hexadimensional

The Hexadimensional Integrator HTTP-API

Developer's Guide and Reference

Document version 4.0

Revision History

Summary

Revision	Revision History Summary	Release Date
4.1	Fixes in documentation	20-Nov-2011
4.0	Updated parameter names and types	01-Oct-2011
3.0	New functions have been added: (a) HTTPIntegrator_GetInboundSMS_1 (b) HTTPIntegrator_GetInboundSMSMulti_1 (c) HTTPIntegrator_GetInboundReceipt_1 (d) HTTPIntegrator_GetInboundReceiptMulti_1	21-Sept-2011
2.1	Improved texts, fixed documentation issues.	23-Aug-2011
1.1	A new function HTTPIntegrator_GetAccountInfo_1 has been added	04-July-2011
1.0	First version	20-June-2011

Revision History Details

Changes in Version 4.1

Documentation fixes only, for language and content. No technical changes.

Changes in Version 4.0

Several names of member fields and their types have been altered for consistency.

Changes in Version 3.0

4 new functions have been added to the HTTP-API:

(a) HTTPIntegrator_GetInboundSMS_1

(b) HTTPIntegrator_GetInboundSMSMulti_1

(c) HTTPIntegrator_GetInboundReceipt_1

(d) HTTPIntegrator_GetInboundReceiptMulti_1

These functions would serve the purpose of retrieving the details of the inbox message(s) and the receipts (single/multiple),The details of these can be referred to the respective sections below.

Changes in Version 2.1

Fixes to errors in the documentation.

Changes in Version 1.1

A new function 'HTTPIntegrator_GetAccountInfo_1' has been added to the HTTP-API, the details of which can be referred to the respective sections below.

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Introduction

The Hexadimensional SMS Gateway is a corporate service that allows users to send SMS messages using internet and web-based technologies. This service enables businesses and corporations to easily transmit SMS messages to a huge mass of recipients conveniently and quickly.

Integrator

The Integrator is a set of APIs that allow software developers to integrate the functionality of the SMS Gateway into their applications, for example, send SMS on internal application events.

The Integrator set of APIs comprise:

- The Web-Services API
- The HTTP API

This document details the HTTP API, and its various functions.

HTTP-API

The HTTP Server API enables applications to communicate with the SMS Gateway over HTTP. Applications can send requests to the server over regular HTTP requests, and receive confirmations and other information over the HTTP Response. The HTTP Server API includes SSL support so that applications can exchange data over secure HTTP connections.

GET & POST

The server allows the functionality to be called using either GET or POST HTTP requests. While GET and POST each have their own limitations, the server does not differentiate based on the type, thereby allowing developers to test the service using the simpler GET, and later switching to POST to allow for longer URLs.

Encoding

URLs can only be sent over the Internet using the ASCII Character-set. Since GET presents the parameters to the server within the URL, the URL may end up containing characters outside the ASCII set such as Arabic characters, or characters such as '&' which have a different meaning to the URL. The URL thus has to be converted into a valid ASCII format. URL encoding replaces unsafe ASCII characters with a "%" followed by two hexadecimal digits. URLs also cannot contain spaces; thus URL encoding normally replaces a space with a %20.

For more information about URL encoding, see http://en.wikipedia.org/wiki/Percent-encoding

The HTTP API requires that these special characters when used within parameter values should be encoded. There is no need to encode parameter names, since they have been designed to not have any disallowed characters.

Notes

- Note that if a message content contains “CR” or “LF” characters, they will be replaced by “\n”, ie, a character containing a Slash, followed by the character 'n'.
- For responses containing recurring sets of fields, the response is displayed in a header-detail format. For such successful responses the header information is displayed once on the top and the detail information is repeated successively for the specified times, in the following format:

```
Header
{
...Detail for record 1...
}

{
...Detail for record 2...
}
```

If the request has failed, or there is no detailed information present, only the header information will be displayed.

