

Volante SWIFT CATEGORY-5 Validator AMI User Guide

1. About Volante SWIFT CATEGORY-5 Validator AMI User Guide

This document is referenced in the REST Services Deployment Guide. This outlines the available REST Services and application level security mandated by the API.

1.1. Authorization

The SWIFT CATEGORY-5 Validator services use the Bearer token grant type. Calls that require authorization need an access token to be passed in in the Authorization header field. This access token can be obtained from the /client/login call by passing in the appropriate User ID and password.

1.2. Request Headers

All API calls that are marked as requiring Authorization require the following header:

- Authorization: Bearer <accessToken >

All POST requests that send in data in an enveloped JSON format require the following header:

- Content-Type: application/json

1.3. Base Path

The base path of the application will be /volanteapis-swift-category5/messaging/v1/ , and all the subsequent mentions of rest services will, therefore, have the following implicit prefix,

<https://{hostname}:{port}/volanteapis-swift-category5/messaging/v1/>

2. Services

Use the GET /services call to get a list of all the validations that are available to use by the user with the access token supplied in the Authorization header.

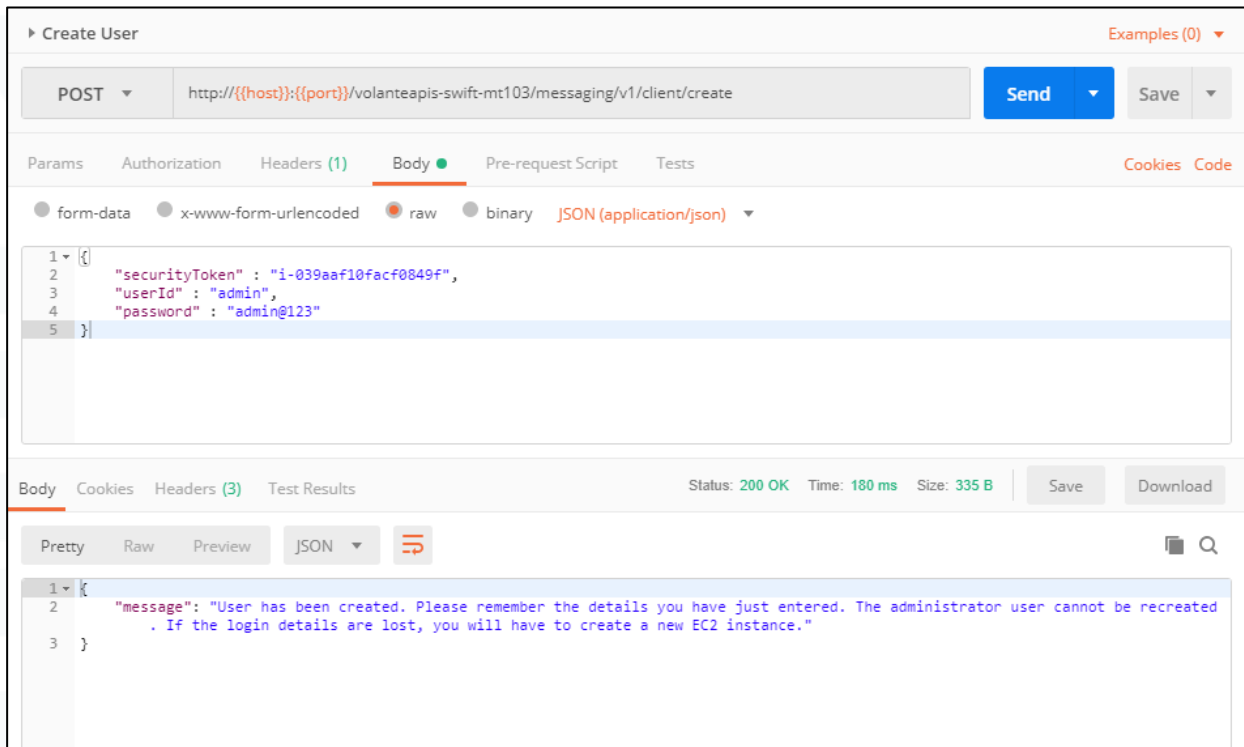
2.1. Client Services

Create Client – POST /client/create

Authorization: Not Required.

This service is used to create the user that will call services. Multiple users can only be created, each with a unique username (though the password can be changed).

Note: Although this call does not require an authorization header, it is secured by the securityToken value passed in the message body. This value is the EC2-ID of the AWS machine that the services are deployed on. The following screenshot shows a typical request response for the create client call.



The screenshot displays a REST client interface for a 'Create User' endpoint. The request is a POST to `http://{{host}}:{{port}}/volanteapis-swift-mt103/messaging/v1/client/create`. The request body is a JSON object with the following fields:

```
1 {
2   "securityToken" : "i-039aaf10facf0849f",
3   "userId" : "admin",
4   "password" : "admin@123"
5 }
```

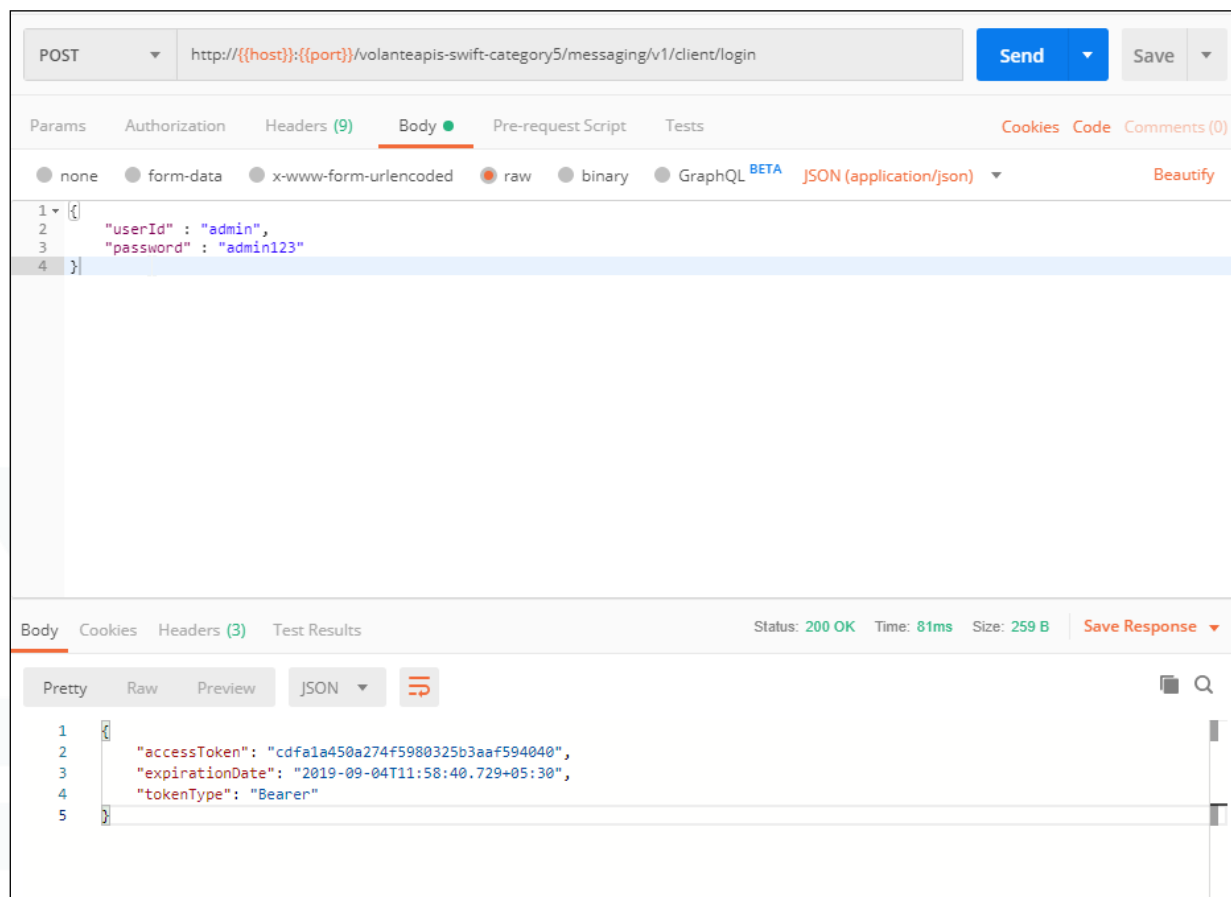
The response is a 200 OK status with a time of 180 ms and a size of 335 B. The response body is a JSON object with a message:

```
1 {
2   "message": "User has been created. Please remember the details you have just entered. The administrator user cannot be recreated
3             . If the login details are lost, you will have to create a new EC2 instance."
4 }
```

