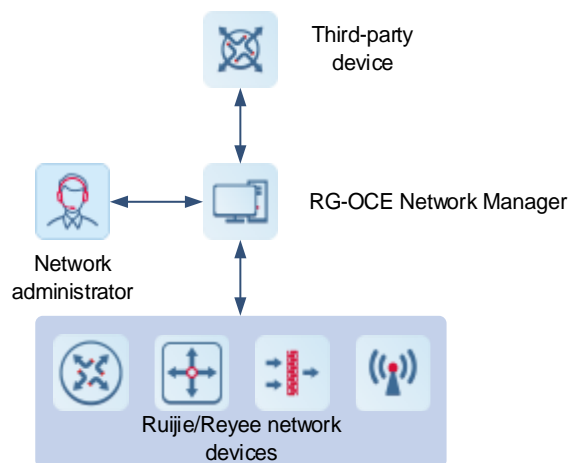
This manual provides the device installation steps, hardware troubleshooting, module technical specifications, and specifications and usage guidelines for cables and connectors. It is intended for the users who have some experience in installing and maintaining network hardware. At the same time, it is assumed that the users are already familiar with the related terms and concepts.

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# 1 Product Overview

The Ruijie Reyee Omni-Control Engine (RG-OCE) Network Manager is a powerful network management software designed for small- and medium-sized enterprises. It offers visual monitoring, batch configuration, operation and maintenance, network analysis, and other functions for managing network devices. The RG-OCE Network Manager not only supports configuration, monitoring, and maintenance of Ruijie and Reyee network devices but also extends its management capabilities through the Simple Network Management Protocol (SNMP), allowing users to effectively integrate and manage third-party network devices.



# 2 Deployment

## 2.1 Preparations Before Deployment

The server OS is based on Rocky Linux 8.10 version, recommend to use this minimal.iso version, the download link refers to: [https://download.rockylinux.org/pub/rocky/8/isos/x86\\_64/Rocky-8.10-x86\\_64-minimal.iso](https://download.rockylinux.org/pub/rocky/8/isos/x86_64/Rocky-8.10-x86_64-minimal.iso)

And this server needs to have internet access to download some packages during installation.

### 2.1.1 Server Hardware Requirements

The following table lists the minimum server hardware requirements for the RG-OCE Network Manager, based on the number of managed devices.

**Table 2-1 Minimum Server Hardware Requirements**

Number of Managed Devices	CPU	Memory	Hard Disk Drive	Operating System	Network Bandwidth
< 100	4-core (Intel Xeon processors, 2 GHz or higher)	24 GB	150 GB SSD	Rocky or Redhat Linux 8.10	Uplink: 5 Mbps Downlink: 5 Mbps
100 to 1000	4-core (Intel Xeon processors, 2 GHz or higher)	32 GB	200 GB SSD	Rocky or Redhat Linux 8.10	Uplink: 20 Mbps Downlink: 20 Mbps
1,000 to 5,000	8-core (Intel Xeon processors, 2 GHz or higher)	64 GB	500 GB SSD	Rocky or Redhat Linux 8.10	Uplink: 20 Mbps Downlink: 40 Mbps
5,000 to 10,000	16-core (Intel Xeon processors, 2 GHz or higher)	128 GB	1 TB SSD	Rocky or Redhat Linux 8.10	Uplink: 40 Mbps Downlink: 40 Mbps
> 10,000	Contact us for details.				

Note 1: The server's CPU must support the AVX instruction set. Generally, Xeon series CPUs from 2012 and later support AVX. You can verify this in two ways:

(1) Command line: Run the `lscpu|grep avx` command on the server. If there is any output, the CPU supports AVX. If there is no output, the CPU does not support AVX.

(2) Intel's official website: Search for your CPU model followed by the keyword "ark" on a search engine. On Intel's website, look for AVX or AVX2 in the CPU specifications. If neither is listed, the CPU is not supported.

Note 2: For virtual machine environments, the CPU passthrough feature typically needs to be enabled. For example, in Proxmox VE, the CPU type should be set to host.

