# SGL4010

User Manual

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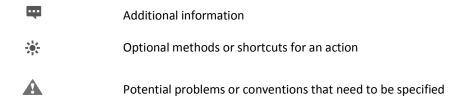
# **1** Getting Started

## 1.1Welcome to the CPE

In this document, the LTE (Long Term Evolution) CPE (customer premises equipment) will be replaced by the CPE. The CPE support B2/4/5/8/12/13/14/25/26/66/38/41/42/43/48/53.

And its tx power is  $23 \pm 2$ .

Carefully read the following safety symbols to help you use your CPE safely and correctly:



Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

The customer does not have permission to modify the parameters of the device.

The device usage scenario is 20cm away from the human body.





No professional installation of equipment is required.

# **1.2Computer Configuration Requirements**

| Item                                     | Requirement  |  |  |
|--|--|--|--|
| CPU                                      | Pentium 500 MHz or higher                          |  |  |
| Memory                                   | 128 MB RAM or higher                               |  |  |
| Hard disk                                | 50 MB available space                              |  |  |
| Operating system                         | Microsoft: Windows XP, Windows Vista, or Windows 7 |  |  |
|  | • Mac: Mac OS X 10.5 or higher                     |  |  |
| Display resolution                       | 1024 x 768 pixels or higher                        |  |  |
| Browser • Internet Explorer 7.0 or later |  |  |  |
|  | • Firefox 3.6 or later                             |  |  |
|  | Opera 10 or later                                  |  |  |
|  | • Safari 5 or later                                |  |  |
|  | Chrome 9 or later                                  |  |  |

For optimum performance, make sure your computer meets the following requirements.

# 1.3Logging In to the Web Management Page

Use a browser to log in to the web management page to configure and manage the CPE.

The following procedure describes how to use a computer running Windows XP and Internet Explorer 7.0 to log in to the web management page of the CPE.

- 1. Connect the CPE properly.
- 2. Launch Internet Explorer, enter <u>http://192.168.1.1</u> in the address bar, and press Enter. As shown in Figure 1-1.

http://192.168.1.1

Figure 1-1

- 3. Enter the user name and password, and click Log In.
- 4. You can log in to the web management page after the password is verified. As shown in Figure 1-2.

| 4 | GLTE       |
|---|------------|
| ÷ | superadmin |
| 0 |            |
|   | Login      |

Figure 1-2

The default user name and password are both admin. If you want to view or configure the CPE more, you should use the super account to log in to the web management page. The default super user name is superadmin, and the password is admin.

To protect your CPE from unauthorized access, change the password after your first login.

The CPE supports diagnostic function. If you encounter problems, please contact customer service for the specific using method.

To ensure your data safety, it is recommended that you turn on the firewall, and conserve your login and FTP password carefully.

# 2 Overview

# 2.1Viewing Current Connection

To view the current connection, perform the following steps:

Choose Overview;

In the **Current Connection** area, view the connection status, such as DL/UL Data Rate and Online time. As shown in Figure 2-1.

| Current | Connection |  |
|---------|------------|--|
| current | connection |  |

| DL Data Rate | Current: 63 KB/s   Max.: 63 KB/s   Min.: 0 Bytes/s |
|--------------|--|
| UL Data Rate | Current: 51 KB/s   Max.: 91 KB/s   Min.: 0 Bytes/s |
| Online Time  | 00d 00h 33min                                      |

Figure 2-1

# 2.2Viewing LTE Status

To view the LTE network status, perform the following steps:

- 1. Choose Overview;
- 2. In the **LTE Status** area, view the information about Connect status, Mode, Cell ID, Signal quality and so on. As shown in Figure 2-3.

| LTE Status |           |  |
|------------|-----------|--|
| Status     | Connected |  |
| Mode       | TDD       |  |
| Cell ID    | 203       |  |
| RSRPO      | -70 dBm   |  |
| RSRP1      | -81 dBm   |  |
| RSRQ       | -6 dB     |  |
| SINR       | 30 dB     |  |
|            | E: 0.0    |  |



# 2.3Viewing WAN Status

To view the WAN status, perform the following steps:

- 1. Choose Overview;
- 2. In the **WAN Status** area, view the information about Connect Mode, IP, Subnet Mask, DNS Server and so on. As shown in Figure 2-4.

| WAN Status   |                    |
|--------------|--------------------|
| Connect Mode | NAT                |
| IP Address   | <u>100.0.10.60</u> |
| Subnet Mask  | 255.0.0.0          |
| DNS Server   | 172.16.34.120      |
|              | 114.114.114.114    |

Figure 2-4

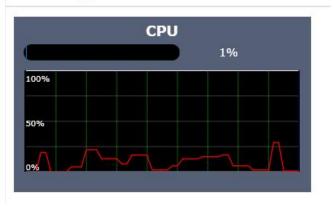
# **3** Statistics

# 3.1Viewing CPU Usage

To view the CPU usage, perform the following steps:

- 1. Choose Statistics;
- 2. In the **CPU Usage** area, view the CPU usage information, such as Current CPU usage, Max CPU usage, Min CPU usage. As shown in Figure 3-1.

# **CPU Usage**

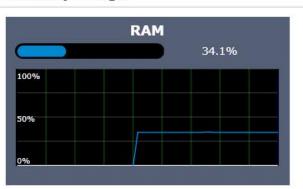




# 3.2Viewing Memory Usage

To view the memory usage, perform the following steps:

- 1. Choose Statistics;
- 2. In the **Memory Usage** area, view the memory usage information, such as Total memory, Current memory usage, Max memory usage and Min memory usage. As shown in Figure 3-2.







# **3.3Viewing APN List**

To view the APN list, perform the following steps:

- 1. Choose Statistics;
- 2. In the **APN List**, view the information about APN information. As shown in Figure 3-3.

| APN List |         |               |             |
|----------|---------|---------------|-------------|
| APN Name | Status  | IP Address    | Subnet Mask |
| apn1     | Enable  | 100.16.14.121 | 255.0.0.0   |
| apn2     | Disable | -             |             |
| apn3     | Disable |               | -           |
| apn4     | Disable |               | -           |

Figure 3-3

# **3.4Viewing Throughput Statistics**

To view the Throughput Statistics, perform the following steps:

- 1. Choose Statistics;
- 2. In the **Throughput Statistics** area, view the throughput statistics, such as APN throughput and LAN throughput.
- 3. In this area, also you can choose and click the button **Reset** to empty the throughput statistics. As shown in Figure 3-4.

| Port | Received      |         |        |         |               | Sent    | nt     |         |
|------|---------------|---------|--------|---------|---------------|---------|--------|---------|
|      | Total Traffic | Packets | Errors | Dropped | Total Traffic | Packets | Errors | Dropped |
| LAN  | 2.97 MB       | 18066   | 0      | 0       | 17.44 MB      | 24735   | 0      | 0       |
| apn1 | 12.96 MB      | 16883   | 0      | 0       | 1.65 MB       | 12366   | 0      | 0       |
| apn2 | 0 Bytes       | 0       | 0      | 0       | 0 Bytes       | 0       | 0      | 0       |
| apn3 | 0 Bytes       | 0       | 0      | 0       | 0 Bytes       | 0       | 0      | 0       |
| apn4 | 0 Bytes       | 0       | 0      | 0       | 0 Bytes       | 0       | 0      | 0       |

Figure 3-4

# **3.5Viewing Device List**

To view the device list, perform the following steps:

Choose Statistics;

In the **Device List** area, view the device information which connect to the CPE, such as Device name, Mac address, IP address and Lease time. As shown in Figure 3-5.

| Device List |             |                   |               |                |      |  |  |
|-------------|-------------|-------------------|---------------|----------------|------|--|--|
| Index       | Device Name | MAC Address       | IP Address    | Lease Time     | Туре |  |  |
| 1           | jingjin-PC  | c0:f8:da:ab:38:64 | 192.168.1.173 | 0days 11:59:51 | WIFI |  |  |



# 4 Update

### 4.1 Version Manager

This function enables you to upgrade the software version of the CPE to the latest version. It is recommended that you upgrade the software because the new version, certain bugs have been fixed and the system stability is usually improved.

## **Viewing Version Info**

To view the version info, perform the following steps:

- 1. Choose Update>Version Manager.
- 2. In the **Version Info** area, you can view the product name and software version. As shown in Figure 4-1.

| Overview   Statistics | Update          | Settings                 |                          |  |  |
|-----------------------|-----------------|--------------------------|--------------------------|--|--|
| 🕀 Version Manager     | 1               |                          |                          |  |  |
| Auto Upgrade          | Version Manager |                          |                          |  |  |
|                       |                 | Version Information      |                          |  |  |
|                       | 1               | Product Model            | ZS321                    |  |  |
|                       | 3               | Running software version | M-IDU-20160324_V1.1      |  |  |
|                       | 3               | Backup software version  | M-IDU-20160324_V1.1      |  |  |
|                       | 1               | Module Version           | CAT6_BYPASS_0.3.2.9_V0.8 |  |  |
|                       |                 | Local Upgrade            |                          |  |  |
|                       |                 | Version File 选择文件        | 未选择任何文件                  |  |  |
|                       |                 | Upgrade                  |                          |  |  |

Figure 4-1

# **Version Upgrade**

To perform an upgrade successfully, connect the CPE to your computer through a network cable, save the upgrade file on the computer, and make sure the CPE is not connected to anything other than a power adapter and the computer.

To perform an upgrade, perform the following steps:

- 1. Choose Update>Version Manager.
- 2. In the Version Upgrade area, click Browse. In the displayed dialog box, select the target

software version file.

