6-slot Layer 3 IPv6/IPv4 Routing Chassis Switch

CS-6306R

Quick Installation Guide

Table of Contents

1. Package Contents

Thank you for purchasing PLANET 6-slot Layer 3 IPv6/IPv4 Routing Chassis Switch, **CS-6306R. "Chassis Switch"** mentioned in this quick installation guide refers to the **CS-6306R**.

Open the box of the **Chassis Switch** and carefully unpack it. The box should contain the following items:

- The **CS-6306R** Chassis Switch x 1
- Quick Installation Guide x 1
- RJ45-to-DB9 Console Cable x 1
- Mini USB Console Cable x 1 (for CS6 Switch Modules)
- Power Cord x 1
- Wire Rack x 3
- Wire Rack Screw x 6
- Ground Cable x 1
- Rack Screw x 8
- Rack Screw Cap x 8

If any item is found missing or damaged, please contact your local reseller for replacement.

2. Physical Description

- The CS-6306R is a 19-inch, 9U Rack-mountable Chassis, with the standard dimensions (W x D x H) of 482 x 397 x 370 mm. The chassis consists of a module slot and a power supply slot.
- The fan block is located on the right side of the board rack and accommodates one fan tray, which contains 4 axial fans.
- Dust gauze is installed on the left side of the board rack to filter air circulating through the rack.
- The power block, located under the dust gauze, provides power to the system and supports up to three power modules. The power modules are inserted into the power slots from the front, while the distribution box at the back of the rack allows for maintenance.

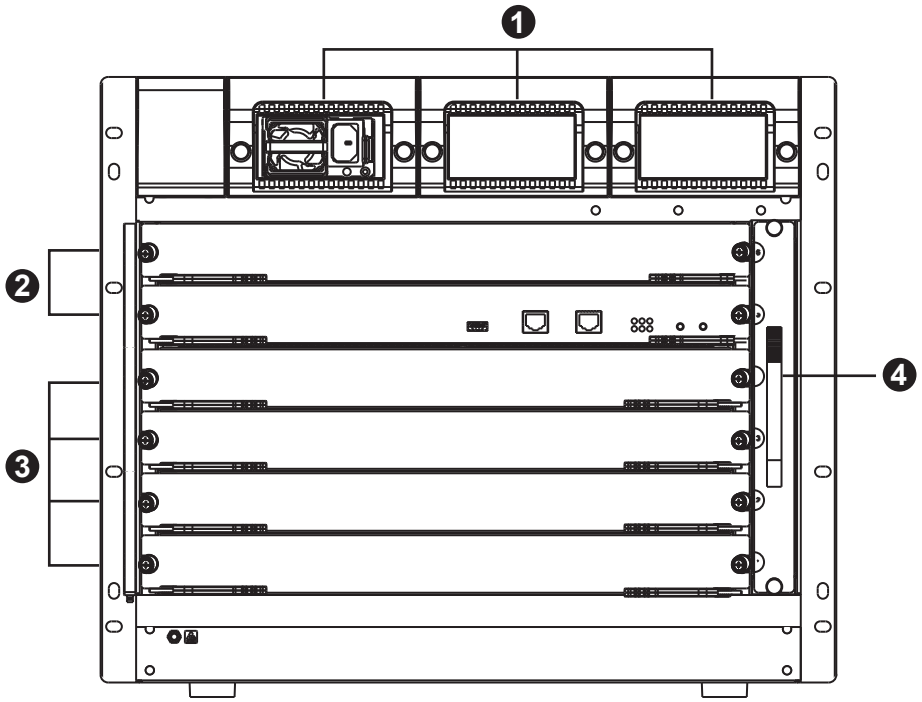

Figure 2-1: CS-6306R Front Panel

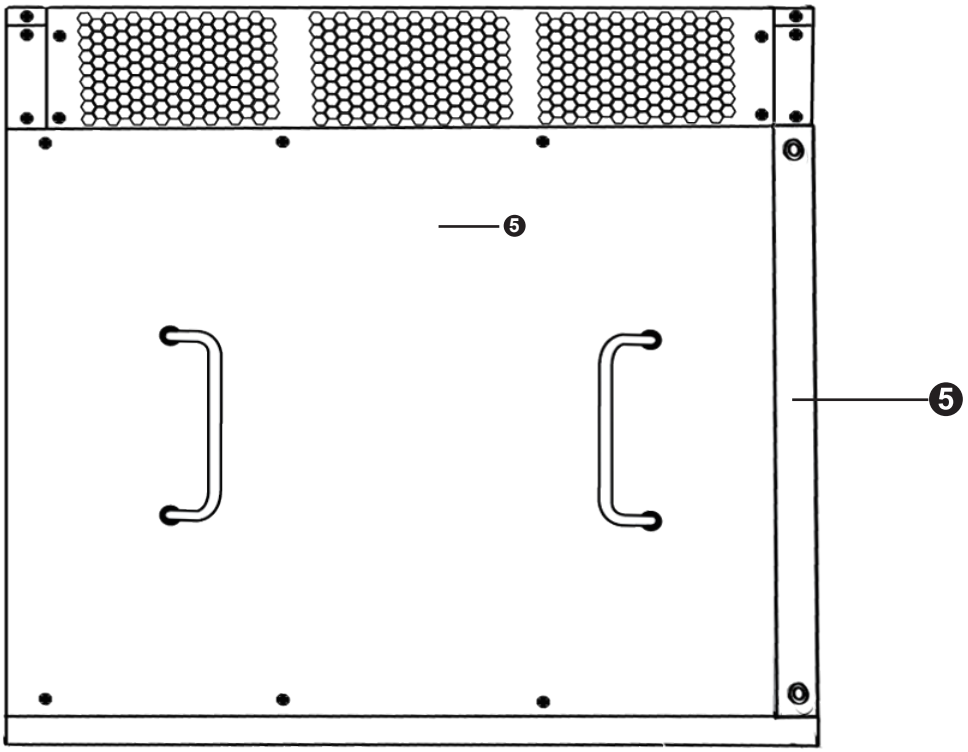

Figure 2-2: CS-6306R Rear Panel

1. Power slots	Used for system power supply modules and supports up to three 550W AC/DC modules (CS6-PWR550-AC/DC).
2. Management slots	Slots 5 and 6 support management module like CS6-MCU. (Slot 5 is Master.)
3. Switch slots	Slots 1 to 4 support Switch modules like CS6-S16X and CS6-S24S8X.
4. Fan tray slot	Supports one system fan assembly with each assembly consisting of four axial fans.
5. Dust gauze slot	Exterior air inlet for the ventilation subsystem.