Syntax

The HTTP-API can be invoked using the following syntax:

```
http://<domain_name>/<function_name>?
<param1>=<value1>&<param2>=<value2>&...
```

For example, the following URL is used to send a message by calling the 'SendSMS' function:

http://smsgw.hexadimensional.net/HTTPIntegrator_SendSMS_1?u=l.hofstadter&p=pe56&s=Leonard& r=true&f=false&n=Penny&d=441234534500&t=Hi%20There%21

This URL generates an SMS to 441234534500, with the text 'Hi There!' and sendername 'Leonard'. The username of the account it uses is 'l.hofstadter' and the password is 'pe56'.

Features of the Integrator HTTP-API

In later sections are detailed the methods contained in the HTTP API. These methods can be invoked by your application to perform the required functionality.

Authentication

The security of your account is maintained by password-based authentication. Almost all of the functions require a username and password, which identifies you as the authorized user of the account.

The username and password can be that of any of the 'Logins' present in your account on the web site. It is recommended that a separate login be setup within your account, for the purpose of the APIs. Creating a separate login also helps while extracting reports of api usage vs web-based usage by personnel in your organization.

HTTPIntegrator_SendSMS_1

This function posts a single SMS to the server.

Syntax:

```
http://<domain_name>/HTTPIntegrator_SendSMS_1?
u=<username>&p=<password>&s=<sendername>&d=<destinationnumber>&t=<tex
t>[&n=<destname>][&r=t|f][&f=t|f]
```

The request parameters to be passed to this function are:

Parameter Name	Meaning	Description
u	User name	The username (login name) used to access the account.
p	Password	The password used to access the account.
s	Sender name or short code	The Sender-name or shortcode that should appear as the sender of the SMS. This name or shortcode should have been approved for your account.
r	Report of Delivery	Whether a delivery report is required for the sent message. If set to true, a Delivery Report message will be returned at a later time, through a separate call to one of the getInboundReceipt functions. The recommended values are 't'(True)/'f'(False). For more possible values please refer to the Notes below.
f	Flash message	If the SMS is intended to be sent as a flash message. The recommended values are 't'(True)/'f'(False). For more possible values please refer to the Notes below.
n	Name of the recipient	The name of the recipient. Optional. This field is useful if names of recipients are to be stored in your Sent Messages for your future reference.
d	Destination phone number	The destination phone number of the recipient (including the country code). The phone number should be numeric, and not include any leading '0's or '+' symbols.
t	Text of the message	The text content of the SMS.

Also note that the parameters p(password),s(sender name), n(name of the recipient) and t(message text) would require a possible encoding of the URL. Refer the Encoding section for further details.

The response is multiline, with each line of the format ***title:value***

The following information is provided in the response:

Title	Description
POSTED	True: if the message was accepted successfully. False: if the message was rejected by the gateway.
ERROR	Error message if any occurred while posting the message to the queue. The value will be blank if the message was accepted.
MESSAGE-ID	Server generated unique ID representing an SMS successfully posted to the server. It is recommended that you store this value for future reference. The value will be blank if the message post was unsuccessful.
NUMBER-OF-PARTS	Number of parts into which the message was split before posting. Each part is billed separately. The value will be blank if the message post was unsuccessful.

Notes:

All the response titles are provided, irrespective of whether the post was a success or not, for example, the NUMBER-OF-PARTS will be displayed even for messages that could not be posted. The value for these types will be a blank, and so should be ignored.

For the boolean types above, besides the recommended values of 't'/'f', more possible values can also be used such as: 'T', 'Y' and 'y' to represent True or 'F', 'N' and 'n' to represent False.

