



# EBS (Event Billing)

api

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## **Version 3.3**

We recognise how much easier it is to get things done with your suppliers and partners if you know who to talk to. If you have any queries or would like additional information, please contact our support team.

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## Version history

Revision number	Revision Date	Author	Changes
1.0	2009-12-10	Kieron Thwaites	Initial document release
1.1	2009-12-11	Kieron Thwaites	Added new status codes
1.2	2010-02-24	Jon Hudson	Added Network Testing
1.3	2010-04-26	Jon Hudson	Updated Process Flow
1.4	2010-05-11	Kieron Thwaites	Updated list of valid debit amounts
1.5	2010-06-25	Kieron Thwaites	Corrected documentation errors regarding debits
1.6	2010-07-13	David Jacques	Added additional error codes
1.7	2011-12-02	Alan Haarhoff	Cell C Beta Phase
1.8	2012-02-02	Matthew Smythe	General doc updates
1.9	2012-06-14	Matthew Smythe	Added MSISDN blacklisting details
1.9.1	2012-07-02	Matthew Smythe	Amended Subscription Code types
2.0	2012-07-03	Matthew Smythe	Added Anti-Fraud Alert precautions
2.1	2012-11-19	Matthew Smythe	Updated doc with extra subscription billing info
2.2	2013-04-16	Matthew Smythe	Updated Ticket system
2.2.1	2013-04-17	Matthew Smythe	Update of reporting xml and format
2.3	2013-04-17	Matthew Smythe	Addition of 8ta support
2.4	2014-01-20	Jon Hudson	Added DOI Information
2.4.1	2015-11-18	Jon Hudson	Updated DOI information for MTN
2.4.2	2016-01-26	Jon Hudson	Added Network parameter
2.4.3	2018-02-12	Natasha Meyer	Updated Subscription Annexure D
2.4.4	2018-03-21	Natasha Meyer	Updated Subscription Termination Procedure
2.4.5	2018-04-05	Natasha Meyer	Updated Business Rules
2.4.6	2018-04-24	Natasha Meyer	Updated Multiple Service Methods
2.4.7	2018-05-22	Natasha Meyer	Updated Business Rules
2.4.8	2018-07-02	Jon Hudson	Updated MTN DOI Info
2.4.9	2018-10-03	Jon Hudson	Updated Business Rules
2.5	2020-04-08	Natasha Meyer	Update Business rules – Charging Retries Monthly
3.0	2020-07-26	Natasha Meyer	<ul style="list-style-type: none"> <li>- Updated Annexure E: EBS Error Codes.</li> <li>- Added DOI Validity Period.</li> <li>- Transactions.</li> <li>- Added Appendix G - FAQ</li> <li>- Added Business Rules: Billing &amp; Subscription Services.</li> <li>- Added “The Logistics”</li> <li>- Added “Billing”</li> </ul>
3.1	2021-02-12	Jon Hudson	Removed Vodacom DOI Cost
3.2	2022-04-20	Jon Hudson	Updated “ftsauthId” parameter
3.3	2022-08-11	Jon Hudson	Updated Telkom error codes

## Introduction

This document aims to define the interface between third-party developers and the EBS (*Event Billing Service*) platform. EBS allows third parties to directly bill a subscriber's mobile phone account for content or services provided by the third party to the subscriber.

Billing services handled by EBS include both Ad-Hoc (once off) transactions, as well as Subscription billing services.

Event Billing is supported on all South African MNO's.

## Scope

This document will provide the specifications of the interface to be used by external applications developed by third parties who wish to interface with Event Billing.

This document targets the following groups:

- Application Designers
- Application Developers

The interface is a Web Service, and the SOAP protocol will be used to communicate with it.

## Business Rules

Each Mobile Operator has a predefined set of business rules which is in line with the WASPA Code of Conduct.

## Billing

- A billing threshold for any service is a total of R200 for that service for every calendar month.
- Once a customer has joined a subscription service, neither the amount and frequency of the billing nor the frequency of the service may be increased without the customer's explicit permission.
- Once a customer has joined a subscription service, the amount of the charges may not be increased, nor may the trigger for the notification service billing be altered without the customer's explicit permission.
- Billing for subscription services must not exceed the total amount specified in the pricing information.
- A customer may not be billed in advance for a subscription service if this exceeds the amount specified in the pricing information.

## Subscription Services

A subscriber may not automatically be subscribed to a subscription service because of any non-subscriptions content transactions.

The instruction for subscribing and description of subscription must be clear on all advertising and must be in line with the WASPA advertising guidelines as outlined in the WASPA Code of Conduct.

## Double Opt-In

DOI (Double Opt-In) is a service, which queries the subscriber to accept or decline a transaction.

Once a Credit Check is initiated, the subscriber receives a notification from the Mobile Operator in the form of an SMS or a Network Initiated USSD session. The notification prompts the subscriber to accept or decline the transaction.

The relevant response from the subscriber will be sent back to the WASP and forwarded to the client in the form of a URL call-back.

### Network Process

Vodacom, CellC and Telkom handle the DOI process by simply sending an SMS from their system to the customer to confirm whether they accept the charge for the service in question.

MTN handles the process differently by invoking an NI USSD popup, which will appear on the user's cell phone for them to accept or decline. If the person requesting the debit is not the bill payer then the approval request will also be sent to bill payer, and that will be over SMS.

The end user may respond to the SMS / NI USSD at no cost to them.

