

MPOS AND 3G MODEM CONFIGURATION PROCEDURE



<u>System:</u> Quality Management System	<u>Reference No, Revision No:</u> Q-F-IT-P-01, Rev 1	<u>Originated by:</u> Systems Administrator
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1 Purpose

This document describes the procedure and a process for the configuration of the 3G modem and MPOS terminal. The MPOS Terminal is used by our third party vendors of prepaid electricity. The procedure is intended for SEC Systems Administrator and Technician to use ONLY in times of Preparing an MPOS for third party vendors.

2 Scope

The procedure serves as a fine guide with step by step tasks to follow in cases where the MPOS needs to be configured to work with a 3G modem. Due to the fact that passwords are kept constant for the 3G modems and MPOS, some passwords have been included as part of this procedure. This procedure is written with respect to the **Huawei B683 HSPA+ 3G Wireless Gateways**. Please note that the configurations that will be stated here should apply for any other gateway, as long as one identifies where the specific settings are on that different gateway.

3 References

N/A

4 Definitions

- i. MPOS – Mobile Point Of Sale
- ii. LAN – Local Area Network
- iii. UTP – Unshielded Twisted Pair
- iv. EVG – Extended Vending Gateway
- v. DHCP - Dynamic Host Configuration Protocol

5 Responsibilities

The Systems Administrator – Only the System Administrator OR an approved IT department employee is responsible for executing the commands of configuring the 3G Modem and MPOS setup.

The Business Systems Engineer – Only the Business Systems Engineer or the IT Manager can approve this type of configuration for third party vendors.

6 Procedure

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6.1 Modem Configuration

- a. The first step here is to insert the Swazi MTN SIM Card at the correct position and facing the right direction. The diagram below demonstrates this case:



Once that is finished, be sure to place the lid which covers the SIM card back on.

- b. The next step is to connect the modem with the computer using the LAN ports of the modem as shown in the diagram below:



The modem usually has 4 LAN ports, however other brands may differ, it should not worry you because we need only 1 port to achieve our goal. Pick any port at random

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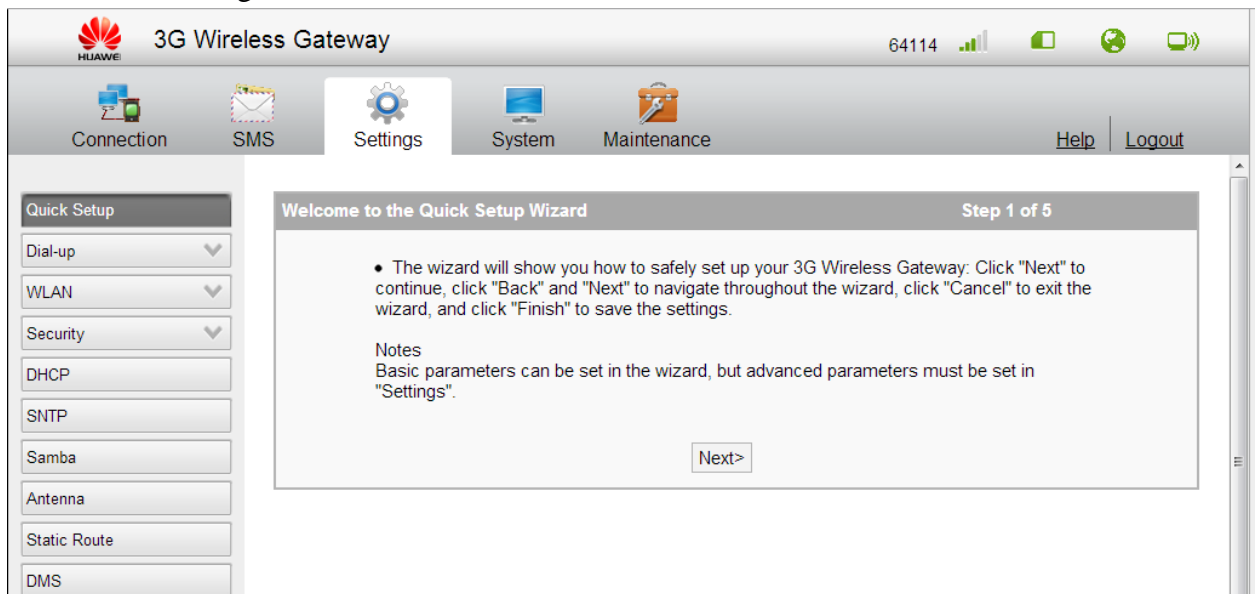


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and connect it to the computer with a UTP-Cable. Switch the power on and give the modem some time to boot up, say one minute at least.

