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**VNPT EPAY SMS PAYMENT**

**HTTP INTERFACE DESCRIPTION**

**Version 1.4.1-2015**

# HISTORY

\*A – Add M – Update D - Delete

|  |  |  |  |
| --- | --- | --- | --- |
| **Time** | **Name** | **Description** | **Version** |
| 18/07/2014 | Vietda | Add new | 1.0 |
| 07/10/2014 | Dailt | 1. Update parameter name:  * Change the field ServiceNumber to ShortCode * Change the field SenderNumber to UserID * Add the the field Keyword in MO request  1. Remove the Method in MT 2. Description more details for Request and Response 3. Description more details for HTTP Status code and Error codes 4. Remove the field ReceiverNumber in MO request | 1.1 |
| 13/10/2014 | Dailt | Update the checksum fields, including values:  + content: both MO, MT requests  + shortcode: in MT request  + keyword: in MO request   1. Add chapter III.3.4 | 1.2 |
| 05/12/2014 | Dailt | Update the acceptance technical testing records | 1.4 |
| 03/02/2015 | team | Update MT: add default values for items: 10,11,12 | 1.4.1 |
| 18/06/2015 | Dungtv | * Remove fields: contenttype, ismore, totalmesage, msgindex from MT.   - Remove fields: sub\_key from MO | 1.7 |

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# Introduction

This document specifies the connection parameters for information transfer between SMS Gateway of VNPT EPAY and Partner system using HTTP protocol v1.1. Reference: Hypertext Transfer Protocol - http://www.w3.org/Protocols/

These HTTP connections should be implemented on a secured network layer, e.g. a VPN or leased-line environment, which will be discussed outside the scope of these documentation.

# Terms and Abbreviations

EPAY: VNPT EPAY

Partner: Here mainly refers to the content services, games, ect partner.

MO: the Mobile Originating

MT: the Mobile Terminating

HTTP：Hypertext Transfer Protocol

HTML：HyperText Markup Language (HTML4)

## Business flow

* User send a SMS to shortcode (such as 9029,..) with a syntax.
* EPAY will forward a MO req which contains parameters info such as mobile number, content, keyword, amount,… to the API link of partner (your system).
* When you reveive the MO req from EPAY, you immediately response in MO response with httpstatus=200 and body msg is “requeststatus=200” for EPAY understands that you have received MO successfully.
* Partner handle private business (register account, deposite,…), then must set a MT req contain paras such as the content partner want reply to end user.
* Partner will send the MT req to the MT API link which EPAY provides.
* **With 9029, the timeout since you receive MO from EPAY until you send MT to EPAY is 10 second. If there is some exception, you can’t send MT to EPAY, or you send MT late, EPAY will init a default MT with content “Co loi xay ra” to respond to the user.**
* When reveice the MT req from partner, EPAY will also response a MT response contain body msg is "requeststatus=200" for Partner understands that EPAY have received MO successfully.
* EPAY forward the MT req to telco.
* Telco replys the SMS contains the content which partner wants user to receive

# System model



You must allow the IPs of EPAY server: **123.29.67.137, 123.29.67.138**

## MO processing flow

Partners have to build a HTTP interface following EPAY description below:

* EPAY will send MO request to Partner system through Http protocol using Get method. All parameters are encode (UTF8) before sending to partners. Partner will process the message and feedback the MO response.
* Partner have to log all request from EPAY these data can be used in reconciliation and complaints solving from users.

### **MO request**

* Partner URL: http://<partnerserver>:<port>/service?
* Parameters table

|  |  |  |  |
| --- | --- | --- | --- |
| No | **Parameter name** | **Data type** | **Description** |
| 1 | partnerid | Integer | Id of partner |
| 2 | moid | String | Request identify string |
| 3 | userid | String | Mobile phone number of sender (subscriber). International format start with 84.  Ex: 8491345678 |
| 4 | shortcode | String | Service number user used to send SMS. Here is 8x76. |
| 5 | keyword | String | Keyword of SMS message |
| 6 | content | String | SMS content (**be URLEncoded before sent to you, you will pick it to perform checksum**) |
| 7 | transdate | String | VNPT EPAY transaction date as format (YYYYmmddHHmmss) |
| 8 | checksum | String | checkSum= MD5(moid+shortcode+keyword+UrlEncode(content)+transdate+**MD5(partnerPassword))**  *See more details in chapter: III.3.1* |
| 9 | amount | String | Amount of SMS (for: **9029**) |