### Validity Period

Each operator has a different expiration time for a DOI (Double Opt-In) to be initiated. Failure to respond within these times, will result in the transaction being cancelled.

Vodacom	: 18 Hours
MTN	: 7 Days
Cell	: 24 Hours
Telkom	: 5 Days

## Charging Retries

- A maximum of three (3) charge attempts per day per service for each subscriber regardless of the subscription frequency may be allowed.
- Subscriber De-Registration after Unsuccessful Charge attempts:  
The following subscriber de-registration options may apply:
  - Variable Unsuccessful recharge attempts:
    - i. Daily Subscription: A maximum of 7 consecutive days of unsuccessful billing is allowed after which the subscriber is removed from the service.
    - ii. Weekly Subscription: 14 consecutive days of unsuccessful billing is allowed after which the subscriber is removed from the service.
    - iii. Monthly Subscription: 60 days of unsuccessful billing is allowed after which the subscriber is removed from the service.
  - Maximum Unsuccessful Recharge Attempts
    - i. The maximum period of consecutive days of unsuccessful billing will be limited to 60 days.

## Billing

Vodacom, CellC and Telkom requires the Debit instruction to be initiated by the client. Refer to Debit section.

MTN handles once off and recurring billing automatically, but to keep a standard the same process as outlined in the Debit section can be followed throughout. Our application will handle client-initiated debits for MTN.

## Notifications

MTN is responsible for sending these messages for their own customers.

In terms of the other networks, we will send these messages from your account on your behalf. They will be charged at your existing SMS rate.

## Welcome Messages

Once a successful subscription is initiated, an SMS is sent to notify the customer of the successful registration of the subscription service.

Detail in our notification SMS:

- The name of the service the customer has subscribed to.
- The price.
- The Customer Care number.
- Type of subscription (daily, weekly, monthly).

**Example:** *Welcome to %SERVICE% %TOTAL%/ %FREQUENCY%. Contact %CONTACT% for support. Opt-out by SMSing STOP %ID% to 30509*

## Reminders

Monthly reminder messages are sent to all subscription service customers. This reminder is sent within 30 days of the initial notification and once per calendar month thereafter.

- WASP Name.
- WASP Customer Care number.
- The name of the service.
- The amount billed.
- Type of subscription (daily, weekly, monthly).

We include text explaining how a customer can unsubscribe from the service by SMSing our Short Code.

**Example:** *Reminder: You're subscribed to: %SERVICE% at a cost of %TOTAL%/ %FREQUENCY%. Contact %CONTACT% for support. To Opt-out SMS STOP %ID% to 30509*

## Warning Messages

Once an end user has spent over R200 in a calendar month on any Premium Service the WASP runs, we automatically warn them of this and give them the option to Unsubscribe as we do for the reminder messages.

**Example Once-Off Spend Limit:** *Your spend for %SERVICE% this month is %TOTALAMOUNT%. If you confirm the next Opt-In it will be %PROJECTEDAMOUNT%*

**Example Subscription Spend Limit:** *You're subscribed to %SERVICE% at %TOTAL%/ %FREQUENCY%. Spend for the month: %TOTALAMOUNT% Contact %CONTACT% for support. To Opt-out SMS STOP %ID% to 30509*

## Termination Messages

An SMS is sent to a customer when they terminate a subscription.

**Example:** *You've been successfully unsubscribed from: %SERVICE%.*

## The Logistics

### Account Requirements

By now you should have a Messaging Account registered and active. If not, it should be in the process of vetting and approval. You will not have access to EBS without this account.

### Event Billing Service Registration

Service names must be registered with each mobile operator.  
A service name needs to be unique per application and case sensitive.

If you wish to bill for multiple services, you are required to register each service.

Example Service Names:

MyServiceNameD : Daily Debit  
MyServiceNameW : Weekly Debit  
MyServiceNameM : Monthly Debit  
MyServiceNameA : Once-Off Debit (Adhoc)

- Clients are not allowed to bill a subscriber for a daily, weekly, and monthly debit under the same service name.
- You would also have to stipulate the Rand Value/s you wish to register for each service. (Refer to appendix B for valid debit amounts.)
- A Once-Off (Adhoc) service can have multiple debit values, i.e. donations/wallet top-ups.
- Requests for additional services under a new service name can be logged with support.

### Network Testing Period

Once your service is setup and fully operational, the Network Operators require a 5 – 10 working day period to conduct thorough testing of your service. Once they confirm they are satisfied, your service can be activated.

## Getting Started

The Web Service resides at the following location: <https://ebs.gsm.co.za/ebs.asmx>

It is compulsory to connect to the Web Service via HTTPS. HTTP connections to the Web Service are not accepted.

### Basic Endpoints

Below is the basic list of endpoints to use during the EBS transactional process, which is also further elaborated on in this document.

Endpoint	What it Does
/CreditCheck	Determines if the subscriber has sufficient funds.
/Debit	Initiates billing instruction to subscriber.
/Terminate	Terminates a subscription service.

A full list of all EBS operations can be obtained from: <https://ebs.gsm.co.za/ebs.asmx?wsdl>

### Definition of parameter types

For the purposes of this document, parameter types are defined as follows:

Type	Definition
<b>bool</b>	A value of either “true” or “false”.
<b>char</b>	A single Unicode character.
<b>decimal</b>	A floating-point value with 28 or 29 digits of precision and a range from $1.0 \times 10^{-28}$ to about $7.9 \times 10^{28}$ .
<b>int</b>	A 32-bit signed integer.
<b>long</b>	A 64-bit signed integer.
<b>String</b>	A string of Unicode characters.

