



Welcome To IdeaPro!

Powered by Ideamart.

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1. Overview

1.1 What is this documentation all about?

This documentation is all about creating an IdeaPro application. We will be going through step by step on 'How to develop an IdeaPro application'. This will cover,

- PHP programming to the application
- Testing application with the Simulator
- Provisioning the IdeaPro application
- Hosting the application into cloud

At the end of this documentation, you will be having your own IdeaPro SMS application.

1.2 What is an IdeaPro application?

IdeaPro is a platform provided by Ideamart which provides some cool features like subscribe users to your application, send and receive SMS, track the locations, popup a USSD wizard etc. These features are provided to the developer as API's. A developer can develop his/her application with the help of this application.

1.3 What is the use of an IdeaPro application?

You can earn money from your application. Here's how it works. You can charge your subscriber on daily or monthly plan. Charging plans can be set up while provisioning the application.

1.4 What are the API's provided by IdeaPro platform?

1. SMS API – This is used to send and receive SMS using a HTTP based API.
2. USSD API - This allows applications to initiate USSD sessions using a HTTP-based API.
3. Subscription API - This allows a subscriber to register or unregister to or from an app.
4. LBS API – This allows you to find users location.
5. CaaS API - This monetizes your app with micro-payments.
6. IVR API - uses pre-recorded voice prompts and menus to provide information and options in order to receive responses from the users via keypad dialing.

2. Setting up the environment

2.1 Notepad++

We use Notepad++ as our code editor. To install,

1. Go to <https://notepad-plus-plus.org/downloads/v7.8.6/>
2. Download the 'Installer'.
3. Run the installer.
4. Keep default settings and install Notepad++.

2.2 Ideamart Simulator and Documentations

Ideamart simulator provides you the ability to test your application in your local environment.

1. Go to <http://www.ideamart.lk/web/idea-pro/downloads/download-list/>
2. Download the 'Ideamart Developer Bundle'.
3. Extract the downloaded file.

2.3 Java

We need java to run the Ideamart Simulator. To install,

1. Go to <https://java.com/en/download/win10.jsp>
2. Download 'Java for windows'.
3. Run the installer.
4. Keep default settings and install Java.

2.4 Xampp

XAMPP is used to run our application in local environment. To install,

1. Go to <https://www.apachefriends.org/download.html>
2. Download 'XAMPP for windows'
3. Run the installer.
4. Keep default settings and install XAMPP.

2.5 WinSCP

WinSCP is used to host your application in Cloud Server. To install,

1. Go to <https://winscp.net/eng/download.php>
2. Download WinSCP.
3. Run the installer.
4. Keep default settings and install WinSCP.

3. Developer Documentation

In this part we are going to cover the developer coding requirement such as the API call, URL to the API, data's received and sent etc.

You can download the full documentation from <http://www.ideamart.lk/web/idea-pro/downloads/download-list/>.

3.1 Subscription API

Imagine an application where the users have to be subscribed for a period of time for usage. For example, a news application where users will need updates as soon as you send them, for which the users will have to be subscribed, where this API comes into play. Subscription REST API allows a subscriber to,

- **Register or unregister to or from an app**
- Send subscription notification
- Query subscription status
- Query subscriber base size.

3.2 SMS API

SMS API can send and receive a SMS using a HTTP based API. It can,

- Send a SMS behalf of the user (MT)
- Check the delivery status of the sent SMS
- Receive a SMS with a short code (MO)

In this section we are going to focus on Sending and Receiving SMS which we will be using in our application.

3.2.1 Send SMS in IdeaPro (MT)

- Method : `Post`
- Request URL

Simulator: <http://localhost:7000/sms/send>

Active Production: <https://api.dialog.lk/sms/send>

- Following is a sample request of send service.

```
{  
  "message": "Hello",  
  "destinationAddresses": ["tel:5C74B588F97"],  
  "password": "password",  
  "applicationId": "APP_999999"  
}
```

- Following are the Request parameters of Send service.