Note	The Chassis Switch is equipped with only one power supply module. A management/switch Ethernet module is not included in the shipment.

Note	When a management module is installed in Slot 5 or 6, power off the Chassis Switch; otherwise, the Chassis Switch will not operate normally after it is turned on.

3. Hardware Installation

During the installation and use of the CS-6306R Chassis Switch, please follow the steps below:

1. Chassis switch Mounting
   - Desktop installation
   - Rack-mounting installation
2. Chassis switch grounding
3. Modules installation
4. Removing and installing the dust gauze
5. Removing and installing the fan tray
6. Removing and installing the power supply

3.1 Desktop Installation

To avoid damage, do not place any weight on the CS-6306R.
The maximum weight of any installed modules is 30kg and the total weight in a fully configured setup is also 30kg.
The Chassis Switch is very heavy, so two people should do the job to avoid injury.

To install the CS-6306R on a desktop or shelf, simply complete the following steps:

Step 1 Choose a workbench with a smooth, level surface.

Step 2 Make sure the workbench is strong enough to support the CS-6306R's fully configured weight.

Step 3 Place the CS-6306R in a good position so as to easily operate it, and have an appropriate power source and good grounding point.

Step 4 Place the CS-6306R safely on the workbench; avoid obstructions on any side of the Chassis Switch.

3.2 Rack-mounting Installation

Caution

During the installation, make sure the device does not slip from your grasp, or else it may cause damage to the device or may even hurt the installer. Please also note the hardware must be placed in the rack properly; if not, the hardware may fall off from the rack, causing harm to someone nearby. Double-check it after the installation.

To install the CS-6306R in a 19-inch standard rack, follow the instructions described below.

Step 1 Place your CS-6306R on a hard flat surface, with the front panel positioned towards your front side.

Step 2 Secure the brackets tightly on the CS-6306R as shown in Figure 3-1.

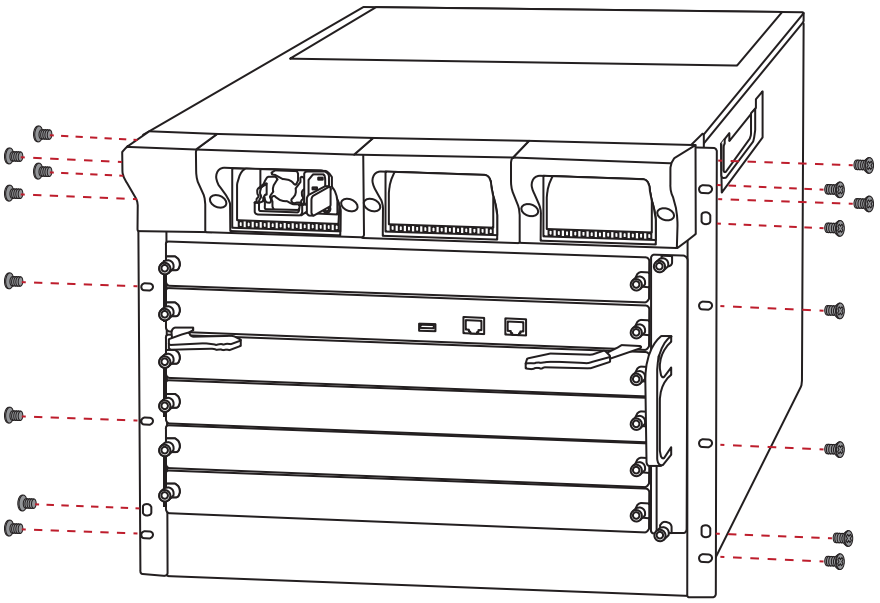

Figure 3-1: Rack-mounting Brackets

Caution

You must use the screws supplied with the mounting brackets. Damage caused to the parts by using incorrect screws would invalidate your warranty.

Step 3 After the brackets are attached to the CS-6306R, use suitable screws to securely attach the brackets to the rack, as shown in Figure 3-2.

Note

Please make sure the device does not slip through your grasp, or else it may cause damage to the device or may even hurt the installer.

The handles are designed for sliding into cabinet only; please don't use handles to lift the Chassis Switch.

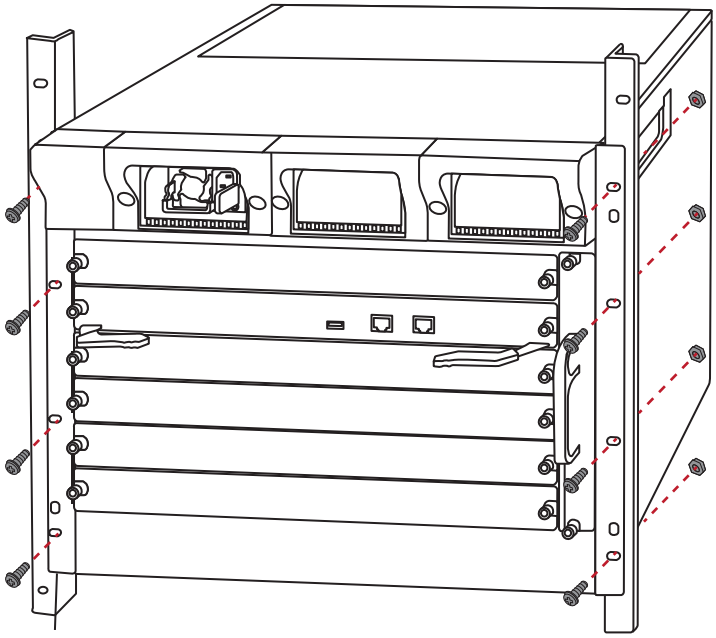

Figure 3-2: Mounting the CS-6306R in a Rack

3.3 Chassis Switch Grounding

A good grounding system is the groundwork for the smooth and safe operation of the CS-6306R, and an excellent way to prevent lightning strikes and resistance interference. Please follow the CS-6306R grounding specification instructions, verify the installation site's grounding condition and ensure proper grounding accordingly.

■ Proper Grounding

When using an AC power source, the device must be grounded with the green and yellow ground cables; otherwise, shock hazards may occur when insulation resistance between the internal power supply and the chassis degrades.

■ Lightning Protection Grounding

The lightning protection system is an independent system consisting of a lightning rod, conductor and connection joint with the grounding system. The grounding system usually is shared with the power reference grounding, and green and yellow ground cable grounding. Lightning protection grounding is a building requirement, not a specific requirement of the Chassis Switch.

■ Electromagnetic Compliance Grounding

This refers to the grounding in compliance with CS-6306R electromagnetic compatibility requirements, including shielded grounding, filter grounds, noise, and interference control and level reference. The overall grounding requirements are the sum total of the above. Ground resistance value should be less than 1 ohm.