- 3. Click **Open**. The dialog box choses. The save path and name of the target software version file are displayed in the Update file field.
- 4. Click Submit.
- 5. The software upgrade starts. After the upgrade, the CPE automatically restarts and runs the new software version. As shown in Figure 4-2.
  - During an upgrade, do not power off the CPE or disconnect it from the computer.

| grade        |      |         |  |
|--------------|------|---------|--|
| Version File | 选择文件 | 未选择任何文件 |  |
| Submit       |      |         |  |
|              |      |         |  |

Figure 4-2

### 4.2Auto upgrade

To perform a ftp auto upgrade successfully, make sure the CPE is connected to the Internet.

To perform a ftp auto upgrade, perform the following steps:

Choose Update>Auto upgrade.

Enable auto upgrade.

If you want to check new firmware after connect to Internet, you need to enable the item of **Check new firmware after connect to Internet**.

Set a ftp address to the Upgrade folder box.

Set Version file.

Set User name and Password.

Set the Interval of checking new firmware.

Set Start time.

Set Random time.

Click **Submit**. As shown in Figure 4-3.



The CPE will automatically upgrade according to the setting. During an upgrade, do not disconnect the power supply or operate the CPE.

| Overview   Statistics | Update | Settings                  |                            |   |
|-----------------------|--------|---------------------------|----------------------------|---|
| 🕸 Version Manager     |        |                           |                            |   |
| P Auto Upgrade        | Au     | to Upgrade                |                            |   |
|                       |        | Settings                  |                            |   |
|                       |        | Auto Upgrade              | <ul> <li>Enable</li> </ul> |   |
|                       |        | Check New FW after connec | ted 🔲 Enable               |   |
|                       |        | Upgrade Folder            | ftp 🔻 ://                  | * |
|                       |        | Version File              | version.txt *              |   |
|                       |        | Username                  | admin *                    |   |
|                       |        | Password                  | *                          |   |
|                       |        | Check New FW Every        | 24                         |   |
|                       |        | Start Time(24hrs)         | 0                          |   |
|                       |        | Random Time               | 3 🔻                        |   |
|                       |        |                           |                            |   |

Figure 4-3

# **5** Settings

# 5.1 Viewing the Device Information

To view the System Information, perform the following steps:

Choose Settings;

In the **System Information** area, view the system status, such as Running time. As shown in Figure 5-1.

### System Information

Running Time

00d 02h 23min

Figure 5-1

# Viewing the Version Information

To view the Version Information, perform the following steps:

- 1. Choose Settings;
- In the Device Information area, view the device information, such as Product name, Product Model, Hardware Version, Software version, UBoot version and CPE SN. As shown in Figure 5-2.

| Version Information |                     |
|---------------------|---------------------|
| Product Model       | ZS321               |
| Hardware Version    | V2.0                |
| Software Version    | M-IDU-20160324_V1.1 |
| UBOOT Version       | V1.0.1              |
| Serial Number       | 022387A180500004    |
| IMEI                | 863491030070095     |
| IMSI                | 460680004600024     |
|                     |                     |



# **Viewing LAN Status**

To view the LAN status, perform the following steps:

Choose Settings;

In the **LAN Status** area, view the LAN status, such as Mac address, IP address and Subnet mask. As shown in Figure 5-4.

#### LAN Status

| MAC Address | A8:93:52:0A:12:90 |
|-------------|-------------------|
| IP Address  | 192.168.0.1       |
| Subnet Mask | 255.255.255.0     |

Figure 5-4

# **5.2Viewing Network**

#### **Network Mode**

To set the network mode, perform the following steps:

#### Choose Network >WAN Settings;

In the Network Mode area, select a mode between NAT and ROUTER;

Click **Submit**. As shown in Figure 5-5.

| Settings     |               |   |  |  |
|--------------|---------------|---|--|--|
| Network Mode | NAT           | v |  |  |
|              | NAT<br>ROUTER |   |  |  |



# **LTE Settings**

### Settings

To set the LTE network, perform the following steps:

- 1. Choose Network >LTE Settings;
- 2. In the Settings area, you can set the configuration of LTE network;
- 3. In the **Status** area, you can view the LTE network connect status, such as Frequency, RSSI, RSRP, RSRQ, CINR, SINR, Cell ID and so on. As shown in Figure 5-7.

| Device Information | Settings       |           |               |
|--------------------|----------------|-----------|---------------|
| Network            |                |           |               |
| WAN Settings       | Status         | Connected |               |
| LTE Settings       | Connect Method | Auto 🔻    |               |
| Scan Mode          |                |           |               |
| APN Management     |                |           | Submit Cancel |
| PIN Management     | Status         |           |               |
| LAN Settings       | DL MCS         | 0         |               |
| DMZ Settings       | UL MCS         | 0         |               |
| Static Route       |                |           |               |
| Ş M⊦LL             | DL Frequency   | 36600 KHz |               |
| 🖓 Firewall         | UL Frequency   | 36600 KHz |               |
| <\$ VPN            | Bandwidth      | 20 MHz    |               |
| ∰IPv6              | RSSI           | -50 dBm   |               |
| - System           | RSRP0          | -76 dBm   |               |
|                    | RSRP1          | -82 dBm   |               |
|                    | RSRQ           | -6 dB     |               |
|                    | SINR           | 30 dB     |               |
|                    | TX Power       | -7 dBm    |               |
|                    | PCI            | 52        |               |
|                    | CINR0          | 30.3 dB   |               |
|                    | CINR1          | 31.0 dB   |               |
|                    | Cell ID        | 203       |               |
|                    | MCC            | 460       |               |
|                    | MNC            | 68        |               |

```
Figure 5-7
```

#### Connect Method Setting

To set the connect method, perform the following steps:

- 1. Choose Network > LTE Settings;
- 2. In the **Setting** area, Select a connect method between **Auto** and **Manual**. As shown in Figure 5-8.

| Status         | Connected |   |  |
|----------------|-----------|---|--|
| Connect Method | Auto      | • |  |
|                | Manual    |   |  |
|                | Auto      |   |  |



#### Auto Connect LTE Network

To set the CPE automatically connect to the internet, perform the following steps:

- 1. Choose Network > LTE Settings;
- 2. In the **Setting** area, set the connect method as **Auto**, when the LTE network is ready, the CPE will be connected automaticity. As shown in Figure 5-9.

| Status         | Connected |   |
|----------------|-----------|---|
| Connect Method | Auto      | Y |
| Status         |           |   |
| DL MCS         | 28        |   |
| UL MCS         | 22        |   |
| DL Frequency   | 36600 KHz |   |
| UL Frequency   | 36600 KHz |   |
| Bandwidth      | 20 MHz    |   |
| RSSI           | -52 dBm   |   |
| RSRP0          | -78 dBm   |   |
| RSRP1          | -85 dBm   |   |
| RSRQ           | -6 dB     |   |
|                | 30 dB     |   |

#### Manual Connect Mobile Network

To set the mobile network manual connect to the internet, perform the following steps:

- 1. Choose Network > LTE Settings;
- 2. In the **Setting** area, set the connect method as **Manual**, when the LTE network is ready, you can set the CPE connect to the LTE network or disconnect from the LTE network. As shown in Figure 5-10.

| Settings       |            |               |
|----------------|------------|---------------|
| Status         | Connected  |               |
| Connect Method | Manual 🔻   |               |
|                | Disconnect |               |
|                |            | Submit Cancel |
| Status         |            |               |
| DL MCS         | 28         |               |
| UL MCS         | 22         |               |
| DL Frequency   | 36600 KHz  |               |
| UL Frequency   | 36600 KHz  |               |
| Bandwidth      | 20 MHz     |               |
| RSSI           | -52 dBm    |               |
| RSRP0          | -77 dBm    |               |
| RSRP1          | -80 dBm    |               |
| RSRQ           | -6 dB      |               |
| SINR           | 30 dB      |               |
| TX Power       | -6 dBm     |               |
| PCI            | 52         |               |
| CINR0          | 29.3 dB    |               |
| CINR1          | 31.2 dB    |               |

Figure 5-10

# Scan Mode

To set the lte network scan mode, perform the following steps:

#### choose Network>Scan mode;

You can choose full mode, a band the CPE supported

Click Submit.

### Setting Frequency (Earfcn)

To set the frequency, perform the following steps:

- 1 Choose Network>Scan Mode.
- 2 In the **Scan Mode** area, choose **Frequency Lock**.
- 3 In the Frequency Lock area, you can choose a band, then click Add list to

#### choose a Earfcn Number.

4 Click **Submit**. As shown in Figure 5-11.

| Device Information |                              |   |               |  |  |  |
|--------------------|------------------------------|---|---------------|--|--|--|
|                    | Scan Mode                    |   |               |  |  |  |
| WAN Settings       |                              |   |               |  |  |  |
| LTE Settings       |                              |   |               |  |  |  |
| Scan Mode          | To put the new configuration | To put the new configuration into effect, must click Submit button after Add List |               |  |  |  |
| APN Management     |                              |   |               |  |  |  |
| PIN Management     | Cattinge                     |   |               |  |  |  |
| LAN Settings       | Settings                     |   |               |  |  |  |
| DMZ Settings       | Scan Mode                    | Frequency Lock v  |               |  |  |  |
| Static Route       |                              |   |               |  |  |  |
| ∕\$Wi-Fi           | Frequency Lock               |   |               |  |  |  |
| Firewall           | EARFCN                       | 44500 <b>v</b> Ad   | d             |  |  |  |
| K VPN              |                              |   |               |  |  |  |
| ®IPv6              | Frequency Lock L             | ist (Max Limit :5)  |               |  |  |  |
| System             | Index                        | Frequency   | Operation     |  |  |  |
|                    | 1                            | 44500   | Delete        |  |  |  |
|                    |                              |   | Submit Cancel |  |  |  |

Figure 5-11

## **APN Management**

To set and manage APN, perform the following steps:

Choose Network>APN Management.