The screenshot shows the 'Create: Virtual Machine' window with the 'CPU' tab selected. The settings are as follows:

Parameter	Value
Sockets	1
Cores	2
VCPUs	2
CPU limit	unlimited
Type	host
Total cores	2
CPU units	1024
Enable NUMA	<input type="checkbox"/>

### 2.1.2 Server Domain Name and IP Address

#### Caution

- Reyee devices enabled with MQTT must use a domain name to go online in the RG-OCE Network Manager.
- The server needs to communicate with managed devices, that is, the server's IP address must be reachable by these devices.

As the network management server, the RG-OCE Network Manager must have a domain name for managed devices to access it. Otherwise, Reyee devices enabled with MQTT cannot go online in the RG-OCE Network Manager.

- Configure the server domain name: Select and register a domain name that is easy to remember and relevant to your organization, such as ocnm.xxx.com. Map this domain name to the server's IP address. If the server's IP address changes in the future, you will only need to update the DNS mapping.
- Configure the managed device: Set the server's domain name on the managed device to allow access to the server.

### 2.1.3 Firewall Open Port

Service	Intranet Port	Protocol	Mandatory or Optional	Remarks
CWMP	80	TCP	Mandatory	For HTTP access
	443	TCP	Mandatory	For HTTPS access
	3478	UDP	Mandatory	Port for interacting with devices, learned and bound by device STUN
	3479	UDP	Mandatory	Port for interacting with devices, learned and bound by device STUN
MQTT	25857	TCP	Mandatory	For MQTT service

Service	Intranet Port	Protocol	Mandatory or Optional	Remarks
COAP	5683	UDP	Mandatory	For ESW management service
	6683	UDP	Mandatory	For ESW log service
	8683	UDP	Mandatory	For ESW firmware download
SNMP	162	UDP	Optional	Required for SNMP traps
Tunnel	65000 to 65200	TCP	Optional	Required for remote tunnel service
	3822	TCP	Optional	
DNS	53	TCP	Optional	Required for DNS service
	53	UDP	Optional	

## 2.1.4 Server Disk Partitioning and Directory Creation

### Warning

Do not install the RG-OCE Network Manager on the system drive, as it could consume all disk space and block access to the operating system.

All data related to the installation and operation of the RG-OCE Network Manager is stored under the /macc directory. Therefore, ensure that this directory exists and reserve disk space based on the number of managed devices. For details, see [Table 2-1](#).

```
mkdir /macc //Create the macc directory.
```

Check the available disk space under the root (/) partition by running `df -h`.

Ensure that the available space under the root (/) or /macc directory is greater than 100 GB.

If the root (/) partition does not have sufficient space but the /home partition has more than 100 GB available, you can create a symbolic link to share the /home disk space for installation:

```
mkdir -p /home/macc
ln -s /home/macc /macc
```

Verify that the link is effective:

```
cd /
ls -l
```

Confirm that `/macc -> /home/macc` is displayed before proceeding with installation.

```
[root@localhost ~]# cd /
[root@localhost /]# ls -l
total 32
lrwxrwxrwx. 1 root root 7 Oct 11 2021 bin -> usr/bin
dr-xr-xr-x. 5 root root 4096 Jul 28 03:08 boot
drwxr-xr-x. 20 root root 3140 Sep 26 06:56 dev
drwxr-xr-x. 93 root root 8192 Sep 26 06:56 etc
drwxr-xr-x. 5 root root 44 Jul 28 06:11 home
lrwxrwxrwx. 1 root root 7 Oct 11 2021 lib -> usr/lib
lrwxrwxrwx. 1 root root 9 Oct 11 2021 lib64 -> usr/lib64
lrwxrwxrwx. 1 root root 10 Jul 28 03:27 macc -> /home/macc
-rw-r--r--. 1 root root 217 Jul 28 06:00 macc_init.log
drwxr-xr-x. 2 root root 6 Oct 11 2021 media
drwxr-xr-x. 2 root root 6 Oct 11 2021 mnt
drwxr-xr-x. 3 root root 24 Jul 28 06:00 opt
dr-xr-xr-x. 475 root root 8 Sep 26 06:56 proc
dr-xr-x---. 3 root root 4096 Aug 21 02:33 root
drwxr-xr-x. 33 root root 940 Sep 26 06:56 run
lrwxrwxrwx. 1 root root 8 Oct 11 2021 sbin -> usr/sbin
drwxr-xr-x. 2 root root 6 Oct 11 2021 srv
dr-xr-xr-x. 13 root root 8 Sep 26 06:56 sys
drwxrwxrwt. 5 root root 4096 Oct 13 07:38 tmp
drwxr-xr-x. 12 root root 144 Jul 28 02:58 usr
drwxr-xr-x. 21 root root 4096 Jul 28 03:08 var
```

## 2.2 Installation and Deployment

### Note

- Do not install OCE NM and IM on the same VM, as this will cause conflicts and render them inoperable.