### List of available methods

- CreditCheck()
- Debit()
- CreditCheckMS()
- DebitMS()
- Terminate()
- GetReportFromDateRange()
- GetReportFromMsisdn()
- GetReportFromRef()



## Process flow

The process flow does vary slightly from Network to Network, based on the Networks' specification documents. The general flow is as follows, this will be described first, and following this general description, network specifics will be outlined.

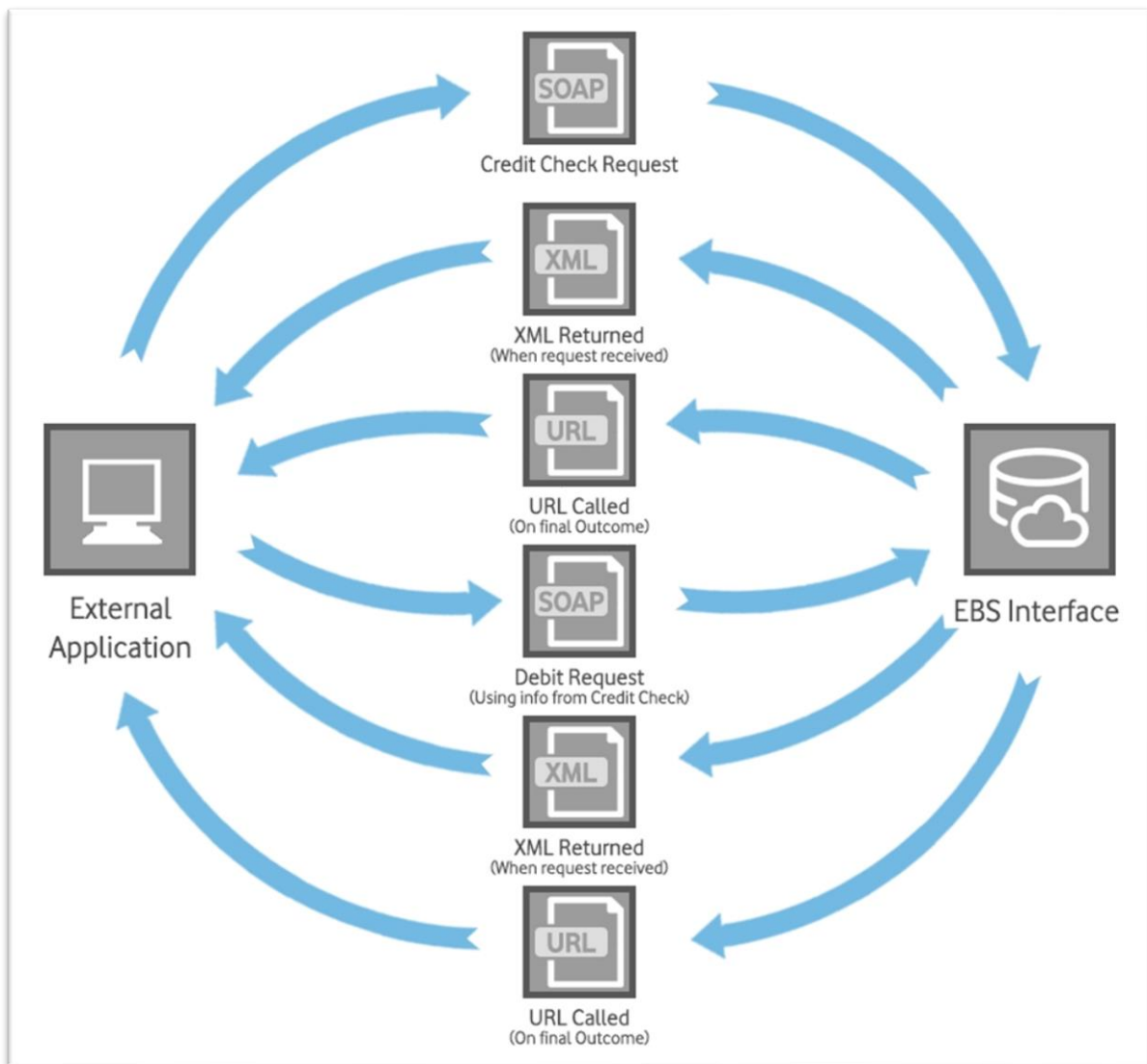


Figure 1: General process flow of EBS service

## SOAP Interactions

Below SOAP interactions apply to both Once-off (Adhoc) and Subscription services.

### Single Services

The following methods can be used where a client has a single service name registered.

#### Credit check

Before debiting a subscriber, it is necessary to perform a credit check on the user to ascertain whether the subscriber has sufficient funds.

