



WAVO – Telco Integration API for NeuLion

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1.0	13-11-18	Initial Draft	Initial draft
1.1	26-11-18	Changes in Properties	Payment Notification properties changed. Transaction ID verification response has some change.
1.2	26-11-18	Minor modification in titles and descriptions	



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1. Introduction

This document describes the details of API specifications for the Telco subscription integration with NeuLion WAVO platform. This RESTful API for NeuLion is prepared based on the specifications discussed and agreed with Business. Any change in these specifications will be duly updated and shared among all stakeholders.

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2. New Subscription Registration

New Telco customer registration starts with the agreement based on respective Telco and OSN. New Telco subscription registration is happening through two major steps process. Both steps are mandatory for the completion of full registration of Telco user and access the WAVO content.

2.1. Telco User Registration Step 1

Telco user sends the request for customer registration and that customer details will be stored as part of relevant request under OSN. An SMS will be sent to the customer's mobile number, which is part of registration request. Customer will complete the registration by clicking the URL and following the instructions. Below are the specification for the URL and security factors.

OSN generate a GUID as transaction ID and sends to NueLion through an agreed format of URL.

Request Attributes

Attribute Name	Type	Example Value	Description
paytype	string	osn	
transactionid	Guid	"f055bc08-d060-4bac-a72a-46cfe5b30015"	Global Unique Identifier
signature	string	NDVGQkFCNERDNDAYNDg0OTRBNTU0REM1REU1MkYwMjkzQzNEMTExNDUxMzA1MzNCNDIFRjJFMTUxODczOENEMA==	<p>This indicates Hashed key based on SHA 256 with a shared pass phrase which will be shared from OSN.</p> <p>Hash Algorithm will be applied on combination text of Shared Key + Transaction Id.</p> <p>All these values should be in lower case before applying the hash.</p> <p>This will be Base64 encoded has value.</p> <p>Pass Phrase is a salt key which will be agreed between OSN and NueLion.</p> <p>Shared Key is a fixed value which will be provided by NeuLion.</p>