Parameter Name	Description	Type
message	<ul style="list-style-type: none">• The message that need to be sent• Messages over the limit shall be broken up	String
destinationAddresses	<ul style="list-style-type: none">• List of destination addresses should be Hash Codes.• tel: for MSISDN, tel: 5C74B588F97,tel: 5C74B588F97• Address can also have the value – “tel: all”, which will in turn be a message to the subscribed base of the application.• <i>Note: tel might be a masked number depending on the type of application</i>	String
password	Password given when provisioned.	String
applicationId	Application ID as given when provisioned.	String

3.2.2 Receive SMS in IdeaPro (MO)

This service allows you to retrieve SMSs sent to the Ideamart application. We will be giving a SMS MO URL when provisioning the application.

- Following is a sample request of receive service.

```
{
  "message": "my testing message",
  "sourceAddress": "tel:5C74B588F97",
  "requestId": "APP_000001",
  "encoding": "0",
  "version": "1.0",
  "applicationId": "APP_000001"
}
```

- Following are the Request parameters of receive service.

Parameter Name	Description	Type
message	Message as sent from the user	String
address	Source address is a masked number.	String
requestId	Request Identifier in the Ideamart	String
encoding	Encoding scheme used in the Message	<u>Enumerated</u> 0 – Text 240 – Flash SMS 245 – Binary SMS
version	API version shall be numbered as 1.0, 2.0 etc	String
applicationId	Application ID as given when provisioned	String

4. Coding the Application

4.1 Coding the application

- First, go to <https://github.com/MahdiRe/FirstIdeaProSMSApp>.
- Then click on '**Clone or Download**' and click '**Download ZIP**'.
- Next extract the downloaded ZIP file.
- Inside the extracted folder, right click the 'sms.php' file and click 'Edit with Notepad++'.
- These are the three parts which you need to change,
 - ✓ applicationId – You'll get it when you provision your application.
 - ✓ password – You'll get it when your application is approved by the admin.
 - ✓ serverURL – SMS (MT) sending url

```
/** To be filled ***/  
  
$applicationId = "<appcationId>";  
  
$password= "<password>";  
  
$serverurl= "<url>";
```

- If changes are done correctly, Congratulations, Your app is ready for testing.

5. Test the Application in Local Environment

5.1 How to start the Simulator

- First extract the 'IdeaMart_Simulator.zip' file or 'IdeaMart_developer_bundle.zip' file (which you previously downloaded in the 2.4 section).
- Then go to: **IdeaMart Simulator-v2.2 > sdk-standalone-1.0.147 > bin** folder.
- Click inside the location bar, and type 'cmd', without the quote marks to open the Command Prompt window in that location.
- In the Command Prompt type '**sdp-simulator.bat console**', without the quote marks to start the simulator.
- Now open your browser and type the following URL to access the IdeaMart Simulator.
<http://localhost:10001/>
- To **stop** the simulator, Press Ctrl + C in the Command Prompt.



5.2 Run the Application in Local Environment

- First open 'Xampp' and start Apache.
- Change the code in sms.php file as below,
 - ✓ applicationId – copy the Application ID in simulator.
 - ✓ password – copy the password in simulator.
 - ✓ serverUrl - <http://localhost:7000/sms/send>
- Then copy your application folder and paste it in 'C:\xampp\htdocs'.

5.3 Test the Application with Simulator

- First, try sending a message from the simulator to your application. Go to 'Send Message To Application' section and change the 'URL',
 - ✓ **Application URL:** <http://localhost/<application folder name>/sms.php>
 - ✓ **Message:** type 'sujatha <your_name>'.
- And click 'Send'.

Messages sent to Application

Time	Phone #	Message	Status
02:18:01	77177	sujatha hi	SUCCESS

- If your application successfully replies back, your message will be received by the simulator as below.