- 1) A credit request is sent in XML/SOAP format to the EBS service:

#### /CreditCheck Request

```
<SOAP-ENV:Envelope xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ZSI="http://www.zolera.com/schemas/ZSI/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header></SOAP-ENV:Header>
  <SOAP-ENV:Body xmlns:ns1="https://ebs.gsm.co.za/">
    <ns1:CreditCheck>
      <ns1:username>ClientUsername</ns1:username>
      <ns1:password>ClientPassword</ns1:password>
      <ns1:msisdn>MSISDN</ns1:msisdn>
      <ns1:reference></ns1:reference>
      <ns1:xid></ns1:xid>
      <ns1:description>ClientContentDescription</ns1:description>
      <ns1:contentID>ContentID</ns1:contentID>
      <ns1:contentType>ContentType</ns1:contentType>
      <ns1:amount>AMOUNT</ns1:amount>
      <ns1:type>Type</ns1:type>
      <ns1:bfrq>0</ns1:bfrq>
      <ns1:firstDebit>0</ns1:firstDebit>
      <ns1:ftsauthId>0</ns1:ftsauthId>
      <ns1:srvConf>true</ns1:srvConf>
    </ns1:CreditCheck>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

- 2) An immediate response is returned in XML format indicating if the /creditcheck operation was successful or not.

#### /CreditCheck Response (Success)

```
<?xml version="1.0" encoding="utf-8" ?>
<result message="Success" ref="123" ref="123 network=""Vodacom"/>
```

#### /CreditCheck Response (Failed)

```
<?xml version="1.0" encoding="utf-8" ?>
<error code="1000" message="Invalid Credentials" />
```

- 3) Once the Mobile Operator returns the result of the credit check, the response will be sent back to the client via URL Call-back.

<https://clientURL:clientPort/ebsfb/?action=CREDITCHECK&ref=12345&xid=987654321&result=OK&code=&message=SUCCESSFUL>

## CreditCheck() methods exposed

### Parameters

The CreditCheck() method expects the following parameters:

Name	Type	Description
<b>username</b>	string	The username associated with your account.
<b>password</b>	string	The password associated with your account
<b>msisdn</b>	string	The MSISDN of the subscriber to perform the credit check on. It is expected that the MSISN is in international format (e.g. 27820000000).
<b>description</b>	string	A description of the content that the subscriber will be billed for.
<b>contentID</b>	int	The third party's own ID for the content.
<b>contentType</b>	int	An integer specifying the type of the content. Allowed types are discussed in Appendix A.
<b>Amount</b>	decimal	The amount to bill the subscriber, in South African Rands (ZAR). Allowed amounts/tickets are discussed in Appendix B.
<b>Type</b>	char	The type of billing. Set to '65' (ASCII code for A) for an ad-hoc (once-off) debit; set to '83' (ASCII code for S) for a subscription debit.
<b>bfrq</b>	int	The billing frequency of this transaction – Once=1 (ad hoc transactions), Daily=2 (once a day subscription), Weekly=3 (once a week subscription), Monthly=4 (once a month subscription), Yearly=5 (once a year subscription).
<b>firstDebit</b>	long	The time that the first debit for the MSISDN for a specific service occurred. The time must be passed as a UNIX timestamp (a 64-bit signed integer representing the number of seconds since 1970-01-01 00:00:00 UTC). If this is the first debit, set this parameter to 0.
<b>ftsauthId</b>	int	This is no longer used should be set to 0 (zero).
<b>srvConf</b>	bool	Set to true to continue the transaction; set to false to roll back the transaction.
<b>servicename</b>	String	The service names associated with your account.

### Query string parameters passed to URL called

When the mobile network completes a credit check request, a URL specified by the third party (via the client interface) will be called with the following query string parameters:

Parameter	Description
<b>ref</b>	The reference number that was returned in the XML above.
<b>xid</b>	The transaction ID returned by the mobile network.
<b>action</b>	Will be the string "CREDITCHECK"
<b>result</b>	Will be one of the following strings: "ERROR", "OK", "DECLINED" or "UNKNOWN". Note that requests to MTN and Cell C will always return the string "UNKNOWN".
<b>code</b>	If the result was "ERROR", this parameter will contain an error code.
<b>message</b>	If the result was "ERROR", this parameter will contain an error message.
<b>network</b>	The network of the user i.e. MTN, Vodacom, Cell C or Telkom_8ta

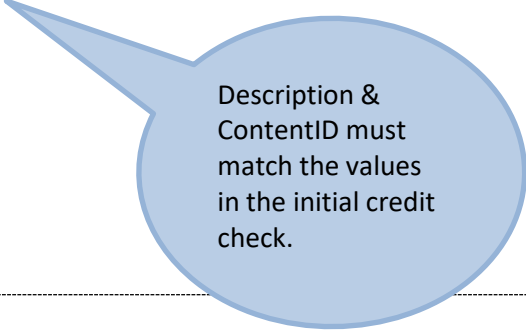
## Debit

If (and only if) the credit check was successful, the third party may debit the subscriber's account by calling the Web Service method to debit a subscriber; reference numbers obtained from the credit check must be passed to this method. This is both true for Ad Hoc and Subscription services.

For subscription services and proceeding debit checks, please refer to Appendix F

- 1) A debit request is sent in XML/SOAP format to the EBS service:

```
<SOAP-ENV:Envelope xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ZSI="http://www.zolera.com/schemas/ZSI/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header></SOAP-ENV:Header>
  <SOAP-ENV:Body xmlns:ns1="https://ebs.gsm.co.za/">
    <ns1:Debit>
      <ns1:username>ClientUsername</ns1:username>
      <ns1:password>ClientPassword</ns1:password>
      <ns1:msisdn>MSISDN</ns1:msisdn>
      <ns1:reference>12345</ns1:reference>
      <ns1:xid>0</ns1:xid>
      <ns1:description>ClientContentDescription</ns1:description>
      <ns1:contentID>ContentID</ns1:contentID>
      <ns1:contentType>ContentType</ns1:contentType>
      <ns1:amount>AMOUNT</ns1:amount>
      <ns1:type>Type</ns1:type>
      <ns1:bfrq>0</ns1:bfrq>
      <ns1:firstDebit>0</ns1:firstDebit>
      <ns1:ftsauthId>0</ns1:ftsauthId>
      <ns1:srvConf>true</ns1:srvConf>
    </ns1:Debit>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```



- 2) An immediate response is returned in XML format indicating if the /debitcheck operation was successful or not.