Client Login – POST /client/login

Authorization: Not Required.

This call is used to get the access token for the client. This access token can then be used to access the validator services or change the user's password. The following picture shows a sample request and response.



The screenshot displays a REST client interface for a POST request to the endpoint `http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/client/login`. The request body is a JSON object with the following content:

```
{
  "userId": "admin",
  "password": "admin123"
}
```

The response status is `200 OK` with a response time of `81ms` and a size of `259 B`. The response body is a JSON object with the following content:

```
{
  "accessToken": "cdfa1a450a274f5980325b3aaaf594040",
  "expirationDate": "2019-09-04T11:58:40.729+05:30",
  "tokenType": "Bearer"
}
```

Client Registered – GET /client/registered

Authorization: Not Required.

Call that can be used to check whether a client has registered. Also doubles as a heartbeat check for the services. The following screenshot shows a sample request.

The screenshot displays a REST client interface for a GET request to the endpoint `http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/client/registered`. The interface includes a **Send** button and a **Save** dropdown. Below the URL bar, tabs for **Params**, **Authorization**, **Headers (7)**, **Body**, **Pre-request Script**, and **Tests** are visible. The **Authorization** tab is active, showing a dropdown menu set to **Inherit auth from parent**. A message states: "This request is not inheriting any authorization helper at the moment. Save it in a collection to use the parent's authorization helper." Below this, a note explains that the authorization header will be automatically generated when the request is sent, with a link to [Learn more about authorization](#). The **Body** tab is also active, showing the response status: **Status: 200 OK**, **Time: 133ms**, and **Size: 186 B**. The response body is displayed in **JSON** format, showing a successful response:

```
1 {
2   "success": true,
3   "message": "User has been registered"
4 }
```

Client Services – GET /client/services

Authorization: Required

Returns a list of all the transformation and validation services that are available for the client to use. The following screenshot shows a typical request response. Here the `{{token}}` is the `accessToken` that is obtained from the response of the client login call.

The screenshot shows a REST client interface with the following details:

- Method:** GET
- URL:** `http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/client/services`
- Headers (1):**

KEY	VALUE	DESCRIPTION
Authorization	Bearer <code>{{token}}</code>	
Key	Value	Description
- Temporary Headers (7):** (None visible)
- Status:** 200 OK
- Time:** 6ms
- Size:** 1.06 KB
- Body:**

```

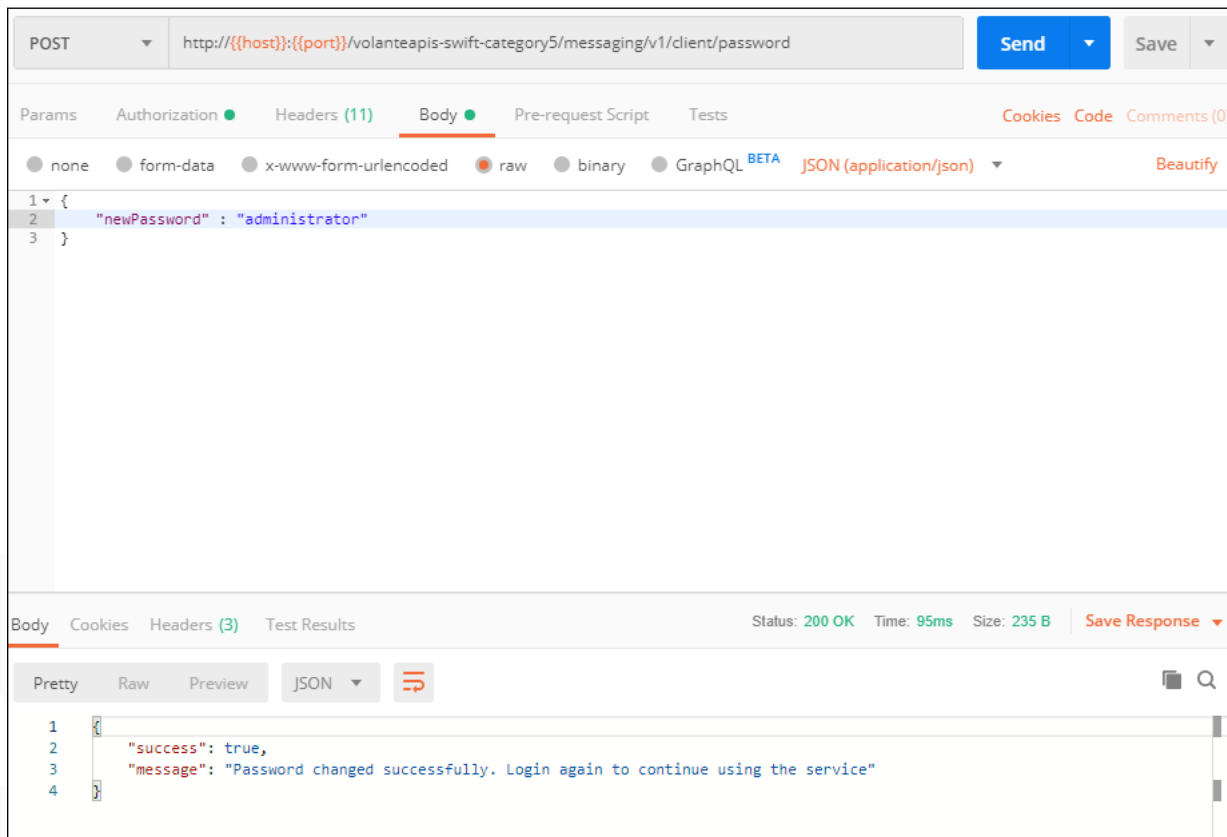
1  {
2    "validations": [
3      "MT542",
4      "MT543",
5      "MT544",
6      "MT545",
7      "MT540",
8      "MT541",
9      "MT546",
10     "MT547",
11     "MT548",
12     "MT549",
13     "MT530",
14     "MT535",
15     "MT536",
16     "MT537",
17     "MT538",
18     "MT524",
19     "MT526",
20     "MT527"

```

Change Client Password – POST /client/password

Authorization: Required

Used to change the password for the client that the access token passed in the authorization header belongs to. The following shows a sample request-response. Note that the authorization header for this request is identical to the Authorization header from the Client Services call.