Examples:

http://smsgw.hexadimensional.net/HTTPIntegrator_SendSMS_1?u=l.hofstadter&p=pe56&s=Leonord& r=true&f=false&n=Penny&d=441234534500&t=Hi%20There%21

Sample Output (of a successfully posted message):

```
POSTED:TRUE

ERROR:

MESSAGE-ID:12383664

NUMBER-OF-PARTS:2
```

Sample Output (of a failed posted message):

```
POSTED:FALSE

ERROR:The sendername is not allowed for this user

MESSAGE-ID:

NUMBER-OF-PARTS:
```

HTTPIntegrator_GetAccountInfo_1

This function extracts key information pertaining to the credits of an account on the gateway.

Syntax:

```
http://<domain_name>/HTTPIntegrator_GetAccountInfo_1?
u=<username>&p=<password>
```

The request parameters to be passed to this function are:

Parameter Name	Meaning	Description
u	User name	The username (login name) used to access the account.
p	Password	The password used to access the account.

Also note that the parameter p(password) would require a possible encoding of the URL. Refer the Encoding section for further details.

The response is multiline, with each line of the format ***title:value***

The following information is provided in the response:

Title	Description
CALL-SUCCESS	TRUE: The request was successful. The amounts fields will contain information about your account. FALSE: The call to the web service has failed, probably due to authentication issues.
ERROR	The error message if any occurred during the request. This value will be blank if the request was successful.
AMOUNT-PRESENT	The current credits held in the account.
CURRENCY	Currency of all the amounts returned in this response.
NO-OF-HISTORY-MESSAGES	Number of messages sent in the past 30 days by this account and its subaccounts. This value is used for calculating tariff slab discounts.
AMOUNT-USED-BY-USERS-FOR-SMS	Total amount so far used by logins of the account for sending sms messages.
AMOUNT-USED-BY-SUBACCOUNTS-FOR-SMS	Total amount so far used by sub-accounts of the account for sending sms messages.
PROFIT-FROM-SUBACCOUNTS-FOR-SMS	Profits received so far from sub-accounts due to sub-accounts' use of sms messaging

AMOUNT-USED-BY-USERS-FOR-NUMERATOR	Total amount so far used by logins of the account for the Numerator feature.
AMOUNT-USED-BY-SUBACCOUNTS-FOR-NUMERATOR	Total amount so far used by sub-accounts of the account for the Numerator feature.
PROFIT-FROM-SUBACCOUNTS-FOR-NUMERATOR	Profits received so far from sub-accounts due to sub-accounts' use of the Numerator feature.

Examples:

http://smsgw.hexadimensional.net/HTTPIntegrator_GetAccountInfo_1?u=l.hofstadter&p=pe56

Sample Output (of a successfully posted request):

```
CALL-SUCCESS:TRUE

ERROR:

AMOUNT-PRESENT:50.0996

CURRENCY:USD

NO-OF-HISTORY-MESSAGES:453

AMOUNT-USED-BY-USERS-FOR-SMS:25.8319

AMOUNT-USED-BY-SUBACCOUNTS-FOR-SMS:38.2051

PROFIT-FROM-SUBACCOUNTS-FOR-SMS:15.5200

AMOUNT-USED-BY-USERS-FOR-NUMERATOR:11.6991

AMOUNT-USED-BY-SUBACCOUNTS-FOR-NUMERATOR:9.8302

PROFIT-FROM-SUBACCOUNTS-FOR-NUMERATOR:6.8713
```

Sample Output (of a failed request):

```
CALL-SUCCESS:FALSE

ERROR:Username cannot be blank

AMOUNT-PRESENT:

CURRENCY:

NO-OF-HISTORY-MESSAGES:

AMOUNT-USED-BY-USERS-FOR-SMS:
```

AMOUNT-USED-BY-SUBACCOUNTS-FOR-SMS:

PROFIT-FROM-SUBACCOUNTS-FOR-SMS:

AMOUNT-USED-BY-USERS-FOR-NUMERATOR:

AMOUNT-USED-BY-SUBACCOUNTS-FOR-NUMERATOR:

PROFIT-FROM-SUBACCOUNTS-FOR-NUMERATOR:

HTTPIntegrator_GetInboundSMS_1

This function downloads an inbound message. This message would have been sent by a handset and held at the server's inbox.