### /Debit Response (Success)

```
<?xml version="1.0" encoding="utf-8" ?>
<result message="Success" ref="12345" />
```

### /Debit Response (Failed)

```
<?xml version="1.0" encoding="utf-8" ?>
<error code="1000" message="Invalid Credentials" />
```

- 3) A URL will be called once a response is received from the mobile network. The format of the XML returned and the query string parameters in the URL called are discussed later.

<http://clientURL:clientPort/ebsfb?action=DEBITCHECK&ref=123&xid=&result=OK&code=&message=>

## Debit() methods exposed

### Parameters

The Debit() method expects the following parameters:

Name	Type	Description
<b>username</b>	string	The username associated with your account.
<b>password</b>	string	The password associated your account.
<b>msisdn</b>	string	The MSISDN of the subscriber to perform the credit check on. It is expected that the MSISN is in international format (e.g. 27820000000).
<b>reference</b>	int	The reference number (ref) obtained from the successful credit check.
<b>xid</b>	int	The mobile network transaction ID obtained from the successful credit check.
<b>description</b>	string	A description of the content, matching the original credit check description, the subscriber will be billed for.
<b>contentID</b>	int	The third party's own ID for the content, matching the original credit check ContentID
<b>contentType</b>	int	An integer specifying the type of the content. Allowed types are discussed in Appendix A.
<b>amount</b>	decimal	The amount to bill the subscriber, in South African Rands. Allowed amounts/tickets are discussed in Appendix B.
<b>type</b>	char	The type of billing. Set to '65' (ASCII code for A) for an ad-hoc (once-off) debit; set to '83' (ASCII code for S) for a subscription debit.
<b>bfrq</b>	int	The billing frequency of this transaction – Once=1 (ad hoc transactions), Daily=2 (once a day subscription), Weekly=3 (once a week subscription), Monthly=4 (once a month subscription), Yearly=5 (once a year subscription).
<b>firstDebit</b>	long	The time that the first debit for the MSISDN for a specific service occurred. The time must be passed as a UNIX timestamp (a 64-bit signed integer representing the number of seconds since 1970-01-01 00:00:00 UTC). If this is the first debit, set this parameter to 0.
<b>ftsauthId</b>	int	This is no longer used and should be set to 0 (zero).
<b>srvConf</b>	bool	Set to true to continue the transaction; set to false to roll back the transaction.
<b>servicename</b>	String	The service names associated with your account.

### Query string parameters passed to URL called

When the mobile network completes a debit request, a URL specified by the third party (via the client interface) will be called with the following query string parameters:

Parameter	Description
<b>ref</b>	The reference number that was returned in the XML above.
<b>xid</b>	The transaction ID returned by the mobile network.
<b>action</b>	Will be the string "DEBIT"
<b>result</b>	Will be one of the following strings: "ERROR", "OK" or "DECLINED".
<b>code</b>	If the result was "ERROR", this parameter will contain an error code.
<b>message</b>	If the result was "ERROR", this parameter will contain an error message.
<b>network</b>	The network of the user i.e. MTN, Vodacom, Cell C or Telkom_8ta

## Multiple Services

Where a client has multiple services registered, the Multiple Service methods should be applied. Refer to <https://ebs.gsm.co.za/ebs.asmx?>

### CreditcheckMS

Before debiting a subscriber, it is necessary to perform a credit check on the user to ascertain whether the subscriber has sufficient funds.

- 1) A credit request is sent in XML/SOAP format to the EBS service:

#### /CreditCheck Request

```
<SOAP-ENV:Envelope xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ZSI="http://www.zolera.com/schemas/ZSI/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header></SOAP-ENV:Header>
  <SOAP-ENV:Body xmlns:ns1="https://ebs.gsm.co.za/">
    <ns1:CreditCheckMS>
      <ns1:username>ClientUsername</ns1:username>
      <ns1:password>ClientPassword</ns1:password>
      <ns1:msisdn>MSISDN</ns1:msisdn>
      <ns1:reference></ns1:reference>
      <ns1:xid></ns1:xid>
      <ns1:description>ClientContentDescription</ns1:description>
      <ns1:contentID>ContentID</ns1:contentID>
      <ns1:contentType>ContentType</ns1:contentType>
      <ns1:amount>AMOUNT</ns1:amount>
      <ns1:type>Type</ns1:type>
      <ns1:bfrq>0</ns1:bfrq>
      <ns1:firstDebit>0</ns1:firstDebit>
      <ns1:ftsauthId>0</ns1:ftsauthId>
      <ns1:srvConf>true</ns1:srvConf>
    </ns1:CreditCheckMS>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

- 2) An immediate response is returned in XML format indicating if the /creditcheck operation was successful or not.

#### /CreditCheck Response (Success)

```
<?xml version="1.0" encoding="utf-8" ?>
<result message="Success" ref="123" ref="123"Vodacom"/>
```

#### /CreditCheck Response (Failed)