The CS-6306R provides chassis grounding post in the lower front chassis, marked as "GND". Chassis protection grounding should be properly connected to the rack grounding connector.

The ground cabling procedures are listed below:

Step 1 Remove the nuts from the front chassis grounding posts.

Step 2 Wrap one end of the green and yellow grounding cable to the grounding posts.

Step 3 Attach the grounding post nut and tighten it well.

Step 4 Attach the other end of the grounding cable to the rack grounding connector.


Note

The grounding cable should be made of a good conductor, and the diameter should be determined by the possible maximum current that may pass through. Bare conductor cabling is forbidden. The combined grounding resistance value should be less than 1 ohm.

3.4 Module Installation

The installation procedure is the same for all cards, as shown below:

Note

Either Slot 5 or Slot 6 is used to install a **management module**. Make sure to power off the Chassis Switch when installing the module; otherwise, the Chassis Switch will not operate normally. The Chassis Switch supports a maximum of 2 management modules **(CS6-MCU)** placed in Slots 5 and 6 for redundancy.

Step 1 Power down the CS-6306R (Hot-swapping is supported by optional modules for the CS-6306R. However, for better convenience, it is recommended to power down the CS-6306R before installing the modules, if no module in the Chassis Switch is running.).

Step 2 Ensure proper grounding of the CS-6306R.

Step 3 Loosen the panel fasteners, securing the back plate by turning them counterclockwise, and then remove the back plate.

Step 4 Align the rail and insert the optional module into the slot; you can use the metal handle on the front plate of the module to ensure good contact. Then lock the module with the panel fasteners in the front plate.

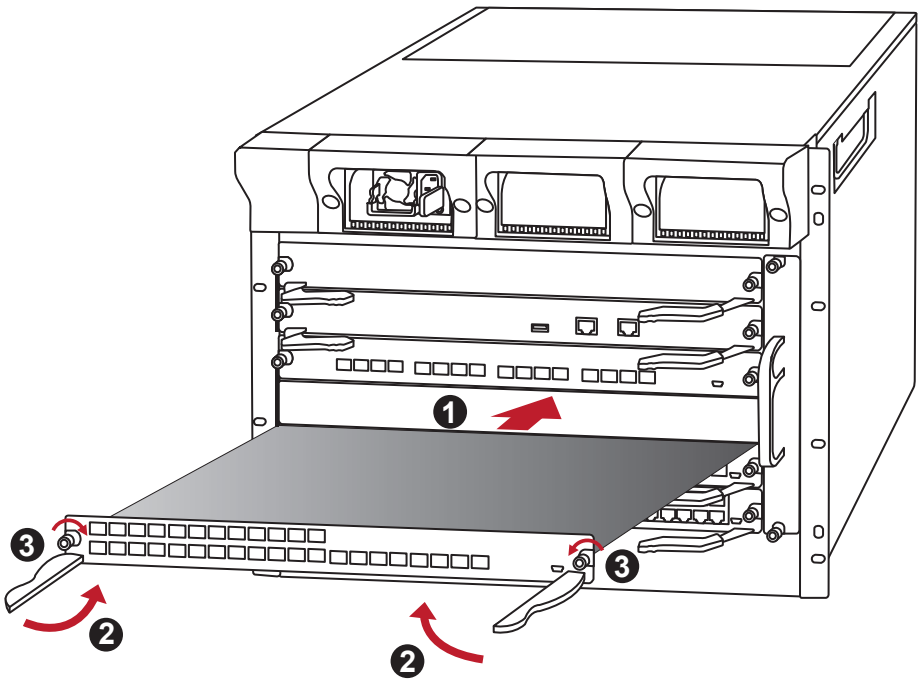

Figure 3-3: Inserting the Optional Module into the Slot of CS-6306R

3.5 Removing and Installing the Dust Gauze

Dust gauze is provided in the CS-6306R, which can be installed and removed from the back of the CS-6306R in the right section. The dust gauze is meant to prevent large debris or particles in the air from being ingested into the Chassis Switch. Please perform cleaning on a regular basis according to the site conditions.

Follow steps below:

Step 1 Loosen the 2 panel fasteners in the dust gauze.

Step 2 Draw the dust gauze out smoothly by holding the 2 screws.

Step 3 Clean the dust gauze with a brush (never wash with any liquid).

Step 4 Insert the gauze back to its original position in the Chassis Switch.

Step 5 Tighten the panel fasteners.

The installation and removal of the dust gauze are shown below:

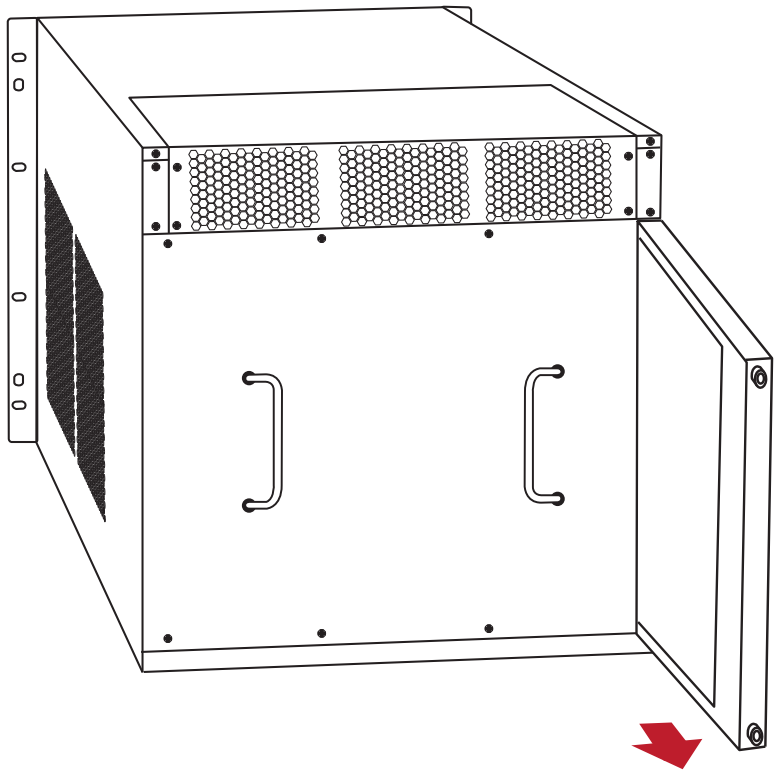

Figure 3-4: IInstallation and Removal of the CS-6306R Dust Gauze

3.6 Removing and Installing the Fan Tray

One fan tray in the right section of the CS-6306R can be serviced from the front. The installation and removal of the fan tray are relatively simple. Please refer to the following procedure for reference.