The screenshot displays a REST client interface for a POST request to the endpoint `http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/client/password`. The request body is a JSON object: `{ "newPassword": "administrator" }`. The response status is `200 OK` with a time of `95ms` and a size of `235 B`. The response body is a JSON object: `{ "success": true, "message": "Password changed successfully. Login again to continue using the service" }`.

```
POST http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/client/password
```

Params Authorization Headers (11) Body Pre-request Script Tests Cookies Code Comments (0)

none form-data x-www-form-urlencoded raw binary GraphQL BETA JSON (application/json) Beautify

```
1 {
2   "newPassword": "administrator"
3 }
```

Body Cookies Headers (3) Test Results Status: 200 OK Time: 95ms Size: 235 B Save Response

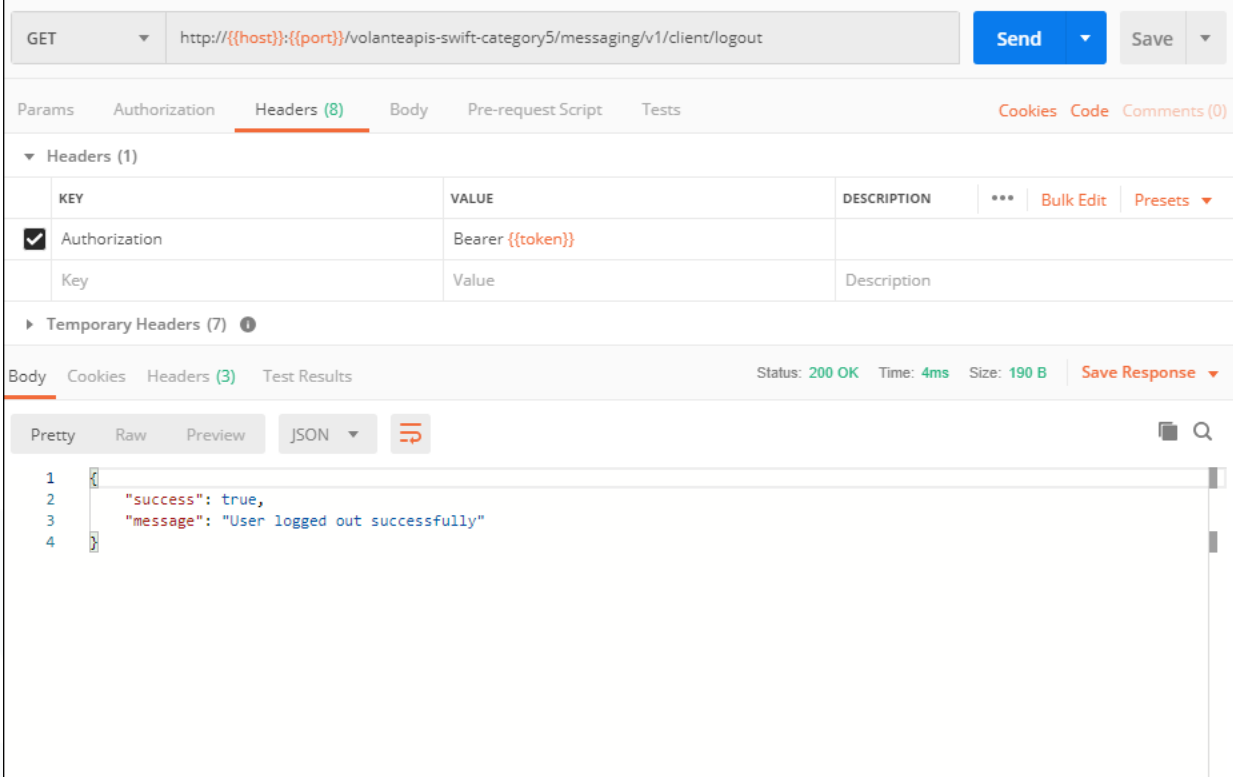
Pretty Raw Preview JSON

```
1 {
2   "success": true,
3   "message": "Password changed successfully. Login again to continue using the service"
4 }
```

Client Logout – GET /client/logout

Authorization: Required

Service that can be called to log the user with the supplied access token out. Any further calls that require authentication will need a new access token to be obtained using the login call. The following screenshot depicts a typical logout call.



The screenshot displays a REST client interface for a GET request to the endpoint `http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/client/logout`. The request is configured with the following headers:

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> Authorization	Bearer <code>{{token}}</code>	
Key	Value	Description

The response status is `200 OK`, with a time of `4ms` and a size of `190 B`. The response body is displayed in JSON format:

```
1 {
2   "success": true,
3   "message": "User logged out successfully"
4 }
```

2.2. Validation Services

Validator – POST /validator

Authorization: Required

Performs a validation of the message supplied as input and returns any inconsistencies with the standard specified in message type. The following screenshots show a sample validation request/response. Note that the value of the message is the raw validation message in the form of an escaped string. The authorization header is also identical to the Authorization header in client calls like Client Password and Client Services.

The screenshot displays a REST client interface for a POST request to the endpoint `http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/validator`. The request body is a JSON object with a single key `"message"` containing a long, escaped string of Swift message data. The response body is a JSON object with a single key `"success"` set to `true`.

```

1 {
2   "message": "(1:F01PAS0BE804XXX0230024235)(2:05000913041029LRLRXXX4A0500004557410410291013N)(3:{108:MT500 003 OF 003})(4:\n:16R\n:GENL\n:20C::SEME//01126\n:23G:CANC\n:98C::PREP//20020915123456\n:22F::INST//REGI\n:16R:LINK\n:22F::LINK//INFO\n:13A::LINK\n//501\n:20C::PREV//BR/29 zprt 98-22\n:16S:LINK\n:16R:LINK\n:22F::LINK//INFO\n:13A::LINK//501\n:20C::POOL//BR/2\n:16S:LINK\n:16R:LINK\n:22F::LINK//INFO\n:13A::LINK//501\n:20C::RELA//BR/wp\n:16S:LINK\n:16S:GENL\n:16R:REGDET\n:200::BREF//BkZZ-12 pt105\n-872\n:200::BPAR//98 x9\n:20D::SHAR//quip\n:22F::OWNT//OWNE\n:22F::BENT//LEGL\n:22F::ADMT//TIME\n:22F::RREA//CAPG\n:22F::CERT\n//TOBK\n:358:Written description of FI\nsince ISIN is not standard at this\n time. Private Issue.\n:70C::REGI//xxx\n:16R\n:FIA\n:948::PLIS//EXCH/NARRATIVE\n:22F::MICO//A001\n:22F::FORM//BEAR\n:22F::PFRE//ANNU\n:22F::PAYS//FULL\n:22F::REST//144A\n:13A::COUP//501\n:16S:FIA\n:16R:FIAC\n:36B::QREG//FAMT/175000,\n\n:97A::SAFE//SK a56-89/302\n:16S:FIAC\n:16S:REGDET\n:16R\n:CLTDET\n:16R:ADDRESS\n:17B::MAIL//Y\n:16S:ADDRESS\n:16R:PERSDET\n:22F::LANG//DUTH\n:22F::OCCU//BBCC\n:16S:PERSDET\n:16S\n:CLTDET\n-}{5:{MAC:39EF33BE}{CHK:5B56E770E89A}{TNG:}}",
3   "messageType": "MT500"
4 }

```

The response body is:

```

1 {
2   "success": true
3 }

```


Validator (Raw) – POST /validator/raw

Performs a validation of the message supplied as input and returns any inconsistencies with the standard specified in message type. Note that the message variable is now supplied as the raw body of the request, and the message type variable is passed as a query parameter (as opposed to the previous call where both were passed in a JSON body). This also means that there is no need to convert the message to be validated into an escaped string.

