

GLO Ghana

User Manual – Web Services

Revision: V 1.9

© 2016 Seamless Distribution AB. Proprietary/Confidential. All rights reserved.

Document history

Version	Date	Comments
V 1	08-12-2016	Initial Draft
V 1.1	09-12-2016	Minor Updates
V 1.2	09-02-2017	Minor Updates
V 1.3	09-02-2017	Addition of new result codes
V 1.4	20-08-2018	Updated with Data bundle purchase
V 1.5	29-08-2018	Updated with New Data bundles
V1.6	17-09-2108	Updated with Balance Enquiry API
V1.7	09-11-2018	Correct the 300MB bundles
V1.8	22-05-2019	Modify Data bundle
V1.8	22-05-2019	SSL link for 3PP
V1.9	24-05-2019	Updated Data bundle list

Contents

1 Overview	5
1.1 Purpose	5
1.2 Intended Audience	5
2 Server Information	6
3 General Concepts	7
3.1 Client context	7
3.1.1 clientId	7
3.1.2 clientId	8
3.2 Client transaction data	8
3.2.1 clientReference	8
3.2.2 clientTag	8
3.2.3 clientComment	9
4 General Services	10
4.1 Topup Service	10
4.1.1 Topup Request Field	10
4.1.2 Topup Response Field	11
4.1.3 SOAP Request & Response Examples	11
4.2 Transfer Service	15
4.2.1 Transfer Request Field	15
4.2.2 Transfer Response Field	15
4.2.3 SOAP Request & Response Examples	16
4.3 Voucher Purchase Service (VOD)	20
4.3.1 Purchase Request Field	20
4.3.2 Purchase Response Field	20
4.3.3 SOAP Request & Response Examples	21
4.4 Data Bundles Purchase	25
4.4.1 Data Bundle Purchase Request Fields	25
4.4.2 Data Bundle Purchase Response Field	25
4.4.3 SOAP Request & Response Examples	26

Seamless

4.5 Balance Enquiry	32
4.5.1 Balance Enquiry Request Fields.....	32
4.5.2 Balance Enquiry Response Field.....	32
4.5.3 SOAP Request & Response Examples	33
5 Result Codes.....	35

1 Overview

ERS Web Services act as an intermediary service to serve requests from external clients seeking services from ERS. ERS Web Services enable operators or third party applications to communicate with ERS System. This service will take the client requests and call ERS after mapping the request. After execution of this service, it will convert ERS response to client's desired response and send it back to client application.

1.1 Purpose

ERS Web Services APIs enable operators or third party applications to communicate with ERS System. The purpose of this service is to enable web services through our system. The system takes the client's web services requests and calls ERS after mapping the request. After execution of this service, it will convert ERS response to client's desired response and send it back to client application.

1.2 Intended Audience

This document serves as a guide to enable Third Party Platforms (3PPs) and integrate those platforms with ERS to enable web services. The document provides information to the technical personnel of third party service providers who wish to get information about the ERS system's third party service enablers and the steps involved in carrying out requests and responses when a third party application communicates with the ERS system to carry out a web service. ERS system information at the service provider's end is assumed.

2 Server Information

<http://x.x.x.x:8913/topupservice/service?wsdl>

<https://x.x.x.x:8914/topupservice/service?wsdl>

3 General Concepts

This section will explain some common concepts and structures.

3.1 Client context

This is a structure used in all requests to identify and authorize the client performing the transaction. Since all production transactions take place over a secure channel (typically HTTPS), this is sent in clear text.

Client context fields	
Name	Description
clientId	This is the unique id of the client that is performing the transaction, this will be provided by the owner of the ERS for the specific client.
clientUserId	The client user id that is performing the transaction, a list of users available for the client will be provided by the owner of the ERS for the specific client.
password	The password associated with the client and the client user specified
clientRequestTimeout	The client side timeout for the request. If the server takes longer time than this to process the request it will attempt to abort or rollback the request.

3.1.1 clientId

clientId will contain type of client and unique id of the client. Client Type is appended before the client unique id and separated with “:”

Example clientId

RESELLERMSISDN: 233230190277

clientId Type		
Name	Description	clientId (Mandatory)
TERMINALID	This type should be used when reseller will use his terminal id	No
ADMINUSER	This type should be used when an admin user is using the service	No
RESELLERMSISDN	This type should be used when reseller will use his MSISDN	No
RESELLERUSER	This type should be used when reseller will use one of his user account	Yes

3.1.2 clientId

clientId is a specific user of a reseller (client). clientId can be mandatory based on the clientId Type.