Removing the Fan Tray

Step 1 Loosen the 2 screws on the front panel of the fan tray.

Step 2 Hold the handle on the front panel of the fan tray with your middle and ring fingers, press the locker slightly down, and the fan tray can be drawn out smoothly.

Installing the Fan Tray

Step 1 Just hold the fan tray in the correct direction, and align with the corresponding slot and push to secure.

Step 2 Tighten the panel fasteners on the front panel.

The installation and removal of a fan tray are shown below:

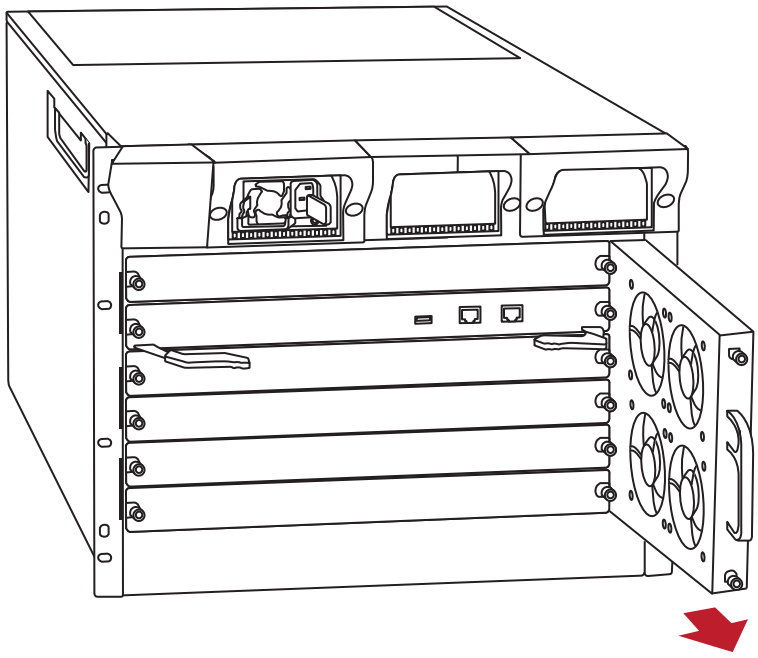

Figure 3-5: Installation and Removal of the Fan Tray

3.7 Installing and Removing the Power Supply Unit

Power down the CS-6306R (Hot-swapping is supported by power supply modules for the CS-6306R. However, for better convenience, it is recommended to power down the CS-6306R before installing the power supply modules).

To install a power supply unit into the CS-6306R, please slide it into the compartment.

To remove a power supply unit from the CS-6306R, press and hold the blue lever to the left till it is totally pulled out from the power supply unit.

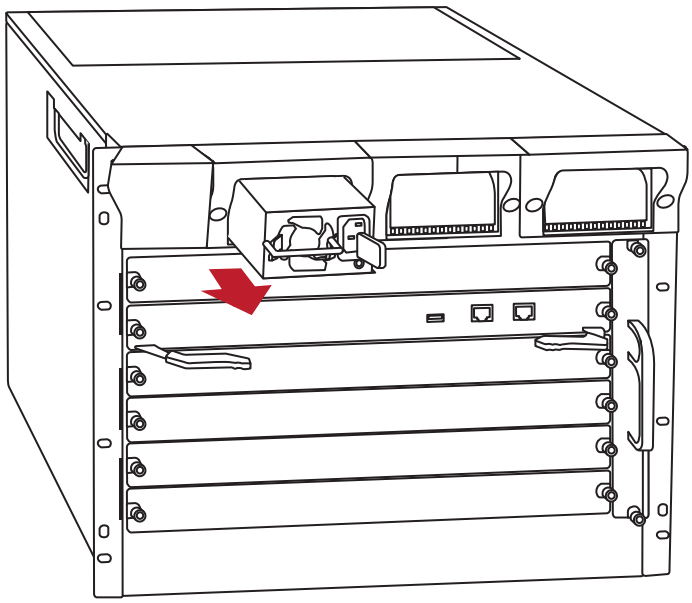

Figure 3-6: Installing and Removing the Power Supply Unit

3.8 Installing Wire Rack in the Chassis Switch

You can see the front side of the CS-6306R with the wire rack slot in the left section .The installation and removal of the wire rack are relatively simple. Please refer to the following procedure for reference.

Step 1 Combine three of the wire rack unit.

Step 2 Install it in the wire rack and fasten 6 screws into the CS-6306R on the left section, as shown in Figure 3-7.

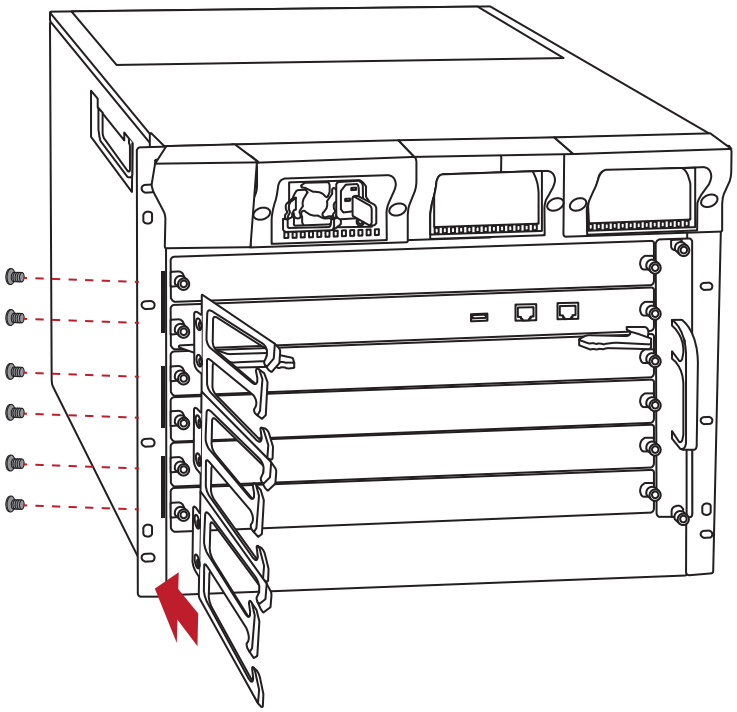

Figure 3-7: Installing It in the Wire Rack

4. Chassis Switch Management

To set up the Chassis Switch, the user needs to configure the Chassis Switch for network management. The Chassis Switch provides two management options: **Out-of-Band management** and **In-Band management**.

■ Out-of-Band Management

Out-of-band management is the management through Console interface.