As before, the authorization header is the same as that in the client services. The following screenshot shows a sample raw validator request and response.

The screenshot displays a REST client interface for a POST request to the endpoint `http://{{host}}:{{port}}/volanteapis-swift-category5/messaging/v1/validator/raw?messageType=MT500`. The request body is set to 'raw' and contains the following Swift message:

```

1 {1:F01PAS08EB0AXXX0230024235}{2:05000913041029LRLRXXX4A0500004557410410291013N}{3:{108:MT500 003 OF 003}}{4:
2 :16R:GENL
3 :20C::SEME//01126
4 :23G:CANC
5 :98C::PREP//20020915123456
6 :22F::INST//REGI
7 :16R:LINK
8 :22F::LINK//INFO
9 :13A::LINK//501
10 :20C::PREV//BR/29 zprr 98-22
11 :16S:LINK
12 :16R:LINK
13 :22F::LINK//INFO
14 :13A::LINK//501
15 :20C::POOL//BR/2
16 :16S:LINK
17 :16R:LINK
18 :22F::LINK//INFO
19 :13A::LINK//501
20 :20C::RELA//BR/wp
21 :16S:LINK
22 :16R:LINK

```

The response status is 200 OK, with a time of 19ms and a size of 144 B. The response body is shown in JSON format:

```

1 {
2   "success": true
3 }

```

3. User Interface

For testing purpose, a User Interface has been provided for Volante SWIFT CATEGORY-5 Validator.

This User Interface will call the REST-based API services described in the above sections and accessible by below URL.

`https://{hostname}:{port} /vms-swift-category5`

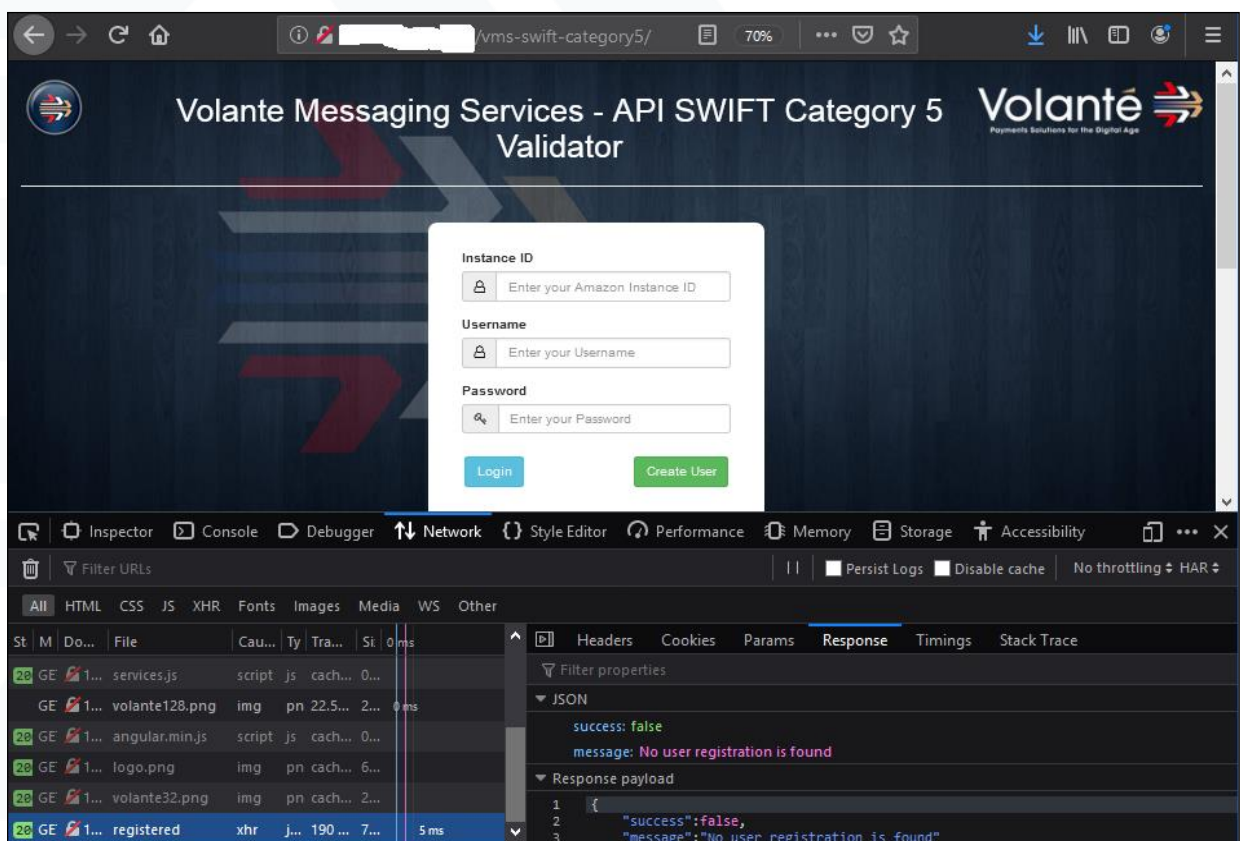
Notes:

- Multiple users can be created per AMI Instance.
- The AMI Instance ID of AMI Image in which the validator service is running is required to create a user.
- The Volante SWIFT CATEGORY-5 Validator UI will display the User register option in Homepage if the user is not yet created. If the user is already registered, the User Login option will be displayed on the Homepage.

