



SMS Server

Installation Guide

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1 System Overview

The SMS Server runs on a Linux system with the following LAMP runtime environment.

- Linux
- Apache v2.2/v2.4
- MySQL v5.x
- PHP v5.x

If your current system already has LAMP installed, please check to see if it meets the above requirements. If LAMP is not installed, we have prepared a “LAMP Installation Package” for you to install before installing the SMS Server. This package has been verified to run on CentOS7, CentOS8, Ubuntu18.04, Ubuntu20.04 and Debian10.

Please note that your hardware system should have at least 2GB RAM and 10GB hard disk free space.

2 LAMP Installation

PLEASE DO NOT INSTALL THIS “LAMP INSTALLATION PACKAGE” IF YOUR LINUX SYSTEM HAS ALREADY GOT LAMP INSTALLED. Installing this “LAMP Installation Package” will remove your existing LAMP (Apache/HTTP + PHP + MYSQL/Mariadb) as this may affect the operation of other services currently running in your system.

Please login the linux system with “root”, and follow below steps to install LAMP

- a) Download the “LAMP Installation Package”

```
cd /root
wget http://47.242.36.50/update/lamp_install-latest.tar.gz
```

- b) Uncompress and execute the install script

```
tar xzf lamp_install-latest.tar.gz
cd lamp_install
./install.sh
```

The installation progress may take 10-40 minutes. Please DO NOT close the command window before it is completed.

The installing is successful when you see the following message appeared on the screen:

Install LAMP completed! enjoy it.

Important files and default settings of this LAMP:

- The config files of Apache: /usr/local/apache/conf/
- The web files of Apache: /home/www/
- The config file of PHP: /usr/local/php/etc/php.ini
- The config file of MySQL: /etc/my.cnf
- The databases directory of MySQL: /usr/local/mysql/data/
- The default password of MySQL “root” user: db!tek.com

3 SMS Server Installation

Here are the installation steps:

- a) To download and decompress the installation package, type the following commands at the server system prompt.

```
wget http://47.242.36.50/update/goip_install-latest.tar.gz
```

```
tar -xvzf goip_install-latest.tar.gz -C /root
```

- b) Type the following commands to execute the installation script.

```
cd /root/goip_install  
./goip_install.sh
```

The installation is successful when you see the following messages appeared on the screen:

Install done.

You can visit "http://<IP_Addr>/goip" now.

Default username and password both are: root

PS:

If you are installing the SMS SERVER on a Linux system with a LAMP runtime that is not installed by the "LAMP Installation Package", the following messages will appear during installation. Please enter the responses highlighted in grey accordingly.

Message:

Configure httpd config:

Enter the httpd config file PATH: (default: /etc/httpd/conf.d)

Default press Enter

Response:

```
Enter the Apache/HTTP config path. Just press "Enter" to use the default path.
```

Message:

Import Databases

Enter the Mysql root password if the password exists:

Response:

```
Enter the MySQL password. If no password is set, just press "Enter" to continue.
```

Message:

Enter your Mysql PATH: (default: /usr/bin/mysql)

Default press Enter

Response:

```
Enter the MySQL bin file path. Just press "Enter" to use the default path.
```

SMS SERVER will listen the following ports by default: 44444/UDP and 80/TCP. Although the install script will automatically config the system firewall to open these ports, you have to open them manually if there is an extra firewall beyond the system.

Once the installation is completed, type the following command in a browser to execute the SMS Server. The default login ID and password are both "root".

<http://<server IP>/goip>

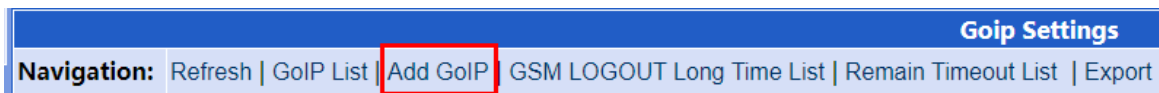
Once login in, please change the login password immediately as shown below.

Modify Myself	
Name:	root
New Password:	<input type="text"/>
Confirm password:	<input type="text"/>
Remark:	Super Administrator
Will not change password with blank input_box named "New Password"	
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

4 Basic Configuration

4.1 Adding a "GoIP"

Click on "System Manage" and then "GoIP Manage" as shown in the two screen captures below.



