

SOCIETE GENERALE LUXEMBOURG PSD2 API Solution

Addressees:

Business Analysts, Project Managers, Developers, Architects, IT

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1 Introduction

This document describes how Third-Party Providers (TPPs) can connect the PSD2 Solution of SOCIETE GENERALE LUXEMBOURG.

The document assumes that the reader has basic knowledge about Payment Services Directive 2 (PSD2) regulation of the European Union, its terminology and use cases.

The document assumes that TPP is aware about the request for a PSD2 certificate from QTSP (Qualified Trust Service Provider).

The full process allowing TPPs to use the API is :





2 TPP ONBOARDING PREREQUISITES

Before sending queries ,TPPs should perform the following actions:

Step1: TPP requests and gets the agreement from the National competent authority (CSSF in LUX), the agreement contains following

Step2:TPP applies and obtains the PSD2 Certificate from a Trusted center (ex:LUX TRUST in LUX)

PSD2 certificate : an EiDAS certificates enriched with the following PSD2 information 1. TPP identifier ("PSD<mark>CC-NCA-nnnnnnn</mark>)

- ✓ CC: 2 character ISO 3166-1 [8] country code representing the Competent Authority country;
- ✓ NCA : [2-8] character Competent Authority identifier without country code (A-Z uppercase only, no separator)
- nnnnnnn :identifier (authorization number as specified by the Competent Authority. There are no restrictions on the characters used).
 Exemple: PSDLU-CSSF-xxxxxxxx
 - LU: Luxembourg
 - CSSF: NCA luxembourg
- 2. Scope
 - Account information service provider (AISP) and/or
 - Payment initiation service provider (PISP)
- 3. Validity date
- 4. Passporting (Geographical area of the agreement)

3 TPP ONBOARDING

This section explains how to prepare the use of PSD2 API. TPP registration, application creation, certificate management, etc.

Environment preparation process is the same in the non-production and production environment: The returned results (AIS) when a consent is established between a client and the TPP are the same when a client logs directly to the eBanking application. A certificate check will be done against the trusted center having issued it, role check, authorization on the APIs according to the role.

Here is the steps in order to prepare the environment:





TPP Onboarding

3.1 Register and Login

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TPP registration is made under API store website

API Store website urls :

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NON-PRODUCTION	https://int-api.privatebanking.societegenerale.lu/ebankingPsd2/store/
PRODUCTION	https://api.privatebanking.societegenerale.lu/ebankingPsd2/store/

PSD2 API Solution

To be able to work in the API Store, the TPP must be identified and this requires a one-time registration,

To register, please click on the "Sign-up" button at the top of the page. A form will open in which TPP can enter the necessary data.

SOCIETE CENERALE		Sign-up.	() Sign In
APIS APPLICATIONS ANALYTICS COOKIE POLICY PRIVACY POLICY PRIVACY POLICY PSD2 VI admin *****			
Fill the following form:			
	Create your Account Usemame * e.g.JohnDoe Characters left: 30 Password * Password * Password * Password Password * Password * Passwo		

After the registration is completed, TPP can log in to the store. To do this, please use the "Sign-In" button at the top of the page:





TPP will now be asked for login data.

3.2 Upload TPP certificate

After logging to the API store, the TPP is redirected to the PSD2 Certificate upload form

• Click on the "Add certificate" button

TPP-Name*	TPP_Name
TPP-ID	TPP-ID
Roles	
Rotes	Account Servicing (PSP_AS)
	Payment Initiation (PSP_PI)
	Account Information (PSP_AI)
	2 Issuing of card-based navment instruments (PSP 10)
	(c) issuing of an observe payment into america (r ar_ic)
	 Information By deactivating the checkboxes, the functionalities of the TPP are withdrawn even if the certificate
	valid
Contact Person Data	valid .
Contact Person Data	TPP_First_Name
Contact Person Data First name* Last name*	TPP_First_Name TPP_Last_Name
Contact Person Data First name* Last name* E-Mail	TPP_First_Name TPP_Last_Name TPP_Mail_Address
Contact Person Data First name* E-Mail TPP Status	TPP_First_Name TPP_Last_Name TPP_Mail_Address
Contact Person Data First name* Last name* E-Mail TPP Status Status*	TPP_First_Name TPP_Last_Name TPP_Mail_Address Received

• Click on "CHOOSE FILE TO UPLOAD" button

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PSD2 API Solution

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C Add Certificate		
Certificate		
Certificate Upload	ې CHOOSE FILE TO UPLOAD	Certificate uplad button
Third party provider TPP-Name	-	
TPP-ID		
Certificate Status		
Issued by		
Roles		Informations not yet available
Roles	Account Servicing (PSP_AS)	
	Payment Initiation (PSP_PI)	
	Account Information (PSP_AI)	
	Issuing of card-based payment instruments (PSP_IC)	
Certificate Validation	-	
Status*	Received	
Last checked		
	CANCEL ADD MORE SAVE	

• Go to the file location and select the certificate file

Add Certificate			Navigate to the certificate file location
Certificate			
Certificate Upload	CHOOSE FILE TO UPLOAD	Copen	Unload file
Third party provider		Organize • New folder 🔠 • 🔟 🕐	opioud inc
TPP-Name		This PC Name Date n	
трр-Ю		30 Objects GROUPE_SOCIETE_GENERALE_EV-AIS.ct D4066 GROUPE_SOCIETE_GENERALE_EV-AIS.key 04/06 GROUPE_SOCIETE_GENERALE_EV-AIS.key 04/06	
Certificate Status		Documents Documents Documents Documents Documents Documents Documents Documents Documents Music V C S	
Roles		File name: GROUPE_SOCIETE_GENERALE_EV- V All Files V	
Roles	Account Servicing (PSP_AS)	Optin Cancel	
	Payment Initiation (PSP_PI)		
	Account Information (PSP_Ai)		
	listuing of card-based payment in		
Certificate Validation			
Stetue*	Received		
Last checked			
	[CANCEL ADD NOTE LAVE	