3.1. Client Services

1. Client Registered – GET /client/registered

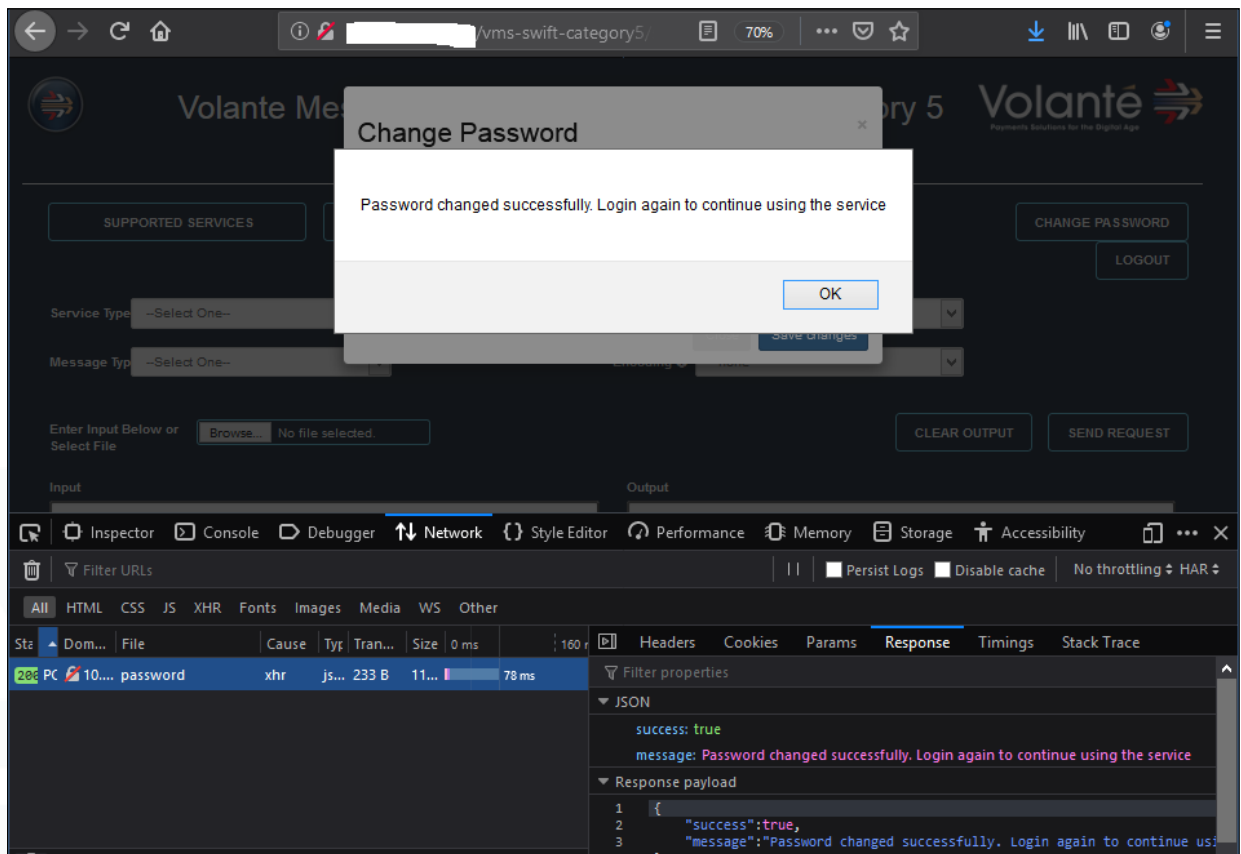
To check whether a client has registered or not. Based on the response from this call, the Register page or the Login page will be displayed. The following screenshot shows that no user is registered and hence it displays the Register page.



2. Register User – POST /client/create

The register will be displayed only if the user is not registered. Multiple client can be created per AMI Instance. Fill the AMI Instance ID, username & password and press the “Create User” to call the /client/to create rest service.

The following screenshot shows the register page along with the request-response after the Create User is clicked.



3. Login Page – POST /client/login

This page is used to login with username & password to get the access token for the client. The obtained access token after the successful login will be automatically used to send the authorization header whenever it is required. This page will be visible after the user has been registered.

The following picture shows a sample page and response after the call has been made.

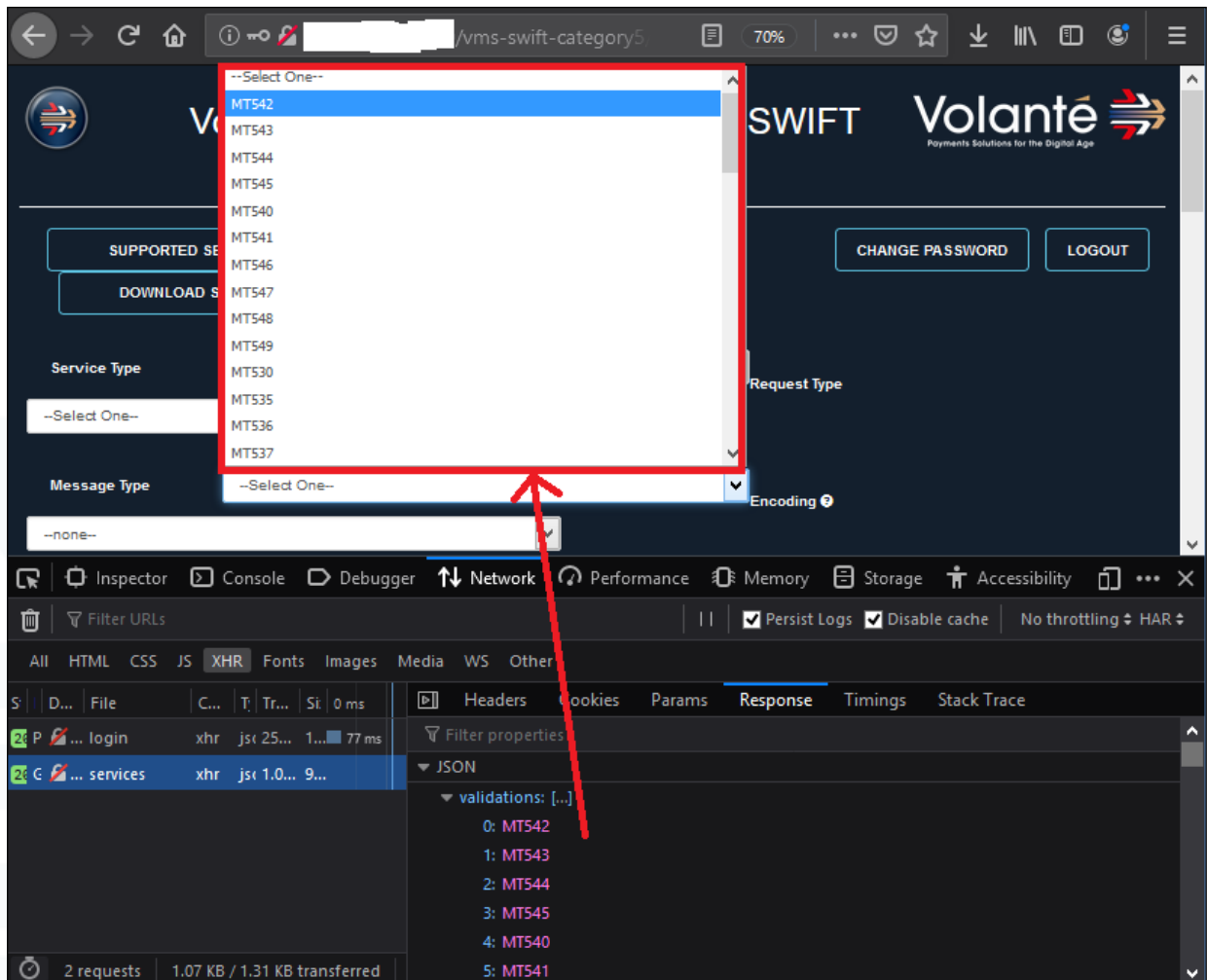
The screenshot displays a web browser window showing the login page for Volante Messaging Services - API SWIFT Category 5 Validator. The page features a login form with fields for Username (admin) and Password (masked with dots), and buttons for 'Create User' and 'Login'. Below the browser window, the Chrome DevTools Network tab is open, showing the response for the login request. The response is a JSON object containing an accessToken, expirationDate, and tokenType (Bearer).

```
access_token: 12a9045e80d346f19ced67de285c7059
expiration_date: 2019-09-05T04:53:54.620+05:30
token_type: Bearer
```

4. Client Services – GET /client/services

Returns a list of all the validation services that are available for the client to use. This call will be automatically made when the user login is successful, and the list obtained in the response will be updated in the 'Message Type' dropdown in the services page.