Messages sent to Customer

Time	Phone #	Message
02:18:03	94771122336	Hi, Thank you for replying



6. Hosting the Application

6.1 Requesting for Ideamart Hosting

- You need to send an Email,

TO: devsupport@ideamart.lk

SUBJECT: Requesting for a hosting space

MESSAGE:

Hi Ideamart Team,

Please provide me a hosting space as per below requirement.

Ideamart Username - <username_here>

Language – PHP

Contact No – <contact_number_here>

Best Regards,

<Your_Name>

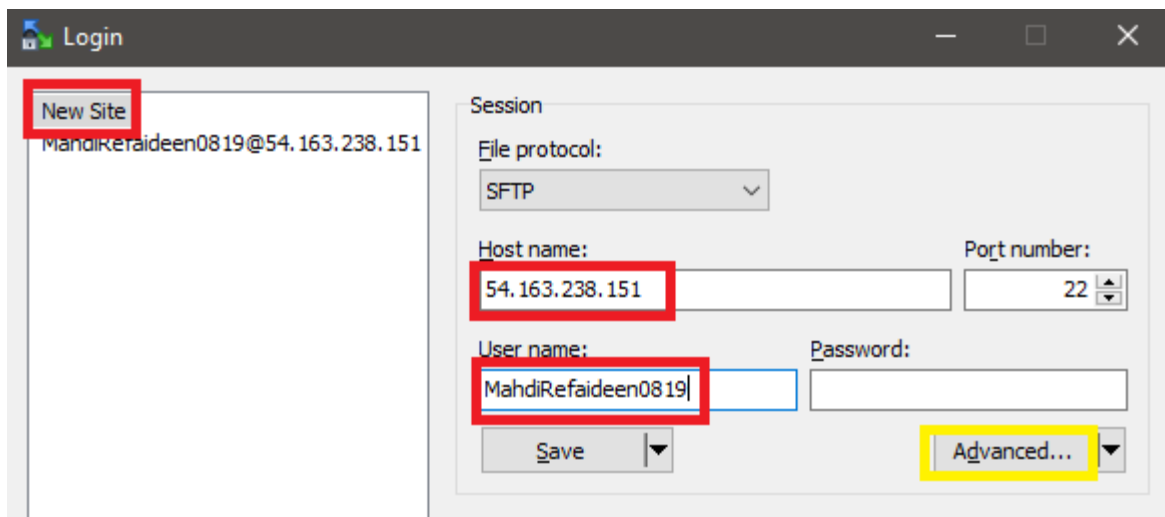
- Your email will be replied by providing these information,
 - ✓ ssh details:
 - Username :-
 - Pass-phrase :-
 - ✓ MySQL details:
 - Databases :-
 - Username :-
 - Password :-
 - ✓ A `.key` file attached.
- These credential information will be used for hosting purpose. So please save these information in a safe place.