- c. Next, open up your favourite internet browser and type the following address <http://192.168.0.1>, ***note: “your computer should be set to dhcp mode for this to work, since a new modem will come defaulting to dhcp”***. Use the default login information provided with every new modem.

The following screenshot shows the options for the configuration of the modem after a successful login:



- d. Now select the DHCP option on the left and set the values as shown below:

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The screenshot shows the 'Settings > DHCP' configuration page. The left sidebar contains a menu with options: Quick Setup, Dial-up, WLAN, Security, DDNS, DHCP (selected), SNTP, Samba, and Clip. The main content area displays the following fields:

IP Address:	192.168.1.1
Subnet Mask:	255.255.255.252
DHCP Server:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
Start IP Address:	
End IP Address:	
DHCP Lease Time(s):	

At the bottom right of the form are 'Apply' and 'Cancel' buttons.

After that apply settings, in which case the modem will reboot to allow them to take effect


- e. Next select the DIAL-UP option and click NEW on the buttons at the bottom and then set the values as shown in the screenshot below:

The screenshot shows the 'Settings > Dial-up > Profile Management' page. The left sidebar menu includes: Quick Setup, Dial-up (selected), Profile Management (highlighted), Mobile Network Settings, PIN Code Management, PIN Code Auto Validation, WLAN, Security, DDNS, DHCP, SNTP, Samba, Clip, and Antenna. The main content area displays the following fields:

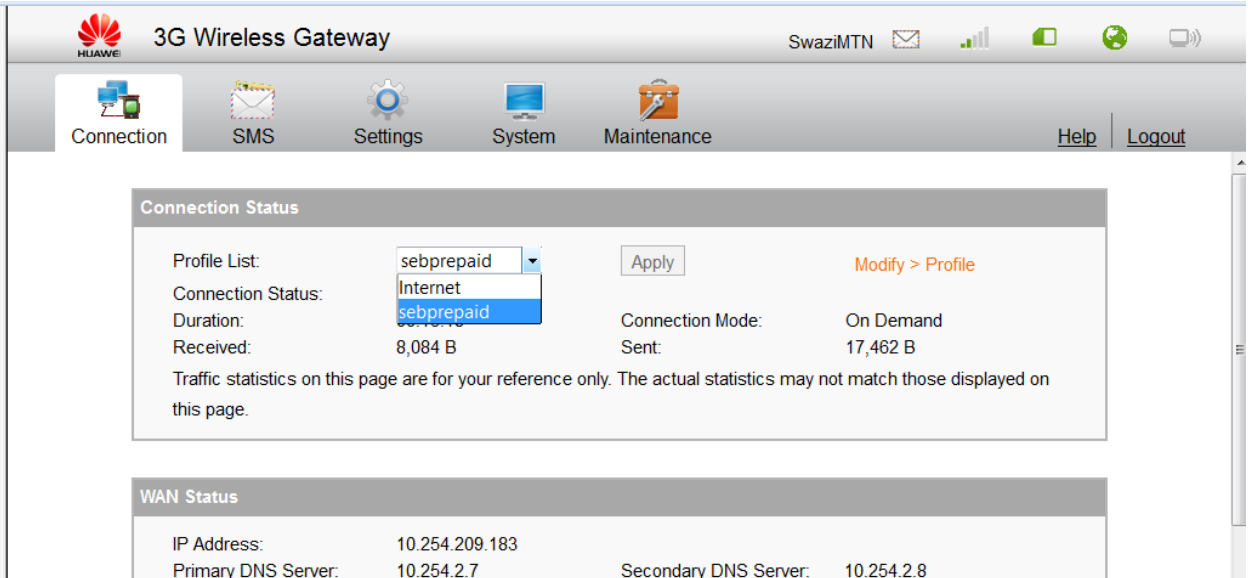
Profile List:	sebprenpaid
Profile Name:	sebprenpaid
Dial-up Number:	*99#
User Name:	
Password:	
APN:	
<input type="radio"/> Dynamic <input checked="" type="radio"/> Static	sebprenpaid
IP Address:	
<input checked="" type="radio"/> Dynamic <input type="radio"/> Static	
Authentication:	CHAP+PAP
Connection Mode:	On Demand
Max Idle Time(s):	600
MTU:	1500

At the bottom right of the form are 'New', 'Save', 'Delete', and 'Cancel' buttons.