The following screenshot shows a typical response and the list updated in the dropdown. Here the session token obtained by the login call is used in the request header of this call.



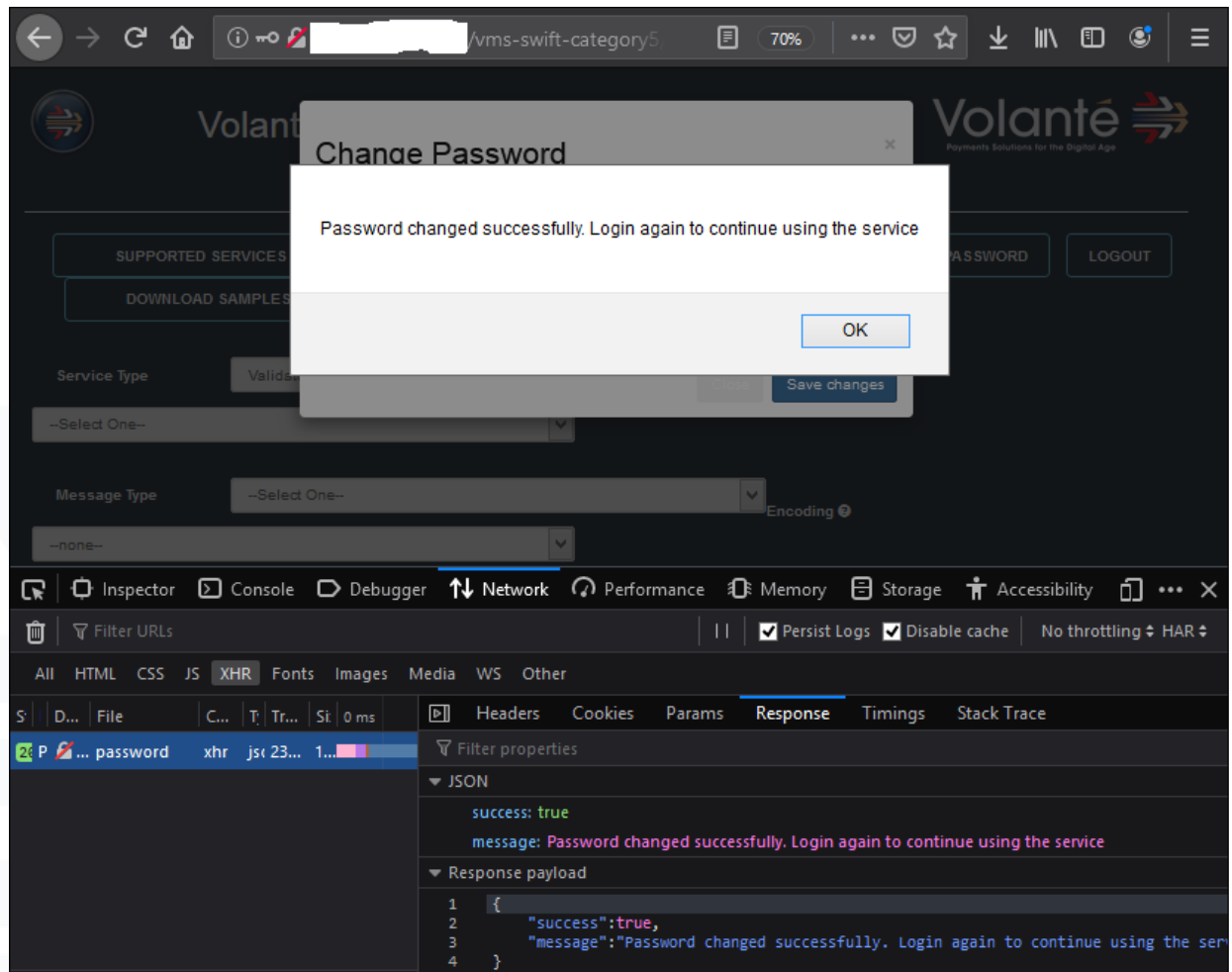
The screenshot displays the Volante SWIFT web application interface. The 'Message Type' dropdown menu is open, showing a list of validation services: MT542, MT543, MT544, MT545, MT540, MT541, MT546, MT547, MT548, MT549, MT530, MT535, MT536, and MT537. The dropdown is highlighted with a red box. Below the dropdown, the 'Message Type' field is set to '--Select One--'. A red arrow points to the 'Message Type' field. The browser's developer tools are open, showing the JSON response for the 'services' call, which includes a list of validation services:

```
JSON
  validations: [...]
    0: MT542
    1: MT543
    2: MT544
    3: MT545
    4: MT540
    5: MT541
```

5. Change Client Password – POST /client/password

Used to change the password for the client who has logged into that session. "Change Password" button can be found below the service page heading. The user needs to enter the new password twice in the password fields provided in the 'Change Password' popup. The user will be logged out automatically and to use the service, the user needs to login again.

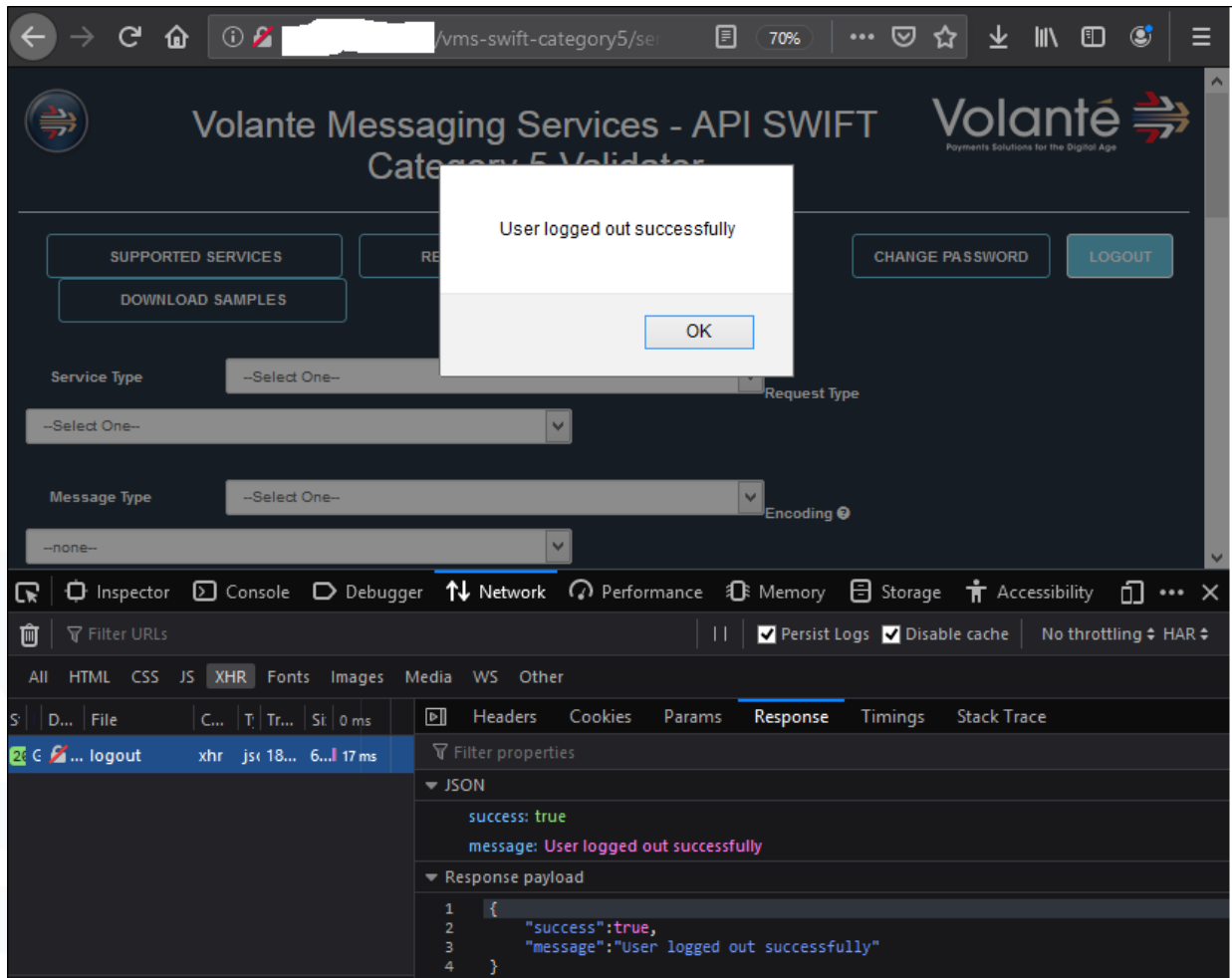
The following picture shows a sample screenshot and response after the call has been made.