3.2 Client transaction data

This is a structure used in most requests that are not only reading data. It can be used for the client to send data to identify the transaction afterwards using references and tags that the client system recognizes.

The client transaction data has the following fields:

3.2.1 clientReference

The client reference for the transaction should be unique at least for the specific client id to be usable.

The maximum length allowed for this field is 32 characters.

3.2.2 clientTag

Tag(s) that the client wants to associate with this transaction, expressed as a single string. This will typically (if used) not be unique per transaction and can be used to label transaction that can then be reported as part of transaction clearing, reports and/or invoicing. If multiple tags are desired, it is up to the client to partition this string with delimiters, fixed lengths etc.

The maximum allowed length field is 128 characters.

3.2.3 clientComment

Comment that the client wants to assign to this transaction. The maximum allowed length field is 256 characters.

4 General Services

Serial No.	General Services Offered
1.	Topup Service
2.	Credit Transfer Service
3.	Voucher Purchase Service (VOD)

Below chapters contain detailed description of each of these services including the request and response details to carry out these services.

4.1 Topup Service

Through this service, a reseller can recharge a subscriber's airtime account. The webmethod used for this service is **requestTopUp**.

4.1.1 Topup Request Field

Request field for **requestTopup** is given below:

Name	Description
context	The client context
senderPrincipalId	The id of the sender reseller. This has to be prefixed with the type of the id (which is typically RESELLERUSER) and UserId defines which user made the topup.
topupPrincipalId	The id of the receiving subscriber. This has to be prefixed with the type of the id, which is typically SUBSCRIBERMSISDN or SUBSCRIBERANONYMOUSID
senderAccountSpecifier	Account type of sender reseller
topupAccountSpecifier	Account type of receiver subscriber
productId	ID of the product, which is typically Topup
amount	The amount to be topped up

4.1.2 Topup Response Field

The response to topup request is **topupResponse**. Breakdown of this return field is explained below:

Name	Description
resultCode	A numerical value indicating the end result of the request that was last processed. See the <i>Result Codes</i> section
ersReference	Unique ERS transaction reference which is used for topup
resultDescription	Result message of the transaction. This usually elaborates the result code
requestedTopupAmount	Requested amount to be topped up
senderPrincipal	Sender account information with account details from which the amount is deducted for topup
topupAccountSpecifier	The account to which the topup amount is credited
topupAmount	Amount which is topped up
topupPrincipal	Topup receiver principal with details of the account to which the topup amount is credited

4.1.3 SOAP Request & Response Examples

SOAP Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ext="http://external.interfaces.ers.seamless.com/">
```