In the APN Management area, you can set the APN.

Choose a **APN number** which you want to set.

In the **APN Setting** area you can set the APN parameters, such as enable or disable the apn, apn name, username, password and so on.

If you want set a APN as **default gateway**, you should check that is enabled.

Click **Submit.** As shown in Figure 5-12.

| UDevice Information |                     |                 |               |
|---------------------|---------------------|-----------------|---------------|
| A Network           | APN Management      |                 |               |
| WAN Settings        |                     |                 |               |
| LTE Settings        | APN Selection       |                 |               |
| Scan Mode           | APN Number          | <b>#</b> 1 ▼    |               |
| APN Management      | AFININGHOL          | π 1 Ψ           |               |
| PIN Management      | APN Settings        |                 |               |
| LAN Settings        | Enable              | Capital Capital |               |
| DMZ Settings        | Enable              | Enable          |               |
| Static Route        | Profile Name        | apn1 *          |               |
| <del>©</del> ₩i-Fi  | APN Name            | APN1            |               |
| 😡 Firewall          | To H Home           |                 |               |
| 🗳 VPN               | Authentication Type | NONE            |               |
| ∰IPv6               | PDN Type            | IPv4 v          |               |
| 🖨 System            | Default Gateway     | 🖉 Enable        |               |
|                     | Apply To            | TR069           |               |
|                     |                     |                 | Submit Cancel |

#### Figure 5-12

# **PIN Management**

To manage the PIN, you can perform the following operations on the PIN Management page:

- > Enable or disable the PIN verification.
- Verify the PIN.
- Change the PIN.
- Set automatic verification of the PIN. As shown in Figure 5-13

| Device Information |   |  |   |
|--------------------|---|--|---|
|                    | PIN Management                            |  |   |
| WAN Settings       |   |  |   |
| LTE Settings       |   |  |   |
| Scan Mode          | The PIN lock of the USIM card<br>the PIN. | I protects the router against unauthorized accesses to the   | Internet. You can activate, modify, or deactivate |
| APN Management     | ule i liv.                                |  |   |
| PIN Management     | Note:The router cannot provid             | le Internet services when the USIM card is not inserted or t | the PIN verification failed.                      |
| LAN Settings       |   |  |   |
| DMZ Settings       |   |  |   |
| Static Route       | PIN Management                            |  |   |
| रू Wi-Fi           | USIM Card Status                          | USIM Normal  |   |
| <b>V</b> Firewall  | PIN Verification                          | Enable      Disable  |   |
| SVPN               |   |  |   |
| ₿IPv6              | PIN                                       | *  |   |
| System             | Remaining Attempts                        | 3  |   |
|                    |   |  | Submit Cancel                                     |

Figure 5-13

#### Viewing the Status of the USIM Card

To view the status of the USIM card, perform the following steps:

- 1 Choose Network >PIN Management.
- 2 View the status of the USIM card in the USIM card status field.

#### Enabling PIN Verification

To enable PIN verification, perform the following steps:

- 1 Choose Network >PIN Management.
- 2 Set PIN verification to Enable.
- 3 Enter the PIN (4 to 8 digits) in the Enter PIN box.
- 4 Click Submit.

### Disabling PIN Verification

To disable PIN verification, perform the following steps:

- 1 Choose Network >PIN Management.
- 2 Set PIN verification to Disable.
- 3 Enter the PIN (4 to 8 digits) in the Enter PIN box.
- 4 Click Submit.

### Verifying the PIN

If PIN verification is enabled but the PIN is not verified, the verification is required. To verify the PIN, perform the following steps:

- 1 Choose Network >PIN Management.
- 2 Enter the PIN (4 to 8 digits) in the **PIN** box.
- 3 Click Submit.

### Changing the PIN

The PIN can be changed only when PIN verification is enabled and the PIN is verified.

To change the PIN, perform the following steps:

- 1 Choose Network>PIN Management.
- 2 Set PIN verification to **Enable**.
- 3 Set Change PIN to Enable.
- 4 Enter the current PIN (4 to 8 digits) in the **PIN** box.
- 5 Enter a new PIN (4 to 8 digits) in the **New PIN** box.
- 6 Repeat the new PIN in the **Confirm PIN** box.
- 7 Click Submit.

### Setting Automatic Verification of the PIN

You can enable or disable automatic verification of the PIN. If automatic verification is enabled, the CPE automatically verifies the PIN after restarting. This function can be enabled only when PIN verification is enabled and the PIN is verified.

To enable automatic verification of the PIN, perform the following steps:

- 1. Choose Network > PIN Management.
- 2. Set **Pin verification** to **Enable**.
- 3. Set **Remember my PIN** to **Enable**.
- 4. Click **Submit**.

### Verifying the PUK

If PIN verification is enabled and the PIN fails to be verified for three consecutive times, the PIN will be locked. In this case, you need to verify the PUK and change the PIN to unlock it.

To verify the PUK, perform the following steps:

Choose Network> PIN Management.

Enter the PUK in the **PUK** box.

Enter a new PIN in the **New PIN** box.

Repeat the new PIN in the **Confirm PIN** box.

Click Submit.

# **SIM Lock**

If you want to connect a specify network, and the CPE can't connect other network, you can set a SIM lock.

To set the SIM lock, perform the following steps:

- 1. Choose Network>SIM Lock.
- 2. Enter the PLMN in the **PLMN** box.
- 3. Click **Submit**. As shown in Figure 3-9.

| (i) Device Information |                          |   |                   |
|------------------------|--------------------------|---|-------------------|
| 🚠 Network              | SIM Lock                 |   |                   |
| WAN Settings           |                          |   |                   |
| LTE Settings           |                          |   |                   |
| Scan Mode              | To put the new configura | tion into effect, must click Submit butto | on after Add List |
| APN Management         |                          |   |                   |
| PIN Management         | Cottingo                 |   |                   |
| SIM Lock               | Settings                 |   |                   |
| LAN Settings           | PLMN                     |   | * Add             |
| DMZ Settings           |                          | -   |                   |
| Static Route           | PLMN List (Ma            | x Limit :5 )                              |                   |
| र्रुWi-Fi              | Index                    | PLMN                                      | Operation         |
| Parental Controls      | index                    | I LIVIN                                   | Operation         |
| 💭 Firewall             |                          |   | Submit Concel     |
| < VPN                  |                          |   | Submit Cancel     |
| ₩IPv6                  |                          |   |                   |



# **LAN Setting**

#### Setting LAN Host Parameters

By default, the IP address is 192.168.0.1 with a subnet mask of 255.255.255.0. You can change the host IP address to another individual IP address that is easy to remember. Make sure that IP address is unique on your network. If you change the IP address of the CPE, you need to access the web management page with the new IP address.

To change the IP address of the CPE, perform the following steps:

- 1. Choose Network>LAN Settings.
- 2. In the LAN Host Settings area, set IP address and subnet mask.
- 3. In the DHCP Setting area, set the DHCP server to Enable.
- 4. Click **Submit**. As shown in Figure 5-14.

| Device Information |                   |               |   |
|--------------------|-------------------|---------------|---|
| - Network          | LAN Settings      |               |   |
| WAN Settings       |                   |               |   |
| LTE Settings       | LAN Host Settings | 3             |   |
| Scan Mode          | IP Address        | 192.168.0.1   | * |
| APN Management     | IF Address        | 192.108.0.1   |   |
| PIN Management     | Subnet Mask       | 255.255.255.0 | * |
| LAN Settings       |                   |               |   |
| DMZ Settings       | DHCP Settings     |               |   |
| Static Route       | DHCP Server       | Enable        |   |

Figure 5-14

### Configuration the DHCP Server

DHCP enables individual clients to automatically obtain TCP/IP configuration when the server powers on. You can configure the CPE as a DHCP server or disable it. When configured as a DHCP server, the CPE automatically provides the TCP/IP configuration for the LAN clients that support DHCP client capabilities. If DHCP server services are disabled, you must have another DHCP server on your LAN, or each client must be manually configured.

To configure DHCP settings, perform the following steps:

- 1. Choose Network Setting > LAN Settings.
- 2. Set the DHCP server to **Enable**.
- 3. Set Start IP address.

This IP address must be different from the IP address set on the LAN Host Settings area, but they must be on the same network segment.

4. Set End IP address.

This IP address must be different from the IP address set on the LAN Host Settings area, but they must be on the same network segment.

5. Set Lease time.

Lease time can be set to 1 to 10,080 minutes. It is recommended to retain the default value.