```
<?xml version="1.0" encoding="utf-8" ?>
<error code="1000" message="Invalid Credentials" />
```

- 3) Once the Mobile Operator returns the result of the credit check, the response will be sent back to the client via URL call-back.

<https://clientURL:clientPort/ebs/?action=CREDITCHECK&ref=12345&xid=987654321&result=OK&code=&message=SUCCESSFULL>

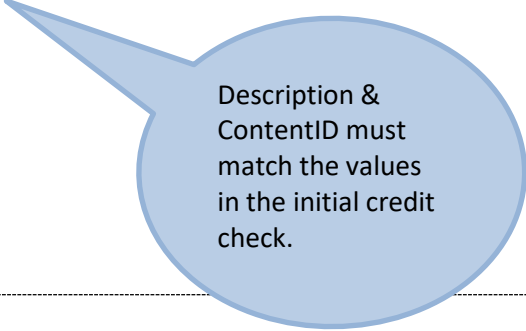
## DebitMS

If (and only if) the credit check was successful, the third party may debit the subscriber's account by calling the Web Service method to debit a subscriber; reference numbers obtained from the credit check must be passed to this method. This is both true for Ad Hoc and Subscription services.

For subscription services and proceeding debit checks, please refer to Appendix F

- 1) A debit request is sent in XML/SOAP format to the EBS service:

```
<SOAP-ENV:Envelope xmlns:SOAP-ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ZSI="http://www.zolera.com/schemas/ZSI/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <SOAP-ENV:Header></SOAP-ENV:Header>
  <SOAP-ENV:Body xmlns:ns1="https://ebs.gsm.co.za/">
    <ns1:DebitMS>
      <ns1:username>ClientUsername</ns1:username>
      <ns1:password>ClientPassword</ns1:password>
      <ns1:msisdn>MSISDN</ns1:msisdn>
      <ns1:reference>12345</ns1:reference>
      <ns1:xid>0</ns1:xid>
      <ns1:description>ClientContentDescription</ns1:description>
      <ns1:contentID>ContentID</ns1:contentID>
      <ns1:contentType>ContentType</ns1:contentType>
      <ns1:amount>AMOUNT</ns1:amount>
      <ns1:type>Type</ns1:type>
      <ns1:bfrq>0</ns1:bfrq>
      <ns1:firstDebit>0</ns1:firstDebit>
      <ns1:ftsauthId>0</ns1:ftsauthId>
      <ns1:srvConf>true</ns1:srvConf>
    </ns1:DebitMS>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```



- 2) An immediate response is returned in XML format indicating if the /debitcheck operation was successful or not.

### /Debit Response (Success)

```
<?xml version="1.0" encoding="utf-8" ?>
<result message="Success" ref="12345" />
```

### /Debit Response (Failed)

```
<?xml version="1.0" encoding="utf-8" ?>
<error code="1000" message="Invalid Credentials" />
```

- 3) A URL will be called once a response is received from the mobile network. The format of the XML returned and the query string parameters in the URL called are discussed later.

<https://clientURL:clientPort/ebs?action=DEBITCHECK&ref=123&xid=&result=OK&code=&message=>

## Recurring Debit Transactions

Client is required to submit a recurring Debit request on each interval following the commencement of a subscription. Note that MTN handles all recurring debits directly, therefore it is optional for the client to issue a debit request for MTN subscribers.

No recurring creditchecks are required for existing subscriptions.

When initiating recurring debits, client must ensure that the initial reference returned on the first credit check is used throughout the recurring debits. *Refer to Appendix F.*

## Subscription Termination

Subscribers have the right to opt out of any subscription service at any point in time:

- 1) A termination request is sent in XML/SOAP format to the EBS service:

```
<SOAP:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <Terminate xmlns="https://ebs.gsm.co.za/">
      <username>string</username>
      <password>string</password>
      <msisdn>string</msisdn>
      <ftsauthId>int</ftsauthId>
    </Terminate>
  </soap:Body>
</soap:Envelope>
```

- 2) A URL will be called once a response is received from the mobile network. The format of the XML returned and the query string parameters in the URL called are discussed later.

<https://clientURL:clientPort/ebs?action=TERMINATE&ref=123&xid=&result=SUBSCRIBER&code=&message=>



## Report Methods Exposed

The web service exposes three methods to enable reports to be drawn: GetReportFromDateRange(), GetReportFromMsisdn() and GetReportFromRef(). The only difference between these methods are the parameters that they accept; all three methods return the same XML output format.

### Parameters of GetReportFromDateRange()

Name	Type	Description
username	string	The username associated with your account.
password	string	The password associated with your account.
startDate	long	The start date/time to search reports for. The time must be passed as a UNIX timestamp (a 64-bit signed integer representing the number of seconds since 1970-01-01 00:00:00 UTC).
endDate	long	The end date/time to search reports for. The time must be passed as a UNIX timestamp (a 64-bit signed integer representing the number of seconds since 1970-01-01 00:00:00 UTC).

### Parameters of GetReportFromMsisdn()

Name	Type	Description
username	string	The username associated with your account.
password	string	The password associated with your account.
msisdn	string	The MSISDN of the subscriber to search reports for.

### Parameters of GetReportFromRef()

Name	Type	Description
username	string	The username associated with your account.
password	string	The password associated with your account.
reference	int	The reference number obtained from the successful credit check to search reports for.

