



Routesms Solutions Limited

SMPP Gateway Manual

(Document version 1.2)

This document describes how to interface to and use the Routesms Messaging Platform for connecting to the Routesms Network for Mobile Originated and Mobile Terminated SMS services.

1. Introduction

The Routesms® Messaging Platform uses the SMPP v3.4 Protocol Specification Issue 1.2, However it has been designed to be backward compatible with SMPP v3.3.

This document should be read in conjunction with SMPP v3.4 Specification v1.2 and assumes with SMPP a level of familiarity functionality.

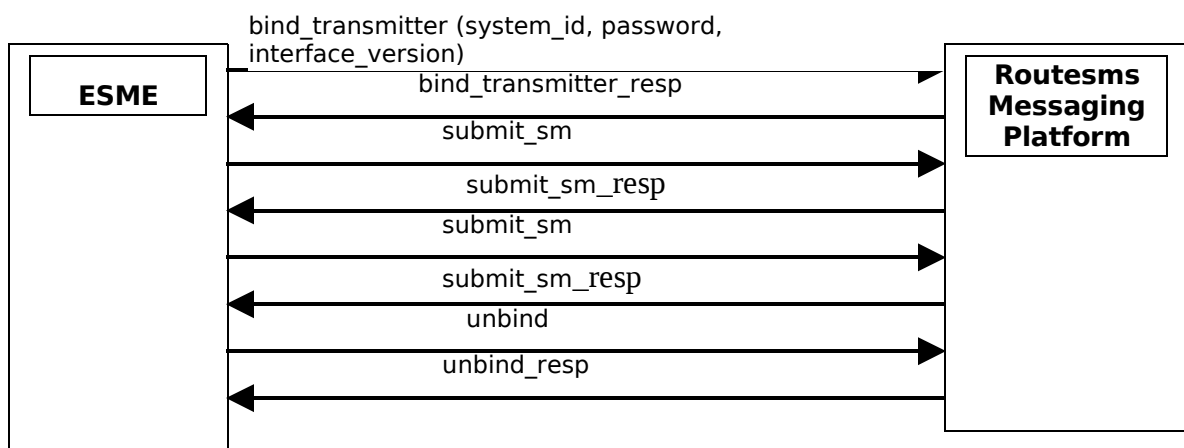
2. Connecting to the Service

Clients may connect to the Routesms® Messaging Platform Server multiple numbers of times. This may be of importance if the client wishes to deploy multiple applications simultaneously. To connect to the Routesms® Messaging Platform one needs to specify the following parameters:

- ❖ **IP Address and Port** : This is the TCP/IP endpoint on which the ESME should connect to the Routesms® Messaging Platform.
- ❖ **system_id** : This is the username of your account configured on the Routesms® Messaging Platform.
- ❖ **password** : Password for the above account. Required for security reasons to prevent unauthorized access to your account.
- ❖ **system_type** : This field is not used by us, hence set to null.
- ❖ **interface_version**: The client application should connect with the interface_version field set to 0x34 (52 decimal), if it is using SMPP v3.4, otherwise the Routesms® Messaging Platform assumes that the application is using SMPP v3.3.

If the application uses SMPP v3.3 then the optional fields cannot be used. These optional fields may be required to implement extra facilities like long SMS, etc.

- ❖ **enquire_link**: The application should issue an *enquire_link* every minute. This will ensure the link stays active even when it is not in use. The Routesms® Messaging Platform will automatically disconnect any link which is inactive for more than 5mins.



3. Submitting Messages

❖ **Submission Types:**

Messages may be submitted with either *submit_sm* or *data_sm*, using either the *short_message* or *message_payload* fields. The message length may not exceed the byte limit for the network that the message is being sent to (for example 140 bytes on GSM networks).

The Routesms® Messaging Platform does not support *submit_multi*. If the same message has to be sent to multiple destinations, each message must be sent separately.

The *sar* optional parameters are also not supported.

Concatenated messages are supported by using the User Data Header (UDH), which is included in the message size byte limit.

❖ **Submit Responses:**

A positive response to a submit will contain an error code of zero and a non null message reference.

A negative response will contain a Routesms® vendor specific error code.