6.2 Log into your host space

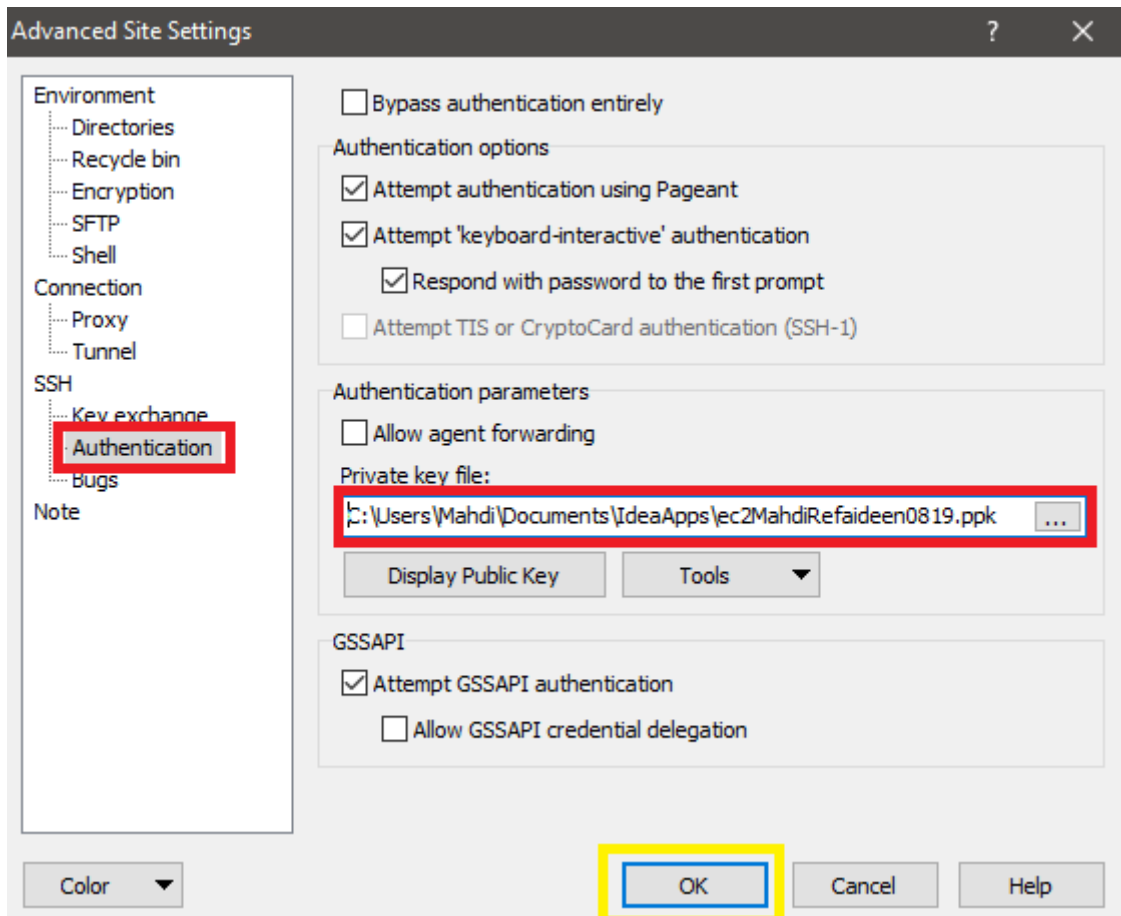
- Open WinSCP.
- In WinSCP, Click 'New Site' and then fill the information as below.
 - ✓ **Host name:**
 - Go to CMD and type, ping sv2.ideamarthosting.dialog.lk
 - Copy the IP address
 - Paste in in the **Host name**

```
C:\Users\Mahdi>ping sv2.ideamarthosting.dialog.lk  
  
Pinging sv2.ideamarthosting.dialog.lk [54.163.238.151] with 32 bytes of data:  
Reply from 54.163.238.151: bytes=32 time=446ms TTL=230
```

- ✓ **User name:**
 - Copy the `ssh username` and paste it here.



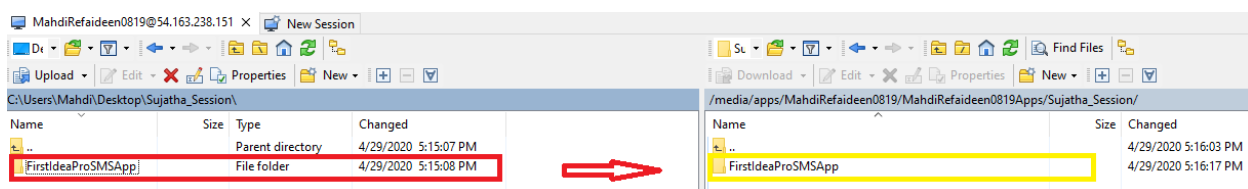
- Next click '**Advanced**', and go to 'Authentication' under `SSH`.
 - ✓ From there, choose your `private key file`.
 - ✓ Click "OK" for changing it to PuTTY format.
 - ✓ You will be popped up to enter the pass-phrase. There you need to enter your SSH pass-phrase.
 - ✓ Then click "OK"



- Then Click “Login”. You will be logged into your Ideamart hosting account.