```
  <soapenv:Header/>
```

```
  <soapenv:Body>
```

```
    <ext:requestTopup>
```

```
      <context>
```

```
        <channel>GLOWEBSERVICE</channel>
```

```
        <clientComment>Testing topup</clientComment>
```

```
        <clientId>Etopup Systems</clientId>
```

```
        <prepareOnly>>false</prepareOnly>
```

```
        <clientReference>12345678</clientReference>
```

```
        <clientRequestTimeout>10000</clientRequestTimeout>
```

```
<initiatorPrincipalId>
  <id>dealer1</id>
  <type>RESELLERUSER</type>
  <userId>webuser</userId>
</initiatorPrincipalId>
<password>xxxxxxx</password>
  <transactionProperties>
</transactionProperties>
</context>
<senderPrincipalId>
  <id>dealer1</id>
  <type>RESELLERUSER</type>
  <userId>webuser</userId>
</senderPrincipalId>
<topupPrincipalId>
  <id>230089518</id>
  <type>SUBSCRIBERMSISDN</type>
  <userId>?</userId>
</topupPrincipalId>
<senderAccountSpecifier>
  <accountId>?</accountId>
  <accountTypeId>RESELLER</accountTypeId>
</senderAccountSpecifier>
<topupAccountSpecifier>
  <accountId>?</accountId>
  <accountTypeId>AIRTIME</accountTypeId>
</topupAccountSpecifier>
<productId>TOPUP</productId>
<amount>
  <currency>GHS</currency>
  <value>0.1</value>
</amount>
</ext:requestTopup>
</soapenv:Body>
```

SOAP Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:requestTopupResponse
      xmlns:ns2="http://external.interfaces.ers.seamless.com/">
      <return>
        <ersReference>2017020909522189901000347</ersReference>
        <resultCode>0</resultCode>
        <resultDescription>SUCCESS</resultDescription>
        <requestedTopupAmount>
          <currency>GHS</currency>
          <value>0.1</value>
        </requestedTopupAmount>
        <senderPrincipal>
          <principalId>
            <id>dealer1</id>
            <type>RESELLERID</type>
          </principalId>
          <principalName>TEST-RES5</principalName>
          <accounts>
            <account>
              <accountSpecifier>
                <accountId>dealer1</accountId>
                <accountTypeId>RESELLER</accountTypeId>
              </accountSpecifier>
              <balance>
                <currency>GHS</currency>
                <value>4.90</value>
              </balance>
            </account>
          </accounts>
          <status>Active</status>
          <msisdn>233236464648</msisdn>
        </senderPrincipal>
      </return>
    </ns2:requestTopupResponse>
  </soap:Body>
</soap:Envelope>
```

```
<topupAccountSpecifier>
  <accountId>233230089518</accountId>
  <accountTypeId>AIRTIME</accountTypeId>
</topupAccountSpecifier>
<topupAmount>
  <currency>GHS</currency>
  <value>0.10</value>
</topupAmount>
<topupPrincipal>
  <principalId>
    <id>233230089518</id>
    <type>SUBSCRIBERID</type>
  </principalId>
  <principalName/>
</topupPrincipal>
<accounts>
  <account>
    <accountSpecifier>
      <accountId>233230089518</accountId>
      <accountTypeId>AIRTIME</accountTypeId>
    </accountSpecifier>
  </account>
  <account>
    <accountSpecifier>
      <accountId>233230089518</accountId>
      <accountTypeId>MOBILEMONEY</accountTypeId>
    </accountSpecifier>
  </account>
</accounts>
</return>
</ns2:requestTopupResponse>
</soap:Body>
</soap:Envelope>
```

4.2 Transfer Service

The transfer function allows a reseller to transfer airtime to child reseller account, using his credit. The webmethod used for transfer service is **requestTransfer**.

4.2.1 Transfer Request Field

Request field for **requestTransfer** is given below:

Name	Description
context	The client context
senderPrincipalId	The id of the sender reseller. This has to be prefixed with the type of the id (which is typically RESELLERUSER) and UserId defines which user made this transfer
receiverPrincipalId	The id of the receiving reseller. This has to be prefixed with the type of the id, which is typically RESELLERUSER
senderAccountSpecifier	Account Type of Sender reseller
receiverAccountSpecifier	Account Type of Receiver reseller
productId	ID of the product, which is typically TRANSFER
amount	The amount to be transferred

4.2.2 Transfer Response Field

The response to transfer request is **transferResponse**. Breakdown of this return field is explained below:

Name	Description
resultCode	A numerical value indicating the end result of the request that was last processed. See the <i>Result Codes</i> section
ersReference	Unique ERS transaction reference which is used for this transfer.
resultDescription	Result message of the transaction. This usually elaborates the result code.

receivedAmount	This is received amount. It is of type Amount, which is value and currency.
receiverPrincipal	Receiver account information with account details to which amount is credited for transfer
requestedTransferAmount	This is requested amount for transfer. It is of type Amount, which as value and currency.
senderPrincipal	Sender account information with account details from which the amount is debited for transfer.

4.2.3 SOAP Request & Response Examples

SOAP Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ext="http://external.interfaces.ers.seamless.com/">
```