Syntax:

```
http://<domain_name>/HTTPIntegrator_GetInboundSMS_1?
u=<username>&p=<password>
```

The request parameters to be passed to this function are:

Parameter Name	Meaning	Description
u	User name	The username (login name) used to access the account.
p	Password	The password used to access the account.

Also note that the parameter p(password) would require a possible encoding of the URL. Refer the Encoding section for further details.

The response is multiline, with each line of the format ***title:value***

The following information is provided in the response:

Title	Description
CALL-SUCCESS	TRUE: The request was successful. FALSE: The call to the web service has failed, probably due to authentication issues.
ERROR	The error message if any occurred during the request. This field will not have any value if the request was successful.
MESSAGE-PRESENT	TRUE: Indicates that a message is present within this response FALSE: Indicates that no messages are present to be downloaded. This field will always be FALSE if CALL-SUCCESS is FALSE.
HANDSET-PHONE-NUMBER	The sender's telephone number from which the message was received.
SHORT-CODE	The short-code at which the message was received.
MESSAGE-RECEIVED-AT	The Date and time at which the message was received.
NUMBER-OF-PARTS	The number of parts the message was received in.
MESSAGE-CONTENT	The content of the message received. For CR/LF

	characters please refer to the notes in the Introduction section of the document.

Examples:

http://smsgw.hexadimensional.net/HTTPIntegrator_GetInboundSMS_1?u=l.hofstadter&p=pe56

Sample Output (of a successfully posted request):

```
CALL-SUCCESS: TRUE

ERROR:

MESSAGE-PRESENT: TRUE

HANDSET-PHONE-NUMBER: 97339681740

SHORT-CODE: 95112

MESSAGE-RECEIVED-AT: 2011-09-21 04:07:36

NUMBER-OF-PARTS: 1

MESSAGE-CONTENT: Answer is option A
```

Sample Output (of a failed request):

```
CALL-SUCCESS: FALSE

ERROR: Username cannot be blank

MESSAGE-PRESENT: FALSE

HANDSET-PHONE-NUMBER:

SHORT-CODE:

MESSAGE-RECEIVED-AT:

NUMBER-OF-PARTS:

MESSAGE-CONTENT:
```

HTTPIntegrator_GetInboundSMSMulti_1

This function extracts information about multiple incoming messages. This function operates similarly to HTTPIntegrator_GetInboundSMS_1, except that it allows the download of multiple messages within a single request.

Syntax:

```
http://<domain_name>/HTTPIntegrator_GetInboundSMSMulti_1?
u=<username>&p=<password>&n=<number of messages>
```

The request parameters to be passed to this function are:

Parameter Name	Meaning	Description
u	User name	The username (login name) used to access the account.
p	Password	The password used to access the account.
n	Number of messages	The number of messages to download. Note that the maximum value for this field is 100 and the minimum is 1. If no value is specified for this field then a default value of 10 messages is assumed and the result generated.

Also note that the parameter p(password) would require a possible encoding of the URL. Refer the Encoding section for further details.

The following information is provided in the response, the response is multi-line, with each line of the format ***title:value***

Header

Title	Description
CALL-SUCCESS	TRUE: The request was successful. FALSE: The call to the web service has failed. This could be due to any of the following reasons: (a) authentication issues (b) invalid number of messages specified
ERROR	The error message if any occurred during the request. This value will be blank if the request was successful.
NUMBER-OF-MESSAGES	The total number of messages for which the information has been retrieved. The value for this field is zero if the request to the web-service

	fails.

Detail

Title	Description
HANDSET-PHONE-NUMBER	The sender's telephone number from which the message was received.
SHORT-CODE	The short-code to which the message was received.
MESSAGE-RECEIVED-AT	The Date and time at which the message was received.
NUMBER-OF-PARTS	The number of parts the message was received in.
MESSAGE-CONTENT	The content of the message received. For CR/LF characters please refer to the notes in the Introduction section of the document.