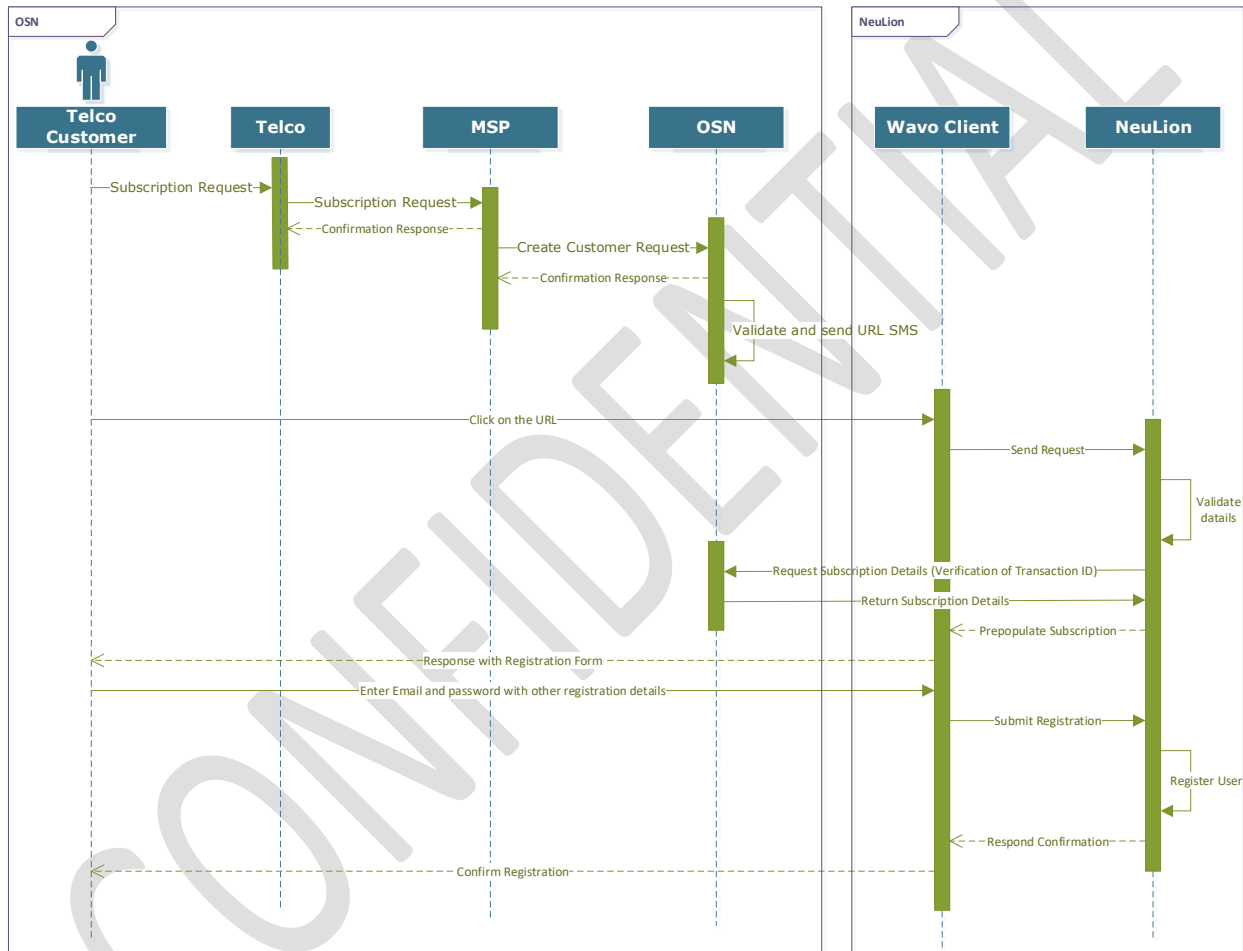


			This URL will be case sensitive.
--	--	--	----------------------------------

2.2. Telco User Registration Step 2

Whenever the customer receive the URL through SMS, customer can directly click on the URL or copy and apply through the browser. This will be triggered to the WAVO portal for the completion of registration.

Below diagram shows the complete registration sequence for API integration.



3. Inbound API Method Specifications

This section explains all possible API calls from NeuLion server to OSN server. There will not be specific security layer here because the assumption that the traffic is expecting through internal network. Whenever any change happens in this architecture, additional security will be reconsidered.



3.1. Verification of Transaction ID

API Description

NeuLion will call this API for retrieving all details of the Telco Customer. This can be prepopulated in the customer interface for continuing the registration process. NeuLion will accept only those transaction IDs that are verified through the OSN API.

Request Link

*Will be exposed separately.

Request Verb

GET

Request Header

None

Request Body

Data Fields	Data Type	Description
transactionid	String	Unique identifier, which is retrieved through the URL. NeuLion verify the validity by validating the hash and call this API only for valid Transaction IDs.

Sample Request

https://[URL]?transactionid=[transactionid]

Response Properties

Data Fields	Data Type	Description
mobileNumber	string	Unique telco customer mobile number. This is unique for each telco user and system will not allow to register multiple telco user with same mobile number.
country	String	Three Character ISO Alpha-3 code, for example "UAE" for United Arab Emirates.
telco	string	These are the possible values presently but can be added more in the future. "VIVA-Kuwait", "Umniah-Jordan", "Zain - Iraq", "Oordeo-Kuwait", "Du - UAE"
paymentType	string	These are the payment Types and its details which are presently using. DCB - Direct Carrier Billing (Both Managed and Unmanaged) IPTV - IPTV / Device Level Bundling



		MVB – Mobile Voice Bundle MBB – Mobile Broadband Bundle Payment type will notify NeuLion with values either "DCB" or "Bundle" for all above cases.
transactionId	string	Same unique identifier which are received through the request. If request is not valid, this value will be "null"
productId	string	Values will be either "wavo" or "asli". NueLion should provide this to OSN if any changes occur.
status	string	This is the status of the API, which return below possible values. a) error – any error occur in the server side b) valid – API returns valid if the request is successfully accepted by the system.
expiration	string	UTC date and time of subscription expiration. This value will be always 50 years ahead from the registration.
recurring	boolean	"true", "false". OSN returns "false" for all the requests. This means that NueLion should continue the subscription until the expiration.
errorCode	integer	These are predefined error code, which should be handled accordingly. Below are the possible error codes from this API, Any additional code which come during integration, that will be duly added in the below list. a) 0 – No error (Success) b) 21 – invalid transaction ID c) 22 – already suspended d) 23 – already terminated

