# Smartcall Web Service V3 (RESTful)

## Technical Interface Specification

**Version 1.2.15**

## Document Change History

| Issue | Revision | Date | Author | Reason for Change |
|---|---|---|---|---|
| 1 | 1.0.0 | 2017-07-27 | Derek Scotney | Initial release |
| 2 | 1.0.1 | 2017-08-04 | Derek Scotney | Security information |
| 3 | 1.0.2 | 2017-08-07 | Derek Scotney | Product offering update checks using Etag headers implemented |
| 4 | 1.0.3 | 2017-09-04 | Derek Scotney | Added a "Getting Started" section |
| 5 | 1.0.4 | 2017-09-08 | Derek Scotney | Added "FAQ" and "API Operations" sections |
| 6 | 1.0.5 | 2017-11-15 | Derek Scotney | Added "Cashup" functionality to the Smartload operations and "Token" management functionality to the Authentication operations |
| 7 | 1.0.6 | 2018-01-10 | Derek Scotney | - Added information regarding the automatic token invalidation after 4 hours of non-usage<br>- Added error code and response code information |
| 8 | 1.0.7 | 2018-05-23 | Derek Scotney | Added "SIM Network" query |
| 9 | 1.0.8 | 2018-06-21 | Derek Scotney | Added "Query SIM RICA status" |
| 10 | 1.0.9 | 2018-08-01 | Derek Scotney | - Added reminder to save Smartload reference |
| 11 | 1.1.0 | 2019-01-22 | Derek Scotney | - Added synchronous recharging<br>- Added mobile network connectivity status check (up/down)<br>- Removed recharge cancellation functionality |
| 12 | 1.1.1 | 2019-02-22 | Derek Scotney | - Added more information to the synchronous recharging endpoint |
| 13 | 1.1.2 | 2019-05-07 | Derek Scotney | - Updated the information related to the synchronous recharge response code |
| 14 | 1.1.3 | 2019-05-21 | Derek Scotney | - Updated the information relating to the smsProviderIdentifier field in the synchronous recharge request |
| 15 | 1.1.4 | 2019-05-29 | Derek Scotney | - Added a new endpoint under RICA whereby an MSISDN can be queried to see if it is a) a Smartcall RICA agent, b) if the agent is enabled, and c) if the agent falls under the clients master dealer |
| 16 | 1.1.5 | 2019-06-05 | Derek Scotney | Updated the "Synchronous Recharge" endpoint description to remove the statement that a "pending" response can be returned. |
| 17 | 1.1.6 | 2019-07-25 | Derek Scotney | Added result code 3 to Synchronous Recharge response |
| 18 | 1.1.7 | 2019-08-22 | Derek Scotney | Added electricity prevend. |
| 19 | 1.1.8 | 2019-10-01 | Derek Scotney | Added recharge cancellation endpoint |
| 20 | 1.1.9 | 2020-01-16 | Derek Scotney | Added RICA agent creation (not generally available to web service clients) |
| 21 | 1.2.0 | 2020-02-04 | Derek Scotney | - Added "recharge" and "payment" indictators to each product in the product list to indicate which web service endpoint to use.<br>- Added Payments endpoint group with the initial payment products being EasyPay and DSTV |
| 22 | 1.2.1 | 2020-04-28 | Derek Scotney | Added statusId info to recharge status enquiry |

| | | | | |
|---|---|---|---|---|
| | | | | response |
| 23 | 1.2.2 | 20-05-21 | Derek Scotney | No functional changes. Added mobile network recharge error codes. Possibly relevant to the synchronous recharging endpoint users. |
| 24 | 1.2.3 | 20-07-14 | Derek Scotney | - Changes to RICA request. It is now mandatory to supply an alternative contact number for the client as well as providing an expiry date in the event of a passort being used as identification<br>- A new transaction query endpoint has been added with which one can query a transaction using the Smartload transaction ID as this provides a month transaction history |
| 25 | 1.2.4 | 20-09-15 | Derek Scotney | Added RICA response codes |
| 26 | 1.2.5 | 20-11-03 | Derek Scotney | Added Electricity recharge status query |
| 27 | 1.2.6 | 21-05-27 | Derek Scotney | - Recharge simulator updated to simulate Electricity recharges Success/Fail which are asynchronous<br>- Added chapter informing of the IP restriction feature.<br>- Added “Getting started” and “Moving to Production” sections<br>- Telkom prevend functionality added |
| 28 | 1.2.7 | 21-08-10 | Derek Scotney | - Added batch voucher purchase with the voucher info returned in the response<br>- Added a new query for the batch voucher purchase<br>- Added info for secondary/failover web service<br>- Updated some error code info<br>- Added extended electricity purchase limits for municipalities |
| 29 | 1.2.8 | 21-11-09 | Derek Scotney | - Updated some error code info as well as the use of HTTP status code 503<br>- Add recharge error handling procedure |
| 30 | 1.2.9 | 22-04-28 | Derek Scotney | - Added the facility to allow product ID correction when it is detected that the provided MSISDN does not match the specified variable airtime product code. |
| 31 | 1.2.10 | 22-07-12 | Derek Scotney | - Changes “mobile network down” recharge response to user triggered via the recharge amount of R17 for better test case handling.<br>- New Smartload endpoint added to query voucher stock level |
| 32 | 1.2.11 | 22-08-03 | Derek Scotney | Change to web service URL’s. **Discontinuation of smartcallesb url**. |
| 33 | 1.2.12 | 22-11-09 | Derek Scotney | Change of web service QA/Test URL |
| 34 | 1.2.13 | 22-12-02 | Derek Scotney | Clarification of recharge query status meanings in<br><br>*Table 5: Transaction Query* Response Codes |

| | | | | |
|---|---|---|---|---|
| 35 | 1.2.14 | 23-06-28 | Derek Scotney | - Increased visibility of the token limit and corrected the value from 20 to 50<br>- Extended electricity transaction response to enable the handling of Key Change PINs |
| 36 | 1.2.15 | 23-08-25 | Derek Scotney | - Added a mobile network RICA processing status under the Utilities functions<br>- In the event of a "duplicate recharge" caused by the re-use of a client reference number, the response (error) message contains details of original transaction. Only for synchronous recharges.<br>- Introduction of Telkom MoNice offers using two new Smartload endpoints<br>- RICA Change Ownership functionality has been removed |

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## Abbreviation List

| | |
|---|---|
| FTP | File Transfer Protocol |
| HTTPS | Hypertext Transfer Protocol Secure |
| ICCID | Integrated Circuit Card ID 19 or 20-digit serial number of the SIM card |
| MSISDN | Mobile Subscriber Integrated Services Digital Network Number (or cell phone number) |
| OAUTH 2.0 | OAuth 2.0 is an authorization framework that enables applications to obtain limited access to user accounts on an HTTP service |
| REST | Representational State Transfer |
| RICA | Regulation of Interception of Communications and Provision of Communication Related Information Act 70 of 2002 |
| SIM | Subscriber Identity Module (Card) |
| SOAP | Simple Object Access Protocol |
| SSL | Secure Socket Layer |
| USSD | Unstructured Supplementary Service Data |
| WS | Web Service |
| | |
| | |

# 1. Introduction

This document describes Smartcall's RESTful Smartload web service which provides the opportunity for dealers to directly access Smartload and SmartRica by creating their own client interface.