Example:

Sample Post:

http://smsgw.hexadimensional.net/HTTPIntegrator_GetInboundSMSMulti_1?u=l.hofstadter&p=pe56&n=3

Sample Output (of a successfully posted request):

```
CALL-SUCCESS: TRUE

ERROR:

NUMBER-OF-MESSAGES: 3

{

HANDSET-PHONE-NUMBER: 97339681740

SHORT-CODE: 95112

MESSAGE-RECEIVED-AT: 2011-08-21 04:07:36

NUMBER-OF-PARTS: 1

MESSAGE-CONTENT: Answer is option A

}

{
```

```
HANDSET-PHONE-NUMBER: 97339790491

SHORT-CODE: 89144

MESSAGE-RECEIVED-AT: 2011-09-18 15:45:11

NUMBER-OF-PARTS: 1

MESSAGE-CONTENT: A1

}

{

HANDSET-PHONE-NUMBER: 97333100784

SHORT-CODE: 95112

MESSAGE-RECEIVED-AT: 2011-09-23 11:05:26

NUMBER-OF-PARTS: 1

MESSAGE-CONTENT: option c

}
```

Sample Output (of a failed request):

```
CALL-SUCCESS: FALSE

ERROR: Number of messages required should be between 1 and 100

NUMBER-OF-MESSAGES: 0
```

HTTPIntegrator_GetInboundReceipt_1

This function extracts information about a receipt of a sent message.

Syntax:

```
http://<domain_name>/HTTPIntegrator_GetInboundReceipt_1?
u=<username>&p=<password>
```

The request parameters to be passed to this function are:

Parameter Name	Meaning	Description
u	User name	The username (login name) used to access the account.
p	Password	The password used to access the account.

Also note that the parameter p(password) would require a possible encoding of the URL. Refer the Encoding section for further details.

The response is multiline, with each line of the format ***title:value***

The following information is provided in the response:

Title	Description
CALL-SUCCESS	TRUE: The request was successful. FALSE: The call to the web service has failed, probably due to authentication issues.
ERROR	The error message if any occurred during the request. This value will be blank if the request was successful.
RECEIPT-PRESENT	TRUE: Indicates that a receipt is present within this response. The remaining fields will contain the details of the receipt FALSE: Indicates that no receipts are present to be downloaded. This field will always be false if CALL-SUCCESS is false.
RECEIPT-ID	This field uniquely identifies the receipt
HANDSET-PHONE-NUMBER	The recipient's telephone number to which the message was sent.
SHORT-CODE	The short-code that was used in sending the message to the recipient.
ORIGINAL-MESSAGE-ID	This field is a unique 64-bit message id which co-relates to this receipt id.
MESSAGE-POSTED-ON	The Date at which the message was posted to be sent

	to the recipient. As the posted date can also be a date which was scheduled to a future date.
MESSAGE-RECEIVED-ON	The Date at which the message was received by the recipient.
MESSAGE-DELIVERY-STATUS	The delivery status of the receipt, these are of four types: (a)Delivered: Message was successfully delivered (b)Undelivered: Message was not delivered (c)Expired: Message expired (d)Unknown: Message status unknown

Example:

Sample Post:

http://smsgw.hexadimensional.net/HTTPIntegrator_GetInboundReceipt_1?u=l.hofstadter&p=pe56

Sample Output (of a successfully posted request):

```
CALL-SUCCESS: TRUE

ERROR:

RECEIPT-PRESENT: TRUE

RECEIPT-ID: 596802

HANDSET-PHONE-NUMBER: 97339790491

SHORT-CODE: 92811

ORIGINAL-MESSAGE-ID: 10009988863

MESSAGE-POSTED-ON: 2011-09-20 04:26:12

MESSAGE-RECEIVED-ON: 2011-09-20 04:26:46

MESSAGE-DELIVERY-STATUS: Delivered
```