### Prerequisites

Ensure that the server can access the Internet.

### Installation Procedure

- Download the RG-OCE Network Manager installation package.

#### Method 1

```
[root@localhost ~]# curl -o RG-OCE_1.0_Build2024xxxx.tar.gz
http://xxx.ruijie.com/service/api/download/oce/RG-OCE_1.0_Build2024xxxx.tar.gz
```

#### Method 2

```
[root@localhost ~]# yum -y install wget //Install the wget package. Skip this step if the
wget package already exists in the system.
wget http://xxx.ruijie.com/service/api/download/oce/RG-
OCE_1.0_Build2024xxxx.tar.gz //Obtain the RG-OCE Network Manager installation package.
```

- Deploy the RG-OCE Network Manager.

```
[root@localhost ~]# tar -zxvf RG-MACC-OCE_1.0_Build2024xxxx.tar.gz
[root@localhost ~]# cd macc_private
[root@localhost macc_private]# ls
cube init-linux install middleware service status
```

```
[root@localhost RG-MACC-OCE_1.0_Build20240822]# ./install
```

# 3 Debugging and Verification

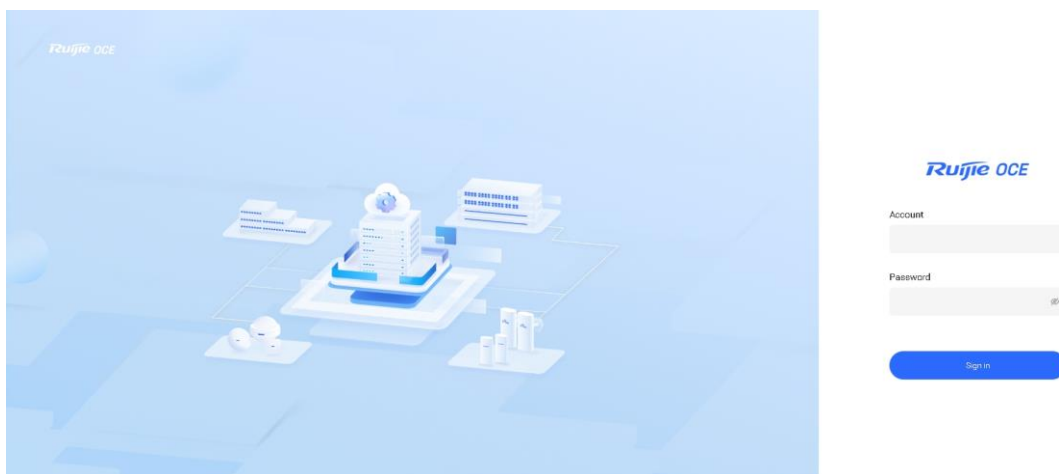
Enter <https://ServerIP> in Google Chrome to access the login page. If the login page is displayed, the RG-OCE Network Manager is installed successfully.