Sample Response

Success:

```
{  
  "transactionId": "f055bc08-d060-4bac-a72a-46cfe5b30015",  
  "status": "valid",
```



```
"mobileNumber": "00965326325698",
"country": "KWT",
"telco": "Zain",
"paymentType": "DCB",
"productId": "WAVO",
"expiration": "2023-11-13T04:41:22.5462223Z",
"recurring": "True",
"errorCode": "0"
}
Failure:
{
  "transactionId": " f055bc08-d060-4bac-a72a-46cfe5b30015",
  "status": "error",
  "mobileNumber": "",
  "country": "",
  "telco": "",
  "paymentType": "",
  "productId": "",
  "expiration": "",
  "recurring": "",
  "errorCode": "21"
}
```

4. Outbound API Specifications (Notification API)

Here describes the NueLion's Notification API and the related use cases, which will be executed under different stage of the Telco subscription life cycle.

4.1. Use Case - Suspend Subscription

API Description

Telco can suspend the customer at any moment based on several reasons or also customer will be suspended from OSN side if it is managed scenario. This can occur because of bad payment or other valid reasons. Below describes the Notification API



specification for updating the status in NeuLion. NeuLion will suspend the subscription immediately till it get the reactivation notification (Section 4.2).

Request Link

Link *NeuLion will exposed it

Request Verb

POST

Request Header

None

Request Body

Data Fields	Data Type	Description
transactionid	string	Unique identifier, which is shared by OSN during the registration of subscription.
status	string	This is the status which are submitting as part of request a) suspend – if subscription is suspended in Telco side, NeuLion suspend the subscription from the WAVO and user can login but cannot play back the content.

Sample Request

```
{  
  "transactionid": "f055bc08-d060-4bac-a72a-46cfe5b30015",  
  "status": "suspend"  
}
```

Response Properties

This is a notification API and NeuLion respond to this API as HTTP responses. If NeuLion accepts request, HTTP response codes will be considered as API response. Below are sample response codes and 200 will be considered as API is successfully accepted and OSN will not retry again. If API fails to return 200 as response code, OSN will continue to send the notification again until configured number and send notification alert after configured number of attempts.



200	Success
400	Bad Request
401	Unauthorized Request.
404	Not found

Sample Response

None

4.2. Use Case - Reactivation Subscription

API Description

Telco can resume the subscription if it is suspended (temporary) because of bad payment or other reasons. OSN call this NeuLion Notification API for updating the status change. Below describes the API specification of subscription reactivation.

Request Link

Link *NeuLion will exposed it

Request Verb

POST

Request Header

None

Request Body

Data Fields	Data Type	Description
transactionid	string	Unique identifier, which is shared by OSN during the registration of subscription.
status	string	This is the status which are submitting as part of request b) renew – if subscription is resumed by Telco, OSN send this status to NeuLion and resume the subscription of WAVO and user can login and play back the content.
recurring	boolean	"true", "false". OSN returns "false" for all the requests. This means that NueLion should continue the subscription until the expiration.
expiration	string	UTC date and time of subscription expiration.



Sample Request

```
{  
  "transactionid": "f055bc08-d060-4bac-a72a-46cfe5b30015",  
  "status": "renew",  
  "recurring": "false",  
  "expiration": ""2023-11-13T04:41:22.5462223Z"  
}
```

Response Properties

This is a notification API and NeuLion respond to this API as HTTP responses. If NeuLion accepts request, HTTP response codes will be considered as API response. Below are sample response codes and 200 will be considered as API is successfully accepted and OSN will not retry again. If API fails to return 200 as response code, OSN will continue to send the notification again until configured number and send notification alert after configured number of attempts.

200	Success
400	Bad Request
401	Unauthorized Request.
404	Not found

Sample Response

None

4.3. Use Case - Terminate Subscription

API Description

OSN notify NeuLion whenever any request get from Telco for terminating the subscription. Customer has to reregister if the Telco resume the subscription after the successful termination from the system. Here describes the Notification API specification for terminating the subscription.

Request Link

Link *NeuLion will exposed it

Request Verb

POST

Request Header

None



Request Body

Data Fields	Data Type	Description
transactionid	string	Unique identifier, which is shared by OSN during the registration.
status	string	This is the status of the API which return below possible values. c) terminate – if subscription is terminated in Telco side, NeuLion terminate the subscription from the WAVO and user cannot login in the application.

Sample Request

```
{  
  "transactionid": "f055bc08-d060-4bac-a72a-46cfe5b30015",  
  "status": "terminate"  
}
```

Response Properties

This is a notification API and NeuLion respond to this API as HTTP responses. If NeuLion accepts request, HTTP response codes will be considered as API response. Below are sample response codes and 200 will be considered as API is successfully accepted and OSN will not retry again. If API fails to return 200 as response code, OSN will continue to send the notification again until configured number and send notification alert after configured number of attempts.