■ In-Band Management

In-band management refers to the management by logging to the Chassis Switch using **Telnet**, **HTTPs**, or using **SNMP** management software to configure the Chassis Switch. In-band management enables the management of the Chassis Switch to attach some devices to the Switch. The following procedure is required to enable In-band management:

1. Logging on to console
2. Assigning/Configuring IP addres
3. Creating a remote login account
4. Enabling HTTPs or Telnet server on the Managed Switch

If in-band management fails, due to Chassis Switch configuration changes, out-of-band management can be used for configuring and managing the Chassis Switch.


Note

The Chassis Switch is shipped with **Management Port** IP address **192.168.1.1/24** assigned and **VLAN 1 interface** IP address **192.168.0.100/24** assigned by default. User can assign another IP address to the Chassis Switch via the Console interface to be able to remotely access the Chassis Switch through Telnet or HTTPs.

5. Requirements

- **Workstations** running Windows 10/11, MAC OS 10.16 or later, Linux, UNIX, or other platforms are compatible with TCP/IP Protocols.
- **Serial Port Connection** (Terminal)
  - The above Workstations come with COM Port (DB9) or USB-to-RS232 converter.
  - The above Workstations have been installed with terminal emulator, such as Tera Term or PuTTY.
  - Serial cable -- One end is attached to the RS232 serial port, while the other end to the console port of the Managed Switch.
- **Ethernet Port Connection**
  - Network cables -- Use standard network (UTP) cables with RJ45 connectors.
  - The above PC is installed with Web browser and JAVA runtime environment plug-in.


Note

It is recommended to use Google Chrome or above to access the Managed Switch. If the Web interface of the Managed Switch is not accessible, please turn off the anti-virus software or firewall and then try it again.

6. Terminal Setup

To configure the system, connect a serial cable to a **COM port** on a PC or notebook computer and to serial (console) port of the CS-6306R Chassis Switch. The console port of the Chassis Switch is DCE already, so that you can connect the console port directly through PC without the need of Null Modem.

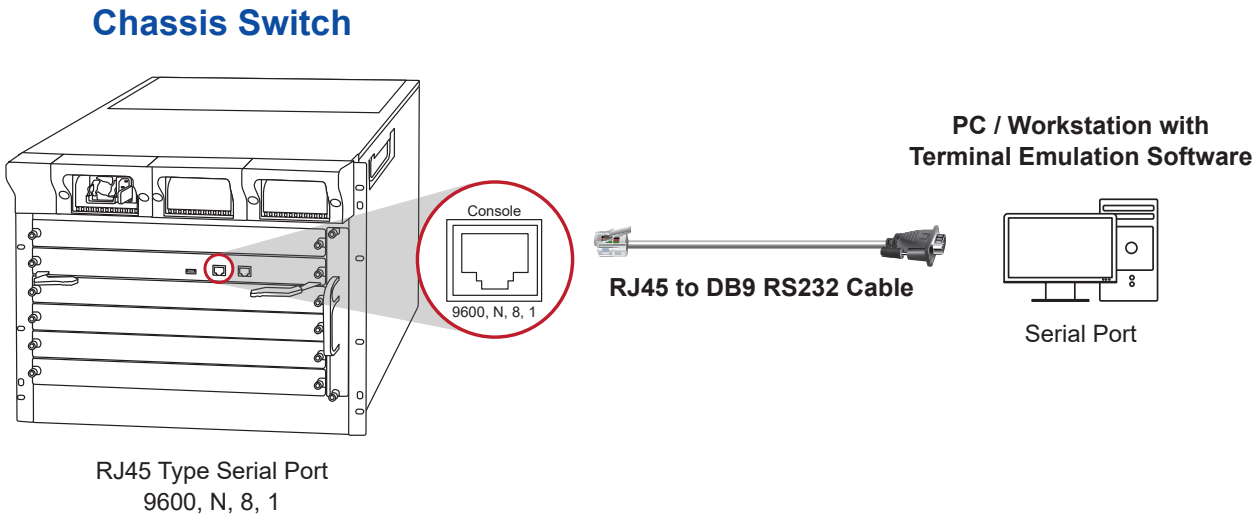

Figure 6-1: CS-6306R Chassis Switch Console Connection

A terminal program is required to make the software connection to the CS-6306R Chassis Switch. Putty or Tera Term may be a good choice.

1. Run terminal program Tera Term on the OS.
2. When the following screen appears, make sure that the COM port should be configured as:

- Baud Rate: 9600
- Data Bits: 8
- Parity: None
- Stop: 1
- Flow Control: None

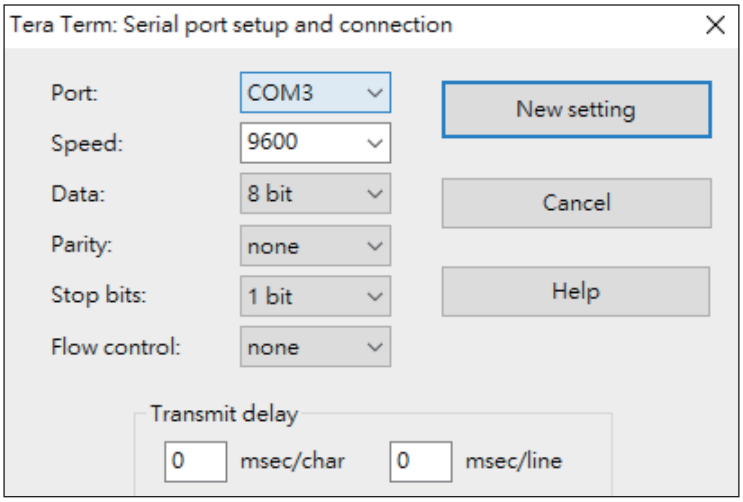

Figure 6-2: COM Port Configuration

6.1 Logging on to the Console

Once the terminal is connected to the Chassis Switch, power on the CS-6306R Chassis Switch, and the terminal will display "running testing procedures".

Then, the following message asks the login user name and password. The factory default user name and password are as follows and the login screen in Figure 6-3 appears.

Note

The following console screen is based on the firmware version before **September of 2024**.

Username: **admin**
Password: **admin**

```
User Access Verification

Username: admin
Password:

                Welcome to PLANET CS-6306R Chassis Switch

Switch>Jan  1 01:23:41 User admin logged in from  on console 0

Switch>
```

Figure 6-3: CS-6306R Chassis Switch Console Login Screen

Note

The following console screen is based on the firmware version of **September of 2024 or after.**

Username: **admin**
Password: **sw + the last 6 characters of the MAC ID in lowercase**

Find the MAC ID on your device label. The default password is "sw" followed by the last six lowercase characters of the MAC ID.