```
<soapenv:Header/>
```

```
<soapenv:Body>
```

```
<ext:requestTransfer>
```

```
<context>
```

```
<channel>GLOWEBSERVICE </channel>
```

```
<clientComment>Testing transfer</clientComment>
```

```
<clientId>Etopup Systems</clientId>
```

```
<clientReference>12345678</clientReference>
```

```
<clientRequestTimeout>1</clientRequestTimeout>
```

```
<initiatorPrincipalId>
```

```
<id>dealer1</id>
```

```
<type>RESELLERUSER</type>
```

```
<userId>webuser</userId>
```

```
</initiatorPrincipalId>
```

```
<password>xxxxxxx</password>
```

```
<transactionProperties>
```

```
</transactionProperties>
```

```
</context>
```

```
<senderPrincipalId>
```



```
<id>dealer1</id>
<type>RESELLERID</type>
<userId>webuser</userId>
</senderPrincipalId>
<receiverPrincipalId>
  <id>0231234520</id>
  <type>RESELLERID</type>
  <userId>?</userId>
</receiverPrincipalId>
<senderAccountSpecifier>
  <accountId>dealer1</accountId>
  <accountTypeId>RESELLER</accountTypeId>
</senderAccountSpecifier>
<receiverAccountSpecifier>
  <accountId>0231234520</accountId>
  <accountTypeId>RESELLER</accountTypeId>
</receiverAccountSpecifier>
<productId>TRANSFER</productId>
<amount>
  <currency>GHS</currency>
  <value>1</value>
</amount>
</ext:requestTransfer>
</soapenv:Body>
```

SOAP Response

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:requestTopupResponse
      xmlns:ns2="http://external.interfaces.ers.seamless.com/">
      <return>
        <ersReference>2017020909545379401000348</ersReference>
        <resultCode>0</resultCode>
        <resultDescription>SUCCESS</resultDescription>
      </return>
    </ns2:requestTopupResponse>
  </soap:Body>
</soap:Envelope>
```

```
<requestedTopupAmount>
  <currency>GHS</currency>
  <value>0.1</value>
</requestedTopupAmount>
<senderPrincipal>
  <principalId>
    <id>dealer1</id>
    <type>RESELLERID</type>
  </principalId>
  <principalName>TEST-RES5</principalName>
  <accounts>
    <account>
      <accountSpecifier>
        <accountId>dealer1</accountId>
        <accountTypeId>RESELLER</accountTypeId>
      </accountSpecifier>
      <balance>
        <currency>GHS</currency>
        <value>4.80</value>
      </balance>
    </account>
  </accounts>
  <status>Active</status>
  <msisdn>233236464648</msisdn>
</senderPrincipal>
<topupAccountSpecifier>
  <accountId>233230089518</accountId>
  <accountTypeId>AIRTIME</accountTypeId>
</topupAccountSpecifier>
<topupAmount>
  <currency>GHS</currency>
  <value>0.10</value>
</topupAmount>
<topupPrincipal>
```

```
<principalId>
  <id>233230089518</id>
  <type>SUBSCRIBERID</type>
</principalId>
<principalName/>
<accounts>
  <account>
    <accountSpecifier>
      <accountId>233230089518</accountId>
      <accountTypeId>AIRTIME</accountTypeId>
    </accountSpecifier>
  </account>
  <account>
    <accountSpecifier>
      <accountId>233230089518</accountId>
      <accountTypeId>MOBILEMONEY</accountTypeId>
    </accountSpecifier>
  </account>
</accounts>
</topupPrincipal>
</return>
</ns2:requestTopupResponse>
</soap:Body>
</soap:Envelope>
```

4.3 Voucher Purchase Service (VOD)

The transfer function allows a reseller to transfer airtime to child reseller account, using his credit. The webmethod used for transfer service is **requestTransfer**.

4.3.1 Purchase Request Field

Request field for **requestTransfer** is given below:

Name	Description
context	The client context
senderPrincipalId	The id of the sender reseller. This has to be prefixed with the type of the id (which is typically RESELLERUSER) and UserId defines which user made this transfer
receiverPrincipalId	The id of the receiving reseller. This has to be prefixed with the type of the id, which is typically RESELLERUSER
senderAccountSpecifier	Account Type of Sender reseller
receiverAccountSpecifier	Account Type of Receiver reseller
productId	ID of the product, which is typically TRANSFER
amount	The amount to be transferred

4.3.2 Purchase Response Field

The response to purchase request is **purchaseResponse**. Breakdown of this return field is explained below:

Name	Description
resultCode	A numerical value indicating the end result of the request that was last processed. See the <i>Result Codes</i> section
ersReference	Unique ERS transaction reference which is used for this transfer.
resultDescription	Result message of the transaction. This usually elaborates the result code.

receivedAmount	This is received amount. It is of type Amount, which is value and currency.
receiverPrincipal	Receiver account information with account details to which amount is credited for transfer
requestedPurchaseAmount	This is requested amount for transfer. It is of type Amount, which as value and currency.
senderPrincipal	Sender account information with account details from which the amount is debited for transfer.