❖ **Character Sets, Class and Data Coding:**

The Routesms® Messaging Platform supports the following two types of data coding schemes:

- GSM 03.38 Encoding (default)
- Latin 1 (ISO-8859-1) encoding

The default character set is GSM 338. Although for *data_coding*=1 the character set GSM 03.38 is supported it is **NOT RECOMMENDED**, as it is known to cause problems with character encoding. Please set *data_coding* = 3 for ISO-8859-1 (if and only if told so explicitly) encoded messages and *data_coding*=0 for GSM 03.38 encoded messages.

For Unicode messages you have to set *data_coding* = 8 and the message is expected in UTF-16 Big Endian format.

❖ **Originators and Destination:**

The default originator type is full International MSISDN. Alpha numeric or network short code originators can be sent by using the following ton values in *source_addr_ton* field.

- | | |
|---------------------------------|---|
| ➤ Alpha-numeric | 5 |
| ➤ National / Network Short Code | 3 |
| ➤ International MSISDN | 1 |

Destination Address types are not supported. They can be set to any value but are always interpreted as 1. This requires all the destination numbers to be sent in an international format without the leading 00.

❖ **Long Messages:**

Long Messages as the name suggests are messages whose length exceeds the normal length imposed on short messages (160 for text and 70 for Unicode).

The user can send long messages via the Routesms® Messaging Platform using the following two methods:

➤ **Concatenated Messages**

In this method the long message is sent in parts as multiple short messages which are then joined together on the mobile (If the mobile supports long messages, else each message part will be displayed as a separate message).

In this method the client sends the UDH (User Data Header) as part of the *short_message* field. The UDH contains all the details required for the mobile join the parts and make the complete message at its end. In this method the client has to set the *esm_class* field in the *submit_sm* pdu to 0x43 (Store and Forward with UDHI)

➤ **Message Payload**

Here the Routesms® Messaging Platform can accept a message with length up to 64K octets. In this method the client uses the optional *message_payload* of the *submit_sm* pdu. To use this method the client should set the *interface_version* to 0x34; else this field will not be available for sending messages.

❖ **Delivery Reports:**

The Routesms® Messaging Platform will return a delivery report (Intermediate and/or final depending on the route) for a specific message to the client application when the *registered_delivery* field, while submitting the message, is set to 1. In order to retrieve the delivery report from our server the client will have to connect to the Routesms® Messaging Platform in the receiver or transceiver mode.

Status	Description
DELIVRD	Message delivered to handset
FAILED	Message could not be delivered
EXPIRED	Message validity period expired, before any successful tries of submission
UNDELIV	Message is Undeliverable

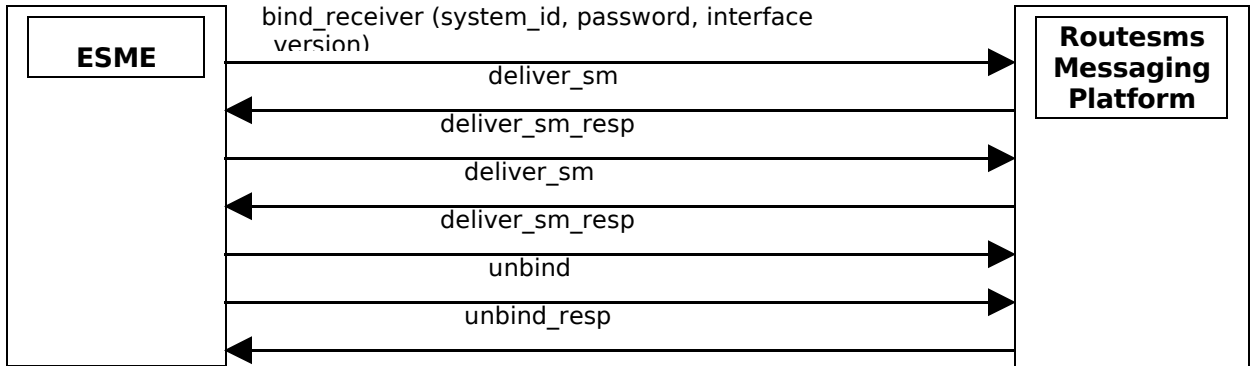


Illustration of how to fetch delivery reports from Routesms® Messaging Server