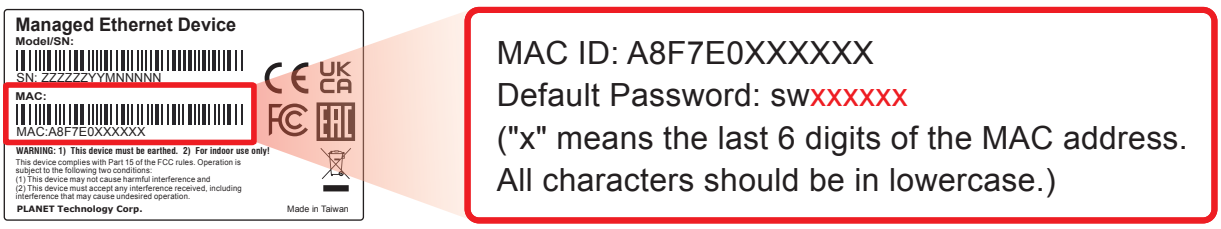

Figure 6-4: MAC ID Label

Enter the default username and password, then set a new password according to the rule-based prompt and confirm it.

Figure6-5: Managed Switch Console Login Screen

The user can now enter commands to manage the Chassis Switch. For a detailed description for the commands, please refer to the following chapters.

Note

1. For security reason, please change and memorize the new password after this first setup.
2. Accept command in lowercase or uppercase letter under console interface.

6.2 Configuring IP Address

■ Management Port

The IP address configuration commands for **Management module** interfaces are listed below:

```
Switch# enable
Switch# config
Switch_config# interface gigaEthernet 5/0
Switch_config_g5/0# ip address 192.168.1.1 255.255.255.0
```

The previous command would apply the follow settings for the Chassis Switch.

IPv4 Address: 192.168.1.1
Subnet Mask: 255.255.255.0

Figure 6-6: Configuring IPv4 Address Screen

■ Interface VLAN 1

Note

The Switch Module interface default setting is in the disable mode. To log in and manage the Chassis Switch through the switch module, an interface on switch module is required.

The configuration commands are as follows:

```
Switch# config
Switch_config# interface vlan 1
Switch_config_v1# ip address 192.168.0.100 255.255.255.0
```

The previous command would apply the following settings for the CS-6306R.

IPv4 Address: 192.168.0.100
Subnet Mask: 255.255.255.0

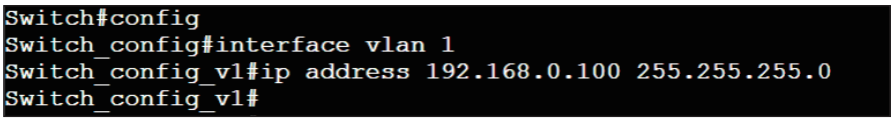

Figure 6-7: Configuring IPv4 Address of Interface VLAN 1 Screen

To check the current IP address or modify a new IP address for the Chassis Switch, please use the procedure as follows:

■ Show the current IP address

1. On "Switch#" prompt, enter **"show ip interface brief"**.
2. The screen displays the current IP address, Subnet Mask and Gateway as shown in Figure 6-8.

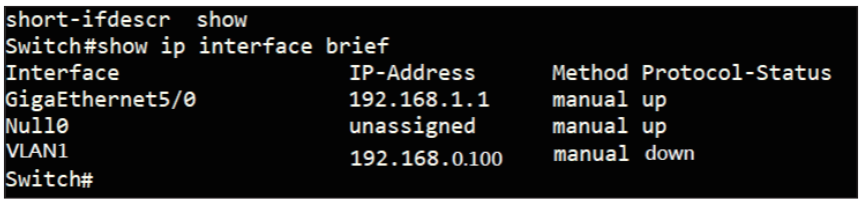

Figure 6-8: Show IP Information Screen

If the IP address is successfully configured, the Chassis Switch will apply the new IP address setting immediately. You can access the Web interface of the CS-6306R Chassis Switch through the new IP address.

Note

If you are not familiar with console command or the related parameter, enter "**help**" anytime in console to get the help description.

6.3 Telnet Management

Log in to the Telnet configuration interface. The commands used in the Telnet CLI interface after login is the same as that in the Console interface.

Default IP Address: **192.168.1.1**
Username: **admin**
Password: **admin**

Figure 6-9: Telnet Configuration Interface

6.4 Saving the Configuration

In Chassis Switch, the running configuration file stores in the RAM. In the current version, the running configuration sequence running-config can be saved from the RAM to FLASH by **write** command, so that the running configuration sequence becomes the start up configuration file, which is called configuration save.

Switch# **write all**

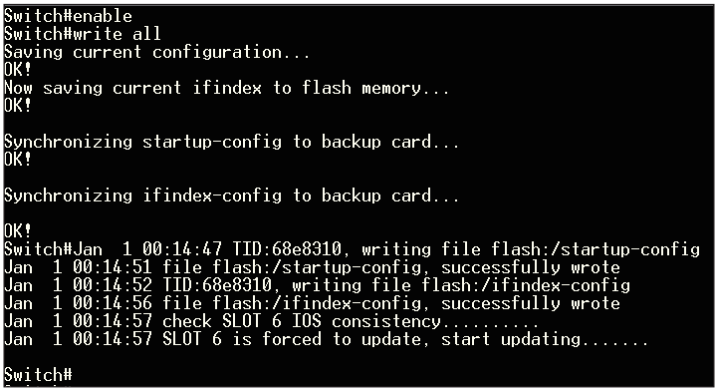

Figure 6-10: Copying Running-config Startup-config Screen

7. Starting Web Management

The CS-6306R, like the CS6-S16X and CS6-S24S8X, needs a switch module to configure to **Web Management** by ***Interface VLAN 1***.