4.3.3 SOAP Request & Response Examples

SOAP Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ext="http://external.interfaces.ers.seamless.com/">
```

```
<soapenv:Header />
```

```
<soapenv:Body>
```

```
<ext:requestPurchase>
```

```
<context>
```

```
<channel>GLOWEBSERVICE</channel>
```

```
<prepareOnly>false</prepareOnly>
```

```
<clientReference>131747</clientReference>
```

```
<clientRequestTimeout>500</clientRequestTimeout>
```

```
<initiatorPrincipalId>
```

```
<id>dealer1</id>
```

```
<type>RESELLERUSER</type>
```

```
<userId>webuser</userId>
```

```
</initiatorPrincipalId>
```

```
<password>xxxxxxx</password>
```

```
<transactionProperties>
```

```
<entry>
```

```
<key>preferredLanguage</key>
```

```
<value>en</value>
```

```
</entry>
```

```
<entry>
  <key>productSKU</key>
  <value>VOS</value>
</entry>
<entry>
  <key>currency</key>
  <value>GHS</value>
</entry>
<entry>
  <key>purchaseAmount</key>
  <value>0.1</value>
</entry>
</transactionProperties>
</context>
<senderPrincipalId>
  <id>dealer1</id>
  <type>RESELLERID</type>
  <userId>webuser</userId>
</senderPrincipalId>
<receiverPrincipalId>
  <id>236464642</id>
  <type>SUBSCRIBERMSISDN</type>
</receiverPrincipalId>
<senderAccountSpecifier>
  <accountTypeId>RESELLER</accountTypeId>
</senderAccountSpecifier>
<purchaseOrder>
  <productSpecifier>
    <productId>VOS</productId>
    <productIdType>VOD</productIdType>
  </productSpecifier>
  <purchaseCount>1</purchaseCount>
</purchaseOrder>
</ext:requestPurchase>
```

```
</soapenv:Body>
</soapenv:Envelope>
```

SOAP Response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
```

```
<soap:Body>
```

```
<ns2:requestPurchaseResponse
xmlns:ns2="http://external.interfaces.ers.seamless.com/">
```

```
<return>
```

```
<ersReference>2017020909453005901000346</ersReference>
```

```
<resultCode>0</resultCode>
```

```
<resultDescription>Voucher Generated:
```

Amount: 0.1 GHS

Expiry Date: 14-02-2017

Serial: 1486633530195

Your balance is 1,243.55 GHS.</resultDescription>

```
<receiverPrincipal>
```

```
<principalId>
```

```
<id>233236464642</id>
```

```
<type>SUBSCRIBERID</type>
```

```
</principalId>
```

```
<principalName/>
```

```
<accounts>
```

```
<account>
```

```
<accountSpecifier>
```

```
<accountId>233236464642</accountId>
```

```
<accountTypeId>AIRTIME</accountTypeId>
```

```
</accountSpecifier>
```

```
<balance>
```

```
<currency>GHS</currency>
```

```
<value>0.0919</value>
```

```
</balance>
```

```
</account>
```

```
<account>
  <accountSpecifier>
    <accountId>233236464642</accountId>
    <accountTypeId>MOBILEMONEY</accountTypeId>
  </accountSpecifier>
</account>
</accounts>
</receiverPrincipal>
<purchasedProducts>
  <purchaseCount>1</purchaseCount>
  <productDetails>
    <map>
      <entry>
        <key>SERIAL</key>
        <value>1486633530195</value>
      </entry>
      <entry>
        <key>EXPIRY_DATE</key>
        <value>Tue Feb 14 00:00:00 GMT 2017</value>
      </entry>
    </map>
  </productDetails>
</purchasedProducts>
</return>
</ns2:requestPurchaseResponse>
</soap:Body>
</soap:Envelope>
```


4.4 Data Bundles Purchase

This method allows the purchase of Data bundles through the Web Services API. The **requestTopup** method is used to achieve this.