Save the new profile.


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- f. To conclude our modem set up, go to the CONNECTION tab, try to locate your new profile from the drop down list labelled Profile List, select it and click apply, as shown in the screenshot below:



The screenshot displays the '3G Wireless Gateway' web interface. The top navigation bar includes 'Connection', 'SMS', 'Settings', 'System', and 'Maintenance'. The 'Connection' tab is active. Below the navigation bar, the 'Connection Status' section shows a 'Profile List' dropdown menu with 'sebp prepaid' selected. The 'Connection Status' is 'Internet'. The 'Duration' is 'sebp prepaid'. The 'Received' data is 8,084 B and the 'Sent' data is 17,462 B. The 'Connection Mode' is 'On Demand'. Below this, the 'WAN Status' section shows the IP Address as 10.254.209.183, the Primary DNS Server as 10.254.2.7, and the Secondary DNS Server as 10.254.2.8.

- g. Now, at the bottom of this screen lies an option to disable the Wi-Fi on the modem, find it and disable it.
- h. Now, to test if the configuration was a success, you need to trace route to EVG server, which at the time of this writing was at 147.110.192.74, hence using your favourite terminal, the following screenshot demonstrates the expected results for a successful setup.

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```

[2013-07-30 16:23.47] ~
[skdvz.anonymous-PC] > tracert 147.110.192.74

Tracing route to 147.110.192.74 over a maximum of 30 hops

  1      1 ms      <1 ms      <1 ms      192.168.1.1
  2     73 ms     69 ms     69 ms     10.108.2.18
  3     68 ms     69 ms     69 ms     10.108.20.1
  4     67 ms     68 ms     69 ms     10.108.20.36
  5     88 ms     79 ms     89 ms     192.168.250.1
  6      *        *        *        Request timed out.
  7

[2013-07-30 16:24.50] ~
[skdvz.anonymous-PC] >

```

That concludes our modem configuration, and it is ready to work with the MPOS.

6.2 MPOS Configuration

- a. Plug in the MPOS into a power source and it will boot up.



- b. Now press and hold the MENU button until the menu shown below in bold appears:
 - 1 HW Info**
 - 2 Telecom**
 - 3 Boot**
 - 4 Country**

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5 Time-zone

6 Language

- c. Now the first option we are interested in here is the **Boot** option, select it and click **OK**.

You should now be seeing the following menu:

- 1 GSM
- 2 WLAN
- 3 ETH

- d. Select each of them turn by turn and set **GSM** to **off**, **WLAN** to **off** and finally **ETH** to **on**.

Now navigate back using the STOP button to the first menu.

Select **HW Info** and You should see the menu below:

- 1 Telecom Card
- 2 Xentao read. Prot.

- e. Select the first option which will take you to the menu below:

- 1 none
- 2 gsm
- 3 isdn
- 4 pstn
- 5 wlan

Select **none** and navigate back to the first menu.

- f. Now select the **Telecom** option which should give you the menu below:

- 1 wlan
- 2 ipconfig
- 3 ip status

- g. Select **ipconfig** => **eth0** => **OK** => **fixed** and set the network as follows:

Ipaddress : 192.168.1.2

Netmask : 255.255.255.252

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Gateway : 192.168.1.1

Dns 1 : null

Dns 2 : null

Domain : null

h. Now navigate back to the first menu.

The MPOS Configuration is now at a point where it can communicate with the Modem.

Connect the MPOS to the 3G modem with a UTP Cable RJ 45, and then reboot them both.

6.3 Server and terminal configuration

a. This time allow the MPOS to boot without any disturbances:

Username : admin

Password : 1112

b. Once you have logged in, you should see the administration menu; select your options as follows:

Network => Network Interfaces => Ethernet

Server IP Address => {147.110.192.74} =>OK

Server Port => {8804} =>OK

Connect Timeout => {25} => OK

Reply Timeout => {25} => OK

Navigate one step back

Client ID =>{client id}=>OK

Terminal ID =>{client id}=>OK

Navigate one step back, you will be asked to verify if you want to logoff [**YES**]

c. The MPOS Configuration is done, you can now login as follows to test the terminal:

Username : jam

Password : 12345

Select Ethernet;

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The MPOS will try to establish a connection through the modem, and the modem's light should change to green for a successful connection. You can test the setup by trying to reprint a token.

7 Records

N/A