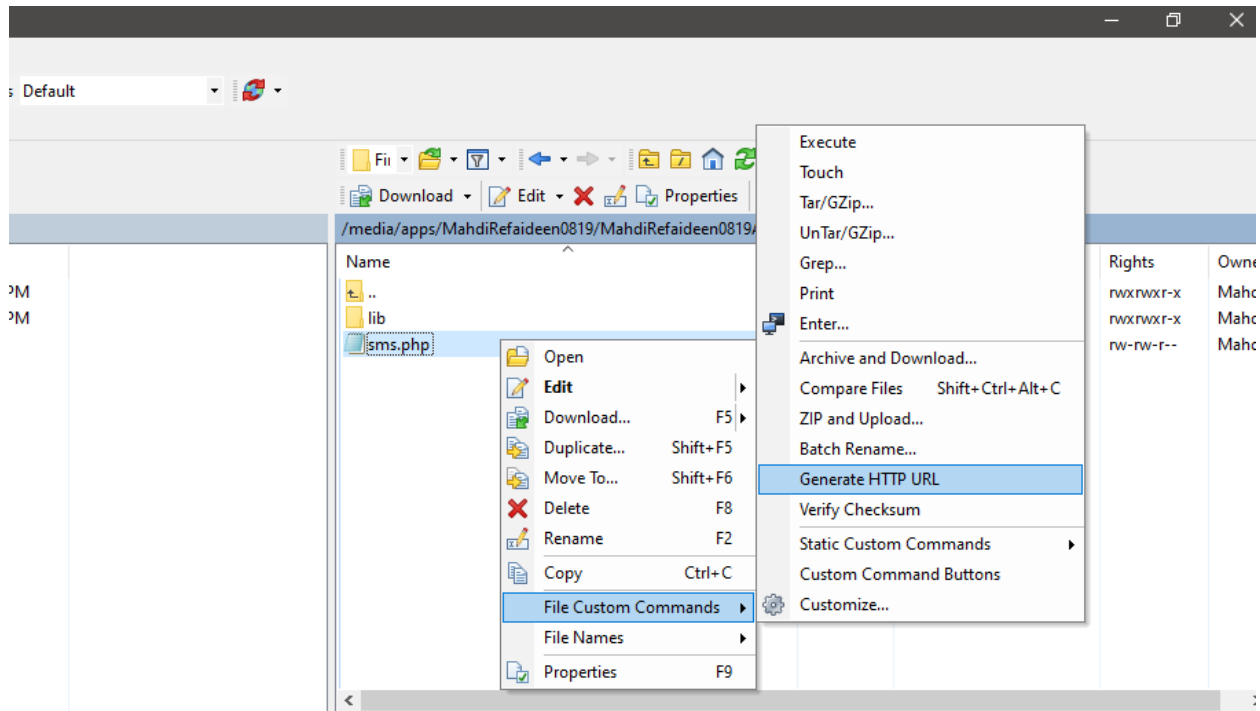
6.3 Hosting your application

- You will be able to see your system folders in left side and the hosting folder in the right side of the window.
- Go to your application folder (from the left side folders in the window) and drag and drop it into the hosting folder (Right side folders in the window).



6.4 Get your application SMS MO URL

- Go to your application folder.
- Right click the `sms.php` file and click `File Custom Commands` > `Generate HTTP URL`



- Copy the URL generated.



- Next, replace the URL with Ideamart Hosting URL,

✓ Copied URL:

http://54.163.238.151/media/apps/MahdiRefaideen0819/MahdiRefaideen0819Apps/Sujatha_Session/FirstIdeaProSMSApp/sms.php

✓ Your SMS MO URL (Needed when provisioning):