4.4.1 Data Bundle Purchase Request Fields

Request fields for **requestTopup** is given below:

Name	Description
context	The client context
initiatorPrincipalId	The id of the initiator of the transaction. This is usually the reseller ID of the user and authenticated by an active username and password.
transactionProperties	This is used to indicate that it is a bundle purchase
senderPrincipalId	The id of the sender reseller. This has to be prefixed with the type of the id (which is typically RESELLERUSER) and UserId defines which user made this transfer
topupPrincipalId	The id of the receiving reseller. This has to be prefixed with the type of the id, which is typically SUBSCRIBERMSISDN
senderAccountSpecifier	Account Type of Sender reseller
topupAccountSpecifier	Account Type of Receiver reseller
productId	ID of the product, which is typically prefixed with BUNDLE_. Check 4.3.7 Available Data bundles and their Product IDs to determine which product id to use for the data bundle purchase
amount	The amount to be transferred

4.4.2 Data Bundle Purchase Response Field

The response to data bundle purchase request is **requestTopupResponse**. Breakdown of this return field is explained below:

Name	Description
------	-------------

resultCode	A numerical value indicating the end result of the request that was last processed. See the <i>Result Codes</i> section
ersReference	Unique ERS transaction reference which is used for this transfer.
resultDescription	Result message of the transaction. This usually elaborates the result code.
topupAmount	This is received amount. It is of type Amount, which is value and currency.
topupPrincipal	Receiver account information with account details to which amount is credited for transfer
topupAccountSpecifier	This is requested amount for transfer. It is of type Amount, which as value and currency.
senderPrincipal	Sender account information with account details from which the amount is debited for transfer.

4.4.3 SOAP Request & Response Examples

SOAP Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ext="http://external.interfaces.ers.seamless.com/">
  <soapenv:Header/>
  <soapenv:Body>
    <ext:requestTopup>
      <context>
        <channel>GLOWEBSERVICE</channel>
        <clientComment>Data bundle Purchase</clientComment>
      </context>
    </ext:requestTopup>
  </soapenv:Body>
</soapenv:Envelope>
```

```
<clientId>ERS</clientId>
<prepareOnly>?</prepareOnly>
<clientReference>?</clientReference>
<clientRequestTimeout>500</clientRequestTimeout>
<initiatorPrincipalId>
  <id>0236464641</id>
  <type>RESELLERUSER</type>
  <userId>9900</userId>
</initiatorPrincipalId>
<password>XXXX</password>
<transactionProperties>
  <entry>
    <key>TRANSACTION_TYPE</key>
    <value>PRODUCT_RECHARGE</value>
  </entry>
</transactionProperties>
</context>
<senderPrincipalId>
  <id>0236464641</id>
```

```
<type>RESELLERUSER</type>
<userId>9900</userId>
</senderPrincipalId>
<topupPrincipalId>
  <id>0238754314</id>
  <type>SUBSCRIBERMSISDN</type>
  <userId>?</userId>
</topupPrincipalId>
<senderAccountSpecifier>
  <accountId>0236464641</accountId>
  <accountTypeId>RESELLER</accountTypeId>
</senderAccountSpecifier>
<topupAccountSpecifier>
  <accountId>0238754314</accountId>
  <accountTypeId>DATA_BUNDLE</accountTypeId>
</topupAccountSpecifier>
<productId>BUNDLE_200MB_Plan</productId>
<amount>
  <currency>GHS</currency>
```

```

        <value>3</value>
    </amount>
</ext:requestTopup>
</soapenv:Body>
</soapenv:Envelope>

```

SOAP Response:

```

<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:requestTopupResponse
xmlns:ns2="http://external.interfaces.ers.seamless.com/">
      <return>
        <ersReference>2018081609052968901000123</ersReference>
        <resultCode>0</resultCode>
        <resultDescription>SUCCESS : You have successfully activated 200MB_Plan
worth 3.00 GHS for 233238754314. Your balance is now 1,080.18 GHS. ref:
2018081609052968901000123</resultDescription>
        <requestedTopupAmount>
          <currency>GHS</currency>
          <value>3</value>
        </requestedTopupAmount>
        <senderPrincipal>
          <principalId>
            <id>0236464641</id>
            <type>RESELLERID</type>
          </principalId>
          <principalName>TEST-DIST1</principalName>
          <accounts>
            <account>
              <accountDescription>TEST-SUBDIST1</accountDescription>
              <accountSpecifier>
                <accountId>0236464641</accountId>
                <accountTypeId>RESELLER</accountTypeId>

```