6. Client Logout – GET /client/logout

Service that can be called to log out the user. After the logout call, the session token used will become invalid, such that any further calls that require authentication will need a new session token to be obtained by logging in from the login page.

The following screenshot depicts a typical logout call.



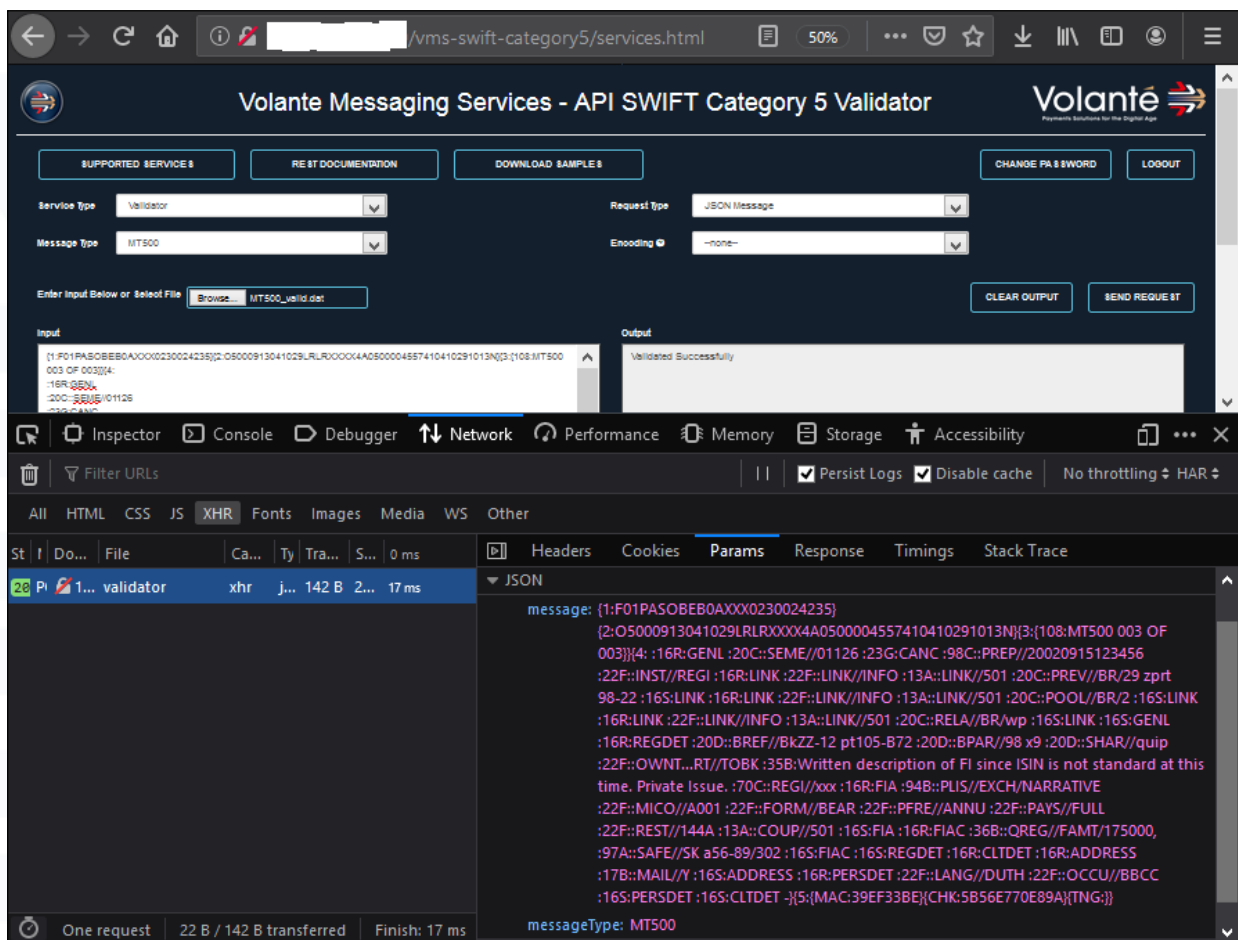
3.2. Validation Services

The user needs to specify the Service Type as Validation, Message Type as one of SWIFT CATEGORY-5message. Provide the input in the Input text area and click "SEND REQUEST" to make a rest call. The result of the request will be displayed in the Output area and exceptions any will be displayed in the Exception(s) area. Based on the Request Type the rest calls will vary which are explained in the below topics. The Encoding is optional and on selecting the value as 'Base64' will base64 encode the input provided in the input text area, set it as message input for the rest call, and adds the appropriate value in the request call.

1. Validator – POST /validator

Performs a validation of the message given in the "Input" text area and returns any inconsistencies with the standard specified in message type. The request type is set as "JSON Message".

The following screenshot shows a sample validator request and response.



The screenshot displays the Volante Messaging Services - API SWIFT Category 5 Validator web application. The interface includes a header with the Volante logo and navigation links. The main content area features a form with the following fields:

- SUPPORTED SERVICES**, **REST DOCUMENTATION**, **DOWNLOAD SAMPLES**, **CHANGE PASSWORD**, and **LOGOUT** buttons.
- Service Type**: Validator
- Message Type**: MT500
- Request Type**: JSON Message
- Encoding**: none
- Enter Input Below or Select File**: Browse... (selected file: MT500_valid.dat)
- CLEAR OUTPUT** and **SEND REQUEST** buttons.