## Successful Report XML Output

```
<queueitem reference="24577" xid="">
  <status>20</status>
  <type>1</type>
  <date>2013-03-18 11:43:01.947</date>
  <msisdn>27821234567</msisdn>
  <description>AdhocTest</description>
  <contentID>123</contentID>
  <contentType>1</contentType>
  <amount>5.00</amount>
  <reqType>A</reqType>
  <billingFrequency>1</billingFrequency>
  <ftsauthID>0</ftsauthID>
  <srvConf>0</srvConf>
</queueitem>
```

## Failed Report XML Response

If generating reports resulted in failure, XML similar to the below will be returned:

```
<?xml version="1.0" encoding="utf-8"?>
<error code="9001" message="No matches"/>
```

## Appendix A: Status codes

The table below lists all possible status codes, as well as their definitions. It also lists if the status code denotes if the process is complete, or still in progress.

Code	Definition	Process complete
1	Completed	Yes
2	Uninitialized	No
3	Requesting authorization	No
4	Authorization request error	Yes
5	Querying authorization	No
6	Authorization query error	Yes
7	Requesting accounting confirmation	No
8	Accounting confirmation request declined	Yes
9	Accounting confirmation request error	Yes
10	Querying accounting confirmation	No
11	Authorized by Vodacom/Telkom	Yes
12	Authorization declined	Yes
13	Authorized by MTN	Yes
14	Authorized by Cell C	Yes
15	Authorization error	Yes
16	Accounting confirmation OK	Yes
17	Accounting confirmation declined	Yes
18	Accounting confirmation error	Yes
19	Information submission request error	Yes
20	Generic error	Yes
21	Generic declination	Yes
22	Request Double Opt-In	No
23	Query Double Opt-In	No

## Appendix B: Type codes

The table below lists all possible values for the <type> tag, as well as their definitions:

Code	Definition
1	The credit check has been performed, but the debit has not yet been performed.
2	The debit has been performed.

## Appendix C: List of content types

The following values for the “ContentType” parameter may be used:

Value	Description
001	Monophonic once off
002	Polyphonic once off
003	True Tones once off
004	Full Track (Full Music track) once off
005	Streaming Track once off
006	Logos once off
007	Java Games once off
008	SMS (standard) once off
009	SMS (long text) once off
010	MMS once off
011	Wallpaper once off
012	Video once off
013	Streaming video once off
014	WAP content access once off
015	Content Bundle once off
016	Monophonic subscription
017	Polyphonic subscription
018	True Tones subscription
019	Full Track (Full Music track) subscription
020	Streaming Track subscription
021	Logos subscription
022	Java Games subscription
023	SMS (standard) subscription
024	SMS (long text) subscription
025	MMS subscription
026	Wallpaper subscription
027	Video subscription
028	Streaming video subscription
029	WAP content access subscription
030	Content Bundle subscription
031	Adult once off
032	Adult subscription
033	CallerTunez
100	Chedda once off
101	Chedda subscription

## Appendix D: Valid debit amounts

The following debit amounts may be used by external applications. These amounts are always inclusive of VAT. These values are the standard values handled by our service; values for clients will still need to be registered with the Networks. Clients need to let us know which ticket values they would like to support, so that this can be configured on the EBS account.

R 1.00	R 6.00	R 15.00
R 1.50	R 6.50	R 16.00
R 2.00	R 7.00	R 18.00
R 2.50	R 7.50	R 20.00
R 3.00	R 8.00	R 25.00
R 3.50	R 8.50	R 30.00
R 4.00	R 9.00	R 40.00
R 4.50	R 9.50	R 45.00
R 5.00	R 10.00	R 50.00
R 5.50	R 12.00	