• Click on "Open" button

Certificate Upload	
Jpload	GROUPE_SOCIETE_GENERALE_EV-AIS.crt
Third party provider	
PP-Name	TPP_NAME
tep-ID	PSDLU-CSSF-800000019
Certificate Status	
titled by	InfoCert Organization Validation CA 3 CL
Valid from*	2019-05-03
/alid to*	2021-05-03
Roles	
fales	Account Servicing (PSP,AS)
	Payerierst feitbarbar (PSP_P0)
	Carl Account Information (PSP_AI)
	Isouding of antid-linear payment fortruments (PSP, (C)
Certificate Validation	
Status*	Received
last checked	

The TPP/Certificate informations will be extracted from the file:

- TPP_IDCert_ID
- Certificate issuer
 Valid from date
- Valid to date
- \blacktriangleright PSD2 role(s)
- > Certificate Status: First, the status of the certificate is "received" until the validation job runnning



3.3 Certificate Status Validation

This action is automatically performed with a scheduled job, the solution will calls the CRLs: "Certificate Revocation Lists" provided by the Trusted center (these URL is extracted from the certificate) if the certificate is not revoked, the status of the uploaded certificate will be "VALID"

Third party provider	
TPP-Name*	TPP_NAME
TPP-ID	PSDLU-CSSF-800000019
Contact Person Data	
First name#	TPP_LAST_NAME
Last name*	TPP_FIRST_NAME
E-Mail	TPP_MAIL_ADDRESS
	Ø IMPORT
	In the required fields first name, last name and E-mail the data of the TPP contact person needs to be entered. It is possible to import this data fields from the previous WSO2 registration through the button "import".
TDD Status	
Status	VALID
Certificates Certific Statu	s. Valid from Valid to Last checked
3613709580464993324 VAL 0320194398368332333 993853820	D 2019-05-03 2021-05-03 2020-03-17
* mandatory fields	
ADD R	EDIRECT URL ADD SECRET REVOKE ADD CERTIFICATE SAVE
PP-ID to use in PSI	D2 requests



3.4 Creating application

Afterwards TPP must select the application to use in order to "consume" it. This application practically serves as a storage location for the later API.

Please click on the menu entry "APPLICATIONS"

SOCIETE GENERALE Private Banking	
APIS	
APPLICATIONS	
ANALYTICS 🗸	
TPP-MANAGEMENT	
COOKIE POLICY	
PRIVACY POLICY	

Now another area opens, then an already created entry "DefaultApplication" is displayed. This application has already been automatically added for TPP during the registration process, as a new application will be created the "DefaultApplication" and can be ignored.

TPP Adds the first own application via the button "ADD APPLICATION".

Private Banking		
APIS		
APPLICATIONS ANALYTICS TPP-MANAGEMENT	Applications An application is a logical collection of APIs. Applications allow you to use a single acce	ess toker
COOKIE POLICY PRIVACY POLICY	Q Filter by	B
	Default Application	42

TPP will now be guided through the installation with the following dialog. First give the application a meaningful name such as the TPP company name. Enter this name in the upper field "Name". TPP is welcome to fill in the other fields if required, but they are not mandatory for using the API.



cation is a logical collectio	on of APIs. Applications a	slow you to u	se a single access token to invoke a collection of A
opplication is pre-created a	and allows unlimited acc	ess by default	
201-201	-		
Name*			
	Characters left: 70		
Per Token Quota	Unlimited		Allows unlimited requests
	This feature allows you will be shared among a	u to assign ar all the subsor	API request quota per access token. Allocated quo bed APIs of the application.
Description			
0.00000-000-000-000-000-000-000-000-000			

The "Add" button completes the process and the application is ready. TPP can now open the newly created application



3.5 Generate key

In order to communicate with the API, the system needs keys, here called "Production Keys". These keys must be generated once. Open the newly created application then click on the "Productions keys" tab.

TEST	APP		
Details	Production Keys	Sandbox Keys	Subscriptions
	Status	APPROVED	
	Per Token Quota	Unlimited Allows	unlimited requests
		This feature allows will be shared amo	you to assign an API re ng all the subscribed A
	Description	Not Given	
Details Pr	oduction Keys Sandbo	x Keys Subscriptions	
No K No keys ar	eys Found regenerated for this type in	this application.	
Grant Type	e.		
The application	o n can use the f <mark>o</mark> llowing grar ou can enable or disable on	nt types to generate Access T ant types for this application.	okens. Based on the application
Refresh T	oken 🦳 🔽 SAML2	Implici	Password
Client Cre	edentials 🛛 🔽 IWA-NT	LM Code	TWL
Callback URL			
Scopes			
No Scopi	es Found		
Access tok	en validity period		
3600		Seconds	
Generate	keys		

The button "Generate Keys" initiates the generation. Please click on the button. No need to make any changes to the settings above.