---

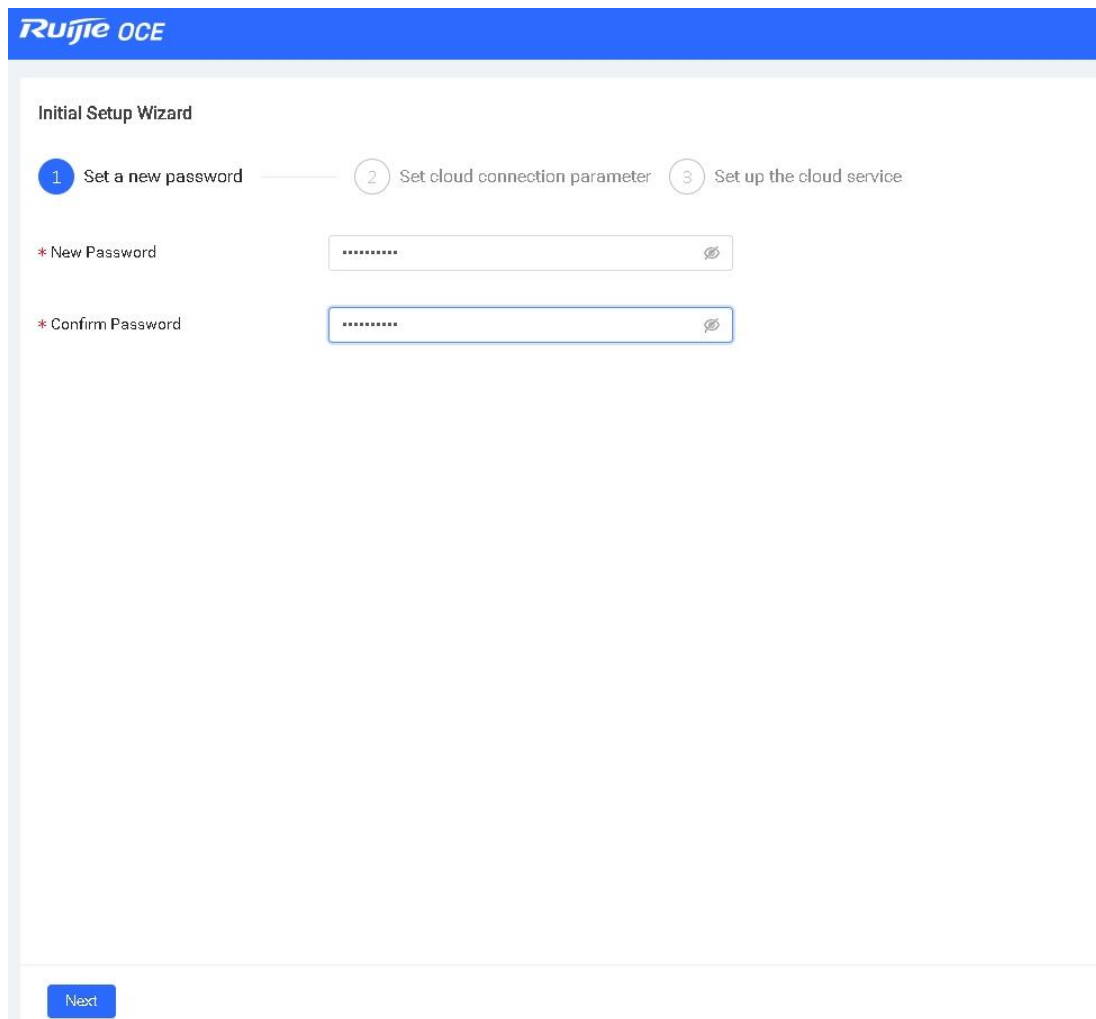
**Note**

- Change the value of **Server IP** to the actual IP address of the server.
  - The default port number for the HTTPS service is 443. If the HTTPS port is changed on the server, you need to enter the new port number, such as <https://serverIP:1234>.
- 

- (1) For initial login, the username is **admins** and the password is **oce@Admin1**.