6. Click **Submit**. As shown in Figure 5-15.

| Device Information |                   |               |   |               |
|--------------------|-------------------|---------------|---|---------------|
| A Network          | LAN Settings      |               |   |               |
| WAN Settings       |                   |               |   |               |
| LTE Settings       | LAN Host Settings |               |   |               |
| Scan Mode          | IP Address        | 192,168,0,1   | * |               |
| APN Management     | II Address        | 132.100.0.1   |   |               |
| PIN Management     | Subnet Mask       | 255.255.255.0 | * |               |
| LAN Settings       | DUCD Cottings     |               |   |               |
| DMZ Settings       | DHCP Settings     |               |   |               |
| Static Route       | DHCP Server       | Enable        |   |               |
| ₹Wi-Fi             | Start IP Address  | 192.168.0.10  | * |               |
| Firewall           | Start IF Address  | 152.100.0.10  |   |               |
| \$ VPN             | End IP Address    | 192.168.0.100 | * |               |
| ∰IPv6              | Lease Time        | 720           | * |               |
| System             |                   |               |   |               |
|                    |                   |               |   | Submit Cancel |



# **DMZ Settings**

If the demilitarized zone (DMZ) is enabled, the packets sent from the WAN are directly sent to a specified IP address on the LAN before being discarded by the firewall.

To set DMZ, perform the following steps:

- 1. Choose Network > DMZ Settings.
- 2. Set DMZ to Enable.
- 3. (Optional) Set ICMP Redirect to Enable.
- 4. Set Host address.
  - This IP address must be different from the IP address set on the LAN Host
     Settings page, but they must be on the same network segment.
- 5. Click **Submit**. As shown in Figure 5-18.

| (i) Device Information |               |              |   |               |
|------------------------|---------------|--------------|---|---------------|
| 🚠 Network              | DMZ Settings  |              |   |               |
| WAN Settings           |               |              |   |               |
| LTE Settings           | DMZ           |              |   |               |
| Scan Mode              | DMZ           | Enable       |   |               |
| APN Management         | DIVIZ         |              |   |               |
| PIN Management         | ICMP Redirect | Enable       |   |               |
| LAN Settings           | Host Address  | 192.168.0.10 | * |               |
| DMZ Settings           | Thous had bee | 102.100.0.10 |   |               |
| Static Route           |               |              |   | Submit Cancel |
| रूWi-Fi                |               |              |   | Submit        |
| Firewall               |               |              |   |               |
| 🗳 VPN                  |               |              |   |               |
| ₿IPv6                  |               |              |   |               |
| 🔅 System               |               |              |   |               |

Figure 5-18

# **Static Route**

#### Add Static Route

To add a static route, perform the following steps:

#### Choose Network Setting>Static Route.

Click Add list.

Set the Dest IP address and Subnet mask.

Select an Interface from the drop-down list.

If you select  $\ensuremath{\textbf{LAN}}$  as the interface, you need set a Gateway.

Click Submit. As shown in Figure 5-19.

| (i) Device Information |              |                    |                 |           |         |        |           |
|------------------------|--------------|--------------------|-----------------|-----------|---------|--------|-----------|
| A Network              | Static Route |                    |                 |           |         |        |           |
| WAN Settings           |              |                    |                 |           |         |        |           |
| LTE Settings           | Static Ro    | ute List (Max      | x Limit :10 )   |           |         |        |           |
| Scan Mode              |              |                    |                 |           |         |        | Add List  |
| APN Management         |              |                    |                 |           |         |        |           |
| PIN Management         | Index        | Dest IP<br>Address | Subnet Mask     | Interface | Gateway | Status | Operation |
| LAN Settings           |              |                    |                 |           |         |        |           |
| DMZ Settings           | Static Po    | ute Settings       |                 |           |         |        |           |
| Static Route           | Static Ro    | die Settings       |                 |           |         |        |           |
| € Wi-Fi                | Dest IP Add  | ress               | 202.100.14.202  | *         |         |        |           |
| Firewall               | Subnet Mas   | k                  | 255.255.255.255 | *         |         |        |           |
| VPN                    |              |                    |                 |           |         |        |           |
|                        | Interface    |                    | LAN             | •         |         |        |           |
| System                 | Gateway      |                    | 192.168.10.1    | *         |         |        |           |



# Modify Static Route

To modify an access restriction rule, perform the following steps:

- 1. Choose Firewall>Static Route.
- 2. Choose the item to be modified, and click **Edit**.
- 3. Repeat steps 3 through 5 in the previous procedure.
- 4. Click **Submit**. As shown in Figure 5-20.

| Device Information |               |                    |                 |           |             |           |               |
|--------------------|---------------|--------------------|-----------------|-----------|-------------|-----------|---------------|
| Network            | Static Route  |                    |                 |           |             |           |               |
| WAN Settings       | _             |                    |                 |           |             |           |               |
| LTE Settings       | Static Rou    | te List (Max       | Limit :10)      |           |             |           |               |
| Scan Mode          |               |                    |                 |           |             |           | Add List      |
| APN Management     |               |                    |                 |           |             |           | 7.000 2.01    |
| PIN Management     | Index         | Dest IP<br>Address | Subnet Mask     | Interface | Gateway     | Status    | Operation     |
| LAN Settings       | 1             | 202.100.14.202     | 255.255.255.255 | LAN       | 192.168.0.1 | Effective | Delete   Edit |
| DMZ Settings       |               |                    |                 |           |             |           |               |
| Static Route       | Ctatia Dav    | to Cottingo        |                 |           |             |           |               |
| ≷Wi-Fi             | Static Rou    | te Settings        |                 |           |             |           |               |
| Firewall           | Dest IP Addre | ess                | 202.100.14.202  | *         |             |           |               |
| VPN                | Subnet Mask   |                    | 255.255.255.255 | *         |             |           |               |
| ∮IPv6              | Interface     |                    | LAN             |           |             |           |               |
| System             | menace        |                    | LAN             | •         |             |           |               |
|                    | Gateway       |                    | 192.168.0.1     | *         |             |           |               |
|                    |               |                    |                 |           |             |           |               |
|                    |               |                    |                 |           |             | Subm      | nit Cancel    |
|                    |               |                    |                 |           |             |           |               |

Figure 5-20

#### Delete Static Route

To delete a static route, perform the following steps:

Choose Firewall>Static Route.

Choose the item to be deleted, and click **Delete**.

# **5.3 Parental Controls**

This page describes how to set the Parental Controls. If you enable or disable the Parental Controls, you can modify the configuration.

# **Parental Controls Manager**

Choose Parental Controls Manager, Choose Enable ,and then click Submit Enabled the Choose Parental function. As shown in Figure 5-4-1.

| arental Controls |            |  |  |  |  |
|------------------|------------|--|--|--|--|
| ls Manager       |            |  |  |  |  |
| Enable           |            |  |  |  |  |
|                  | Is Manager |  |  |  |  |

Figure 5-4-1.

Submit

# **Parental Controls List**

This page is set the Parental Controls List. If this function is enabled, you can add some users. If someone in this List , he was forbidden from the Internet. If you want to allow him to access the

#### Internet, you can remove it from this Parental Controls List. As shown in Figure 5-4-2 $\times$ 5-4-3

| Name                               | tony                                | *                                      |                                    |                              |                         |
|------------------------------------|-------------------------------------|--|------------------------------------|------------------------------|-------------------------|
| Device                             | 192.168.                            | 1.2 *                                  |                                    |                              |                         |
| Weekdays                           | Mon                                 | Tue Wed Thu F                          | ri Sat Sun                         |                              |                         |
| Time                               | 0                                   | • : 1 • - 23                           | ▼ : 59 ▼                           |                              |                         |
|                                    |                                     |  |                                    |                              | Submit Can              |
|                                    |                                     |  |                                    |                              | Submit                  |
|                                    |                                     | Fig                                    | gure 5-4-2                         |                              |                         |
| arental Contro                     | ls List (Max Lim                    | it · 32 )                              |                                    |                              |                         |
|                                    |                                     |  |                                    |                              | Add Lis                 |
|                                    |                                     |  |                                    |                              |                         |
| Index                              | Name                                | Device                                 | Weekdays                           | Time                         | Operation               |
|                                    | Name<br>tony                        | Device<br>192.168.1.2                  | Weekdays<br>Mon,Tue,Wed,Thu,Fri    | <b>Time</b><br>00:01 - 23:59 | Operation Delete   Edit |
| 1                                  |                                     |  |                                    |                              |                         |
| Index<br>1<br>2                    | tony                                | 192.168.1.2                            | Mon,Tue,Wed,Thu,Fri                | 00:01 - 23:59                | Delete   Edit           |
| 1                                  | tony                                | 192.168.1.2                            | Mon,Tue,Wed,Thu,Fri                | 00:01 - 23:59                | Delete   Edit           |
| 2<br>ettings                       | tony                                | 192.168.1.2                            | Mon,Tue,Wed,Thu,Fri                | 00:01 - 23:59                | Delete   Edit           |
| 1<br>2<br>ettings<br>ame           | tony<br>mary                        | 192.168.1.2<br>192.168.1.5             | Mon,Tue,Wed,Thu,Fri                | 00:01 - 23:59                | Delete   Edit           |
| 1<br>2<br>settings<br>ame<br>evice | tony<br>mary<br>mary<br>192.168.1.1 | 192.168.1.2<br>192.168.1.5<br>*<br>5 * | Mon,Tue,Wed,Thu,Fri<br>Tue,Wed,Thu | 00:01 - 23:59                | Delete   Edit           |
| 1<br>2<br>ettings<br>ame           | tony<br>mary<br>mary<br>192.168.1.1 | 192.168.1.2<br>192.168.1.5             | Mon,Tue,Wed,Thu,Fri<br>Tue,Wed,Thu | 00:01 - 23:59                | Delete   Edit           |



# 5.4 Firewall

# **Setting Firewall**

This page describes how to set the firewall. If you enable or disable the firewall, you can modify the configuration.