The newly created keys are displayed:

- consumer key
- consumer secret
- access token

BankingApp	
Details Production Keys Sandbox Keys Subscriptions	
Hide Keys	
Consumer Key	
y_14z8BfgqcirYFz6ZINJXEwKTIa	
Consumer Secret	
PjfOUhN5ohE9Q_UXaL9mX0xafOAa	
Details Production Keys Sandbox Keys Subscriptions	
Show Keys	
Consumer Key	
	a
Consumer Secret	-
Grant Types	
The application can use the following grant types to generate Access Tokens. Based on the application requirement, you can enable grant types for this application.	e or disable
Carlesh Token SAML2 Implicit Password	
Client Credentials VIII-NTLM Code VIII-NTLM	
Callback URL	
Update	
Generating Access Tokens	
The following cURL command shows how to generate an access token using the Password Grant type.	
<pre>curl -k -d "grant_type=password&username@Username&password=Password" \ -H "Authorization: Basic Base64(consumer-key:consumer-secret)" \ https://int-api.privatebanking.societegenerale.lu/ebankingPsd2/token</pre>	9
In a similar manner, you can generate an access token using the Client Credentials grant type with the following cURL command.	
<pre>curl -k -d "grant_type=client_credentials" \ -H "Authorization: Basic Base64(consumer-key:consumer-secret)" \ https://int-api.privatebanking.societegenerale.lu/ebankingPsd2/token</pre>	Ø
Generate a Test Access Token	
Access Token	
Above token has a validity period of 3600 seconds. And the token has (am_application_scope,default) scopes.	
Scopes	
No Scopes Found	
Validity period	
3600 Seconds	
Regenerate	

3.6 Add TPP Redirect (Callback) URL

Redirect URLs are a part of the OAuth flow. After a user successfully authorizes an application, the authorization server will redirect the user back to the application with either an authorization code or access token in the URL.

• Click on "TPP-MANAGEMENT"

You will have to reauthentifcate with same creadentials.

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APPLICATIONS	
ANALYTICS 🗸	
TPP-MANAGEMENT	
COOKIE POLICY	
PRIVACY POLICY	
Change TPP data	
Third party provider	
'PP-Name*	TPP NAME
TPP-ID	PSDLU-CSSF-B00000019
ontact Person Data	
first name*	FIRST NAME
ast name*	LAST NAME
E-Mail	емац
	@ IMPORT
	In the required fields first name, last name and E-mail the data of the TPP contact person needs to be entered. It is possible to import this data fields from the previous WSO2 registration through the button "Import".
TPP Status	
Status	VALID
Certificates	
Cerc-ID Sta 3613709580464593324 VA 0320194398368332333 993853820	us Valid from Valid to Last checked LID 2019-05-03 2021-05-03 2020-03-17
* mandatory fields	

• Click on "ADD REDIRECT URL"

\odot	Add Redirect URL	

Redirect URL		
Redirect URL	Add URL	
		CANCEL

• Enter the URL

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• Click on "SAVE" button the save the URL

3.7 Add The TPP SECRET

• Click on the "TPP-MANAGEMENT" item

Third nantu provider			
TPP-Name*	TPP NAME		
irrivance.			
TPP-ID	PSDLU-CSSF-B00000019		
Contact Person Data			
First name*	FIRST NAME		
Last name*	LAST NAME		
E-Mail	ЕМАЦ		
	Ø IMPORT		
	 In the required fields first name be entered. It is possible to button "import". 	ame, last name and E-mail the da import this data fields from the p	ta of the TPP contact person needs revious WSO2 registration through
TPP Status			
TPP Status Status	VALID		
TPP Status Status Certificates	VALID		
Certificates Status 3613709580464593324 VALIE 0320194398368332333 993853820	VALID Valid from 2019-05-03	Valid to 2021-05-03	Last checked 2020-03-17
Certificates Status Certop Status 264709580464593324 Status 0320194398368332333 VALID 993853820 *	VALID Valid from 2019-05-03	Valid to 2021-05-03	Last checked 2020-03-17

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• Click on the "ADD SECRET" button

Application-Secret	
Create secret	@ CREATE
	① Attention
	The secret is created once and is then permanently available for use in pre-Authentication. It must be copied out immediately after creation and saved locally on the TPP system. The secret is no longer displayed after leaving this page! A new creation of the secret usually entails changes to the used APP. Therefore it is strongly recommended to save this secret now
Secret	
	CANCEL

• Click on the "Create" button

Create secret	
Freato secret	Ø CREATE
	Attention The secret is created once and is then permanently available for use in pre-Authentication. It must be copied out immediately after creation and saved locally on the TPP system. The secret is no longer displayed after leaving this page! A new creation of the secret usually entails changes to the used APP. Therefore it is strongly recommended to save this secret now
lecret	a631da7b-9e21-4201-ad6c-c4fa83104999

• The secret is created

This secret needs to be stored in a dedicated zone (such as password vault). As it will be used for all consent creation requests, the secret should be stored in a TPP configuration file.

• Click on the "SAVE" button



3.8 Subscribe to API

A subscription to the API is mandatory before consuming it. This process also only takes place once. Please click on "APIs" in the left side menu. Then select the PSD2 API by clicking on the colored icon

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APIS	
APPLICATIONS	
ANALYTICS 🗸	and the second second
COOKIE POLICY	
PRIVACY POLICY	
	PSD2
	v1 admin

Select the newly created application and confirm the process with the button "Subscribe".

	Version:	v1	Applications TEST APP	
\mathbf{P}	Updated:	24/Jan/2020 15:39:25 PM CET	Subscribe	
	Status:	PUNUMED		
	Rating:	*****		

PSD2 API Solution

Please close the success message by clicking on the button "Stay on this page".