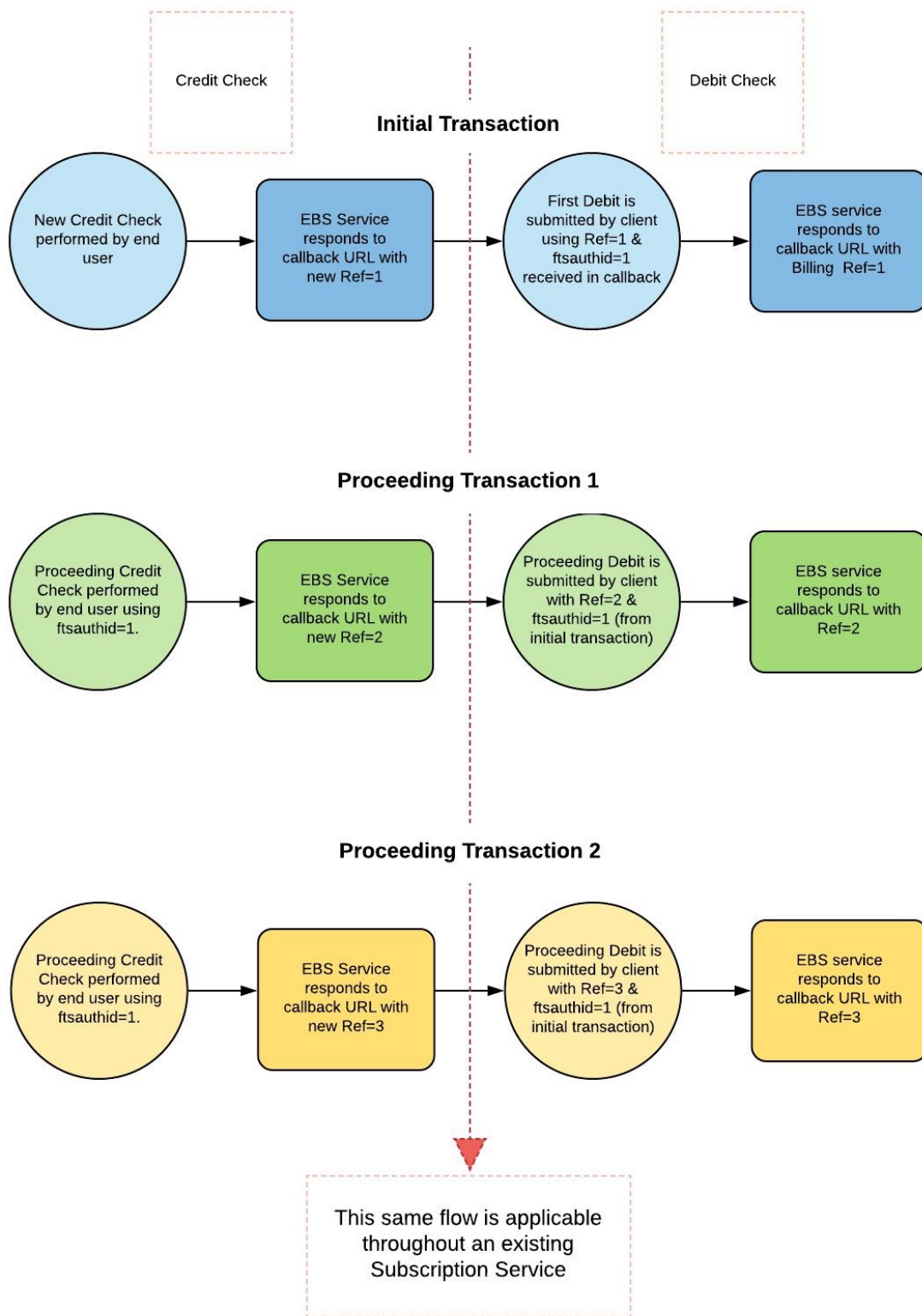
## Appendix E: EBS Error Codes

The following errors are returned from the EBS Service (not the service provider). Error codes are subject to change, depending on Network Operators.

Value	Description
<b>0</b>	Success
<b>1</b>	Refer to message (Invalid Token, Insufficient Balance) etc.
<b>10001</b>	An invalid amount of credit is trying to be used
<b>10002</b>	An invalid MSISDN was supplied
<b>10003</b>	Invalid message
<b>10004</b>	Invalid data
<b>10005</b>	MSISDN not found
<b>10006</b>	An Invalid network was trying to be used
<b>10007</b>	An invalid ContentID was supplied
<b>10009</b>	An Invalid Content type was supplied
<b>10010</b>	An invalid credit request type is being used (either 'S' or 'A' must be used)
<b>10011</b>	An Invalid Action type was given
<b>10012</b>	Initial subscription ID was not supplied
<b>10013</b>	An Invalid billing frequency was supplied
<b>10014</b>	An invalid action type was specified
<b>10050</b>	Daily limit exceeded
<b>11000</b>	The action was unable to be completed
<b>11001</b>	Blacklisted Subscriber (Vodacom, MTN, Telkom)
<b>*000*0*000#</b>	Blacklisted Subscriber (CellC)
<b>11002</b>	Blacklisted Subscriber - subscription services
<b>11003</b>	User not activated to perform subscription transactions
<b>11004</b>	Service not activated to perform subscription transactions
<b>11005</b>	Could not update existing subscription
<b>1000</b>	Invalid Credentials were given
<b>1085</b>	Invalid Servicename was supplied
<b>12011</b>	Invalid missing input parameter
<b>12012</b>	Content Block Flag is set (Vodacom)
<b>14007</b>	Network Error
<b>EBO-056</b>	Failure Occurred (Telkom)
<b>EBO-011</b>	Duplicate DOI found (Telkom)
<b>EBO-119</b>	Charge not allowed for [Subscribe Service Id], max daily content charge limit exceeded (Telkom)
<b>EBO-120</b>	The Account Balance is insufficient for fee deduction (Telkom)
<b>EBO-121</b>	The Spend Limit is insufficient for fee deduction (Telkom)

**NOTE:** Any errors returned that do not form a part of this list can be logged with support.

# Event Billing Subscription Service Process



## Appendix G: FAQ (Frequently Asked Questions)

### **:: Is the recurring debit process automated?**

It is important to note that debit instructions for subscriptions must be initiated by the client for each interval during the subscription term. However, MTN does this automatically, so it is not necessary to do the recurring debits for MTN subscribers.

### **:: Do I have to know what network my subscribers belong to?**

Mobile Number Portability (MNP) is handled by our system and does therefore not need to be considered in part of client's service design. We will indicate the Mobile Network in the initial XML response for information purposes.

### **:: How can I prevent subscribers from using this service?**

We can also add MSISDNs to our DB of blacklisted numbers; these MSISDNs can be configured to be blocked from doing all transactions, or just certain transaction events – such as subscriptions.

### **:: Fraudulent transactions, how are these handled?**

Anti-Fraud Alerts have been added, this is not client facing and is merely an Internal Alert system to allow us visibility into when a specific MSISDN executes more than a certain amount of transactions per day. Should irregular activity be reported, then the user can be contacted, and should the need arise, the number can be “blacklisted” by our system, until the issue has been resolved.

### **:: Am I responsible for sending out reminder messages for subscriptions?**

As part of the legal requirement for subscription services, our system does provide SMS reminders about the service that the subscriber has subscribed to, to the subscriber.

### **:: How should we handle retries for failed transactions due to lack of funds?**

Refer to charging retries.