Then click on "Add GoIP" to enter the GoIPs parameters as shown below.

Add a GOIP	
ID:	G1
Batch Lines:	8
Provider:	MTN
Group:	None(None)
Password:	*****
Confirm Password:	*****
SMS Max. Limit:	
SMS Daily Limit:	
Forward SMS to Email:	<input type="checkbox"/>
Forward SMS to HTTP:	<input type="checkbox"/>
<input type="button" value="Add"/> <input type="button" value="Cancel"/>	

1. **ID** — Assign a name for the GoIP
2. **Lines available** — Specify the number of lines in the GoIP. An ID will then be generated for each line automatically.
3. **Service Provider** — Choose the GSM service provider (the list of the service providers needs to be defined in Carrier Manage first).
4. **Group** — Assign the group property for the GoIP (optional). The group name list is created via “**Group Manage**”.
5. **Password** — Set the login password
6. **Confirm Password** — Repeat the login password

Once the “**Add**” icon is clicked, an ID for each GoIP line defined. In this case, G101 to G108 will be created to correspond to the 8 lines on the GoIP. The screen capture right shows the status of these 8 lines. Since no GoIP with the “G1” ID has configured to register to the SMS server, therefore, the LOGIN status of the corresponding GoIP (G1) lines is LOGOUT.

<input type="checkbox"/>	G101	LOGOUT
<input type="checkbox"/>	G102	LOGOUT
<input type="checkbox"/>	G103	LOGOUT
<input type="checkbox"/>	G104	LOGOUT
<input type="checkbox"/>	G105	LOGOUT
<input type="checkbox"/>	G106	LOGOUT
<input type="checkbox"/>	G107	LOGOUT

4.2 Configuring a GoIP for connecting to the SMS Server

Power up a GoIP and then login to its webpage and go directly to SMS Configuration webpage as shown below (Click “Configuration” and then “SMS Configuration”).

The screenshot shows the 'SMS Configuration' webpage. On the left is a navigation menu with 'Status' and 'Configurations' sections. Under 'Configurations', 'SMS' is selected. The main content area is titled 'SMS' and contains the following settings:

- SMS to VoIP: Disable (dropdown)
- SMS Get Information: Enable Disable
- Options For Sending SMS via SIP MESSAGE>>
- Channel selection: CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8
- SMS Server**: Enable Disable (highlighted with a red box)
- SMS Server IP: 192.168.2.1 (text input, highlighted with a red box)
- SMS Server Port: 44444 (text input, highlighted with a red box)
- SMS Client ID: G101 (text input, highlighted with a red box)
- Password: ***** (password input, highlighted with a red box)
- SMS Number Plan: (text input)
- SMS Count Limit: (text input)
- Send Interval (s): (text input)
- Fixed SMSC Number: (text input)
- SMS To VoIP: (text input)
- SMS To GSM: (text input)
- SMS to Email: Enable Disable
- *Auto Config Other lines: (button)
- Save Changes: (button)

Each GoIP line needs to be configured accordingly. The above capture shows an example of the configuration for the line “CH1” and the parameters are described below.

1. **SMS Server IP** — Enter the IP of the SMS Server installed above.
2. **Communication Port** — Enter the port number used to communicate with the SMS Server. The default is 44444.
3. **Authentication ID** — Enter an unused ID generated when adding a GoIP to the SMS Server above.
4. **Authentication Password** — Enter the corresponding password defined.

If all other lines are connecting to the same SMS server, then clicking at the bottom will automatically apply the same configuration for Line 2 to Line 8 with the exception on the ID being incremented by 1 as the line number goes up by 1. This means the ID for Line 2 is G102 and for Line 8 is G108. Please make sure that all these Line IDs have not been assigned to other GoIPs.

Click “Save Changes” and then reboot the GoIP

4.3 Checking GoIP Line status in SMS Server

Now go back to the SMS server and click on “GoIP Manage” as shown below to view the line status of the GoIPs added.

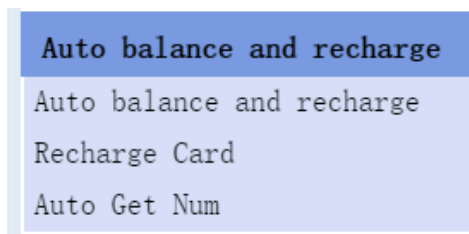


As shown in the capture below, GoIP “G1” is now login (G101 refers to line 1 of G1 and so on).