The purpose of this document is to provide a clear technical guideline on how to connect to the webservice and how to call the individual functions as provided by the web service. This would cover amongst others, calls to perform and query individual airtime recharge requests.

Smartload specific details and the associated rules are covered in the complementary Business Specification document. The Business Specification document should be read in conjunction with this document when implementing your own client solution.

Smartcall provides two independent web service access points for use either for load-balancing or failover.

**Please take note** of the FAQ chapter towards the end of this document as is contains answers to issues which new clients experience.

# 2. Audience

This document is for developers wishing to create a secure client to connect to Smartcall's web service using the new RESTful interface, to access both Smartload and SmartRica functionality.

# 3. RESTful alternative to V2

Smartcall has released this RESTful version of its V2 web service to both provide a RESTful web service as well as changing its web security model from "WS-Security" to the "OAUTH 2.0" model. The new web service (V3) runs in conjunction with V2, and existing users need not do anything. V2 is currently in the process of being discontinued and is no longer available for new clients.

# 4. Client notifications

It is recommended that all clients are added to the Smartcall web service clients notifications email list. Emails are sent to this list in the event of any planned maintenance activity by either us or our providers (e.g. mobile networks) where potential service interruption may or will occur. Notifications of outages and system changes are also communicated via this mailing list. Clients may request multiple email addresses to be added to this list.

## 5. Documentation & Swagger UI

The RESTful webservice interface is described in a swagger file which can be accessed (**for the test service**) at:

https://test.smartcall.co.za:8101/webservice/swagger.json

The content of this file describes each endpoint, the HTTP method (GET/POST/DELETE) with which to access it, and the data models of all the JSON messaging objects. A web browser based interface to this file is provided (Swagger UI) at:

https://test.smartcall.co.za:8101/webservice/api

This web interface also provides the functionality to test each endpoint.

***** Launching the web page from the link above may result in the "https" being removed in the browser and the page failing to load. In this case, simply add the "https" back into the url.

****** The URL is case sensitive

## 6. Authentication

As mentioned above, the RESTful web service security will be using the (2-Step) OAUTH 2.0 model over HTTPS. Before any web service calls (other than the ping test) can take place successfully, the user must first be authenticated and then use the security token returned in all subsequent calls.

**Note**: Unlike V1 & V2 when the Smartload MSISDN/PIN was used for authentication, V3 uses a user defined username and password combination. One or more Smartload accounts can then be linked to those user credentials.

**Please also note** that there is a system limit of **50** concurrently active tokens. Reuse of tokens as much as possible is encouraged. Once the limit is reached, further authentication requests will fail with HTTP 429.

The Authentication message flow is described below.

**Step 1**: A login/authentication is done by submitting an HTTP POST request to the endpoint "…/webservice/auth" with the "Authorization" field in the HTTP header populated with "Basic" and the "username:password" string Base64 encoded.

**Step 2**: The login credentials are validated by the Smartcall server and if successful, a response object containing a time-based token is returned.

**Step 3**: All endpoints are now accessible with the HTTP header field "Authorization" populated with "Bearer" and the supplied token.

**Step 4**: Although the security token will **automatically expire after 24 hours (*or 4 hours of no usage*)**, functionality is provided to invalidate the token at the end of a session if a user so wishes. This is accomplished by submitting an HTTP DELETE request to the same endpoint used for authentication Once again, the HTTP header field "Authorization" populated with "Bearer" and the supplied token is required.

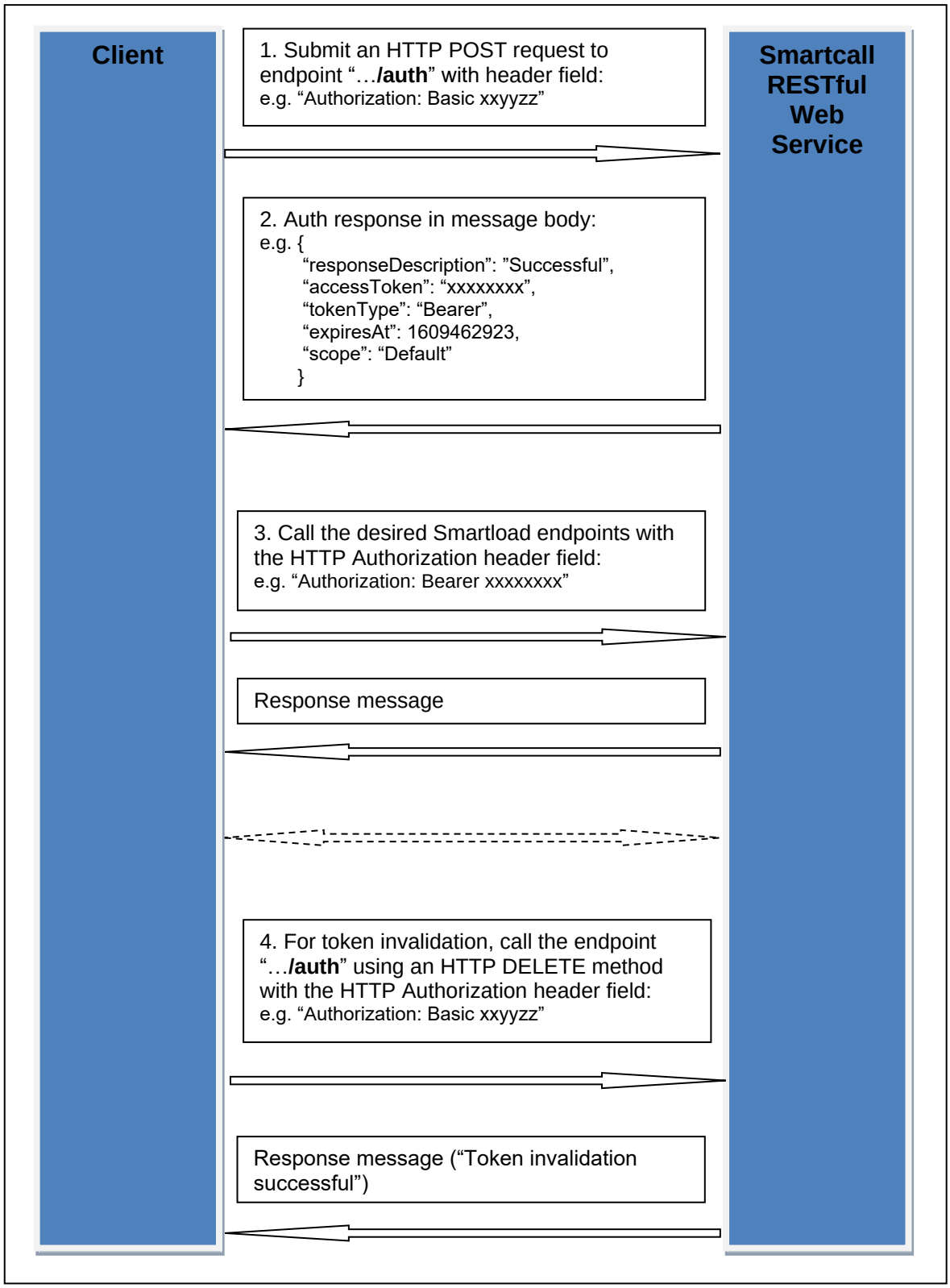


**Figure 1: Authorization Message Flows**

## 7. Getting started

To enable you to get started, you will need a username and password. These can be chosen by you and provided to the relevant developer/sales person you are in contact with. Please also provide 1 or more Smartload account numbers (MSISDNs) in order to be able to access the API business functions (balance/recharge/RICA etc).