```
</accountSpecifier>
<balance>
  <currency>GHS</currency>
  <value>1080.18</value>
</balance>
<creditLimit>
  <currency>GHS</currency>
  <value>0.00000</value>
</creditLimit>
</account>
</accounts>
<status>Active</status>
<msisdn>233236464641</msisdn>
</senderPrincipal>
<topupAccountSpecifier>
  <accountId>233238754314</accountId>
  <accountTypeId>DATA_BUNDLE</accountTypeId>
</topupAccountSpecifier>
<topupAmount>
  <currency>GHS</currency>
  <value>3</value>
</topupAmount>
<topupPrincipal>
  <principalId>
    <id>233238754314</id>
    <type>SUBSCRIBERID</type>
  </principalId>
  <principalName />
</topupPrincipal>
<accounts>
  <account>
    <accountSpecifier>
      <accountId>233238754314</accountId>
      <accountTypeId>AIRTIME</accountTypeId>
    </accountSpecifier>
```

```

    <balance>
      <currency>GHS</currency>
      <value>5000000.00</value>
    </balance>
  </account>
<account>
  <accountSpecifier>
    <accountId>233238754314</accountId>
    <accountTypeId>DATA_BUNDLE</accountTypeId>
  </accountSpecifier>
</account>
</accounts>
</topupPrincipal>
</return>
</ns2:requestTopupResponse>
</soap:Body>
</soap:Envelope>

```

4.4.4 Available Data bundles and their Product IDs

The Product ID of a plan is required

Plan Name	Price(GHc)	Volume	Validity	Product ID
Monthly				
1.7GB Plan	10	1.7GB	30days	BUNDLE_1.7GB_Plan
Weekly				
200MB Plan	2	200MB	7days	BUNDLE_200MB_Plan
Daily				
100MB Plan	1	100MB	1day	BUNDLE_100MB_Plan

4.5 Balance Enquiry

This method allows the reseller to request for current balance through the Web Services API. The **requestPrincipalInformation** method is used to achieve this.

4.5.1 Balance Enquiry Request Fields

Request fields for **requestPrincipalInformation** is given below:

Name	Description
context	The client context
initiatorPrincipalId	The id of the initiator of the transaction. This is usually the reseller ID of the user and authenticated by an active username and password.
principalId	This is the unique Id of the reseller that wants to request for his/her account balance.

4.5.2 Balance Enquiry Response Field

The response to balance enquiry request is **requestPrincipalInformationResponse**. Breakdown of this return field is explained below:

Name	Description
resultCode	A numerical value indicating the end result of the request that was last processed. See the Result Codes section
ersReference	Unique ERS transaction reference which is used for this transfer.
resultDescription	Result message of the transaction. This usually elaborates the result code.
requestedPrincipal	This contains all the information about the resellers including the current account balance

4.5.3 SOAP Request & Response Examples

SOAP Request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"  
xmlns:ext="http://external.interfaces.ers.seamless.com/">
```

```
<soapenv:Header/>
```

```
<soapenv:Body>
```

```
<ext:requestPrincipalInformation>
```

```
<context>
```

```
<channel>WebService</channel>
```

```
<clientComment>Query Balance</clientComment>
```

```
<clientId>Etopup Systems</clientId>
```

```
<prepareOnly>>false</prepareOnly>
```

```
<clientReference>12345</clientReference>
```

```
<clientRequestTimeout>10000</clientRequestTimeout>
```

```
<initiatorPrincipalId>
```

```
<id>dealer1</id>
```

```
<type>RESELLERUSER</type>
```

```
<userId>webuser</userId>
```

```
</initiatorPrincipalId>
```

```
<password>xxxxx</password>
```

```
</context>
```

```
<principalId>
```

```
<id>230089521</id>
```

```
<type>RESELLERID</type>
```

```
<userId>?</userId>
```

```
</principalId>
```

```
<nativeReslutCode>?</nativeReslutCode>
```