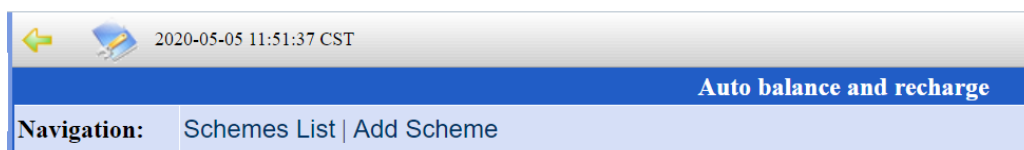
C	ID	Login	GSM Login	GSM Signal	Voip Login	Voip State	Remain Time	Remain SMS	Bal	SIM Info	Provider	Group	SMS FWD	IP:Port	Passwd	Operation
<input type="checkbox"/>	G101	LOGIN	LOGOUT	24	LOGOUT	IDLE				SIM Info	test		N	113.116.52.151:9991	1234	Send SMS SMS Inbox SMS Outbox USSD Call_Record CDR Status Modify Delete
<input type="checkbox"/>	G102	LOGIN	LOGIN	26	LOGIN	IDLE				SIM Info	test		N	113.116.52.151:9992	1234	Send SMS SMS Inbox SMS Outbox USSD Call_Record CDR Status Modify Delete
<input type="checkbox"/>	G103	LOGIN	LOGOUT	24	LOGOUT	IDLE				SIM Info	test		N	113.116.52.151:9993	1234	Send SMS SMS Inbox SMS Outbox USSD Call_Record CDR Status Modify Delete

4.4 Checking Remaining Balance and Recharge Automatically

Click “Auto balance and recharge” as shown below.



Once the “Auto balance and recharge” window is opened, then click on “Add Scheme”.



A scheme consists of a few sections and the parameters in each section are defined below. This is a fairly complicated procedures, but it would be easier to under by going through each section in order.

1. Balance Checking Scheme

Balance Checking Scheme*	
Scheme Name:	<input type="text"/>
Provider:	test <input type="text"/>
Group:	None(None) <input type="text"/>
Balance Checking Method:	USSD <input type="text"/>
USSD Balance Code:	<input type="text"/>
Checking Interval(min):	60 <input type="text"/>
Low Balance Trigger:	<input type="text"/>
Terminate Recharge Trigger:	<input type="text"/>

This section defines the target users and balance checking and update method.

- a. **Scheme Name** – This is a user defined name for this scheme.
- b. **Provider** – This defines which service provider is using this scheme.
- c. **Group** – This defines which group defined is using this scheme.
- d. **Balance Checking Method** – This defines which method is used for checking SIM card balance. There are 5 selections: USSD, SMS, USSD (2 steps), USSD (3 steps), USSD (4 steps) . Please check with the corresponding service provider for more details.
- e. **USSD Balance Code** – When one of the USSD methods is selected, this parameter is displayed and should be filled with the corresponding code Code used by the carrier. is code used by USSD method for checking SIM card balance. For other USSD methods, there other extended parameters as required by the carrier.
- f. **SMS Balance NUM** – When SMS is selected for the Balance Checking Method, this parameter is displayed. The carrier phone number for receiving SMS for balance checking should be filled.
- g. **SMS Balance CMD** – As similar to f. above, this is the command for the balance checking.
- h. **Checking Interval (min)** – This defines the duration for doing the balance checking.
- i. **Low Balance Trigger** – When the balance goes below this Low Balance Trigger, the Low Balance condition is then triggered. This condition can be used to initiate the SIM recharging process as described in 3 below.
- j. **Terminate Recharge Trigger** – This is target balance for terminating the recharging process. If this field is not set, then the recharge process will only perform a single recharge.

2. Extracting SIM Card Balance

According to the Balance Checking Method selected in the previous section, fill in the prefix and the string accordingly as they will be used to extract the credit balance and the amount owe. To determine text needed to be filled in, you can use your cellphone to perform the

corresponding balance checking accordingly.