Using these credentials you with then be able to test on the QA system using the URLs provided above. Once you are ready to access the LIVE API, you can provide us with the credentials you would like to use so we can set up your account. The URL/s remains the same with the exception of the port which changes to 8100.

**Note**: It is possible to restrict access to a specific account on an IP address basis. If you require this, please also supply the IP address(s) of the machines that will be interacting with the API.

## 8. Failover

Two independent server addresses are available for accessing the web service (api1.smartcall.co.za & api2.smartcall.co.za). They run in a live-live configuration and we recommend clients to load balance between the two, or implement their software such that they are able to fail over from one server to the other in the event of one server not being available e.g. down for maintenance.

The alternative port of 9100 of api1.smartcall.co.za/www.smartcallesb.co.za will be discontinued at the end of 2022 as the domain name api2.smartcall.co.za is now available for failover purposes and is on a different server to provide better failover support.

The domain name **www.smartcallesb.co.za** was **discontinued** at the end of 2022.

## 9. Etag headers for product offering update checking

To make it easier to check for changes to the Smartload product offerings, "Etag" and "If-None-Match" HTTP headers have been implemented for the "products" and "networks" endpoints. In the response message of the standard GET method call, a new header "Etag" is returned which contains a hash value of the result data on the server side. In subsequent similar transactions, you can include the header "If-None-Match" with the last obtained Etag value. Should the data (product/network) not have changed, the response from the server will have an HTTP status code of 304 (Not Modified) and the body will be empty. Should the data have been modified, the standard result data will be returned along with the Etag header containing the new hash value.

To see this in a practical example, please use the Swagger UI interface provided.

# 10. API Smartload Operations

## a. Balance Check (/smartload/balance/{smartloadId})

Provides the functionality to perform a balance check on any Smartload MSISDN registered to the user.

## b. Get product information (/smartload/products/{productId})

Obtains information for a specified product ID. *Please note the inclusion of indicators showing if the the product is a "recharge" product (can be used via "smartload/recharges" or "smartload/v2/recharges" endpoints) or a "payment" product, which indicates that the relevant provider under the "/payments" endpoint must be used.*

## c. Get single network products (/smartload/networks/{networkId})

Lists all the products available from a specified network.

NOTE: Also see the highlighted section in (b) above

## d. Get all network products (/smartload/networks)

Returns a list of all the Smartload products available from all the networks.

NOTE: Also see the highlighted section in (b) above

## e. Dealer registration check (/smartload/registered/{smartloadId})

Checks whether the specified MSISDN is a registered Smartload dealer.

## f. Recharge request (/smartload/recharges)

Provides the web service user with the functionality to perform a recharge operation with either a mobile network product or electricity. It should be noted that a successful response only indicates a successful submission to Smartcall and not a final transaction status. This status can be obtained using the "Transaction Query" operation. For municipal electricity purchases only, a list of municipalities with extended purchase limits is available (see Electricity limits query (/electricity/limits)). To use the relevant extended limit, simply append a comma and then the limit ID you wish to use to the meter number in the recharge request (e.g. 123456789,7 where 7 indicates City of Tshwane).

*** In the event of any unexpected recharge failure where you do not receive a success/fail response from the Smartcall web service (e.g. an HTTP 500 server error), the correct procedure to follow is to immediately perform a **Transaction Enquiry** using your submitted **client reference** to ascertain the state of the recharge on the Smartcall system.

**NB**: Please store the Smartload reference number returned from a successful recharge transaction as you will need it for doing recons with our reports.

**NNB**: Please note that the current account balance is returned with each recharge response. This is useful for monitoring when to recharge your account.

## g. Synchronous recharge request (/smartload/v2/recharges)

Provides the web service user with the functionality to perform a fully synchronous recharge operation for mobile network products. Electricity purchases can not be handled synchronously and will function the same as with a normal recharge request, and the final status of the recharge will need to be queried using the "Transaction Query" operation. The responses received from all other recharge requests indicate a final transaction status.

For municipal electricity purchases only, a list of municipalities with extended purchase limits is available (see Electricity limits query (/electricity/limits)). To use the relevant extended limit, simply append a comma and then the limit ID you wish to use to the meter number in the recharge request (e.g. 123456789,7 where 7 indicates City of Tshwane).

Please note that the field "smsProviderIdentifier" *should only be populated* in the recharge request if a branded SMS should be sent.

The recharge request allows for the (non-manditory) addition of a field "AirtimeNetworkAutoCorrect", that when set to "true" enables the Smartcall recharging system to auto-correct the "variable pinless airtime" product ID provided to the correct product ID corresponding to the network the specified MSISDN is currently on. i.e. Recharging an MTN number with product ID 62 (Vodacom) will be corrected to 63 and the recharge will succeed. **Note** that this can *only* be done for variable airtime!

In the QA environment, recharge requests are handled by a basic "**network simulator**", and as such, predefined responses for various scenarios are returned. Current features are:

- Recharges of R11 are interpreted as "Business failures". This is when the network sends a response indicating that the recharge is invalid.
- Recharges of R13 are interpreted as "Network pending" results (see below).
- Recharges of R17 trigger a response indicating that the relevant mobile network is down and as such, the recharge fails
- Electricity recharges* of R42 are interpreted as "Failed", all other values will be successful.

* Even if electricity recharges are done via this (synchronous) endpoint, they remain "asynchronous". The network simulator will change the final state of the transaction from "pending" to "success" or "fail" within approximately 1-2 minutes depending of the recharge value as descrived above.

**NOTE**: In the event of a recharge failure, the "error" field in the response message will be populated. The "statusCode/statusMessage" fields may also be populated. If the "error" field is ***null***, and the "statusCode" is 0, then the transaction should be deemed as "SUCCESSFUL". A ***non-zero*** or ***null*** "statusCode" should always be accompanied by a populated "error" field. The "statusCode" field values are:

0 – Successful
1 – Application/Internal error
2 – Business error (e.g. invalid recharge request information)
3 – Network pending (e.g. when we have submitted a recharge to a network and receive a response that is neither success nor failure such as "busy processing")

Where possible, the "statusMessage" field is populated with the **mobile network recharge response** information, and where these fields are not populated, the error field provides relevant information.

In the event of a "statusCode 3", the recharge final state should either be queried via the transaction enquiry endpoint, and/or queried with Smartcall Customer Care who will check with the relevant mobile network.

*** In the event of any unexpected recharge failure where you do not receive a success/fail response from the Smartcall web service (e.g. an HTTP 500 server error), the correct procedure to follow is to

immediately perform a **Transaction Enquiry** using your submitted **client reference** to ascertain the state of the recharge on the Smartcall system.

**NB**: Please store the Smartload reference number returned from a successful recharge transaction as you will need it for doing recons with our reports.

