SMS Server

Installation Guide

1   Server System

The SIM Server requires to run on Linux OS (x86 platform) and it has been tested to be compatible with Linux OS from RedHat, CentOS, Debian, and Ubuntu.

1.1   Extended Library

Execute the following command as root to determine if the server is a 32-bit or 64-bit system

uname –a

If the response is "i386" or "i686", it means that your server is a 32-bit system.   There is no need to install any extended library.

If the response is "x86_64", it means that your server is a 64-bit system and you need to install the following extended library.

➢   For RedHat / CentOS installation, execute the following command

yum install -y glibc.i686   zlib.i686 zlib.x86_64   krb5-libs.i686 krb5-libs.x86_64

➢   For Debian / Ubuntu installation, execute the following commands.

dpkg --add-architecture i386 && apt-get update
apt-get install lib32z1-dev libgssapi-krb5-2:i386

1.2   LAMP

LAMP is an archetypal model of web service stacks, named as an acronym of the names of its original four open-source components: the Linux Operating System, the Apache HTTP Server, the MySQL relational database management system (RDBMS), and the PHP programming language. SMS Server must run in a LAMP environment; therefore, all LAMP components must first be installed and configured properly before installing the SMS server.

For CentOS 5 or 6:
a)   Type the following command to install the LAMP and common extended packages

**yum -y install httpd php mysql mysql-server php-mysql mod_perl mod_auth_mysql \
php-mcrypt php-gd php-xml php-mbstring php-ldap php-pear php-xmlrpc \
libdbi-dbd-mysql**

b)   Type the following command to start MySQL and Apache

service mysqld start && service httpd start

c)   Type the following command to start MySQL and Apache on server at start up

chkconfig mysqld on && chkconfig httpd on

For CentOS 7：

a)   Issue the following command to install the LAMP and common extended packages

**yum install -y httpd php mariadb mariadb-server php-mysql php-gd php-ldap php-odbc \
php-pear php-xml php-xmlrpc php-mbstring php-bcmath php-mhash**

b) Type the following command to start MySQL and Apache

systemctl start mariadb.service && systemctl start httpd.service

c) Type the following command to start MySQL and Apache on server start up

systemctl enable mariadb.service && systemctl enable httpd.service

For Ubuntu：

a) Type the following command to start both MySQL and Appache

apt-get install -y mysql-server mysql-client apache2 php5 php5-mysql

2   SMS Server Installation and Execution

Please visit the software download site below to obtain the link for the latest SMS Installation package.

http://www.dbltek.com/Software-Download.html

Here are the installation steps (Use v1.28.4 version as an exmaple):

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

wget http://dbltek.com/update/goip_install-v1.28.4.tar.gz

tar -xvzf goip_install-v1.28.4.tar.gz -C /root

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

cd /root/goip_install
./goip_install.sh

Here are interactive display and responses during the installation process.

Configure httpd config:
Enter the httpd config file PATH: (default: /etc/httpd/conf.d)
   Default press Enter
      Configure the apache settings or just press "Enter" to use the default settings.
Import Databases
Enter the Mysql root password if the password exists:
      Enter the MySQL password.   If no password is set, just press "Enter" to continue.
Enter your Mysql PATH: (default: /usr/bin/mysql)
Default press Enter
      Enter the MySQL directory path.   Just press "Enter" to use the default MySQL path.

c) Type the following command to restart the apache server

> For CentOS 5 or 6,
> **/etc/init.d/httpd restart**
>
> For CentOS 7
> **systemctl restart httpd.service**
>
> For Ubuntu or Debian,
> **/etc/init.d/apache2 restart**

d) Configure the firewall

> If firewall is enabled, please make sure the TCP port 80 and UDP pot 44444 are open for internet traffics.

Once the installation is completed, type the following address in a browser to login to 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.

If you encounter any problems during the installation, please contact technical support @ http://en.dbltek.com/contactus.html

3   Basic Configuration

3.1   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:	☐
Forward SMS to HTTP:	☐
	Add 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.

☐	G101	LOGOUT
☐	G102	LOGOUT
☐	G103	LOGOUT
☐	G104	LOGOUT
☐	G105	LOGOUT
☐	G106	LOGOUT
☐	G107	LOGOUT

3.2   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").

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 [*Auto Config Other lines] 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

3.3   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.

System Manage
System Manage
Mail Report
Call Record
GoIP CDR
Provider Manage
GoIP Group
GoIP Manage

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
☐	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
☐	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
☐	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 |

3.4   Checking Remaining Balance and Recharge Automatically

Click "Auto balance and recharge" as shown below.

Auto balance and recharge
Auto balance and recharge
Recharge Card
Auto Get Num
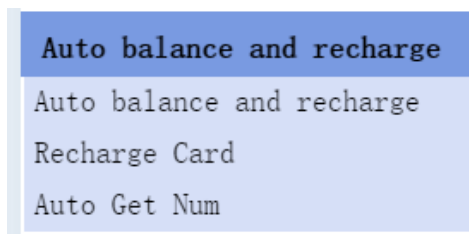
Once the "Auto balance and recharge" window is opened, then click on "Add Scheme".

⬅ 🖊 2020-05-05 11:51:37 CST
Auto balance and recharge
Navigation: Schemes List | Add Scheme
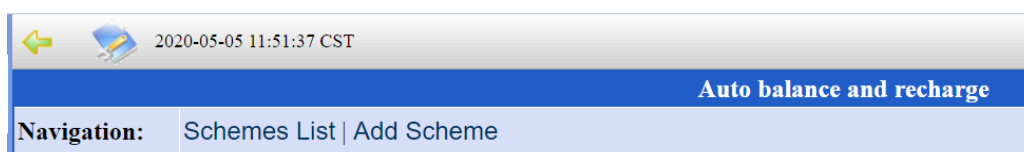
A scheme consists of a few sections and the parameters in each section are defined below.   This is a fairly complicated procedures, but it would be easier to under by going through each section in order.

1. **Balance Checking Scheme**

Balance Checking Scheme*	
Scheme Name:	
Provider:	test
Group:	None(None)
Balance Checking Method:	USSD
USSD Balance Code:	
Checking Interval(min):	60
Low Balance Trigger:	
Terminate Recharge Trigger:	

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):
String for Owe (USSD):
Terminate USSD Menu after Balance Checking: ☐
Exact Balance Prefix (SMS):
String for Owe (SMS):

3. Recharge Settings

Recharge Settings*
Recharge Trigger Type: Low Balance
Recharge Method: USSD Via its ow
USSD Recharge Code:
Need 2 step2 USSD: ☐
String for Recharge OK:
Alternate String for Recharge OK:
Disable Callout (reactivate after recharge): ☐
Set Talk Time Limit after a Recharge OK(M):
Reset Remain Time after Recharge OK: ☐
Balance Checking Delay after a Recharge OK(S):

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 :	
Specify the GoIP Channel to send SMS Alert:	its own channel ˅
Send alert via Email :	
Disable Line (No SIM Recharging):	☐

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:	
String for 1st Follow-up USSD Code OK:	
2nd Follw-up USSD Code:	
2nd Follow-up USSD Code OK:	
Disable Line if a Follow-up code fails:	☐
GSM Number (Failure of Sending Follow-up codes):	
Email Account (Failure of Sending Follow-up codes):	
	ADD Cancel