To set the firewall, perform the following steps:

Choose Firewall>Firewall Setting. Choose Enable or Disable to modify the configuration. Click Submit. As shown in Figure 5-30.

| Device Information |                  |        |               |
|--------------------|------------------|--------|---------------|
| T. Network         | Firewall Setting |        |               |
| <del>©</del> Wi-Fi |                  |        |               |
| 🖓 Firewall         | Settings         |        |               |
| Firewall Setting   | Firewall         | Enable |               |
| MAC Filtering      |                  |        |               |
| IP Filtering       |                  |        | Submit Cancel |
| URL Filtering      |                  |        |               |
| Port Forwarding    |                  |        |               |
| Access Restriction |                  |        |               |
| UPnP               |                  |        |               |
| DoS                |                  |        |               |

Figure 5-30

If you choose enable the firewall, you can modify the configuration about firewall, such as Mac filter, IP filter, URL filter and so on. If you choose disable, you can't modify any configurations about the firewall.

# **MAC Filtering**

This page enables you to configure the MAC address filtering rules.

### Enabling MAC Filter

To enable MAC address filter, perform the following steps:

- 1. Choose Firewall>MAC Filtering
- 2. Set MAC filtering to **Enable**.
- 3. Click **Submit**. As shown in Figure 5-31.

#### **MAC Filtering**

| MAC Filtering Manager         |                           |  |  |  |  |
|-------------------------------|---------------------------|--|--|--|--|
| MAC Filtering                 | Enable                    |  |  |  |  |
| Within The Rule To Allow/Deny | <ul> <li>Allow</li> </ul> |  |  |  |  |
|                               | ○ <sub>Deny</sub>         |  |  |  |  |

Figure 5-31

### Disabling MAC Filter

To disable MAC address filter, perform the following steps:

- 1. Choose Firewall>MAC Filtering
- 2. Set MAC filtering to **Disable**.
- 3. Click **Submit**. As shown in Figure 5-32.

### MAC Filtering Manager

| MAC Filtering                 | Enable |
|-------------------------------|--------|
| Within The Rule To Allow/Deny | Allow  |
|                               | Deny   |



### Setting Allow access network within the rules

To set allow access network within the rules, perform the following steps:

- 1. Choose Firewall>MAC Filtering.
- 2. Set **Allow access network** within the rules.
- 3. Click **Submit**. As shown in Figure 5-33.

#### **MAC Filtering**

| MAC Filtering Manager         |                   |  |  |  |
|-------------------------------|-------------------|--|--|--|
| MAC Filtering                 | Enable            |  |  |  |
| Within The Rule To Allow/Deny | • Allow           |  |  |  |
|                               | O <sub>Deny</sub> |  |  |  |



### Setting Deny access network within the rules

To set deny access network within the rules, perform the following steps:

- 1. Choose Firewall>MAC Filtering.
- 2. Set **Deny access network** within the rules.
- 3. Click **Submit**. As shown in Figure 5-34.

### MAC Filtering Manager

| MAC Filtering                 | Enable             |
|-------------------------------|--------------------|
| Within The Rule To Allow/Deny | O <sub>Allow</sub> |
|                               | Deny               |



## Adding MAC Filtering rule

To add a MAC filtering rule, perform the following steps:

Choose Firewall>MAC Filtering. Click Add list.

Set MAC address.

Click Submit. As shown in Figure 5-35.

| MAC Filtering List | (Max Limit :32)     |           |          |
|--------------------|---------------------|-----------|----------|
|                    |                     |           | Add List |
| Index              | MAC Address         | Operation |          |
|                    |                     |           |          |
| Settings           |                     |           |          |
| MAC Address        | 00:12:61:AE:C0:89 * |           |          |
|                    |                     | Submit    | Cancel   |



### Modifying MAC Filtering rule

To modify a MAC address rule, perform the following steps:

- 1. Choose Firewall>MAC Filtering.
- 2. Choose the rule to be modified, and click **Edit**.
- 3. Set MAC address.
- 4. Click **Submit**. As shown in Figure 5-36.

MAC Filtering List (Max Limit :32)

|             |                     | Add List      |
|-------------|---------------------|---------------|
| Index       | MAC Address         | Operation     |
| 1           | 00:12:61:AE:C0:89   | Delete   Edit |
| Settings    |                     |               |
| MAC Address | 00:12:61:AE:C0:89 * |               |
|             |                     | Submit Cancel |



## Deleting MAC Filtering rule

To delete a MAC address filter rule, perform the following steps:

Choose Firewall>MAC Filtering.

Choose the rule to be deleted, and click **Delete**. As shown in Figure 5-37.

| MAC Filtering List | (Max Limit :32) |
|--------------------|-----------------|
|--------------------|-----------------|

|       |                   | Add I         | List |
|-------|-------------------|---------------|------|
| Index | MAC Address       | Operation     |      |
| 1     | 00:12:61:AE:C0:89 | Delete   Edit |      |

Figure 5-37

# **IP Filtering**

Data is filtered by IP address. This page enables you to configure the IP address filtering rules.

# Enabling IP Filtering

To enable IP Filtering, perform the following steps:

- 1. Choose Firewall>IP Filtering.
- 2. Set IP Filtering Enable.
- 3. Click **Submit**. As shown in Figure 5-38.

#### **IP Filtering Manager**

| IP Filtering                      | Enable            |
|-----------------------------------|-------------------|
| Except The Rules To<br>Allow/Deny | • Allow           |
| Allowberry                        | O <sub>Deny</sub> |



### Disabling IP Filtering

To disable IP Filtering, perform the following steps:

- 1. Choose Firewall>IP Filtering.
- 2. Set IP Filtering **Disable**.
- 3. Click **Submit**. As shown in Figure 5-39.

#### **IP** Filtering Manager

| IP Filtering                      | Enable |
|-----------------------------------|--------|
| Except The Rules To<br>Allow/Deny | Allow  |
| Allow/Deny                        | Deny   |

Figure 5-39

#### Setting Allow access network outside the rules

To set allow access network, perform the following steps:

- 1. Choose Firewall>IP Filtering.
- 2. Set Allow access network outside the rules.
- 3. Click **Submit**. As shown in Figure 5-40.

#### **IP** Filtering Manager

| IP Filtering                      | ☑ Enable                  |
|-----------------------------------|---------------------------|
| Except The Rules To<br>Allow/Deny | <ul> <li>Allow</li> </ul> |
| ,                                 | O Deny                    |

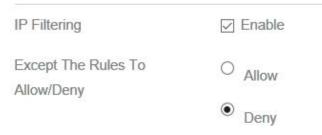


### Setting Deny access network outside the rules

To set allow access network, perform the following steps:

- 1. Choose Firewall>IP Filtering.
- 2. Set Deny access network outside the rules.
- 3. Click **Submit**. As shown in Figure 5-41.

#### IP Filtering Manager





#### Adding IP Filtering rule

Add an IP address filtering rule, perform the following steps:

- 1. Choose Firewall>IP Filtering.
- 2. Click Add list.
- 3. Set Service.
- 4. Set Protocol.
- 5. In the **Source IP Address Range** box, enter the source IP address or IP address segment to be filtered.
- 6. In the **Source port range** box, enter the source port or port segment to be filtered.
- 7. In the Destination IP Address Range box, enter the destination IP address or IP address

segment to be filtered.

- 8. In the **Destination port Range** box, enter the destination port or port segment to be filtered.
- 9. In the **Status** box, choose a status the rule will be executed.
- 10. Click **Submit**. As shown in Figure 5-42.

IP Filtering List (Max Limit :32)

| Index            | Protocol            | Source IP<br>Address Range | Source Port<br>Range | Destination IP<br>Address Range | Destination Port<br>Range | Status | Add List<br>Operation |
|------------------|---------------------|----------------------------|----------------------|---------------------------------|---------------------------|--------|-----------------------|
| Settings         |                     |                            |                      |                                 |                           |        |                       |
| Service          | Custo               | om 🗸                       |                      |                                 |                           |        |                       |
| Protocol         | ALL                 | $\sim$                     |                      |                                 |                           |        |                       |
| Source IP Addr   | ess Range 192.1     | 168.1.120                  |                      |                                 |                           |        |                       |
| Source Port Ra   | nge                 |                            |                      |                                 |                           |        |                       |
| Destination IP / | Address Range 100.1 | 10.64.123                  |                      |                                 |                           |        |                       |
| Destination Por  | t Range             |                            |                      |                                 |                           |        |                       |
| Status           | Allow               | · ~                        |                      |                                 |                           |        |                       |
|                  |                     |                            |                      |                                 |                           |        | Submit Cancel         |

Figure 5-42

# Modifying IP Filtering rule

To modify an IP filtering rule, perform the following steps:

- 1. Choose Firewall > IP Filtering.
- 2. Choose the rule to be modified, and click **Edit**.
- 3. Repeat steps 3 through 9 in the previous procedure.
- 4. Click **Submit**. As shown in Figure 5-43.