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4 Postman collection

In this section it will be described the correspondence of PSD2 API requests with client actions, however, steps 1 and 2 which are managed on the TPP side have no correspondence with API requests. In the absence of an application with a User Journey adapted to PSD2, the POSTMAN tool was used to perform the tests on the API

On POSTMAN, requests are assembled as a collection which is as follows

v PSI	D2-Token & Consen	& Accoount informations requests
~	🖰 TPP & Client au	thentication
		REATE WSO2 ACCESS TOKEN
	GET [AUTH] 2 - GI	ET ACCESS TOKEN (STATIC SCOPE
~	Consent Creation	n
>	POST [CONSENT] 1	- POST CONSENT (ALL ACCOUNT
	POST [CONSENT] 2	- POST CONSENT AUTHORISATION
	GET [CONSENT] 3	- GET ACCESS TOKEN (AIS SCOPE)
>	PUT [CONSENT] 4	- PUT CONSENT AUTHORISATIO
>	GET [CONSENT] 5	- GET CONSENT
>	GET [CONSENT] 6	- GET CONSENT STATUS
~	Account information	ations
	GET [AIS] 1.ACCO	UNTS with balance
	GET [AIS] 2.Get la	st 90 days transactions of an acco
	GET [AIS] 3.Get m	ore than 90 days transactions of a
	POST [AUTH] 1 - CR	REATE WSO2 ACCESS TOKEN Copy
	POST Refresh	
	GET [AIS] 1.b-GET	ACCOUNTS with balance complet

VARIABLE	VALUE FOR INT ENV
wso2-url	https://int-api.privatebanking.societegenerale.lu/ebankingPsd2
ASO	https://int-api.privatebanking.societegenerale.lu/ebankingAuthServer/oauth
api_gateway	https://int-api.privatebanking.societegenerale.lu/ebankingPsd2/psd2/v1
tenantId	12

4.1 **TPP & Client authentication**

4.1.1.1 [AUTH] 1 - CREATE WSO2 ACCESS TOKEN

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This request allows the API to identify the TPP using the Consumer Key and the Consumer Secret generated in the onboarding process

PSD2 API Solution

• Query type: POST

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• URL: {{wso2-url}}/oauth2/token

• Inputs:

Field	Section	Value
Username	authorization	wso2-consumer-key
Password	authorization	wso2-consumer-secret
grant_type	Body	client_credentials

Action to perform

	aloon		Send
POST - Masse-millionsmetre	iken .		Gena
Params Authorization Headers (13	3) Body • Pre-request Script • 1	Tests Settings	Cookies
Type Basic Auth	 Heads up! These parameters recommend using variables. L 	hold sensitive data. To keep this data secure while working in a collaborative elearn more about variables ${\ensuremath{\mathcal{P}}}$	nvironment, we \times
The authorization header will be automatica generated when you send the request. Learn more about authorization A	lly Username	((wso2-consumer-keyTPP4))	
	Password	((wso2-consumer-secretTPP4))	
1		Show Password	0
Body Cookies (1) Headers (13) Test Ri	esults (1/1)	Status: 200 OK Time: 5.37 s Size: 62	15 B Save Response ~
Pretty Raw Preview Visuali	ize JSON v 📅		r q
<pre>1 1 2 *access_token*: * 3 *scope*: *am_application 4 *token_type*: "Bearer*, 5 *expires_in*: 3600 6 1 • Outputs</pre>	n_scope default",	-	1
Field	Type	Expected Value	

Field	Туре	Expected Value
Status	Request status	200 OK
access_token	Token	1

4.1.1.2 [AUTH] 2 - GET ACCESS TOKEN (STATIC SCOPES)

This request allows the API to create access token with statistic scope Go to authorization Pan



Configuration Options Advanced Op	ptions
Token Name	Enter a token name
Grant Type	Authorization Code 🗸 🗸
Callback URL ④	{{redirect_uri_tpp}}
	Authorize using browser
Auth URL 🛞	((ASO))/({tenantid})/oauth/authorize
Access Token URL ①	[{ASO})/{{tenantId}}/oauth/token
Client ID (3)	{{clientIdTPP}}
Client Secret ①	((clientsecreITPP))
Scope 🛈	a.g. read:org
State 🛈	State
Client Authentication	Send as Basic Auth header 🗸 🗸 🗸
() Clear cookies	

Get New Access Token

Fill the fields as below:

• Inputs:

Field	Value
Callback URL	ADD REDIRECT URL
Auth URL	{{ASO}}/{{tenantId}}/oauth/authorize
Access Token URL	{{ASO}}/{{tenantId}}/oauth/token
Client Id	<u>clientIdTPP</u>
Client secret	clientsecretTPP

Action to perform
Click on GET NEW ACCESS TOKEN

The eBanking login page is open,



CLX Portal			×
SEE THE WOR WITH SOCIETI	LD DIFFERENTLY GENERALE PRIVATE BANKING		
	EN FR		
	Autorisation Demandée Par SG_TPP-RKRF		
	Identifiant d'utilisateur*		
	Mot de passe [≭]		
	Annuler Réinitialiser Suivant		

Perform SCA

• 1st factor (contract+Password)

• Inputs:

Field	Value	
ContractID	eBanking contractID	
Password	eBanking password	

• 2nd factor (pushTan confirmation)

Inputs:

Client can use one of the following authentication method

Field	Value
Access_Code	
FingerPrint	If configured
FaceID	If configured

• Outputs

The popup with token response is displayed



Token Name

PSD2 🖋

Access Token	eyJhbGciOiJSUzI1NilsInR5cCl6lkpXVCJ9.eyJ0ZW5hbnRfaWQiOjEy LCJ0ZW5hbnRfbmFtZSl6ljEyliwidXNlcl9uYW1lljoiNzAzNTc0NDliLC JsYW5ndWFnZUNvZGUiOiJmcilsImJjTm8iOilxMilsImNsaWVudF9pZ Cl6llBTRExVLUNTU0YtQjAwMDAwMDE5liwiYXV0aG9yaXRpZXMiOl tdLCJ1c2VyX2lkljo3MDM1NzQ0Miwic2NvcGUiOlsiaHR0cHM6Ly9h cGkuY3JIYWxvZ2l4LmNvbS9wYXltZW50cy9wYXltZW50LndyaXRlli wiaHR0cHM6Ly9hcGkuY3JIYWxvZ2l4LmNvbS9hc3NldHMvYWNjb 3VudC50cmFuc2FjdGlvbi5yZWFkb25seSlsImh0dHBzOi8vYXBpLm NyZWFsb2dpeC5jb20vcGF5bWVudHMvcGF5bWVudC5yZWFkliwia HR0cHM6Ly9hcGkuY3JIYWxvZ2l4LmNvbS9wc2QyY29uc2VudG1n
	bXQvcHNkMilsImh0dHBzOi8vYXBpLmNyZWFsb2dpeC5jb20vcHNk MnhzMmEvcGlzliwiaHR0cHM6Ly9hcGkuY3JIYWxvZ2l4LmNvbS9h c3NldHMvYWNjb3VudC5tZXRhZGF0YS5yZWFkb25seSlsImh0dHB zOi8vYXBpLmNyZWFsb2dpeC5jb20vcHNkMnhzMmEvYWIzII0sImx vZ2luTmFtZSI6ljcwMzU3NDQyliwiZXhwljoxNjU40TMyODc3LCJjbG
Token Type	bearer
refresh_token	eyJhbGciOiJSUzI1NilsInR5cCl6lkpXVCJ9.eyJ0ZW5hbnRfaWQiOjEy LCJ0ZW5hbnRfbmFtZSl6ljEyliwidXNIcl9uYW1lljoiNzAzNTc0NDliLC JsYW5ndWFnZUNvZGUiOiJmcilsImJjTm8iOilxMilsImNsaWVudF9pZ Cl6llBTRExVLUNTU0YtQjAwMDAwMDE5liwiYXV0aG9yaXRpZXMiOl tdLCJ1c2VyX2lkljo3MDM1NzQ0Miwic2NvcGUiOlsiaHR0cHM6Ly9h cGkuY3JIYWxvZ2l4LmNvbS9wYXltZW50cy9wYXltZW50LndyaXRlli wiaHR0cHM6Ly9hcGkuY3JIYWxvZ2l4LmNvbS9hc3NldHMvYWNjb 3VudC50cmFuc2FjdGlvbi5yZWFkb25seSlsImh0dHBzOi8vYXBpLm NyZWFsb2dpeC5jb20vcGF5bWVudHMvcGF5bWVudC5yZWFkliwia HR0cHM6Ly9hcGkuY3JIYWxvZ2l4LmNvbS9wc2QyY29uc2VudG1n bXQvcHNkMilsImh0dHBzOi8vYXBpLmNyZWFsb2dpeC5jb20vcHNk MnhzMmEvcGlzliwiaHR0cHM6Ly9hcGkuY3JIYWxvZ2l4LmNvbS9h c3NldHMvYWNjb3VudC5tZXRhZGF0YS5yZWFkb25seSlsImh0dHB zOi8vYXBpLmNyZWFsb2dpeC5jb20vcHNkMnhzMmEvYWlzll0sImx
	zOi8vYXBpLmNyZWFsb2dpeC5jb20vcHNkMnhzMmEvYWIzII0sImx vZ2luTmFtZSI6licwMzU3NDQvliwiYXRplioiOGZiYmI5OGYtMzM1Mv
	00MmNILThmMGQt0WE2YjYyYWNmZjY3liwiZXhwljoxNjYxNTIzMD
	c3LCJjbGllbnRfbmFtZSI6llNHX1RQUC1SS1JGliwianRpljoiZDg2Yjgz

Field	Value
accessToken	
refresh_token	

Click on the USE TOKEN

Then click on send button in postman request

The refresh_token is not automatically saved

So the value should be copied and saved under the Environment Variable "**refresh_token**" (CUR-RENT VALUE column) and click on "Persist All" button and Save.

Scratch Pad	E.		New Import	1.A.Statistic Generation	[m] INT 14/04/2022	PSD2-Token & Consent il	+		INT 14/04/2022 ~
Collections	+	Ŧ		IN1 14/04/2022			V ronx ⊟ Save ≁ Stu		
0		Globals		VARIABLE		TYPE ①	INITIAL VALUE ①	CURRENT VALUE	eee Persist All Reset All
APIs		INT 14/04/2022	0	wso2-url		default ~	https://int-api.privatebanking.societegenerale,	https://int-api.privatebanking.societegenerale.lu/eban	nkingPsd2
		PROD 14/04/2022		wso2-consumer-k	eyTPP4	default 👘 👻	QP12cvK5MaiY2OETRijldjxnM1wa	QP12cvK5MalY2OETRijldjxnM1wa	
Environments		UAT		wso2-consumer-s	ecretTPP4	default 🗸 🗸	ZXB6mQWE4eIVctHcilJ3m1JKsyYa	ZXB6mQWE4eIVctHcilJ3m1JKsyYa	
a				WS02-token		default 🗠	f9c36401-91ee-3043-b6d9-0be21f036cde	f9c36401-91ee-3043-b6d9-0be21f036cde	
Mock Servers				id_X-Request		default 🗸	dba13259-77ed-3b98-8e57-991eb4fc9ce1	dba13259-77ed-3b98-8e57-991eb4fc9ce1	
Monitors				PSD2-token		default	eyJhbGci0iJSUzI1NilsInR5cCl8lkpXVCJ9.eyJ0ZW5hbn	eyJhbGciOiJSUzI1NiIsInR5cCl6lkpXVCJ9.eyJ0ZW5hb	nRfaWQiOjEyLCJ0ZW5hbnRfbmFtZSI6ljEy
				step1_actual		default 🗸	Response Code 404	Response Code 404	
History				step1_content		default 🗸	2 [TPP4] OAuth Token / Login HUA	2 [TPP4] OAuth Token / Login HUA	
				step1_expected		default 🗸	Response Code 200\n\nFolgende Testdaten werden	Response Code 200\n\nFolgende Testdaten werden	verwendet \n\nRequest-ID: efdf3913
				testrail status ste	p1	default 🚽 👻	5	5	
				xsrf-token		default ~			
				02A 🔽		default 🚽	https://int-api.privatebanking.societegenerale.	https://int-api.privatebanking.societegenerale.lu/eban	nkingAuthServer/cauth
				authorization_cod	ê.	default 🗠			
				refresh_token		default ~	eyJhbGcl0iJ3UzI1NilsinR5cCl0lkpXVCJ9.eyJ02W5hbn	eyJhb6ciOiJ3UzI1NiisinR5cCl0ikpXVCJ9.eyJ0ZW5hb	nRfaWQiOjEyLCJ0ZW5hbnRfbmFtZSI0ijEy
				api_gateway		default 🛩	https://int-api.privatebanking.societegenerale.	https://int-api.privatebanking.societegenerale.lu/eban	skingPsd2/psd2/v1
				redirect_uri_tpp		default 🗸	https://oauth.pstmn.io/v1/callback	https://oauth.pstmn.io/v1/callback	
				consentId		default 🗸	83d6e371-257b-4986-a0c1-d73254df3497	83d6e371-257b-4986-a0c1-d73254df3497	
				step2_actual		default 🗸	Response Code 200 und Consent Status valid\n\nC	Response Code 200 und Consent Status valid\n\nCo	nsent-ID: undefined
				step2_content		default 🚽 👻	[CONSENT] 5 - GET CONSENT	[CONSENT] 5 - GET CONSENT	
				step2_expected		default 🗸 🗸	Response Code 201 und Consent Status received	Response Code 201 und Consent Status received	