**NNB**: Please note that the current account balance is returned with each recharge response. This is useful for monitoring when to recharge your account.

### h. Batch recharge request (/smartload/recharges/batch)

This is similar to the "Recharge Request", but differs in that a batch of up to 100 recharge requests can be submitted within a single operation.

### i. Cancel recharge request (/smartload/recharges/cancel)

This is operation allows for recharges that have not yet been submitted to the relevant network to be cancelled, and would typically be used should a recharge remain in a "Pending" state past a client defined time threshold where they want to give a final recharge status to a customer. This operation would only be useful for the "asynchronous recharge" (old/initial recharge) and electricity recharges as with the new "synchronous" recharge the final state is returned in the recharge response. Once a recharge has been submitted to the relevant network, cancellations will not be possible. In the even that a client uses more than 1 Smartload ID / MSISDN, the MSISDN that was used for the recharge must be used in the cancellation request. The cancellation can be done using either the client reference number used for the recharge, or the Smartload reference returned in the recharge response. Populating the request with both references is also possible. For a table of the response codes and messages returned see Table 4.

### j. Recharge Prevend request (/smartload/prevend)

This is not a recharge operation, but a query to ascertain if a recharge operation "would be successful", and is only available for Electricity and PINLESS products on the **Vodacom**, **MTN** and **Telkom** networks. It is a much quicker operation that a recharge as it is submitted directly to the relevant network, and a response code and the unfiltered response is returned. A SUCCESS response code, indicates the recharge will go through. APP_ERROR indicates the recharge will not go through, and SYS_ERROR indictates an infrastructure issue. An actual recharge performed in conjunction with this prevend MUST use the same client reference number when recharging with mobile networks. This is not required for an Electricity prevend.

### k. Funds transfer (/smartload/fundstransfer)

This provides the facility to transfer funds between two Smartload accounts.

### l. Order batch vouchers (/smartload/batchorders)

This is not a recharge operation, but rather an order for a batch of "PINNED" vouchers. Once the request has been processed, the response message will contain all the information required for retrieving the file containing the voucher PINs.

### m. Retrieve batch order file (/smartload/batchorders/{smartloadId}/{clientReference})

This is the subsequent call to the call listed above. By providing the relevant information, a password protected "zipped" file containing the voucher PINs is downloaded. The password to the file is provided in the initial request response.

### n. Recreate previous order file (/smartload/batchfile)

In the event that the information returned in the initial order response get lost (e.g. the password), this operation "re-creates" the file with the same content but a new password that is returned in the reponse.

### o. Transaction enquiry [Client Reference] (/smartload/recharges/{smartloadId}/{clientReference})

This operation provides the user with the abililty to query a specific transaction status using the client reference provided with the recharge request. A typical case would be after a recharge has been submitted, one would use this operation to find out is the recharge was successful. The status will be "pending" until a final status is received from the relevant network, in which case the status will move to "success" or "failure". See Chapter Response/Status Codes for status Id information. It should be noted that the transaction history available for querying by client reference is only **1 week**. For querying transactions older than 1 week, the "Transaction enquiry (Smartload Reference)" must be used.

### p. Transaction enquiry [Smartload Reference] (/smartload/transactions/{smartloadId}/{smartloadReference})

This operation provides the user with the abililty to query a specific transaction status using the Smartload reference provided in the response to a recharge request. The response using this query is the same as for the query using the Client reference, however **a month** of transaction history is available using this query.

### q. Cashup report [daily] (/smartload/cashup/{smartloadId})

This operation provides the user with the abililty to get a basic cashup report for the specified Smartload account for the current day.

### r. Cashup report [period] (/smartload/cashup)

This operation provides the user with the abililty to get a basic cashup report for the specified Smartload account for the period specified.

### s. Electricity transaction enquiry [Smartload Reference] (/electricity/transactions/{smartloadId}/{smartloadReference})

This operation provides the user with the abililty to query the transaction status specifically of an electricity recharge request and retrieve a more comprehensive response compared to the normal recharge status enquiry. Additional fields include units purchased, meter specific parameters and a list of all PINs relevant to the transaction. **Importantly**, Key Change PINs can now be supplied and where they are present, it **MUST** be communicated to the client that Key Change PIN #1 and Key Change PIN #2 have to be entered into their prepaid meter first in this specific order before their Purchase or Free Units PINs are entered. The order of entry is indicated in the additional PinData field of the response.

For simulation of the different responses in the QA environment:

- Use a recharge value of R42 to simulate a failure
- Use a recharge value of R45 to simulate a success WITH Key Change PINs
- And other recharge value to simulate a success

## t. Electricity limits query (/electricity/limits)

Municipal electricity recharges in general have a default maximum recharge value of R1000 and this limit is therefore enforced when doing electricity purchases in Smartload. Some municipalities allow higher recharge values. At various times, we have been asked by clients to increase this maximum limit and where the municipality in question allows it, we have made cutomised limits available. Using this endpoint, a list of these municipalities can be obtained with higher purchase limits. To use these higher limits simply append a comma and the limit ID to the meter number in the recharge request. **Please note** that this is ONLY available for municipality recharges (product ID 23).

## u. Batch voucher purchase (/smartload/batchvouchers)

This operation provides the user with the abililty to purchase multiple vouchers with a single request. It differs from the "Order batch vouchers" in that the voucher data including PINs is returned in the response. **Please take note** that storing voucher PINs unencrypted has inherent security issues and access to this data should be protected. Usage of this endpoint function is at the clients own risk. Smartcall recommends the use of the "Order Batch Vouchers" endpoint as voucher PINs are retrieved in a password secured zip file.

## v. Batch voucher purchase query (/smartload/batchvouchers/{smartloadId}/{smartloadReference})

This operation enables the user to query and retrieve the batch vouchers from the previous function ("Batch voucher purchase") as the the standard transaction enquiry is not able to return multiple voucher PINs. Please note that the same response message format as the purchase request is used for simplicity sake, however the "dealer balance" field is "null" as the balance at the time of the recharge is not stored for later retrieval.

## w. Voucher stock level check (/smartload/voucherstock/{productId})

This operation enables the user to query the current stock level of a voucher product using the Smartload productId. It should not be necessary to continuously perform these queries unless a bulk purchase is done, as the stock levels are monitored by Smartcall to ensure stock is always available.

## x. Telkom MoNice Query (/smartload/ monice/query/{msisdn})

Telkom MoNice is a new feature from Telkom whereby Telkom creates up to 10 customised campaign bundles for each subscriber. *It is also possible that there are no campaign bundles available*. By calling this endpoint with a Telkom MSISDN, the current campaign bundle offering for that MSISDN will be returned. Each bundle has an ID, a Description and an Amount (in cents). When recharging with one of these bundles, the bundle ID and Amount must be passed in with the recharge request.

It is important to note that from the time of performing the query, there is a time limit of 4 hours in which to perform a recharge. After this time period, a new query must first be done as the transaction reference received back from the query expires.

Also important, is that if a recharge is performed, a new query must be done before a new recharge can take place. The reason for this is that each query returns a unique transaction reference which can only be used once. This reference number is held on the web service side and automatically retrieved when a recharge is requested. The reference number can then not be used again.

**NOTE**: The product/bundle ID CANNOT be used with the "Sync Recharge" endpoint. A MoNice recharge as to be done via the following endpoint.