The **Input** field contains the following SWIFT message:

```
{1:F01PASOBEB0A000230024235}{2:05000913041029LRLRXXX4A0500004557410410291013N}{3:{108:MT500 003 OF 003}}{4: :16R:GENL :20C::SEME//01126 :23G:CANC :98C::PREP//20020915123456 :22F::INST//REGI :16R:LINK :22F::LINK//INFO :13A::LINK//501 :20C::PREV//BR/29 zprt 98-22 :16S:LINK :16R:LINK :22F::LINK//INFO :13A::LINK//501 :20C::POOL//BR/2 :16S:LINK :16R:LINK :22F::LINK//INFO :13A::LINK//501 :20C::RELA//BR/wp :16S:LINK :16S:GENL :16R:REGDET :20D::BREF//BkZZ-12 pt105-B72 :20D::BPAR//98 x9 :20D::SHAR//quip :22F::OWNT...RT//TOBK :35B:Written description of FI since ISIN is not standard at this time. Private Issue. :70C::REGI/xxx :16R:FIA :94B::PLUS//EXCH/NARRATIVE :22F::MICO//A001 :22F::FORM//BEAR :22F::PFRE//ANNU :22F::PAYS//FULL :22F::REST//144A :13A::COUP//501 :16S:FIA :16R:FIAC :36B::QREG//FAMT/175000, :97A::SAFE//SK a56-89/302 :16S:FIAC :16S:REGDET :16R:CLTDET :16R:ADDRESS :17B::MAIL/Y :16S:ADDRESS :16R:PERSDET :22F::LANG//DUTH :22F::OCCU//BBCC :16S:PERSDET :16S:CLTDET -}{5:{MAC:39EF33BE}{CHK:5B56E770E89A}{TNG:}}
```

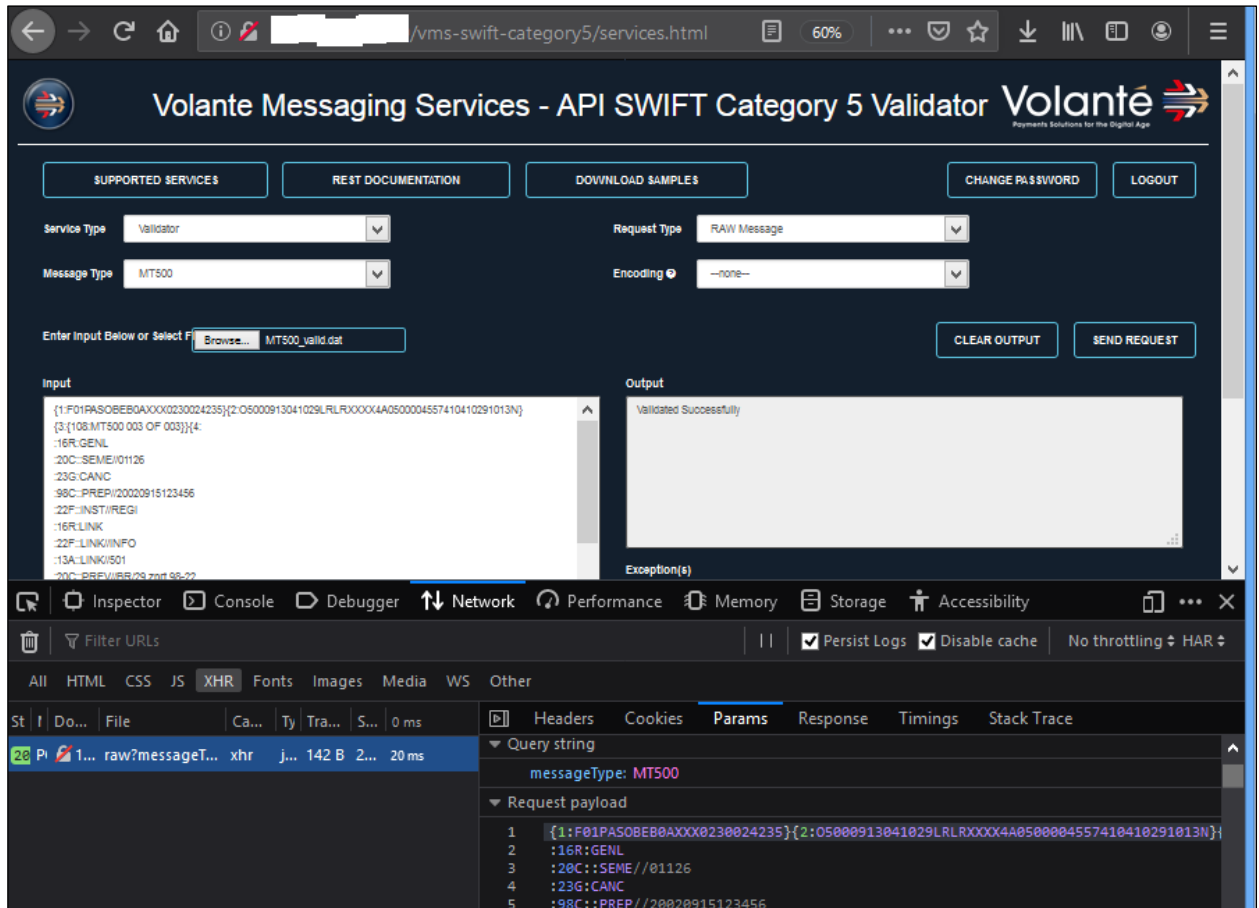
The **Output** field shows "Validated Successfully".

The browser's developer tools network tab shows the XHR request and response. The request is a POST to /validator with a JSON body containing the message. The response is a 200 OK with a JSON body containing the message type (MT500).

2. Validator (Raw) – POST /validator/raw

Performs a validation of the message supplied as input and returns any inconsistencies with the standard specified in message type. Select “Raw Message” in the Request type dropdown. The message type value is passed as a query parameter.

The following screenshot shows a sample raw validator request and response.



The screenshot displays the Volanté Messaging Services - API SWIFT Category 5 Validator interface. The interface includes a header with the Volanté logo and navigation buttons like 'SUPPORTED SERVICES', 'REST DOCUMENTATION', 'DOWNLOAD SAMPLES', 'CHANGE PASSWORD', and 'LOGOUT'. Below the header, there are dropdown menus for 'Service Type' (set to 'Validator'), 'Message Type' (set to 'MT500'), 'Request Type' (set to 'RAW Message'), and 'Encoding' (set to '--none--'). A text input field contains a sample MT500 message, and a 'SEND REQUEST' button is visible. The 'Output' section shows 'Validated Successfully'. At the bottom, a network inspector shows the request details, including the query string 'messageType: MT500' and the request payload.

Input

```
{1:F01PASOBEB0AXXX0230024235}{2:O5000913041029LRLRXXXXAA0500004557410410291013N}
{3:{108:MT500 003 OF 003}}{4:
:16R:GENL
:20C::SEME//01126
:23G:CANC
:98C::PREP//20020915123456
:22F::INST//REGI
:16R:LINK
:22F::LINK//INFO
:13A::LINK//S01
:20C::PREP//88/29 zmt 68-22
```

Output

```
Validated Successfully
```

Request Details (Network Inspector)

- Method: POST
- URL: /vms-swift-category5/services.html
- Query string: messageType: MT500
- Request payload:


```
1 {1:F01PASOBEB0AXXX0230024235}{2:O5000913041029LRLRXXXXAA0500004557410410291013N}
2 :16R:GENL
3 :20C::SEME//01126
4 :23G:CANC
5 :98C::PREP//20020915123456
```