Field	Туре	Expected Value
PSD2-token	Json	
refresh_token	json	

4.1.2 Consent Creation

4.1.2.1 [CONSENT] 1 - POST CONSENT (ALL ACCOUNTS)

- Query type:POST
- URL: {{api_gateway}}/v1/consents

• Inputs:

Field	Section	Value
withBalance	Params	True/false
Authorization	Headers	Bearer {{ <u>WSO2-token</u> }}
PSD2-AUTHORIZATION	Headers	Bearer {{PSD2-token}}
X-Request-ID	Headers	{{id_X-Request}}
Body	Body	{
		"access": {
		"allPsd2": "allAc-
		counts"
		},
		"recurringIndica-
		tor": false,
		"validUntil": "2022-12-
		31",
		"frequencyPerDay": 4,
		"combinedServiceIndica-
		tor": false



	}

validUntil : should always a future date

Action to perform

Click on Send button

• Outputs

1.PSD2-Token & Consent 26 March 2020 / Consent / [CONSE	ENT] 1 - POST CONSENT (ALL ACCOUNTS)	🖺 Save 🐱 🚥 🥖 🗐
POST ~ {{api_gateway}}/v1/consents		Send 💛
Params Authorization Headers (15) Body • Pre-re	equest Script Tests Settings	Cookies
KEY	VALUE	DESCRIPTION *** Bulk Edit Presets ~
Content-Type	application/json	
X-Request-ID	{(id_X-Request))	
PSD2-AUTHORIZATION	Bearer ((PSD2-token))	
PSU-IP-Address	192.168.178.1	
Accept	application/json	
Authorization	Bearer ((WSO2-token))	
Key	Value	Description
Body Cookles (1) Headers (18) Test Results (2/2) Pretty Raw Preview Visualize JSON ~	🛱 Stat	us: 201 Created Time: 4.51 s Size: 1.19 KB Save Response ~
<pre>1</pre>	0b0b27b4a1", 6c2-49f8-8ee9-d50b0b27b4a1/suthorisations"	T
Field	Туре	Expected Value
Status	Status code	201 created
Consent_ID	json	

4.1.2.2 [CONSENT] 2 - POST CONSENT AUTHORISATION

- Query type:POST
- URL: {{api_gateway}}/v1/consents/Consent_ID/authorisations/
- Inputs:

Field	Section	Value
Consent-ID	Headers	Consent ID
Authorization	Headers	Bearer {{ <u>WSO2-token</u> }}
PSD2-AUTHORIZATION	Headers	Bearer {{ <u>PSD2-token</u> }}
X-Request-ID	Headers	{{id_X-Request}}

Action to perform

Click on Send button



POST ~ {(apl_gateway})/v1/consents/((consentId))/a	authorisations/		Send 🗸
Params Authorization Headers (15) Body • Pre-re	equest Script 🔹 Tests 🍨 Set	tings	Cookies
Query Params			
KEY	VALUE	DESCRIPTION	••• Bulk Edit
Кеу	Value	Description	
ody Cookies (1) Headers (18) Test Results (2/3)		Status: 201 Created Time: 1364 ms Size: 1.39 KB	Save Response 🗸
Pretty Raw Preview Visualize JSON ~			ΓQ
<pre>1</pre>	a18-cbf5569b0083", 6c2-49f8-8ee9-d56b0b27b4a1/ ing.societegenerale.lu/eban 8c94-63b26fe51117	authorisations/22eeba75-befa-44c4-8a18-cbf5569b0083* kingAuthServer/oauth/12/oauth/authorize?	T
12 }			

• Outputs

Field	Туре	Expected Value
Status	Status code	201
Datas	Json	See below the json
ais_dynamic_scope		AIS:xxxxxxxx
consent_authorisationId	Json	

4.1.2.3 [CONSENT] 3 - GET ACCESS TOKEN (AIS SCOPE)

This request allows the API to create access token with dynamic scope Go to authorization Pan