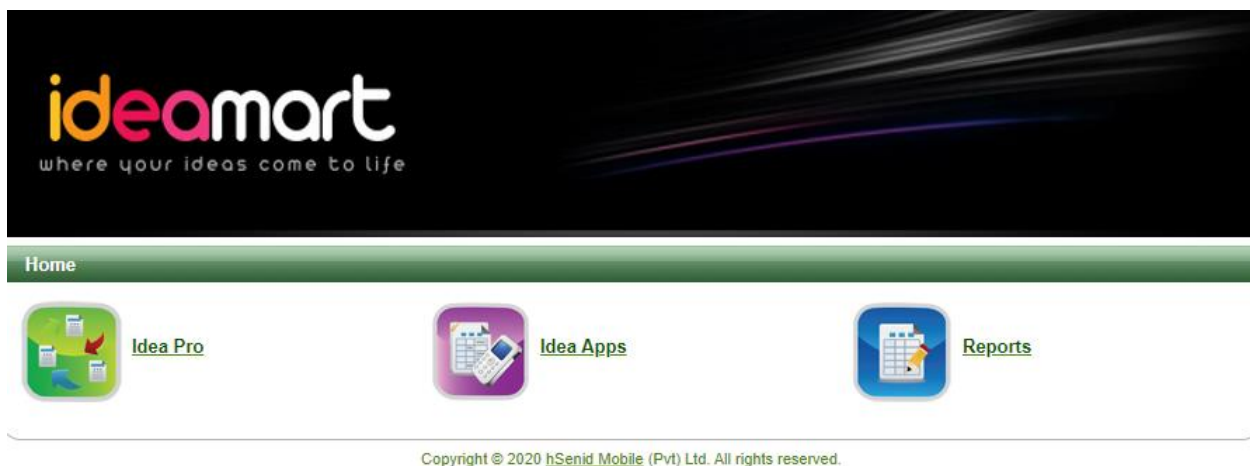
https://sv2.ideamarthosting.dialog.lk/MahdiRefaideen0819Apps/Sujatha_Session/FirstIdeaProSMSApp/sms.php

7. Provisioning (Registering) the IdeaPro Application

- Visit <http://www.ideamart.lk/> and Login to Ideamart account by providing your mobile number or credentials.

Note: If you are a new user you will be directed to a registration page. You need to fill the form including your bank details.

- Once you've logged into Ideamart account, you will be directed to Ideamart portal. There click 'Ideapro' section.



- In IdeaPro section, click 'Create New Application'. Then you'll be given a form to fill the basic details.
 - ✓ **Application Name** – Name of the application
 - ✓ **Application Description** – Brief description about your application
 - ✓ **Allowed Host Addresses** – You need to give your server IP address where the application is hosted. Multiple addresses can be provided separating by ','.
 - ✓ **Whitelisted Numbers** – You can specify your number here. This means the admin number used in production. Multiple numbers can be provided separating by ','.
 - ✓ **Blacklisted Numbers** – Numbers which is to be blocked for your application. . This means the admin number used in production. Multiple numbers can be provided separating by ','

Basic

Advanced

Basic Details

Application Name *

Application Description *

This application is a demo application for IdeaPro developers. This application simply subscribe a user and also dend and receive messages to and from the user

Allowed Host Address(es) ⓘ *

Whitelisted Numbers ⓘ

Blacklisted Numbers ⓘ

Save as Draft

Next

- Next you'll be taken into 'Advanced' section. There you need to specify,
 - ✓ **Application start time**
 - ✓ **Automatic application expiration** – If you want to end this application by a given time, you need to enable this and give the expiration date time. Since this is a test application leave it **disabled**.

Basic

Advanced

Advanced Details

Enable Automatic Content Governance ?

YES

Enable Advertisements ?

YES

Enable Mobile Number Masking ?

YES

Application Start Time ? *

25th Apr 2020, 05:11 PM

Enable automatic application expiration ?

NO






Save as Draft




Back

Next



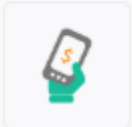

- Then you need to choose the,
 - ✓ **Operators** – You can choose multiple operators. For now, will choose only 'Dialog'.
 - ✓ **API's** used in your app – Here we need to choose our two APIs used in the application. Choose **Subscription** API and **SMS** API.