Within the QA environment, a Telkom MSISDN ending in 0 will be considered a "non-compaign" MSISDN and no campaign bundles will be returned.

### y. Telkom MoNice Recharge (/smartload/monice/recharge)

As indicated by the name, a customer recharge using one of the available campaign bundles retrieved in the query CAN ONLY be done using this endpoint.

Within the QA environment, all recharges will be successful unless an invalid bundle ID is used.

# 11. API SmartRica Operations

## a. Submit registration (/smartrica/registrations)

Provides the functionality to submit a new RICA registration. In the c ase of a passport being used as the means of identification, the passport expiry date MUST be provided and should be valid for at least the next 3 months. An alternative contact number for the user of the SIM must also be provided.

## b. Query SIM RICA status (/smartrica/status/{smartloadId}/{iccid}/{ricaReference})

Provides the functionality to query the status of a submitted RICA request

## c. Agent RICA query (/smartrica/agentquery/{smartloadId}/{msisdn})

Queries the RICA status of a provided MSISDN to determine if the MSISDN is:

- A Smartcall RICA agent
- In an *enabled* state
- If the agent falls under the clients master dealer

## d. Register RICA agent (/smartrica/agent)

Submits all information required to register a new RICA agent which includes:

- All identity and residential information
- An image (base64 encoded, 300k max size) of the persons ID document
- An image (base64 encoded, 300k max size) of the persons Face
- An image (base64 encoded, 300k max size) of the persons Proof-of-Address

NOTE: This functionality is not generally available to all web service RICA users and request to use it will need to be made via the Smartcall Sales department.

## e. RICA Agent registration status (/smartrica/agent/regstatus/{agentRegistrationId})

Queries the status of a previously submitted RICA agent registration. If the registration fails, a new registration operation will be required with the necessary information corrected.

# 12. API Payment Operations

Due to the nature of payments via various payment providers, it is not possible to use a generic request and response interface as with the "Smartload" products. As such, each payment provider will have their own request/response formats.

## 1. EasyPay

Provides the facility to make payments for the products listed as EasyPay "payment" items in the product list.

| EasyPay Account Types | Reference number descriptions |
|---|---|
| epNo | EasyPay numbers start with a 9 and are usually prefixed with a number of >>>> characters |
| noticeNo | Payment of a traffic fine (Enter all characters even dashes '-'s and slashes '/'). In the case of slashes, the query to the web service will need to be URL encoded (e.g. '/' replaced by '%2F' etc) |

### a. Payment request (/payments/easypay)

Provides the functionality to make an Easypay payment for one of the products listed under the "EasyPay" network in the products list.

### b. Payment query (/payments/easypay/{paymentIdentifierType}/{paymentIdentifierValue})

Provides the functionality to do a query to EasyPay on the status of an account.

## 2. DSTV

This operation provides the facility to make DSTV account payments.

### a. Payment request (/payments/dstv)

Provides the functionality to make a payment for a DSTV account. Please note that type of account must be provided (**SUBS** *(subscription)* or **TVOD** *(BoxOffice)*) as well as the account number or account holder ID number.

### b. Account query (/payments/dstv/{accountType}/{accountReference})

Provides the functionality to query a customer's account status. Once again, the account type must be provided as well as the account number or account holder ID number.

# 13. API Utilities Operation

## a. SIM Network (/utilities/simnetwork/{msisdn})

Provides the facility to check the current mobile network of a SIM by passing in the MSISDN.

## b. Mobile network status (/utilities/health)

This operation provides the user with the abililty to get the current connectivity status between Smartcall and the various mobile networks.

## c. Mobile network RICA status (/utilities/ricahealth)

This operation provides the user with the abililty to get the current RICA processing status between Smartcall and the various mobile networks.

# 14. API Authentication Operations

## a. Authentication (/auth)

Provides the functionality to authenticate a user using Basic authentication, which on success returns a JWT token (valid for 24 hours) for use in subsequent transactions with the API.

## b. Token invalidation (/auth)

Allows a user to invalidate a token once they have finished transacting instead of waiting until the token expires. **Tokens should be reused as much as possible**.

## c. Token flush (/auth/token)

Invalidates ALL the current users tokens. In the event the user is accessing this endpoint using a token for authentication, the current token will also be invalidated. This endpoint can also be accessed using the Basic authentication option used for "Authentication".

## d. Token query (/auth/token)

Provides the user with the ability to query how many tokens of the initial maximum of **50** allowed can still be requested (additional authentications). This endpoint can be accessed using both the Basic and Bearer authentication options.

# 15. API Security

In addition to the Authentication/Authorisation process described previously, clients can also request that traffic to the API be restricted to a specific IP address or IP address range. Should this be required, please send this request along with the relevant source IP information to developers@smartcall.co.za.

# 16. Response/Status Codes

The response codes below are correct at the time of inclusion into this document. The mobile networks may change or add new response codes from time to time, and if this is observed, please contact developers@smartcall.co.za and we will check these with the network concerned and updated this document.

Where a network name is not mentioned, it can be assumed that the code is for the Smartcall Web Service.

## 1. Asynchronous Recharge & Batch Recharge response codes

Where the response is SUCCESS, the error field of the recharge response is null. In other cases, the error field is populated with an Error object containing a code and message providing information on the error (see Recharge error codes).

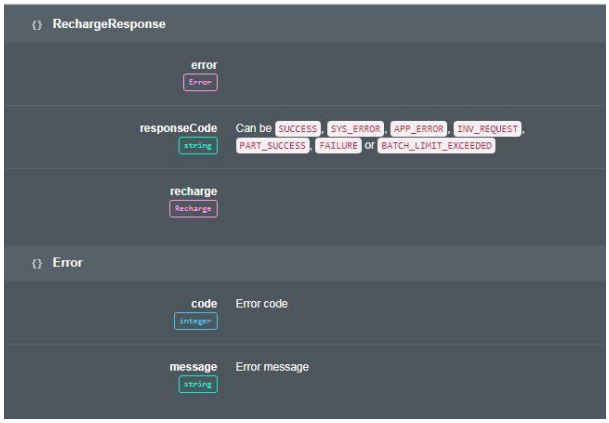


Figure 2: Asynchronous Recharge & Batch Recharge response codes

| Response Code | Description |
|---|---|
| SUCCESS | This only indicates a successful recharge submission to Smartcall. In the case of Pinless recharges, it does not mean the the recharge will be successful when sent to the network. Final recharge status can be queried using the "Transaction Query" API call. |
| SYS_ERROR | Typically a fault on the interface between Smartcall and the relevant mobile network |
| APP_ERROR | Typically a problem with the content of the recharge request (recharge *error codes below*) |
| INV_REQUEST | This code is specific to Prevend requests and means there was a problem with the content of the prevend request message |
| PART_SUCCESS | This is used for Batch Recharges where not all the recharge requests contained in the batch are successful |
| FAILURE | This is used for Batch Recharges where ALL the recharges in the batch |

| | |
|---|---|
| | are unsuccessful |
| BATCH_LIMIT_EXCEEDED | The maximum number of recharges in the Batch Recharge Request has been exceeded (max 100) |

Table 1: Asynchronous Recharge & Batch Recharge response codes

## 2. Synchronous Recharge status codes

Where the status is SUCCESS (0), the error field of the recharge response is null. In other cases, the error field is populated with an Error object containing a code and message providing information on the error (see Recharge error codes). The "statusMessage" field contains the response received from the respective mobile network if the recharge failed at that point, or if the failure was internal to the Smartcall web service failure (or downstream error handling) a relevant indication of the point of failure.