Extracting SIM Card Balance*	
Exact Balance Prefix (USSD):	<input type="text"/>
String for Owe (USSD):	<input type="text"/>
Terminate USSD Menu after Balance Checking:	<input type="checkbox"/>
Exact Balance Prefix (SMS):	<input type="text"/>
String for Owe (SMS):	<input type="text"/>

3. Recharge Settings

Recharge Settings*	
Recharge Trigger Type:	Low Balance <input type="button" value="v"/>
Recharge Method:	USSD Via its ow <input type="button" value="v"/>
USSD Recharge Code:	<input type="text"/>
Need 2 step2 USSD:	<input type="checkbox"/>
String for Recharge OK:	<input type="text"/>
Alternate String for Recharge OK:	<input type="text"/>
Disable Callout (reactivate after recharge):	<input type="checkbox"/>
Set Talk Time Limit after a Recharge OK(M):	<input type="text"/>
Reset Remain Time after Recharge OK:	<input type="checkbox"/>
Balance Checking Delay after a Recharge OK(S):	<input type="text"/>

This section defines the SIM recharging process.

- A. **Recharge Trigger Type** – Select one of the three conditions list below to initiate the SIM recharging process.
1. **Low Balance** – SIM recharging is initiated when the Low Balance occurs. As described in the Balance Checking Scheme (1) above, Low Balance condition is active when The is condition is set when the Balance is below Low Balance Trigger as describe in the Balance Checking Scheme (1) above.
 2. **Fixed Time** – SIM recharging process is scheduled to start daily at the time specified in the parameter Fixed Time of Every Day (hh:mm:ss).
 3. **Low Remain** – SIM recharging process is initiated when the remaining balance is below the value specified in the parameter **Low Remain Tigger**.
- B. **Recharge Method** – This defines the method to be used for SIM recharging. USSD via its own channel, USSD via a fixed channel, SMS via its own channel. There are different parameters associated with each recharging method. Fill in the parameters accordingly as they pop up.

1. USSD via its own channel

- i. USSD Recharge Code
- ii. Need Step 2 USSD
- iii. String for 1st USSD Recharge OK
- iv. 2nd USSD Code
- v. String for Recharge OK
- vi. Alternate String for Recharge OK

2. USSD via a fixed channel

This method is the same as 1 except that the channel sending the USSD code is specified by “Recharge Line Name”.

3. SMS via its own channel

- i. SMS Recharge NUM – This is the phone number for sending the SMS command for recharging.
- ii. SMS Recharge CMD – This is the SMS recharge command.
- iii. String for Recharge OK – This string is used to determine if the recharge status returned from the carrier is successful or not.
- iv. Alternate String for Recharge OK – This is an alternate string used to determine if the recharge status returned from the carrier is successful or not.

- C. **Disable Callout (reactivate after recharge)** – Check this parameter disable outgoing calls during recharging.
- D. **Set Talk Time Limit after a Recharge OK**– The Talk Time is reset to the value specified in this parameter after recharging is successfully completed.
- E. **Reset Remain Time after Recharge OK** – The Remain Time is reset after recharging is successfully completed.
- F. **Balance Checking Delay after a Recharge OK**– This specifies the delay time for checking the balance after recharging is successfully completed.

4. Action on Low Balance

Action on Low Balance	
SMS Recipient :	<input type="text"/>
Specify the GoIP Channel to send SMS Alert:	<input type="text" value="its own channel"/>
Send alert via Email :	<input type="text"/>
Disable Line (No SIM Recharging):	<input type="checkbox"/>

This section defines the actions to be taken when the Low Balance condition occurs.

- A. Sending an SMS alert to the number and via the channel specified in **SMS Recipient** and **Specify the GoIP Channel to send SMS Alert**.

- B. Sending an email alert to the email address specified.
- C. Disable the LINE and SIM recharging

5. Follow-up on USSD Codes

SIM recharging using the USSD method may require multiple commands in order to complete a recharge cycle. This table below allows additional commands and actions to be defined for this recharging method.

Follow-up USSD Codes	
1st Follow-up USSD Code:	<input type="text"/>
String for 1st Follow-up USSD Code OK:	<input type="text"/>
2nd Follow-up USSD Code:	<input type="text"/>
2nd Follow-up USSD Code OK:	<input type="text"/>
Disable Line if a Follow-up code fails:	<input type="checkbox"/>
GSM Number (Failure of Sending Follow-up codes):	<input type="text"/>
Email Account (Failure of Sending Follow-up codes):	<input type="text"/>
<input type="button" value="ADD"/> <input type="button" value="Cancel"/>	