IP Filtering List (Max Limit :32)

|                |                 |                            |                      |                                 |                           |        | Add Lis       |
|----------------|-----------------|----------------------------|----------------------|---------------------------------|---------------------------|--------|---------------|
| Index          | Protocol        | Source IP<br>Address Range | Source Port<br>Range | Destination IP<br>Address Range | Destination Port<br>Range | Status | Operation     |
| 1              | ALL             | 192.168.1.120              | N/A                  | 100.10.64.123                   | N/A                       | Allow  | Delete   Edit |
| Settings       |                 |                            |                      |                                 |                           |        |               |
| Service        |                 | Custom 🗸                   |                      |                                 |                           |        |               |
| Protocol       | A               | ALL 🗸                      |                      |                                 |                           |        |               |
| Source IP Addi | ess Range       | 192.168.1.120              |                      |                                 |                           |        |               |
| Source Port Ra | inge            |                            |                      |                                 |                           |        |               |
| Destination IP | Address Range 1 | 100.10.64.123              |                      |                                 |                           |        |               |
| Destination Po | t Range         |                            |                      |                                 |                           |        |               |
| Status         | 4               | Allow 🗸                    |                      |                                 |                           |        |               |

Submit Cancel

# Deleting IP Filtering rule

To delete an IP address filtering rule, perform the following steps:

- 1. Choose Firewall > IP Filtering.
- 2. Choose the rule to be deleted, and click **Delete**. As shown in Figure 5-44.

| P Filtering | List (Max Limit : | 32)                        |                      |                                 |                           |        |               |
|-------------|-------------------|----------------------------|----------------------|---------------------------------|---------------------------|--------|---------------|
|             |                   |                            |                      |                                 |                           |        | Add Li        |
| Index       | Protocol          | Source IP<br>Address Range | Source Port<br>Range | Destination IP<br>Address Range | Destination Port<br>Range | Status | Operation     |
| 1           | ALL               | 192,168,1,120              | N/A                  | 100.10.64.123                   | N/A                       | Allow  | Delete   Edit |



# **URL Filtering**

Data is filtered by uniform resource locator (URL). This page enables you to configure URL filtering rules.

# Enabling URL Filtering

To enable URL Filtering, perform the following steps:

- 3. Choose Firewall>URL Filtering.
- 4. Set **URL Filtering** to **Enable**.
- 5. Click **Submit**. As shown in Figure 5-45.

# URL Filtering Manager

**URL** Filtering

Enable

Figure 5-45

# Disabling URL Filtering

To disable URL Filtering, perform the following steps:

- 1. Choose Firewall>URL Filtering.
- 2. Set URL Filtering to Disable.
- 3. Click **Submit**. As shown in Figure 5-46.

# **URL Filtering Manager**

**URL** Filtering

Enable

Figure 5-46

### Adding URL Filtering list

To add a URL filtering list, perform the following steps:

Choose Firewall>URL Filtering. Click Add list. Set URL. Click Submit. As shown in Figure 5-47.

URL Filtering List (Max Limit :32)

|          |                  | Add        | List |
|----------|------------------|------------|------|
| Index    | URL              | Operation  |      |
| Settings |                  |            |      |
| URL      | www.google.com * |            |      |
|          |                  | Submit Can | cel  |



# Modify URL Filtering list

To modify a URL filtering rule, perform the following steps:

- 1. Choose Firewall>URL Filtering.
- 2. Choose the rule to be modified, and click **Edit**.
- 3. Set URL address.
- 4. Click **Submit**. As shown in Figure 5-48.

URL Filtering List ( Max Limit :32 )

|          |                  |               | Add List      |
|----------|------------------|---------------|---------------|
| Index    | URL              | Operation     |               |
| 1        | www.google.com   | Delete   Edit |               |
| Sattinga |                  |               |               |
| Settings |                  |               |               |
| URL      | www.google.com * |               |               |
|          |                  |               |               |
|          |                  |               | Submit Cancel |

Figure 5-48

### Deleting URL Filtering list

To delete a URL list, perform the following steps:

- 1. Choose Firewall>URL Filtering.
- 2. Choose the item to be deleted, and click **Delete**. As shown in Figure 5-49.

URL Filtering List (Max Limit :32)

|       |                |               | Add List |
|-------|----------------|---------------|----------|
| Index | URL            | Operation     |          |
| 1     | www.google.com | Delete   Edit |          |
|       |                |               |          |



# **Port Forwarding**

When network address translation (NAT) is enabled on the CPE, only the IP address on the WAN side is open to the Internet. If a computer on the LAN is enabled to provide services for the Internet (for example, work as an FTP server), port forwarding is required so that all accesses to the external server port from the Internet are redirected to the server on the LAN.

## Adding Port Forwarding rule

To add a port forwarding rule, perform the following steps:

|                         | Choose Firewall > Port Forwarding.   |
|-------------------------|--|
|                         | Click Add list.  |
|                         | Set <b>Service</b> .   |
|                         | Set <b>Protocol</b> .  |
|                         | Set Remote port range.   |
|                         | The port number ranges from 1 to 65535.<br>Set <b>Local host.</b>  |
|                         | This IP address must be different from the IP address that is set on the <b>LAN</b><br>Host Settings page, but they must be on the same network segment. |
|                         | Set Local port.  |
|                         | The port number ranges from 1 to 65535.  |
|                         | Click <b>Submit</b> . As shown in Figure 5-50.   |
| Port Forwarding List (M | ax Limit :32 )   |

|                   |               |                   |            |            | Add List      |
|-------------------|---------------|-------------------|------------|------------|---------------|
| Index             | Protocol      | Remote Port Range | Local Host | Local Port | Operation     |
| Settings          |               |                   |            |            |               |
| Service           | Custom        | ~                 |            |            |               |
| Protocol          | TCP           | $\sim$            |            |            |               |
| Remote Port Range | 2000          | *                 |            |            |               |
| Local Host        | 192.168.1.120 | *                 |            |            |               |
| Local Port        | 3000          | *                 |            |            |               |
|                   |               |                   |            |            | Submit Cancel |

Figure 5-50

# Modifying Port Forwarding rule

To modify a port forwarding rule, perform the following steps:

- 1. Choose Firewall > Port Forwarding.
- 2. Choose the item to be modified, and click **Edit**.
- 3. Repeat steps 3 through7 in the previous procedure.
- 4. Click **Submit**. As shown in Figure 5-51.

Port Forwarding List (Max Limit :32)

| Protocol      | Remote Port Range                      | Local Host  |  |   |
|---------------|--|---|--|---|
|               | itemeter of thange                     | Local Host  | Local Port   | Operation   |
| TCP           | 2000                                   | 192.168.1.120   | 3000   | Delete   Edit   |
|               |  |   |  |   |
| Custom        | $\sim$                                 |   |  |   |
| TCP           | $\sim$                                 |   |  |   |
| 2000          | *                                      |   |  |   |
| 192.168.1.120 | *                                      |   |  |   |
| 3000          | *                                      |   |  |   |
|               | Custom<br>TCP<br>2000<br>192.168.1.120 | Custom         ~           TCP         ~           2000         *           192.168.1.120         * | Custorn        TCP        2000     *       192.168.1.120     * | Custom     ✓       TCP     ✓       2000     *       192.168.1.120     * |

Figure 5-51

# Deleting Port Forwarding rule

To delete a port forwarding rule, perform the following steps:

#### Choose Firewall > Port Forwarding.

Choose the item to be deleted, and click **Delete**. As shown in Figure 5-52.

| Port Forwarding List (Max Limit :32) |          |                   |               |            |               |
|--------------------------------------|----------|-------------------|---------------|------------|---------------|
|                                      |          |                   |               |            | Add List      |
| Index                                | Protocol | Remote Port Range | Local Host    | Local Port | Operation     |
| 1                                    | TCP      | 2000              | 192.168.1.120 | 3000       | Delete   Edit |

Figure 5-52

## **Access Restriction**

#### Access Restriction

| Access Restri | iction List (Max L | imit :32 )  |             |          |      |               |
|---------------|--------------------|-------------|-------------|----------|------|---------------|
|               |                    |             |             |          |      | Add List      |
| Index         | Enable             | Name        | Device      | Weekdays | Time | Operation     |
|               |                    |             |             |          |      |               |
| Settings      |                    |             |             |          |      |               |
| Enable        | 🖂 Enal             | ble         |             |          |      |               |
| Name          | ABC                | *           |             |          |      |               |
| Device        | 00:12:61           | * AE:C0:89  |             |          |      |               |
| Weekdays      | Mon                | Tue Wed Thu | Fri Sat Sun |          |      |               |
| Time          | 0 ~                | : 0 ~ _ 23  | ✓ : 59      |          |      |               |
|               |                    |             |             |          |      | Submit Cancel |



### Add Access Restriction

To add a access restriction rule, perform the following steps:

- 1. Choose Security>Access Restriction.
- 2. Click Add list.
- 3. Set Access Restriction to Enable.
- 4. Set Access Restriction Name.
- 5. Set Device MAC address or IP address.
- 6. Set Weekdays and time.
- 7. Click Submit.

#### **Modify Access Restriction**

To modify a access restriction rule, perform the following steps:

- 1. Choose Security>Access Restriction.
- 2. Choose the item to be modified, and click Edit.
- 3. Repeat steps 4 through 6 in the previous procedure.
- 4. Click Submit.

#### **Delete Access Restriction**

To delete a access restriction rule, perform the following steps:

- 1. Choose Security>Access Restriction.
- 2. Choose the item to be deleted, and click **Delete**.

## UPnP

On this page, you can enable or disable the Universal Plug and Play (UPnP) function.

To enable UPnP, perform the following steps:

- 1. Choose Firewall > UPnP.
- 2. Set UPnP to Enable.
- 3. Click **Submit**. As shown in Figure 5-54.

| P            |             |          |            |               |               |
|--------------|-------------|----------|------------|---------------|---------------|
| Settings     |             |          |            |               |               |
| UPnP         | ☑ Enable    |          |            |               |               |
|              |             |          |            |               | Submi         |
| Current UPnP | Status      |          |            |               |               |
| Index        | Description | Protocol | IP Address | External Port | Internal Port |

Figure 5-54

## DoS

On this page, you can enable or disable the Denial of service (DoS) function.