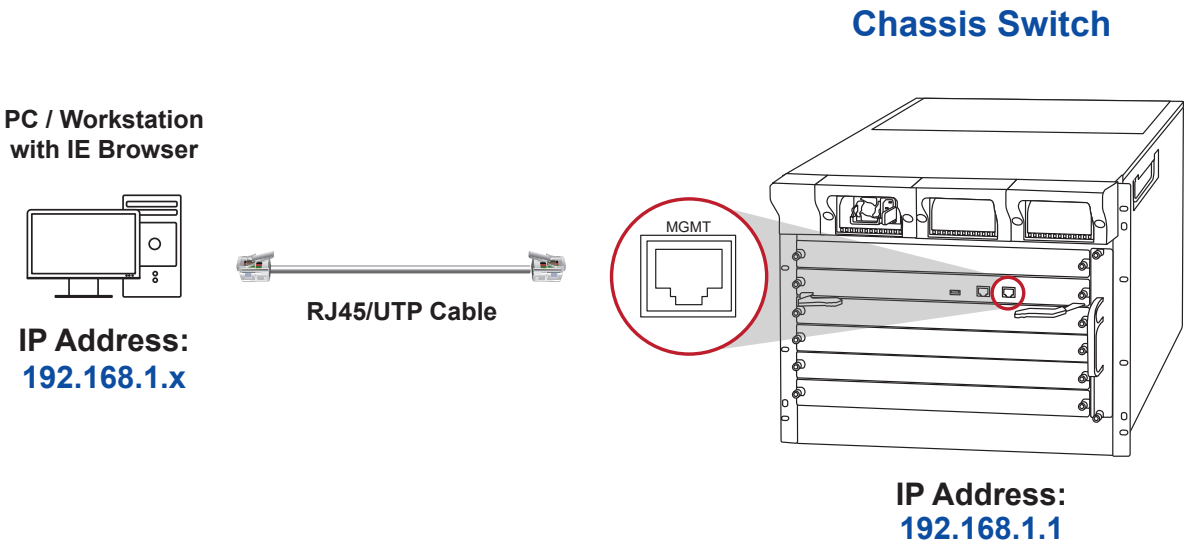

Figure 7-1: IP Management Diagram

The following shows how to start up the **Web Management** of the Managed Switch. Note the Managed Switch is configured through an Ethernet connection. Please make sure the manager PC must be set to the same **IP subnet address**.

1. Start up in Web Management from Management Port.

The CS-6306R chassis switch default IP address is configured with ***192.168.1.1 on Management Port***, then the manager PC should be set to **192.168.1.x** (where x is a number between 1 and 254, except 1), and the default subnet mask is 255.255.255.0

2. Start up in Web Management from VLAN 1

The CS-6306R chassis switch, like CS6-S16X or CS6-S24S8X, needs to include switch modules to enable the VLAN 1 switch port.

The **Interface VLAN 1** default IP address is configured with ***192.168.0.100***, then the manager PC should be set to **192.168.0.x** (where x is a number between 1 and 254, except 100), and the default subnet mask is 255.255.255.0.

7.1 Web Login the Chassis Switch

1. Use Google Chrome or above Web browser, enter IP address ***https://192.168.1.1*** (that you have just set in console) to access the Web interface.

Note

The following console screen is based on the firmware version before **September of 2024.**

2. When the following dialog box appears, please enter the configured user name **"admin"** and password **"admin"** (or the username/password you have changed via console). The login screen in Figure 7-2 appears.

Default IP Address: **192.168.1.1**
Username: **admin**
Password: **admin**

Figure 7-2: Web Login Screen

3. After entering the password, the main screen appears as Figure 5-6 shows.

Note

The following web screen is based on the firmware version of **September of 2024 or after**.

4. When the following dialog box appears, please enter the default user name and password. Refer to **Section 6.1** to determine your initial login password.

Default IP Address: **192.168.0.254**
Default User Name: **admin**
Default Password: **sw + the last 6 characters of the MAC ID in lowercase**

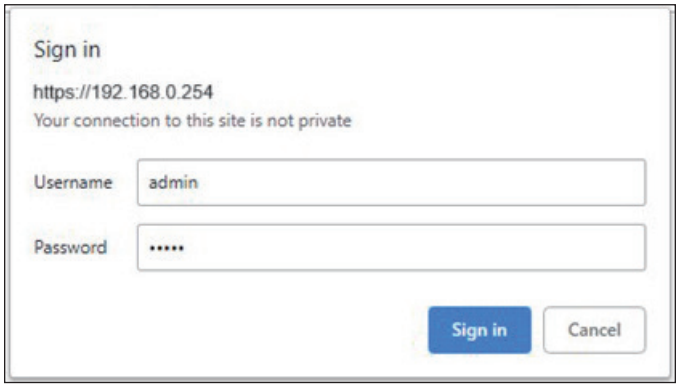

Figure 7-3: Login Screen

After logging in, you will be prompted to change the initial password to a permanent one.