*** HTTP 503** indicates temporary server unavailability due to system error management of a downstream failure. This would typically be a mobile network connectivity outage.

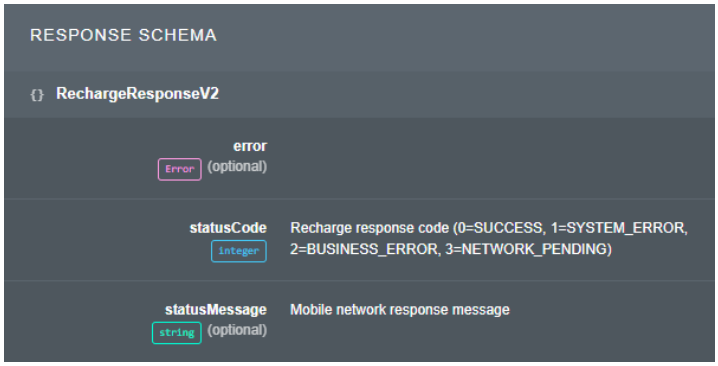


Figure 3: Synchronous Recharge status codes

| Status Code | Status Name | Description |
|---|---|---|
| 0 | SUCCESS | In the case of the synchronous recharge endpoint being used (/smartload/v2/recharges) this means a successful recharge. |
| 1 | SYSTEM_ERROR | Typically a fault on the interface between Smartcall and the relevant mobile network. A recharge failing with this error can be retried (*using a new client reference*) |
| 2 | BUSINESS_ERROR | Typically a problem with the content of the recharge request (*error codes below*). A recharge failing with this error *should not be* retried. |
| 3 | NETWORK_PENDING | This status typically occurs when there is a connectivity outage between Smartcall and the relevant mobile network provider where a recharge request has been submitted to the network but no response has been received. Once the connectivity has been determined to be down, subsequest recharge requests will fail with status code 1. The recommended procedure in the case of receiving a PENDING response is to query the transaction status periodically until a final status is retrieved. Where possible (network and connectivity dependant) the final state of the recharge will be queried as soon as possible. In some cases, the final status will opnly be available once |

| | | |
|---|---|---|
| | | we receive the network report the following day, but this is rare. Queries can be directed to our Call Centre at any time. |

Table 2: Synchronous Recharge status codes

## Recharge error codes

| Code | Description | Result |
|---|---|---|
| 2 | General System Error, recharged failed | Failure |
| 3 | Invalid owner Cell No provided | Failure |
| 5 | Invalid recharge network | Failure |
| 6 | Invalid recharge Cell No provided | Failure |
| 8 | A meter number is compulsory for an electricity recharge | Failure |
| 9 | Invalid Offering ID (product code) | Failure |
| 10 | Pinless Indicator Error: Smartload only distributes vouchers on the selected network | Failure |
| 12 | The Owner Cell No is no longer an active SMARTLOAD dealer | Failure |
| 15 | Insufficient funds in the SmartLoad wallet - Current balance: R… | Failure |
| 16 | A recharge with this meter no. has been received. Please wait for it to complete before retrying | Failure |
| 17 | The prevend has expired | Failure |
| 18 | Error (No Stock) | Failure |
| 19 | The quantity must be greater than 0 | Failure |
| 1001 | Duplicate recharge (usually when customer recharge ID is re-used) | Failure |
| 1002 | Recharge still being processed | Pending* |
| 1003 | Generic recharge failure | Failure |
| 1004 | Recharge response timed out, query to validate if recharge was submitted | Pending* |
| 1005 | ClientReference does not exist | Failure |
| 1006 | Recharge Timeout, Please query recharge for status | Pending* |
| 1007 | Recharge parameter validation failure | Failure |
| 1008 | Recharge does not exist | Failure |
| 2001 | Batch order does not exist | Failure |

Table 3: Recharge ERROR codes

***Pending status:** This recharge status can occur typically with network outages in the period between where recharges are submitted to the relevant mobile network and the time we detect the connectivity is down. This should be a rare occurrence. These recharges are assumed successful until validated otherwise either by a network enquiry when connectivity is restored (not available on all mobile networks) or by the daily recon report from the relevant network. Should the recharge be found to have failed, the dealer will be refunded automatically.

## 3. Cancel recharge response codes

| Code | Message |
|---|---|
| 0 | SUCCESS |
| 1 | Invalid channel code |
| 2 | General System Error |
| 3 | The client reference is not linked to an Smartload reference number (invalid client reference number) |
| 4 | The Smartload reference number is not valid |
| 5 | A voucher recharge cannot be cancelled because a PIN has been issued |
| 6 | The recharge could not be cancelled because it has already been attempted at the network |
| 100 | Invalid request message. No transaction references supplied |

Table 4: Cancel Recharge response codes

## 4. Transaction query response codes

| Code | Message | Description |
|---|---|---|
| 1 | Requested | Relevant only to asynchronous recharges. This indicated the recharge has been submitted to Smartcall but has not yet been submitted to the relevant network. |
| 2 | Pending | The recharge has been submitted to the network, however due to some error (e.g. response timeout), we do not yet have a final status for the recharge. This is attempted to be resolved by queries to the networks where possible or only on the following day on the reconciliation reports from the networks for the previous day. |
| 3 | Successful | The recharge was successfully processed by the relevant network |
| 4 | Failed | The recharge failed to be processed by the relevant network |
| 5 | Cancelled | The recharge was cancelled by the client before it was submitted to the network |

Table 5: Transaction Query Response Codes

## 5. Vodacom recharge response codes

| Code | Description |
|---|---|
| 00 | Approved validation or Recharge completed successfully |
| 03 | Invalid Service Provider Id |
| 10 | Delay in processing the recharge |
| 12 | Invalid Recharge (e.g. Recharge attempt without activation, Business rule violation) |
| 13 | Invalid Recharge Denomination |
| 15 | Invalid Financial Institution Id |
| 22 | Vodacom related problem<br>This response code indicates that the transaction was not successfully processed due to a problem on the back-end system. |
| 26 | Duplicate recharge attempted. |
| 39 | No credit account |
| 42 | Invalid MSISDN |
| 61 | Exceeds withdrawal limit |
| 91 | Vodacom related problem<br>This response code indicates that the back-end system is either unavailable or did not respond in time. |