Choose the Operators Your App Supports

Choose the APIs used in your app

Save as Draft
Back
Next

- Next you need to configure your SMS Common Configuration.
 - ✓ **Enable Mobile Originated SMS** – By enabling this you'll be able to receive SMS from subscribed users.
 - ✓ **Message receiving URL** – Here you need to specify the **SMS MO URL** to your application.
 - ✓ **Enable Mobile Terminated SMS** – By enabling this you'll be able to send SMS from your application.
 - ✓ **Default Sender Address** – Give the default sender alias from the aliases.

- ✓ **Send Address Aliases** - Name of the sender, when sending a SMS from the application. You can have multiple aliases separated by ','. Programmatically you can change to one of the aliases specified here for an SMS.
- ✓ **Subscription Required** – Enable this feature in order to register your user into the application.

SMS Common Configuration

Enable Mobile Originated SMS ?

YES

Message Receiving URL ? *

https://sv2.ideamarthosting.dialog.lk/MahdiRefaideen0819Apps/Ideapro/sms.php

Enable Mobile Terminated SMS ? *

YES

At least Default Sender Address or Sender Address Aliases should be configured

Default Sender Address ?

sujatha

Send Address Aliases ?

sujatha

Enable Delivery Reports ?

NO

Subscription Required ?

YES

Save as Draft

Back

Next

- Next we need to configure our SMS MO and MT.
 - ✓ **SMS short code** – Choose the port number. User registers and sends SMS to your app through this port number.

- ✓ **SMS keyword** – Keyword which the user types in order to call your application.
- ✓ **Traffic charging** – **Disable** both MO and MT traffic charging since this is a demo application.

Dialog SMS Configuration

Configure Mobile Originated SMS YES

SMS Short Code ? 77177 ▼

SMS Keyword ? * sujatha

Enable Mobile Originated Traffic Charging ? NO

[More](#) ▼

Configure Mobile Terminated SMS * YES

Messages Per Second ? * 10

Messages Per Day ? * 30000

Enable Mobile Terminated Traffic Charging ? NO

Save as Draft Back Next

- Next setup the Subscription Common Configuration.
 - ✓ **Subscription Response Message** – This is the message will be sent to the user, if he/she subscribed to our application.
 - ✓ **Unsubscription Response Message** - This is the message will be sent to the user, if he/she unsubscribed from our application.

- ✓ **Subscription Notification URL** – This will notify you when someone subscribed to our application. For now let's **disable** it.

Subscription Common Configuration

Subscription Response Message ? *

Welcome to SujathaTest app. To unsubscribe type UNREG <space> sujatha and send to 77177.

Un-subscription Response Message ? *

Thank you for using SujathaTest app.

Send Subscription Notification ?

☐ NO

Allow HTTP Subscription API ?

☐ NO

- Finally you need to set subscription charging and send it for approval.
 - ✓ **Enable Subscription Charging** – For now we will **disable** charging, since this is a demo application.

Dialog Subscription Configuration

Maximum number of Broadcast Messages Per Day ? *

9999

Enable Subscription Charging ?

☐ NO

Save as Draft

Back

Send for approval

8. Testing the Application

8.1 Code change in hosted file

- Change the code in `sms.php` file hosted as below,
 - ✓ **applicationId** – copy the Application ID given when provisioning.
 - ✓ **password** – copy the password given when provisioning.
 - ✓ **serverUrl** - <https://api.dialog.lk/sms/send>

8.2 Test your SMS application

- ✓ ***To subscribe*** — REG<space> Sujatha and send to **77177**
- ✓ ***To get a message from the app*** — sujatha<space><your name> and send to **77177**.
- ✓ ***[Only white listed users can send broadcast messages] For white listed users*** —
sujatha<space>GO<space><Message needs to be broadcast among subscribers> and
send to **77177**.
- ✓ ***Unregistering from the app*** — UNREG<space> Sujatha and send to **77177**

***** Congratulations, you have successfully created your first IdeaPro SMS Application. *****