SOAP Response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2:requestPrincipalInformationResponse
      xmlns:ns2="http://external.interfaces.ers.seamless.com/">
      <return>
        <ersReference>2018091715415520501000332</ersReference>
        <resultCode>0</resultCode>
        <resultDescription>SUCCESS</resultDescription>
        <requestedPrincipal>
          <principalId>
            <id>dealer1</id>
            <type>RESELLERID</type>
          </principalId>
          <principalName>DEALER1</principalName>
          <accounts>
            <account>
              <accountDescription>RESELLER</accountDescription>
              <accountSpecifier>
                <accountId>dealer1</accountId>
                <accountTypeId>RESELLER</accountTypeId>
              </accountSpecifier>
              <balance>
                <currency>GHS</currency>
                <value>0.50000</value>
              </balance>
              <creditLimit>
                <currency>GHS</currency>
                <value>0.00000</value>
              </creditLimit>
            </account>
          </accounts>
          <status>Active</status>
          <msisdn>233230089521</msisdn>
        </requestedPrincipal>
      </return>
    </ns2:requestPrincipalInformationResponse>
  </soap:Body>
</soap:Envelope>
```

5 Result Codes

Result codes	
Result code	Description
0	SUCCESS
1	PENDING_APPROVAL
2	REPORT_NOT_READY
3	VOUCHER DELIVERED
4	VOUCHER SOLD
10	REJECTED_BUSINESS_LOGIC
11	REJECTED_AMOUNT
12	REJECTED_PAYMENT
13	REJECTED_TOPUP
20	AUTHENTICATION_FAILED
21	ACCESS_DENIED
22	INVALID_NEW_PASSWORD

23	INVALID_ERS_REFERENCE
29	INVALID_INITIATOR_PRINCIPAL_ID
30	INVALID_RECEIVER_PRINCIPAL_ID
31	INVALID_SENDER_PRINCIPAL_ID
32	INVALID_TOPUP_PRINCIPAL_ID
33	INVALID_INITIATOR_PRINCIPAL_STATE
34	INVALID_RECEIVER_PRINCIPAL_STATE
35	INVALID_SENDER_PRINCIPAL_STATE
36	INVALID_TOPUP_PRINCIPAL_STATE
37	INITIATOR_PRINCIPAL_NOT_FOUND
38	RECEIVER_PRINCIPAL_NOT_FOUND
39	SENDER_PRINCIPAL_NOT_FOUND
40	TOPUP_PRINCIPAL_NOT_FOUND
41	INVALID_PRODUCT

42	INVALID_RECEIVER_ACCOUNT_TYPE
43	INVALID_SENDER_ACCOUNT_TYPE
44	INVALID_TOPUP_ACCOUNT_TYPE
45	RECEIVER_ACCOUNT_NOT_FOUND
46	SENDER_ACCOUNT_NOT_FOUND
47	TOPUP_ACCOUNT_NOT_FOUND
48	PAYMENT_IN_PROGRESS
49	INVALID_INVOICE_DATA
50	CANNOT_CANCEL_PAID_INVOICE
51	CANNOT_CANCEL_INVOICE_IN_PROGRESS
52	INVALID_CUSTOMER
53	INVALID_SEQR_ID
54	INVALID_INVOICE_REFERENCE
55	PAYMENT_ALREADY_CANCELLED
56	REGISTRATION_NOT_POSSIBLE
57	REGISTRATION_PRINCIPAL_ALREADY_EXISTS
60	AUTHORIZATION_EXPIRED

61	AUTHORIZATION_CANCELLED
62	AUTHORIZATION_IN_PROGRESS
63	INVALID_AUTHORIZATION_REFERENCE
90	SYSTEM_ERROR
91	UNSUPPORTED_OPERATION
92	LICENSE_REJECTION
93	SYSTEM_BUSY
94	SERVICE_UNAVAILABLE
95	INVOICE_ALREADY_CANCELED
96	INVOICE_STATE_NOT_RESERVED
97	PRODUCT_OUT_OF_STOCK
98	TRANSACTION_ALREADY_REVERSED
100	SUCCESS_CANCELLED
101	RECEIVER_ACCOUNT_DOES_NOT_ALLOW_REFUND
102	LIMIT_EXCEED
103	ACCOUNT_NOT_CREATED
104	INSUFFICIENT_SENDER_CREDIT

105	ACCOUNTSYSTEM_TIMEOUT
106	ACCOUNTSYSTEM_UNAVAILABLE
107	TRANSACTION_NOT_PENDING
108	COMMITTOPU_WITHOUT_PREPARETOPUP
109	CANCELTOPU_WITHOUT_PREPARETOPUP
<hr/>	
901	INVALID_CUSTOMER_PRINCIPAL
<hr/>	
530	SENDER_NOT_FOUND
<hr/>	
931	TRANSACTION_REVERSAL_ALREADY_REQUESTED
933	TRANSACTION_NOT_FOUND
<hr/>	
2016	TRANSACTION_ALREADY_COMPLETED