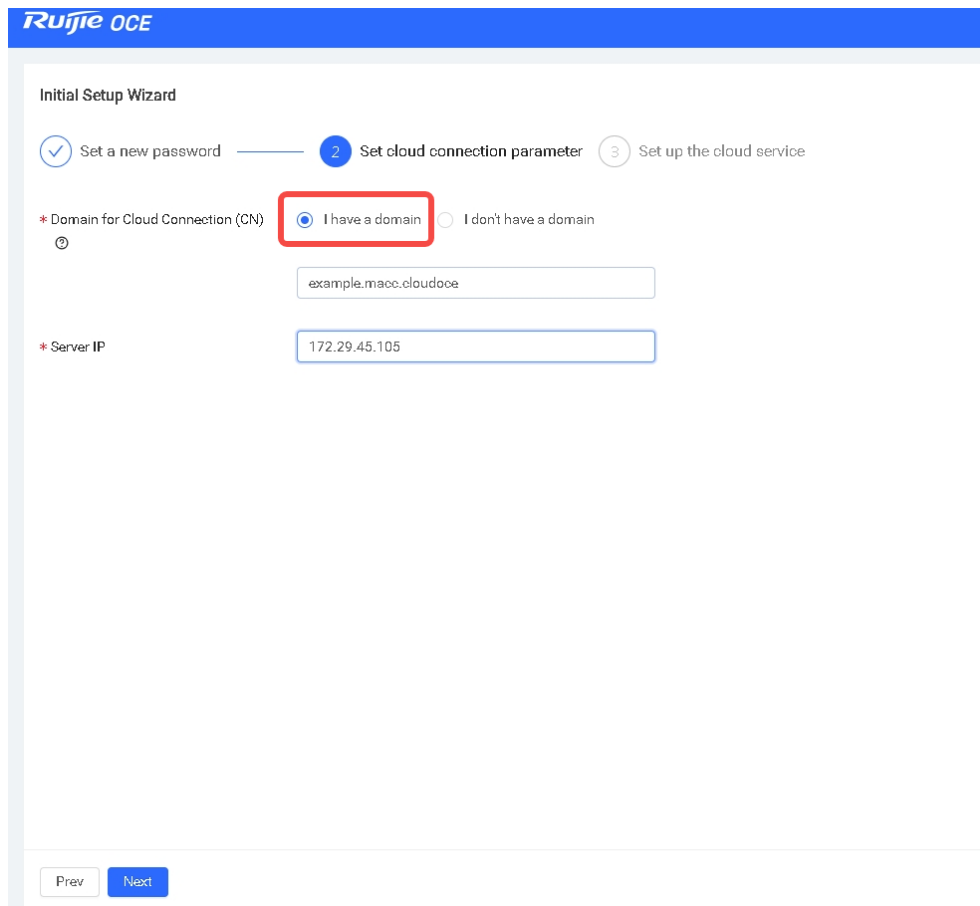


- (2) After logging in, use the initial setup wizard and follow the on-screen instructions to change the password.



The image shows the 'Initial Setup Wizard' interface for Ruijie OCE. At the top is a blue header with the 'Ruijie OCE' logo. Below the header, the title 'Initial Setup Wizard' is displayed. A progress bar shows three steps: 1. Set a new password (active), 2. Set cloud connection parameter, and 3. Set up the cloud service. Under step 1, there are two password fields: '\* New Password' and '\* Confirm Password'. Both fields contain masked text (dots) and have an eye icon to toggle visibility. At the bottom left, there is a blue 'Next' button.

- (3) Set the domain name and the IP address:
- Select **I have a domain** and enter the server domain name.
  - Enter the IP address of the server.



The image shows the 'Initial Setup Wizard' for Ruijie OCE. It has a blue header with the 'Ruijie OCE' logo. Below the header, there are three steps in a horizontal line: '1 Set a new password' (completed), '2 Set cloud connection parameter' (current step), and '3 Set up the cloud service'. Under step 2, there are two radio buttons: 'I have a domain' (selected and highlighted with a red box) and 'I don't have a domain'. Below the radio buttons, there is a text input field for the domain, containing 'example.macc.cloudooe'. Below that, there is a text input field for the server IP, containing '172.29.45.105'. At the bottom of the wizard, there are two buttons: 'Prev' and 'Next'.

Ruijie OCE

Initial Setup Wizard

1 Set a new password — 2 Set cloud connection parameter 3 Set up the cloud service

\* Domain for Cloud Connection (CN) ☒ I have a domain ☐ I don't have a domain

example.macc.cloudooe

\* Server IP 172.29.45.105

Prev Next

- (4) Enable the cloud service as required. After **Enable (Auto Device Onboard)** is checked, the device can be automatically redirected to the private cloud when both the device and server have Internet access.

**Ruijie OCE**

Initial Setup Wizard

✓

Set a new password

✓

Set cloud connection parameter

**3**Set up the cloud service

Cloud Service

☒ **Enable (Auto Device Onboard)** Recommend

If the device and private cloud have Internet access, the device can quickly connect to the private cloud through the cloud service's redirection feature.

☐ **Disable (Manual Device Onboard)**

Modify the DNS resolution or log in to the device's web interface and manually enter the specified private cloud address for cloud connection.

Prev

Save

- (5) Click **Back to Home** to exit the wizard and return to the home page.

**Ruijie OCE**

Initial Setup Wizard

✓

**Success**

You can now start using the Ruijie Cloud OCE platform.  
After setup, you can modify cloud parameters and service settings in the System menu.

Back to Home