200	Success
400	Bad Request
401	Unauthorized Request.
404	Not found

Sample Response

None



4.4. Use Case - Payment on Subscription

API Description

OSN notify NeuLion whenever any notification get from Telco regarding the payment on subscription. This notification will send to NueLion for each transactionId whenever it happen from Telco or MSP side. Here describes the Notification API specification for payment on subscription. The Request properties of this notification is same as "renew" status but it also includes additional properties regarding the payment.

Request Link

Link *NeuLion will exposed it

Request Verb

POST

Request Header

None

Request Body

Data Fields	Data Type	Description
transactionid	string	Unique identifier, which is shared by OSN during the registration.
status	string	This is the status of the API which return below possible values. d) renew – if any payment received on Telco subscription, NeuLion get a notification regarding the payment details.
recurring	boolean	"true", "false". OSN returns "false" for all the requests. This means that NueLion should continue the subscription until the expiration.
expiration	string	UTC date and time of subscription expiration. This always will be a future date like 50 years ahead.
startDate	string	Start date of the payment and this will be "MM/DD/YYYY" format.
endDate	string	End date of the payment or until what date the payment is. This will be "MM/DD/YYYY" format.
currencyCode	string	ISO three-character currency code. Example, AED for United Arab Emirates' Dirham. This will be always in local currency where the Telco is from.
totalAmount	decimal	Payment amount.



description	string	Remarks regarding the payment. Optional value.
dueAmount	decimal	Total due of the transaction.
quantity	integer	Total quantity of transaction.
unitPrice	decimal	Unit price of the product.
vatCharged	decimal	Vat charged on the due amount.
vatRate	integer	Percentage of VAT
vatStatus	string	"Taxable" – included for charging VAT "Zero rated" – excluded from VAT charge.
totalQuantity	integer	Total quantity from all transactions.
totalUnitPrice	decimal	Total unit price from all transactions.
totalVATCharged	decimal	Total amount charged as VAT on all transactions.
totalDueAmount	decimal	Total Due amount from all transactions.

Sample Request

With VAT:

```
{  
  "transactionid": "5B98121C-AE49-43D6-E053-51FEFA0A909E",  
  "status": "renew",  
  "recurring": "false",  
  "expiration": "2050-11-13T04:41:22.5462223Z",  
  "currencyCode": "AED",  
  "totalAmount": "19.00",  
  "transactions": [{  
    "dateOfSupply": "2018-10-30",  
    "description": "remarks",  
    "dueAmount": "19.00",  
    "quantity": "1",  
    "unitPrice": "18.10",  
    "vatCharged": "0.90",  
    "vatRate": "5",  
    "vatStatus": "Taxable",  
    "fromDate": "04/30/2018",  
    "toDate": "05/29/2018"  
  }  
}
```




```
    }},  
    "totalQuantity": "1",  
    "totalUnitPrice": "18.10",  
    "totalIVATCharged": "0.90",  
    "totalAmountDue": "19.00"  
  }  
}
```

Without VAT:

```
{  
  "transactionid": "5B98121C-AE49-43D6-E053-51FEFA0A909E",  
  "status": "payment",  
  "currencyCode": "KWD",  
  "totalAmount": 0.500,  
  "transactions": [{  
    "dateOfSupply": "11/22/2018",  
    "description": "WAVO",  
    "dueAmount": 0.500,  
    "quantity": 1,  
    "unitPrice": 0.500,  
    "vatCharged": 0.000,  
    "vatRate": 0,  
    "vatStatus": "Zero rated",  
    "fromDate": "11/22/2018",  
    "toDate": "11/26/2018"  
  }],  
  "totalQuantity": 1,  
  "totalUnitPrice": 0.500,  
  "totalIVATCharged": 0.000,  
  "totalAmountDue": 0.500  
}
```



Response Properties

This is a notification API and NeuLion respond to this API as HTTP responses. If NeuLion accepts request, HTTP response codes will be considered as API response. Below are sample response codes and 200 will be considered as API is successfully accepted and OSN will not retry again. If API fails to return 200 as response code, OSN will continue to send the notification again until configured number and send notification alert after configured number of attempts.

200	Success
400	Bad Request
401	Unauthorized Request.
404	Not found