Sample Output (of a failed request):

```
CALL-SUCCESS: FALSE

ERROR: Account is disconnected

RECEIPT-PRESENT: FALSE
```

RECEIPT-ID:

HANDSET-PHONE-NUMBER:

SHORT-CODE:

ORIGINAL-MESSAGE-ID:

MESSAGE-POSTED-ON:

MESSAGE-RECEIVED-ON:

MESSAGE-DELIVERY-STATUS:

HTTPIntegrator_GetInboundReceiptMulti_1

This function extracts information about multiple receipts for the messages sent.

The request parameters to be passed to this function are:

Parameter Name	Meaning	Description
u	User name	The username (login name) used to access the account.
p	Password	The password used to access the account.
n	Number of receipts	The number of receipts for which the information is required. Note that the maximum value for this field is 100 and the minimum is 1. If no value is specified for this field then a default value of 10 receipts is assumed and the result generated.

Also note that the parameter p(password) would require a possible encoding of the URL. Refer the Encoding section for further details.

The following information is provided in the response, the response is multi-line, with each line of the format ***title:value***

Header

Title	Description
CALL-SUCCESS	TRUE: The request was successful. FALSE: The call to the web service has failed. This could be due to any of the following reasons: (a) authentication issues (b) invalid number of receipts were specified
ERROR	The error message if any occurred during the request. This value will be blank if the request was successful.
NUMBER-OF-RECEIPTS	The total number of receipts for which the information has been retrieved. The value for this field is zero if the request to the web-service fails.

Detail

Title	Description
RECEIPT-ID	This field uniquely identifies the receipt
HANDSET-PHONE-NUMBER	The recipient's telephone number to which the message was sent.

SHORT-CODE	The short-code that was used in sending the message to the recipient.
ORIGINAL-MESSAGE-ID	This field is a unique 64-bit message id which co-relates to this receipt id.
MESSAGE-POSTED-ON	The Date at which the message was posted to be sent to the recipient. As the posted date can also be a date which was scheduled to a future date.
MESSAGE-RECEIVED-ON	The Date at which the message was received by the recipient.
MESSAGE-DELIVERY-STATUS	The delivery status of the receipt, these are of four types: (a) Delivered: Message was successfully delivered (b) Undelivered: Message was not delivered (c) Expired: Message expired (d) Unknown: Message status unknown

Example:

Syntax:

```
http://<domain_name>/HTTPIntegrator_GetInboundReceiptMulti_1?
u=<username>&p=<password>&n=<number of receipts>
```

Sample Post:

http://smsgw.hexadimensional.net/HTTPIntegrator_GetInboundReceiptMulti_1?u=l.hofstadter&p=pe56&n=2

Sample Output (of a successfully posted request):

```
CALL-SUCCESS: TRUE

ERROR:

NUMBER-OF-RECEIPTS: 2

{

RECEIPT-ID: 596701

HANDSET-PHONE-NUMBER: 97339681740

SHORT-CODE: 92811

ORIGINAL-MESSAGE-ID: 10009988863
```

```
MESSAGE-POSTED-ON: 2011-08-20 16:26:10

MESSAGE-RECEIVED-ON: 2011-08-31 12:30:00

MESSAGE-DELIVERY-STATUS: Delivered

}

{

RECEIPT-ID: 596802

HANDSET-PHONE-NUMBER: 97339790491

SHORT-CODE: 92811

ORIGINAL-MESSAGE-ID: 10009988964

MESSAGE-POSTED-ON: 2011-09-09 9:02:12

MESSAGE-RECEIVED-ON: 2011-09-9 09:02:32

MESSAGE-DELIVERY-STATUS: Expired

}
```

Sample Output (of a failed request):

```
CALL-SUCCESS: FALSE

ERROR: Number of receipts required should be between 1 and 100

NUMBER-OF-RECEIPTS: 0
```