### **MO response:**

* When partner get the MO Request from EPAY, partner will process the information and feedback the HTTP Response with **header status** and **Message Body** as below:

|  |  |
| --- | --- |
| HTTP **Header Status** | **Description** |
| 200 | Accepted/OK |
| 400 (or not 200) | Bad Request (invalid format or parameters)  The error messages will be descripted in the message body of HTTP response as below |

(Reference: http://www.w3.org/ )

* The content of response as below:

|  |  |  |
| --- | --- | --- |
| **Message body** | **Data type** | **Description** |
| requeststatus=<ErrorCode> | String | Errror code:   * 200: Receive Mo success * 1: Receiver Mo fail, EPAY should send this MO again. * 2: MO id existed * 17: wrong checksum. |
|  |  |  |

Example:

**MO Request:** url string request from VNPT EPAY:

<http://115.78.133.42:7979/WSEPAY.asmx?partnerid=10004&moid=237&userid=84982162261&shortcode=8079&keyword=HN&content=HN+hcm&transdate=20141013174758&checksum=32f4532d4abd9a497c334eb3511ed068>

**MO response:**

*Header status*: 200

*Message Body:*

“requeststatus = 200”

## Describe detail of Receiver MT system

VNPT EPAY published an interface to partner to send SMS back to a subscriber’s phone number. Partners must send request as base on VNPT EPAY description below here.

### **MT request**

* EPAY Url: <http://sms.megapayment.net.vn:9099/smsApi>?
* Parameters of MT request as below:

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Parameter name** | **Data type** | **Description** |
| 1 | partnerid | Integer | Partner Id which is provided by VNPT EPAY. |
| 2 | moid | String | Id of MO message sent by EPAY to partner before. |
| 3 | mtid | String | MtId Id of each single Mt message:  mtId = partnerId+Datetime(YYYYMMddHHmmssSSS) +RandomString(0-99999).  *See more details in chapter: III.3.3* |
| 4 | userid | String | The subscriber’s phone number in MO request. International format start with **84**.  Ex: 8491345678 |
| 5 | shortcode | String | Service number which is used to send SMS to get content services. Ex: 8x76 |
| 6 | keyword | String | Command code which is resisted with VNPT EPAY. |
| 7 | content | String | SMS content (must be URLEncode before set in MT) |
| 8 | messagetype | String | - 0: Push message, not billing.  - **1: Billing**  - 2: Not billing because of error message. |
| 9 | transdate | String | Transaction date as format (YYYYmmddHHmmss) |
| 10 | checksum | String | checkSum = checkSum = MD5(mtid +moid+ shortcode+ keyword+UrlEncode(content)+transdate  +**MD5(partnerPassword))**  *See more details in chapter: III.3.2* |
| 11 | amount | String | get from MO |

### **MT response:**

* When EPAY receives the MT Request from Partner, EPAY will process the information and feedback the HTTP Response with **header status** and **Message body** as below:

|  |  |
| --- | --- |
| HTTP **Header Status** | **Description** |
| 200 | Accepted/OK |
| 400 (or not 200) | Bad Request (invalid format or parameters)  The error messages will be descripted in the message body of HTTP response as below |

(reference: http://www.w3.org/ )

The Message Body of response as below

|  |  |  |
| --- | --- | --- |
| **Message Body** | **Data type** | **Description** |
| requeststatus=<ErrorCode> | String | Receive MT error code:   * 200: receive MT success * 01: receiver MT fail, please send again. * 02: mtId duplicate. * 03: Partner IP unacceptable. * 04: no keyword found in system. * 05: no short code found in system. * 06: system temporary error. * 17: wrong checksum * 18: mtId invalid format. * 19: unsupport method. * 20: no corresponding MO found. |
|  |  |  |

Sample:

**MT Request:**

<http://sms.megapayment.net.vn:9099/smsApi?partnerid=10004&moid=237&mtid=100042014101410523898&userid=0982162261&shortcode=8079&keyword=HN&content=Thanh+cong&messagetype=1&transdate=20141014105244&checksum=dc0876018fcd6dffbe4ea572ceed7326>

**MT response:**

*Header status*: 200

*Message Body:*

“requeststatus = 200”

## Addition Infomation

### How VNPT EPAY generates the checksum string:

**checkSum** = MD5(moid+shortcode+keyword+UrlEncode(content)+transdate+**MD5(partnerPassword)**)

**MD5**(**PartnerPassword)**: provided by EPAY

### How Partner generates the checksum string.

checkSum =

MD5(mtid+moid+shortcode+keyword+UrlEncode(content)+transdate+**MD5(partnerPassword))**

**MD5**(**PartnerPassword)**: provided by EPAY

### How partner generates the MtId:

mtId = partnerId+Datetime(YYYYMMddHHmmssSSS) + RandomString(0-99999).

partnerId: this value VNPT EPAY will provide to partners when you are connected.

Datetime(YYYYMMddHHmmssSSS): datetime string is generated as format yyMMddHHmmss.

RandomString(0-99999): A random string between 0 and 99999

### Retry transaction in case of error or time-out

- When sending a request MO without getting response from partners or getting error responses from the partners, EPAY will retry 1 request corresponding with this MO request.

- When sending a request MT without getting response from EPAY or getting response on the errors of EPAY, partners will retry 1 request corresponding with this MT request.

### **Acceptance technical testing records**

After making connections and test successfully, partners and VNPT EPAY signed a written certification done according to the following pattern:

### **Syntax to test SMS with 9029**

Condition: The test mobile number must be registered in the operator in Vietnam (such as Viettel, Mobiphone, Vinaphone,..)

Viettel:

**MW [amount] [keyword] NAP [extented info such as account,…]**

With **[amount]: 1000,2000,3000,4000,5000,10000,20000,30000,40000,50000,100000**

🡪 send to: 9029

🡪Example: **MW 1000 DK NAP dungtv**

Vinaphone and Mobiphone:

**MW [keyword NAP1 [extented info such as account,…]**

with**: NAP1,NAP2,NAP3,NAP4,NAP5,NAP10,NAP20,NAP30,NAP40,NAP50,NAP100**

🡪 send to: 9029

🡪Example: **MW DK NAP1 dungtv**

### **Syntax to test SMS with 8x76**

Condition: The test mobile number must be registered in the operator in Vietnam (such as Viettel, Mobiphone, Vinaphone,..)

Common syntax:

**[KEYWORD] [extented info such as account,…]**

Example: MK dungtv

🡪 send to a shortcode such as (8076,8176,8276,..,8776)

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**MINUTES ACCEPTANCE TECHNICAL TESTING**

**Service 8x76**

Date: Month: 2015:

1. **Party A: VNPT EPAY**

Address: Vien Dong Building, 36 Hoang Cau Str., O Cho Dua Wd., Dong Da Dist., Hanoi, Vietnam

Represented by: Mr

Position:

1. **Party B:**

Address:

Represented by: Mr

Position:

*Hereby the both parties agree to sign this records with terms and conditions as follows:*

1. **Test records**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Short codes** | **Amount (VND)** | **Test number** | **keyword** | **Content (MO,MT)** | **Result**  (ok, not ok) |
| 8076 | 500 |  |  |  |  |
| 8176 | 1000 |  |  |  |  |
| 8276 | 2000 |  |  |  |  |
| 8376 | 3000 |  |  |  |  |
| 8476 | 4000 |  |  |  |  |
| 8576 | 5000 |  |  |  |  |
| 8676 | 6000 |  |  |  |  |
| 8776 | 7000 |  |  |  |  |

We confirmed the completion of the test to the official service deployment.

*This appendix is made into four (02) copies with equal validity; party B keep three (01) copies, party A keep two (01) copies.*

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|  |  |
| --- | --- |
| **VNPT EPAY** | **<Partner>…** |