Table 6: Vodacom Recharge response codes

## 6. MTN recharge response codes

| Code | Message | Description |
|---|---|---|
| 0000 | Request was Successful | Successful Recharge or MSISDN Validation |
| 1800 | MSISDN Validation Failed | MSISDN failed the applicable validation checks |
| 1801 | Violation of Law | Violation of law |
| 1802 | Maximum Rate Violation | Maximum transaction rate exceeded |
| 1803 | Invalid Processing Code | Processing code provided is not supported |
| 1804 | Unknown Merchant | Merchant does not exist |
| 1805 | Recharge Failed | Recharge failed |
| 1806 | Merchant Account Blocked | Merchant account is disabled |
| 1807 | Unknown Bundle | Bundle purchase not allowed/configured |
| 1808 | System Audit Trace Number Error | System Audit trace number do not conform to specification or was not found. |
| 1809 | Transaction Amount not allowed | The transaction amount exceeds the maximum allowed transaction amount or is less than the minimum allowed transaction amount |
| 1810 | Business Rule Violation | Based on MTN defined business rules this requested transaction cannot be performed on the particular subscriber's account |
| 1811 | Subscriber Barred | MSISDN is valid but the requested action is not allowed |
| 1812 | Subscriber not RICA'd | Subscriber not RICA'd |
| 1813 | Merchant limit exceeded | The merchant overall trading limit has been exceeded and an appropriate arrangement needs to be made with MTN |
| 5814 | Reconciliation Date Failure | Reconciliation data for the date specified is not available |
| 9280 | Request Format Error | Incorrect Request Format |
| 9281 | System Error | The request has failed due to an internal server error |
| 9999 | Generic Error | Unspecified Error Occurred |

Table 7: MTN Recharge response codes

## 7. Cell C recharge response codes

| Code | Description |
|---|---|
| 0 | Successful Transaction |
| -3 | Transaction already submitted (Duplicate) |
| -4 | Trade partner not authorised for recharge type |
| 1 | Subscriber can't be recharged, please contact 140 (e.g MSISDN doesn't exist on our network) |
| 2 | Trade-partner authentication failed |
| 3 | Insufficient Funds in Trade partner account |

| | |
|---|---|
| 5 | Subscriber package doesn't allow a recharge (e.g. a Post Paid subscriber) |
| 6 | Transaction time-out |
| 7 | Subscriber chose airtime from an incompatible Service Provider (e.g. a VMSA subscriber trying to recharge with Cell C airtime) |
| 8 | Subscriber not allowed to recharge on CellC network |
| 9 | Unsuccessful Transaction |
| 11 | Unsuccessful Transaction |

Table 8: Cell C Recharge response codes

## 8. Telkom recharge response codes

| Code | Message | Description |
|---|---|---|
| MPR-001 | Invalid Merchant | The MerchantID specified in the request is unknown |
| MPR-002 | Invalid Product | The ProductID specified is unknown/unsupported |
| MPR-003 | Merchant is not allowed to recharge product | MerchantID/ProductID combination is unsupported. |
| MPR-004 | Recharge Amount is not in the range allowed for the merchant. | Each merchant has a transaction minimum/maximum configured per product. |
| MPR-007 | MSISDN Account Status is not valid | Call to IN platform succeeded, however the MSISDN status returned is not in the list allowed to be recharged |
| MPR-008 | MSISDN's Account Type is not valid | Call to IN platform succeeded, however the account linked to the MSISDN is not prepaid or hybrid |
| MPR-011 | No Pinless Recharge concept exists for recharge Ref Number | A valid Recharge Reference Number (MRxxx) must be provided – unsolicited recharge request |
| MPR-012 | Recharge request denied. Merchant daily limit has been exceeded | Each client may have a limit configured against itself per product. This error is returned if the limit is exceeded. |
| MPR-013 | Service pack and/or amount does not match | An incorrect Amount was provided in the Bundle Recharge transaction for the Service Pack code |
| MPR-020 | Recharge request declined. Not allowed to recharge cents. | Review amount in request |
| MPR-021 | Recharge request denied. Subscriber daily recharge limit has been exceeded. | A limit can be imposed by a merchant on every subscriber limit. |
| MPR-030 | An error occurred validating the account against the Product Platform | An invalid MSISDN, PrepaidFone number or WorldCall Card number was provided or some account condition does not allow a recharge. |
| MPR-035 | Previous recharge is pending - Please retry later | Previous recharge is pending - Please retry later |
| MPR-040 | Recharge with provided Transaction Reference Number (TRN) is either unknown or is completed | This error will only be returned on a Cancellation request where the TRN provided in the cancellation transaction cannot be found on the system. |

| | | |
|---|---|---|
| MPR-050 | Recharge is in a state that does not allow for completion | User performs the recharge instruction on a recharge that is not in a Validated state. |
| MPR-070 | Recharge Request Denied. Account credit limit has been exceeded | Each FLPP account is associated with a profile, which in turn has a maximum credit limit associated with it. The request is denied because the recharge would mean that the credit limit for the profile would be breached. |
| MPR-080 | No recharge record found for TRN/SessionID | Recharge transaction could not be found on Telkom logs for the TRN or SessionID provided in the query transaction. |
| MPR-081 | The recharge record found for TRN [TRN] / SessionID [SessionID] does not belong to MerchantID [MerchantID].' | A recharge record was found on Telkom logs for the TRN provided, but the recharge record does not belong to MerchantID. |
| MPR-100 | Ping successful | The user performed a recharge with an amount of 0 (zero). |

Table 9: Telkom Recharge response codes

## 9. RICA response codes

| Code | Description |
|---|---|
| 0 | SUCCESS |
| 1 | Agent MSISDN is not a valid MSISDN |
| 2 | Agent MSISDN is not a RICA Agent |
| 3 | Agent MSISDN is not a SmartLoad Dealer |
| 4 | The event code is is not valid |
| 5 | SIM Identifier type is not valid |
| 6 | SIM Serial No is not valid |
| 7 | Last four digits of the ICCID were not provided for either MSISDN or SPACK |
| 8 | First name is not valid |
| 9 | Last name is not valid |
| 10 | ID Type is not valid |
| 11 | ID number is not a valid SA ID number or Passport number |
| 12 | ID Nationality code is not valid |
| 13 | Country of residence is not valid |
| 14 | Address1 cannot be blank or empty or a post box address and must be longer than 5 characters |
| 15 | Failed to insert record into dbo.Bulk_Submission |
| 16 | Failed to insert record into dbo.Submission |
| 17 | Duplicate Batch |
| 18 | Agent email address was not provided |

| | |
|---|---|
| 19 | Subscriber duplicated in batch |
| 20 | Previous ID Type is compulsory for a change of ownership |
| 21 | The Previous owners ID/Passport is compulsory for a change of ownership |
| 22 | The Previous owners ID/Passport is not valid |
| 23 | Invalid data captured for Address Line 3 |
| 24 | Personal ID details required for Business Registration |
| 25 | Personal ID Type is compulsory for Business Registration and must be N or P |
| 26 | Personal ID Number for Business Registration is not valid |
| 27 | Personal ID Nationality for the Business Registrations is not valid |
| 28 | ID used in too many registrations-Only 100 SIMs per ID number allowed |
| 29 | We cannot register this starter,make sure you buy Smartcall VSP2. |
| 30 | Please ask the client to dial *130*7422*22# to complete the RICA registration. |
| 31 | The network ID is invalid |
| 32 | Address2 cannot be blank or empty or a post box address and must be longer than 3 characters |
| 33 | This function may only be done using the cell number. |
| 34 | We can no longer process deregistrations |
| 35 | You can no longer RICA using the box number. |
| 36 | A registration request for this SIM has already been received and is being processed. |
| 37 | We cannot port to the SIM card No you have captured |
| 38 | The Port Authorisation code is not valid |
| 39 | We do not have a record of a Port Request captured by you for this cell number |
| 40 | The Port Authorisation for this cell number has already been captured |
| 41 | The port request already exists |
| 42 | The Port cell number is not a valid cell number |
| 43 | Ports are currently not available on the selected network |
| 44 | On Cell C, only the RICA Serial No may be used for Port and RICA |
| 45 | The data on the RICA registration referenced does not match the data on the port |
| 46 | The ID Type selected is not valid for the Network selected |
| 47 | Only a Port AND RICA is allowed |
| 48 | A Port is only allowed on a SIM registration event |
| 49 | There is no port request on record for the cell number that requires an authorisation code. |
| 50 | The passport expiry date is required |
| 51 | A valid alternate contact number is required |
| 52 | This function may only be done using a valid Cell C RICA Serial |
| 53 | This function may only be done using a valid Vodacom/VSP2 SIM Card No. |