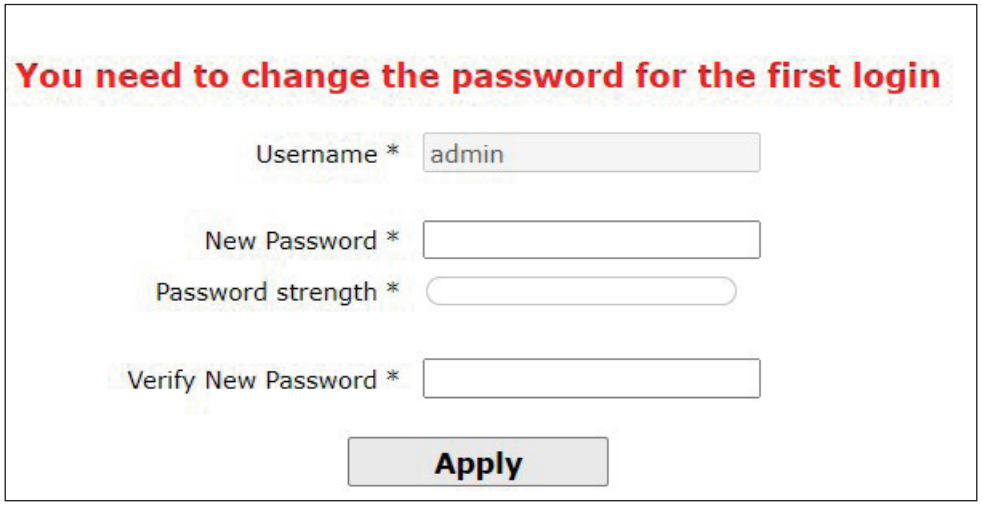

Figure 7-4: Create a New Password

5. After entering the password, the main screen appears as shown in Figure 7-5.

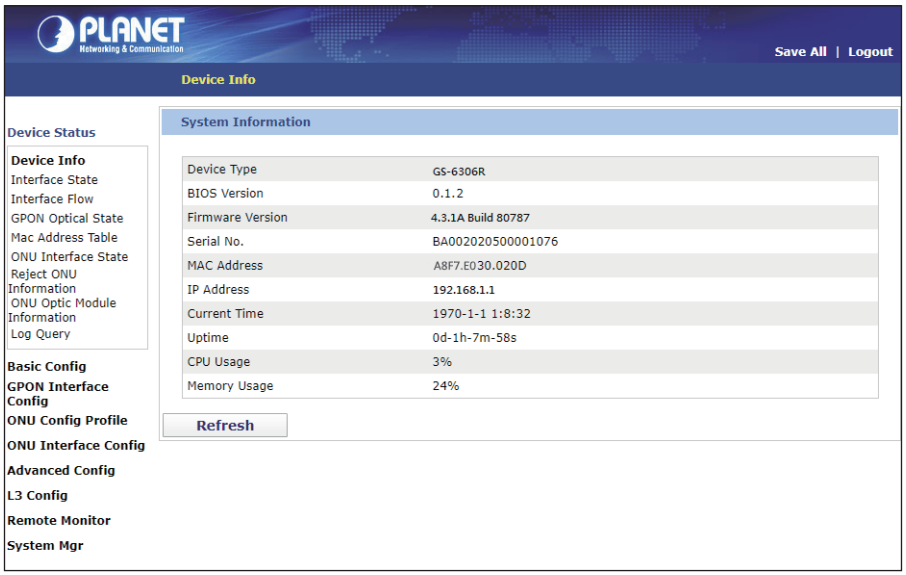

Figure 7-5: Web Main Screen of CS-6306R Chassis Switch

6. The Chassis Switch Menu on the left side of the Web page lets you access all the commands and statistics the Chassis Switch provides.

Now, you can use the Web management interface to continue the Chassis Switch management or manage the Chassis Switch by console interface. Please refer to the user manual for more detailed information.

7.2 Saving Configuration via the Web

To save all applied changes and set the current configuration as a startup configuration, the startup-configuration file will be loaded automatically across a system reboot.

Click **"Save All"** on the top control bar. **"Save All"** function is equivalent to the execution of the **write all** command.

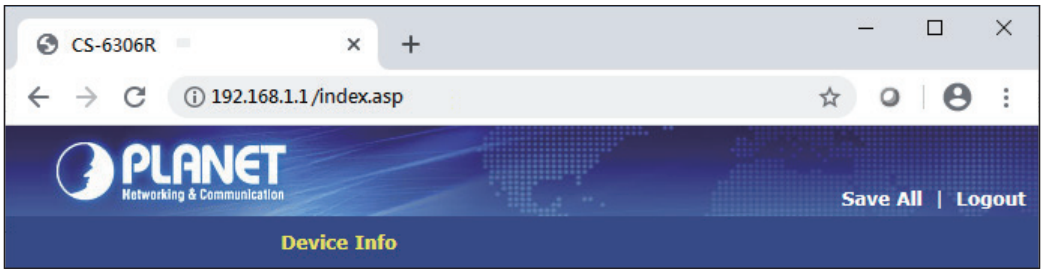

Figure 7-6: Save Configuration

Press the **"OK"** button to save current running-configuration to start up configuration.

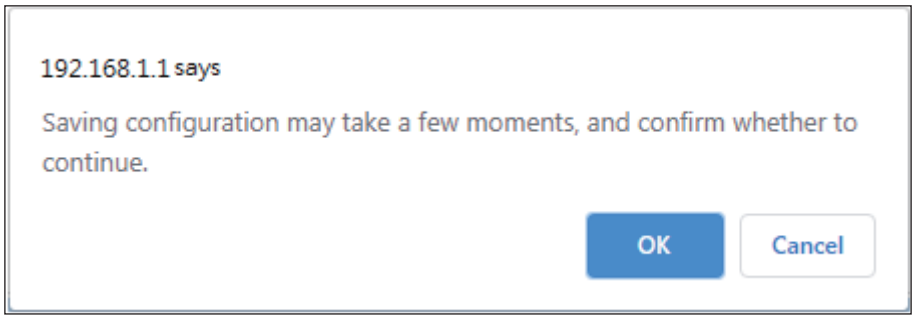

Figure 7-7: Save Configuration

8. Recovering Back to Default Configuration

After logging on to the console, the user can now enter the command "Recovering Back to Default Configuration". For a detailed description of the commands, please refer to the following sections.

```
Switch# delete startup-config
this file will be erased,are you sure?(y/n)y
Switch# reboot
Do you want to reboot the Switch(y/n)?y
```

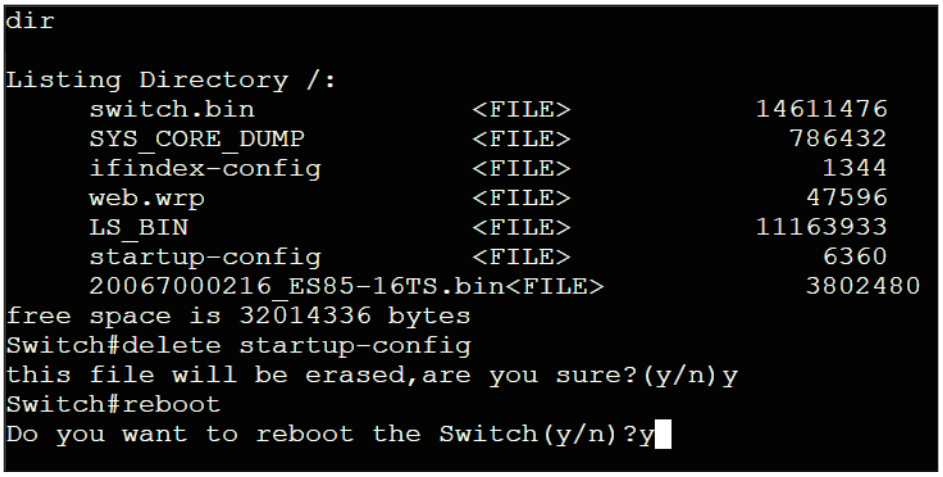

Figure 8-1 CS-6306R Recovering Back to Default Configuration

The previous command would recover back to default settings for the Chassis Switch. The IP address to the default **VLAN 1 interface** is **"192.168.0.100"**, while default **Management Port** IP address is **"192.168.1.1"**, The login default user name is **"admin"** and password is **"admin"**. After the device is rebooted, you can log in the management Web interface within the same subnet of 192.168.0.xx or 192.168.1.xx.

9. Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource at the PLANET Web site first to check if it could solve your issue. If you need more support information, please contact PLANET support team.

PLANET online FAQs:
https://www.planet.com.tw/en/support/faq.php?type=1

Support team mail address:
support@planet.com.tw

CS-6306R User's Manual
https://www.planet.com.tw/en/support/download.php?&method=keyword&keyword=CS-6306R&view=3#list

Copyright © PLANET Technology Corp. 2024.
Contents are subject to revision without prior notice.
PLANET is a registered trademark of PLANET Technology Corp.
All other trademarks belong to their respective owners.