- 1 Choose Firewall > DoS.
- 2 Set UPnP to Enable.
- 3 Click **Submit**. As shown in Figure 5-55.

| Network            | DoS           |                            |               |
|--------------------|---------------|----------------------------|---------------|
| <b>≫</b> Wi-Fi     | 1             |                            |               |
| Firewall           | DoS Setting   |                            |               |
| Firewall Setting   | DoS           | Enable O Disable           |               |
| MAC Filtering      |               |                            |               |
| IP Filtering       | Sync flood    | <ul> <li>Enable</li> </ul> |               |
| URL Filtering      | Ping flood    | Enable                     |               |
| Port Forwarding    | TCP port scan | Enable                     |               |
| Access Restriction | TOP poil scan | Enable                     |               |
| UPnP               | UDP port scan | Enable                     |               |
| DoS                |               |                            |               |
| VPN                |               |                            | Submit Cancel |



# 5.6 VPN

This function enables you to connect the virtual private network (VPN).

To connect the VPN, perform the following steps:

Choose VPN. In the VPN Settings area, enable VPN. Select a protocol from Protocol drop-down list. Enter Username and Password. Click Submit. You can view the status in VPN Status area. As shown in Figure 5-55.

#### **VPN Settings**

| VPN Settings |               |                |               |
|--------------|---------------|----------------|---------------|
| VPN          | Enable        |                |               |
| Protocol     | L2TP          | ¥              |               |
| VPN Server   | 172.16.34.120 | *              |               |
| Usemame      | test          | *              |               |
| Password     | ••••          | *              |               |
| VPN Status   |               |                |               |
| Username     | Local Address | Remote Address | Online Time   |
|              |               |                | Submit Cancel |

Figure 5-55

# 5.7 IPv6

Internet Protocol version 6 (IPv6) is the most recent version of the Internet Protocol (IP). Every device on the Internet is assigned a unique IP address for identification and location definition.

## Status

The status page shows IPv6 information. As shown in Figure 5-56.

# Status

#### IPv6 Information

 IPv6 Status
 Active

 WAN Connection Type
 AutoConfiguration

 IPv6 MGMT Global Address -

### LAN Address AutoConfiguration

IPv6 DATA Global Address ---

IPv6 Link-Local Address fe80::da55:a3ff:fe61:c4e0

AutoConfiguration Type SLAAC

Figure 5-56

## **IPv6 WAN Settings**

In this page, user can enable or disable IPv6 function. Meanwhile, user can set WAN Connection Type and the type of DNS.As shown in Figure 5-27

| WAN   |                   |   |
|---|-------------------|---|
| IPv6 Enable   | 💌 Enable          |   |
|   |                   |   |
| WAN Settings  |                   |   |
|   | AutoConfiguration | Ŧ |
| WAN Settings<br>WAN Connection Type<br>IPv6 MGMT Global Addre |                   | Ŧ |



## **IPv6 LAN Settings**

In this page, user can chose the AutoConfiguration Type. As shown in Figure 5-58.

# **IPv6 LAN Settings**

### LAN Settings

| IPv6 Link-Local Address | fe80::da55:a | 3ff:fe61:c4e0 |
|-------------------------|--------------|---------------|
| AutoConfiguration Type  | SLAAC        | •             |
|                         | SLAAC        | 1000          |
|                         | DHCPv6       |               |

Figure 5-58

# 5.8 System

## 5.8.1 Maintenance

## Reboot

This function enables you to restart the CPE. Settings take effect only after the CPE restarts. To restart the CPE, perform the following steps:

- 1. Choose System>Maintenance.
- Click **Reboot**. As shown in Figure 5-59. The CPE then restarts.

| Rebo | oot                          |
|------|------------------------------|
| С    | lick Reboot to reboot device |
| F    | Reboot                       |

Figure 5-59

## Reset

This function enables you to restore the CPE to its default settings. To restore the CPE, perform the following steps:

- 1. Choose System>Maintenance.
- Click Factory Reset. As shown in Figure 5-60. The CPE is then restored to its default settings.

Factory Reset

Click Factory Reset to restore device to its factory settings

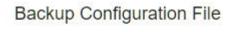
Factory Reset

Figure 5-60

## **Backup Configuration File**

You can download the existing configuration file to back it up. To do so:

- 1. Choose System>Maintenance.
- 2. Click **Download** on the **Maintenance** page.
- 3. In the displayed dialog box, select the save path and name of the configuration file to be backed up.
- Click Save. As shown in Figure 5-61.
   The procedure for file downloading may vary with the browser you are using.



To backup the current configuration file, click Download.

Download

Figure 5-61

## **Upload Configuration File**

You can upload a backed up configuration file to restore the CPE. To do so:

- 1. Choose System>Maintenance.
- 2. Click Browse on the Maintenance page.
- 3. In the displayed dialog box, select the backed up configuration file.
- 4. Click Open.
- 5. The dialog box choses. In the box to be right of Configuration file, the save path and name of the backed up configuration file are displayed.
- 6. Click **Upload**. As shown in Figure 5-62.

The CPE uploads the backed up configuration file. The CPE then automatically restarts.

#### **Restore Configuration File**

To restore the configuration file, specify the path of the local configuration file, import the file, and click Upload to restore the configuration file Configuration File 选择文件 未选择任何文件

Figure 5-62

## 5.8.2 TR069

TR-069 is a standard for communication between CPEs and the auto-configuration server (ACS). If your service provider uses the TR069 automatic service provision function, the ACS automatically provides the CPE parameters. If you set the ACS parameters on both the CPE and ACS, the network parameters on the CPE are automatically set using the TR-069 function, and you do not need to set other parameters on the CPE.

To configure the CPE to implement the TR-069 function, perform the following steps:

- 1. Choose System>TR069.
- 2. Set acs URL source. There are two methods, such as URL and DHCP.
- 3. In the ACS URL box, enter the ACS URL address.
- 4. Enter ACS **user name** and **password** for the CPE authentication.
  - To use the CPE to access the ACS, you must provide a user name and password for authentication. The user name and the password must be the same as those defined on the ACS.
- 5. If you set **Periodic inform** to **Enable**, set **Periodic inform interval**.
- 6. Set connection request user name and password.
- 7. Click **Submit**. As shown in Figure 7-5.

#### **TR069**

| Settings                    |                         |   |  |
|-----------------------------|-------------------------|---|--|
| Enable TR069                | Enable                  |   |  |
| ACS URL Source              | URL <b>v</b>            |   |  |
| ACS URL                     | http://192.168.0.10/acs | * |  |
| ACS Username                | tr069                   | * |  |
| ACS Password                | ···· ~                  | * |  |
| Enable Periodic Inform      | Enable                  |   |  |
| Periodic Inform Interval    | 3600                    | * |  |
| Connection Request Username | tr069                   |   |  |
| Connection Request Password | ····· ~                 |   |  |

Figure 5-63

## 5.8.3 Date & Time

You can set the system time manually or synchronize it with the network. If you select **Sync from network**, the CPE regularly synchronizes the time with the specified Network Time Protocol (NTP) server. If you enable daylight saving time (DST), the CPE also adjusts the system time for DST.

To set the date and time, perform the following steps:

- 1. Choose System > Date & Time.
- 2. Select Set manually.

Settings

- 3. Set Local time or click Sync to automatically fill in the current local system time.
- 4. Click **Submit**. As shown in Figure 5-64.

| ootungo      |  |
|--------------|--|
| Current Time | 2017-10-26 15:23:33  |
| Set Manually |  |
| Local Time   | 2017 / 10 / 26 / 15 / 23 / 33<br>(format:YYYY/MM/DD/HH/MM/SS,the value of year is between 2000 and 2030) |

Sync from Network

#### Figure 5-64

To synchronize the time with the network, perform the following steps:

- 1. Choose **System > Date & Time**.
- 2. Select Sync from network.
- 3. From the **Primary NTP server** drop-down list, select a server as the primary server for time synchronization.
- 4. From the **Secondary NTP server** drop-down list, select a server as the IP address of the secondary server for time synchronization.
- 5. If you don't want to use other NTP server, you need to enable **Optional ntp server**, and set a server IP address.
- 6. Set Time zone.
- 7. Click **Submit**. As shown in Figure 5-65.

| Settings             |   |
|----------------------|---|
| Current Time         | 2017-10-26 15:23:33                                 |
| Set Manually         |   |
| Sync from Network    |   |
| Primary NTP Server   | pool.ntp.org  |
| Secondary NTP Server | asia.pool.ntp.org                                   |
| Optional NTP Server  | <b>192.168.0.10</b>                                 |
| Time Zone            | (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi 🔹 |
| DOT                  |   |

Figure 5-65

To set DST, perform the following steps:

- 1. Choose System>Date&Time.
- 2. Set **DST** enable.
- 3. Set Start Time and End Time.
- 4. Click **Submit**. As shown in Figure 5-66.

### DST

| DST        | 📃 Enab  | le       |       |                 |   |         |
|------------|---------|----------|-------|-----------------|---|---------|
| Start Time | Mar 🔻   | Second V | Mon 🔻 | (2017-03-13) at | 2 | o'clock |
| End Time   | Nov 🔻   | First V  | Sun 🔻 | (2017-11-05) at | 2 | o'clock |
| Status     | Not Run | ning     |       |                 |   |         |

#### Figure 5-66

The CPE will automatically provide the DST time based on the time zone.

## 5.8.4 DDNS

Dynamic Domain Name Server (DDNS) service is used to map the user's dynamic IP address to a fixed DNS service.