| | |
|---|---|
| 54 | Failed to create the Port Request |
| 55 | The passport expiry date should be in the future |
| 56 | An SA passport cannot be used |
| 57 | The port functionality is currently not available for this network. |
| 58 | The port request failed |
| 59 | Invalid postal code |
| 60 | Invalid passport number |

Table 10: RICA Response codes

# 17. F.A.Q.

1. **Q: When I get a list of products, each product ID seems to be duplicated with only the "smsIndicator" field being different.**

   **A**: The reason for the "duplication", is that in the future, when an sms notification is requested to be sent, the discount may be lower. It should be noted though that the relevant mobile network will generally send a recharge notification.

2. **Q: When I send a prevend request I get a failure informing me that the product ID is invalid, but it is in the product list.**

   **A**: Prevend requests are only allowed for "pinless" products, and only available for Vodacom, MTN and Telkom.

3. **Q: What is the difference between a "Prevend" and a "Recharge"?**

   **A**: A "recharge" is immediately logged into Smartcall's recharging system and submitted to the relevant network "asynchronously". Due to the queueing process and possible load issues (for example), the actual submission to the network might not my immediate. Due to the asynchronous process, a "transaction query" is requied to find out if the recharge transaction was ultimately successful. In a very, very small percentage of cases, there are failures returned by the networks for various reasons. A prevend takes a slightly different route though our system in that it is submitted directly (synchronously) to the relevant mobile network/electricity provider (only mobile networks **Vodacom**, **MTN** and **Telkom** provide this feature) and we get back an immediate indication as to whether the transaction is expected to be successful or not. If the prevend is successful, a recharge can then be done and for mobile networks MUST use the same reference number as used for the prevend. It is not required for electricity prevend.

4. **Q: Why do some recharges fail even though I get a "SUCCESSFUL" response to my recharge request?**

   **A**: In the event of a recharge using the asynchronous endpoint (/smartload/recharges), a "successful" recharge response is only an indiction of a successful recharge submission to the Smartcall web service. Since it is only submitted to the relevant mobile network asynchronously after submission, the network can still fail the transaction for a variety of reasons.

5. **Q: When I send an "authorization request", I get a response with HTTP Code 429.**

   **A**: The cause of this issue is generally because you have performed multiple authorization requests (and received security tokens), without invalidating the tokens you are finished with. The web service allows for a maximum of 50 concurrent sessions/tokens per user account.

   e.g.


```
{
    "responseDescription": "Maximum concurrent session limit reached. Limit is 50",
    "accessToken": null,
    "tokenType": null,
    "expiresAt": null,
    "scope": null
}
```

6. **Q: Where do I enter my Smartload PIN in the various requests?**

   **A**: With the new webservice interface, we have upgraded the security model to use a username and password instead of the Smartload account number (MSISDN) and 4-digit PIN. Your Smartload account is linked to your web service user account, and no further validation is required.

7. **Q: The balance on my Smartload QA account is zero, how can I top it up?**

   **A**: Please send a topup request email to developers@smartcall.co.za and we will add funds to your QA account. Please remember to supply the Smartload account number that you would like topped-up.

8. **Q: I can't read the Smartcall certificate. What do I need to do?**

   **A**: In some cases you may need to have the thawte_SSL_CA_G2.cer certificate installed.

9. **Q: Is there a charge for using the Smartcall web service API?**

   **A**: There are **no** charges for using the API

10. **Q: I get a communications error when sending a recharge to the Smartcall web service API?**

    **A**: In the event of any unexpected recharge failure where you do not receive a success/fail response from the Smartcall web service (e.g. an HTTP 500 server error), the correct procedure to follow is to immediately perform a **Transaction Enquiry** using your submitted **client reference** to ascertain the state of the recharge on the Smartcall system.

11. **Q: I get an HTTP 400 error with the error message "A trx with the same Cell no + amount was done in the last 5 minutes. Please retry in 5 min if valid." in response to my recharge requests**

    **A**: Within Smartload we have a business rule in place to help clients prevent duplicate recharges. As mentioned in the error message, a recharge to the same MSISDN with the same value cannot be repeated within a 5 minute period. We are able to disable this business rule on request for clients however to do so we ask for a written request (email is sufficient) stating that the client understands they take full responsibility for duplicate recharges that occur.

# 18. Getting Started

Getting started with integrating to the Smartcall API is as simple as providing the Smartcall Dev department (developers@smartcall.co.za) with the following information:

- Your name, surname and contact number
- A username for your test account (unless you would like us to assign one)
- A password for your test account (unless you would like us to assign one)
- Your Smartload account number (MSISDN). If you do not have one, please provide any valid mobile phone number and we can create a dummy account for you on the QA system. You will need a valid account before you go live however and more infor on that is int the next chapter.
- The web service function you wish to use (Smartload [recharges] and/or SmartRica).

Should you at any time during testing run out of “test funds”, simply email the Smartcall developer on the email address above with your test MSISDN and request a topup.

# 19. Moving to Production

Here are a few steps to ask yourself to ensure you are ready to move into production.

- Do I store the Smartload reference number from recharge responses?

  - This is useful for for recon and or query purposes

- Am I storing the account balance found in each recharge response?

  - This is useful as it enables you to keep track of you balance and can be used to determine when your account needs topping up

- Do I have a production Smartload account (MSISDN)? If not, please either contact the Smartcall Sales department of how to set this up, especially if you are a master dealer or have a master dealer.

  - All information of creating your live account can be found on the Smartcall website (https://www.smartcall.co.za/) under the Business -> Smartload section

- Have I requested live credentials to be created for me?

  - You can do this by sending an email to developers@smartcall.co.za along with the information of the username and password you wish to use and your production Smartload account number (MSISDN). Should you not require a specific password, we can create a secure one for you.

- Am I on the email list to receive web service client notifications of Smartcall and Mobile network planned maintenance windows or unplanned outages? This is sent out by the Smartcall IT department.

  - You can do this by sending an email to developers@smartcall.co.za requesting this along with the names, surnames and email addresses of those people in your organization that need to be informed.

- Once all the above points are done, the URL you were using for QA changes to

  https://api1.smartcall.co.za:8100/webservice/swagger.json

  and

  https://api2.smartcall.co.za:8100/webservice/swagger.json

  It is recommended that you are able to switch or failover between the 2 web service domain names.