To configure DDNS settings, perform the following steps:

- 1. Choose **System > DDNS**.
- 2. Set DDNS to Enable.
- 3. In Service provider, choose DynDNS.org or oray.com.
- 4. Enter **Domain name** and **Host name**. For example, if the domain name provided by your service provider is test.customtest.dyndns.org, enter customtest.dyndns.org as Domain name, and test as Host name.
- 5. Enter User name and Password.
- 6. Click **Submit**. As shown in Figure 5-67.

#### **DDNS** Settings

| DDNS                           | Enable         |   |
|--------------------------------|----------------|---|
| Service Provider               | WWW.DYNDNS.ORG | v |
| Domain                         |                | * |
| Usemame                        |                | * |
| Password                       | ~              | * |
| Refresh                        | 0              | * |
| Enable Wildcard                | Enable         |   |
| WAN IP and domain verification | Enable         |   |



Submit

Cancel

## 5.8.5 Diagnosis

If the CPE is not functioning correctly, you can use the diagnosis tools on the **Diagnosis** page to preliminarily identify the problem so that actions can be taken to solve it.

## Ping

If the CPE fails to access the Internet, run the ping command to preliminarily identify the problem. To do so:

Choose System>Diagnosis.

In the Method area, select Ping.

Enter the domain name in the **Target IP or domain** field, for example, <u>www.google.com</u>.

Set Packet size and Timeout.

Set Count.

Click Ping. As shown in Figure 5-68.

Wait until the ping command is executed. The execution results are displayed in the Results box.

#### Diagnostics

| Method                |  |   |             |
|-----------------------|--|---|-------------|
| Method of Diagnostics | • Ping   |   |             |
|                       | O TraceRoute   |   |             |
| Ping                  |  |   |             |
| Target IP/Domain      | www.google.com *   |   |             |
| Packet Size           | 56 *   | < |             |
| Timeout               | *  |   | 3           |
| Count                 | 4 *  |   |             |
|                       |  |   | Ping Cancel |
| Result                |  |   |             |
| Result                | Pass   |   |             |
| Details               | PING www.google.com/61.135.169.125): 56 data bytes<br>64 bytes from 61.135.169.125: seq=0 ttl=52 time=253.329 ms<br>64 bytes from 61.135.169.125: seq=7 ttl=52 time=203.0802 ms<br>64 bytes from 61.135.169.125: seq=2 ttl=52 time=252.282 ms<br>64 bytes from 61.135.169.125: seq=3 ttl=52 time=252.282 ms<br>www.baidu.com ping statistics<br>4 packets transmitted. 4 packets received, 0% packet loss<br>round-trip min/avg/max = 203.802/332.403/620.199 ms |   |             |

Figure 5-68

### Traceroute

If the CPE fails to access the Internet, run the Traceroute command to preliminarily identify the problem. To do so:

- 1. Choose System>Diagnosis.
- 2. In the Method area, select **Traceroute**.
- 3. Enter the domain name in the Target IP or domain field. For example, <u>www.google.com</u>.
- 4. Set Maximum hops ad Timeout.
- 5. Click Traceroute. As shown in Figure 5-69

Wait until the traceroue command is executed. The execution results are displayed in the Results box.

| gnostics              |  |
|-----------------------|--|
| Method                |  |
| Method of Diagnostics | O Ping   |
|                       | TraceRoute   |
| Traceroute            |  |
| Target IP/Domain      | www.google.com *   |
| Maximum Hops          | 30 *   |
| Timeout               | 10 *   |
|                       | Traceroute Canc  |
| Result                |  |
| Result                | Pass   |
| Details               | traceroute to www.google.com(61.135.169.125), 30 hops max, 38<br>byte packets<br>1 92.168.224 (192.168.22.42) 151.573 ms<br>2 192.168.223 (192.168.22.13) 119.710 ms<br>3 172.16.34.1 (172.16.34.1) 192.445 ms<br>4 112.64.146.109 (112.64.184.109) 166.459 ms<br>5 *<br>6 139.226.197.137 (139.226.197.137) 152.109 ms<br>7 219.158.16.89 (219.158.16.89) 191.071 ms<br>8 * |

Figure 5-69

## 5.8.6 Port Mirror

Port mirroring is used on a network switch to send a copy of network packets seen on one switch port. To do so:

- 1. Choose System>Port Mirror.
- 2. Enable Port Mirror.
- 3. Select the **WAN Interface** which you want a copy.
- 4. Type the **Monitor IP**, where the copy will send to.
- 5. Click **Sbumit**. As shown in Figure 5-70.

#### Port Mirror

| Enable        |        |        |        |
|---------------|--------|--------|--------|
| apn1          | $\sim$ |        |        |
| 192.168.1.120 | *      |        |        |
|               |        |        | Cancel |
|               | apn1   | apn1 V | apn1 V |

Figure 5-70

## 5.8.7 Syslog

The syslog record user operations and key running events.

## Local

To set the syslog to local, perform the following steps:

- 1. Choose System>Syslog.
- 2. In the **Setting** area, set the method to **Local**.
- 3. In the Level drop-down list, select a log level.
- 4. Click **Submit**. As shown in Figure 5-71.

## Syslog

| Settings           |               |   |               |
|--------------------|---------------|---|---------------|
| Method             | Network       |   |               |
| Network            | O Local       |   |               |
| Forward IP Address | 192.168.1.120 | * |               |
|                    |               |   | Submit Cancel |
|                    | Figure 5-71   |   |               |

#### Viewing local syslog

To view the local syslog, perform the following steps:

In the **Keyword** box, set a keyword.

Click **Pull**, the result box will display.

## Network

To set the syslog to network, perform the following steps:

- 1. Choose System>Syslog.
- 2. In the **Setting** area, set the method to **Network**.

- 3. In the Level drop-down list, select a log level.
- 4. In the Forward IP address box, set a IP address.
- 5. Click **Submit**. As shown in Figure 5-72.

The syslog will transmit to some client to display through network.

# Syslog

| Settings           |               |   |
|--------------------|---------------|---|
| Method             | Network       |   |
|                    | Local         |   |
| Network            |               |   |
| Forward IP Address | 192.168.1.120 | * |

Figure 5-72

## 5.8.8 WEB Setting

To configure the parameters of WEB, perform the following steps:

- 1. Choose System> WEB Setting.
- 2. Set **HTTP** enable. If you set HTTP disable, you will can't login the web management page with the HTTP protocol from WAN side.
- 3. Set **HTTP port**. If you want to change the login port, you can set a new port in the box, the default HTTP port is 80.
- 4. Set **HTTPS** enable. If you want to login the web management page with the HTTPS protocol from WAN side, you need to enable the HTTPS.
- 5. If you want to login the web management page form the **WAN**, you need to Enable **Allowing login from WAN**.
- 6. Set the **HTTPS port**.
- 7. Click **Submit**. As shown in Figure 5-73.

#### **WEB** Setting

| Settings                   |           |   |               |
|----------------------------|-----------|---|---------------|
| HTTP Enable                | Enable    |   |               |
| HTTP Port                  | 80        | * |               |
| HTTPs Enable               | Enable    |   |               |
| Allow HTTPs Login from WAN | Enable    |   |               |
| Allow PING from WAN        | Enable    |   |               |
| HTTPs Port                 | 443       | * |               |
| Refresh Time               | 10        | * |               |
| Session Timeout            | 10        | * |               |
| Language                   | English • | ] |               |
|                            |           |   | Submit Cancel |

#### Figure 5-73

## 5.8.9 Account

This function enables you to change the login password of the user. After the password changes, enter the new password the next time you login.

To change the password, perform the following steps:

- 1. Choose System>Account.
- 2. Select the **user name**, if you want to change the password of normal user, you need to set **Enable User** enable.
- 3. Enter the current password, set a new password , and confirm the new password.
- 4. New password and Confirm password must contain 5 to 15 characters.
- 5. Click **Submit**. As shown in Figure 5-74.

#### Account

| Change Password  |       |            |               |
|------------------|-------|------------|---------------|
| Usemame          | admin | •          |               |
| Current Password |       | transfer * |               |
| New Password     |       | transfer * |               |
| Confirm Password |       | ~ *        |               |
|                  |       |            | Submit Cancel |

Figure 5-74

## 5.8.10 Logout

To logout the web management page, perform the following steps:

Choose System and click Logout

It will back to the login page.

# 6 FAQs

#### The POWER indicator does not turn on.

- Make sure that the power cable is connected properly and the CPE is powered on.
- > Make sure that the power adapter is compatible with the CPE.

#### Fails to Log in to the web management page.

- Make sure that the CPE is started.
- Verify that the CPE is correctly connected to the computer through a network cable. If the problem persists, contact authorized local service suppliers.

The CPE fails to search for the wireless network.

- Check that the power adapter is connected properly.
- Check that the CPE is placed in an open area that is far away from obstructions, such as concrete or wooden walls.
- Check that the CPE is placed far away from household electrical appliances that generate strong electromagnetic field, such as microwave ovens, refrigerators, and satellite dishes.

If the problem persists, contact authorized local service suppliers.

#### The power adapter of the CPE is overheated.

The CPE will be overheated after being used for a long time. Therefore, power off the CPE when you are not using it.

Check that the CPE is properly ventilated and shielded from direct sunlight.

#### The parameters are restored to default values.

If the CPE powers off unexpectedly while being configured, the parameters may be restored to the default settings.

After configuring the parameters, download the configuration file to quickly restore the CPE to the desired settings.