Token Name	Enter a loken name	
Grant Type	Authorization Code	~
Callback URL ①	((redirect_uri_tpp))	
	Authorize using browser	
Auth URL (1)	({ASO))/({tenantId}}/oauth/authorize	
Access Token URL 🕄	({ASO))/{{tenantId}}/oauth/token	
Client ID ①	((clientIdTPP))	
Client Secret ()	((clientsecretTPP))	
Scope ③	{{ais_dynamic_scope}}	
State ①	State	
Client Authentication	Send as Basic Auth header	~

Fill the fields as below:

Inputs:	
Field	Value
Callback URL	ADD REDIRECT URL
Auth URL	{{ASO}}/{{tenantId}}/oauth/authorize
Access Token URL	{{ASO}}/{{tenantId}}/oauth/token
Client Id	<u>clientIdTPP</u>
Client secret	<u>clientsecretTPP</u>
ais_dynamic_scope	Dynamic scope retrieved in previous step "Post consent authorization" go to
	here

• Action to perform

Click on GET NEW ACCESS TOKEN The eBanking login page is open,



	- 0
E GENERALE PRIVATE BANKING	
Private Banking	
Autorisation Demandée Par SG_TPP-RKRF	
Identifiant d'utilisateur*	
Mot de passe*	
Annuler Réinitialiser Suivant	
	EN FR Autorisation Demandée Par SG_TPP-RKRF Identifiant d'utilisateur* Mot de passe* Annuler Réinitialiser Suivant

Perform SCA

• 1st factor (contract+Password)

• Inputs:

Field	Value
ContractID	eBanking contractID
Password	eBanking password

• 2nd factor (pushTan confirmation)

• Inputs:

Client can use one of the following authentication method

Field	Value
Access_Code	
FingerPrint	
FaceID	

• Outputs

The popup with token response is displayed



Token Details	Use Token
Token Name	PSD2 🖋
Access Token	eyJhbGciOiJSUzI1NilsInR5cCl6lkpXVCJ9.eyJ0ZW5hbnRfaWQiOjEy
	LCJ0ZW5hbnRfbmFtZSI6ljEyliwidXNlcl9uYW1lljoiNzAzNTc0NDliL0
	JsYW5ndWFnZUNvZGUiOiJmcilsImJjTm8iOilxMilsImNsaWVudF9p
	CI6IIBTRExVLUNTU0YtQjAwMDAwMDE5IiwiYXV0aG9yaXRpZXMi0
	tdLCJ1c2VyX2lkljo3MDM1NzQ0Miwic2NvcGUiOlsiQUIT0jZmM2N
	YTUwLTVINzltNDI2Ny04Yzk0LTAzYjI2ZmU1ZjExNyJdLCJsb2dpbl
	5hbWUiOil3MDM1NzQ0MilsImV4cCl6MTY10DkzMzM3NywiY2xp2
	W50X25hbWUiOiJTR19UUFAtUktSRilsImp0aSI6IjFmNTAwNDhILW
	mMGEtNDE3MC1hNDU5LWFkOGIzMzg3MTg5ZiJ9.WXJBZCEVqB
	9V1Ddxr8Qu_dMFK_Kw4A0VziZ8b0zYb36o5jV-oNlfvUNPMMpoW
	OJhNqGP_i0Gzkzh5oDEWDjPb-I6ztOOAAA5fWBdKPfxQY5oAcBA
	TBCbiPI7PWdZhXgI6iMHZDnNhfjZ54DwFaTgWT0xVLsKFwEKkYd
	DYeJcWGeQ461CcO29Gs4AbptCBr5y4gmDSRXdcwEMpRU6AHN
	38 CPouKG5Q6amnrlaQ iQ5TikiUDiFaSXea9E aHMMtROG6n8da

Field	Value
accessToken	

Click on the USE TOKEN Then click on send button in postman request

4.1.2.4 [CONSENT] 4 - PUT CONSENT AUTHORISATION (VALIDATION)

- Query type:PUT
- URL: {{api_gateway}}/v1/consents/Consent_ID/authorisations/Consent_authorisationId
- Inputs:

Field	Section	Value
Consent-ID	Headers	
Authorization	Headers	Bearer {{ <u>WSO2-token</u> }}
PSD2-AUTHORIZATION	Headers	Bearer {{ <u>PSD2-token</u> }}
X-Request-ID	Headers	{{id_X-Request}}
<pre>consent_authorisationId</pre>	URL	Retrieved value here
{	Body	Retrieved value in <u>PSD2-token-</u>
"scaAuthentication-		
Data": "{{PSD2-token-dyna-		
mic}}"		
}		

• Action to perform

Click on Send button



1.PSD2-Token & Consent 26 March 2020 / Consent / [CONSENT] 4 - PUT CONSENT AUTHORISATION (VALIDATION)						4	1			
PUT	~	{{api_gateway	<mark>/}}</mark> /v1/conse	ents/ <mark>{{cons</mark> e	entId}}/aut	horisations/{{consent_authorisationId}}			Ser	nd ~
Parar Quer	ns Authori Params	zation Head	lers (16)	Body 鱼	Pre-requ	uest Script Tests Settings				Cookies
	KEY					VALUE	DESCRIPTION		000	Bulk Edit
	Key Value Description									

Body Co	okies (1)	Headers (18)	Test Results					¢.	Status: 200 OK	Time: 1541 ms	Size: 1.03 KB	Save Resp	ons
Pretty	Raw	Preview	Visualize	JSON	~	=						G	
1 { 2 3 }	"sca	S <mark>tatus": "fi</mark>	nalised"										

• Outputs

Field	Туре	Expected Value
Status	Status code	200
scaStatus	Json	Finalized

4.1.2.5 [CONSENT] 5 - GET CONSENT

It allows to check the status and the scope of the consent

- Query type:GET
- URL: {{api_gateway}}/v1/consents/{{consentId}}}
- Inputs:

Field	Section	Value
withBalance	Params	True/false
Consent-ID	Headers	(see <u>ConsentID</u>)
Authorization	Headers	Bearer {{ <u>WSO2-token</u> }}
PSD2-AUTHORIZATION	Headers	Bearer {{ <u>PSD2-token</u> }}
X-Request-ID	Headers	{{id_X-Request}}

Action to perform
Click on Send button



1.PSD2-Token & C	consent 26 March 2020 / Consent / [CONS	ENT] 5 - GET CONSENT		🖺 Save 🗸 👓
GET ~	{{api_gateway}}/v1/consents/{{consentId}}			Send ~
Params Author Query Params	ization Headers (15) Body • Pre-	request Script Tests Settings		Cookies
KEY		VALUE	DESCRIPTION	•••• Bulk Edit
Key		Value	Description	
Body Cookies (1) Pretty Raw 1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17	<pre>Headers (18) Test Results Preview Visualize JSON ✓ ess": { f "iban": "LU900612756733200E "currency": "EUR" } f "iban": "LU750612756733210E "currency": "EUR" }], *balances": [f "iban": "LU900612756733200E "currency": "EUR" } }</pre>		C Status: 200 OK Time	: 555 ms Size: 1.47 KB Save Response ~
18 19 20 • Ou	{ "iban": "LU750612756733210E "currency": "EUR" tputs	JR",		

Field	Туре	Expected Value
Status	Status code	200 OK
Response	Json	See the table below

Field	Expected Value
Access	Access scope: List of the contract cash accounts (IBAN+Currency)
Balances	Balances scope: List of the contract cash accounts (IBAN+Currency)
Transactions	Transaction scope: List of the contract cash accounts (IBAN+Currency)
recurringIndicator	false
validUntil	Today <validuntil <today+90="" days<="" td=""></validuntil>
frequencyPerDay	4
consentStatus	valid

4.1.2.6 [CONSENT] 6 - GET CONSENT Status

It allows to check only the status of the consent

- Query type:GET
- URL: {{api_gateway}}/v1/consents/{{<mark>consentId</mark>}}/status
- Inputs:

Field	Section	Value
withBalance	Params	True/false
Consent-ID	Headers	(see <u>ConsentID</u>)
Authorization	Headers	Bearer {{ <u>WSO2-token</u> }}
PSD2-AUTHORIZATION	Headers	Bearer {{ <u>PSD2-token</u> }}
X-Request-ID	Headers	{{id_X-Request}}

Action to perform

Click on Send button



1.PSD2-Token & Consent 26 March 2020 / Consent / [CONSENT] 6 - GET CONSENT STATUS	🖺 Save 🗸 👓	1
GET v {{api_gateway}}/v1/consents/{{consentId}}/state	2U		Send ~
Params Authorization Headers (13) Body Pre-request Query Params	t Script Tests • Settings		Cookies
KEY	VALUE	DESCRIPTION	••• Bulk Edit
Key	Value	Description	
30dy Cookies (1) Headers (18) Test Results (1/1)	🔁 Statu	s: 200 OK Time: 1370 ms Size: 1.03 KB Sa	ive Response 🗸
Pretty Raw Preview Visualize JSON ~	5		ΓQ
1 { consentStatus": "valid" 3 }			I I

Outputs

Field	Туре	Expected Value
Status	Status code	200 OK
consentStatus	Json	Valid

4.1.3 Account information

4.1.3.1 [AIS] 1.ACCOUNTS with balance

- Query type:GET
- URL: https://int-api.privatebanking.societegenerale.lu/ebankingPsd2/psd2/v1/v1/accounts
- Inputs:

Field	Section	Value
withBalance	Params	 true: to retrieve accounts information with balances false: to retrieve accounts information without balances
Consent-ID	Headers	(see <u>ConsentID</u>)
Authorization	Headers	Bearer {{ <u>WSO2-token</u> }}
PSD2-AUTHORIZATION	Headers	Bearer {{ <u>PSD2-token</u> }}
X-Request-ID	Headers	{{id_X-Request}}

Action to perform

Click on Send button



```
🖺 Save 🗸 👓 🥖 🗐
 1.PSD2-Token & Consent 26 March 2020 / Consent / [AIS] 1.b-GET ACCOUNTS with balance complete Copy
 GET

    {{api_gateway}}/v1/accounts?withBalance=true

                                                                                                                             Send
 Params 
Authorization Headers (14) Body Pre-request Script Tests 
Settings
                                                                                                                                Cookies
 Query Params
     KEY
                                                VALUE
                                                                                           DESCRIPTION
                                                                                                                               Bulk Edit
 withBalance
                                                true
     Key
                                                Value
                                                                                           Description
Body Cookies (1) Headers (18) Test Results (2/2)
                                                                                    Status: 200 OK Time: 1080 ms Size: 1.95 KB Save Response
 Pretty
         Raw Preview Visualize
                                   JSON 🗸
                                              =
                                                                                                                              6
                                                                                                                                  Q
   1
      ş
   2
          "accounts": [
   3
              5
                 "resourceId": "2601d0d5-6fda-4cc3-9ceb-a571600def2e",
   4
                 "iban": "LU900612756733200EUR",
   5
                 "currency": "EUR",
"name": "compte perso 2",
   6
   7
   8
                 "cashAccountType": "CACC",
                 "bic": "SGABLULL",
  10
                 "balances": [
                        "balanceAmount": {
    "currency": "EUR",
    "amount": "11.9"
  13
  14
  15
  16
                    3
  17
  18
                  links" · {
                     "self": {
  19
  20
                             ": "/v1/accounts/2601d0d5-6tda-4cc3-9ceb-a571600det2e
          Outputs
     •
 Field
                                                                                             Expected Value
                                                 Туре
 Status
                                                 Status code
                                                                                             20
 Datas
                                                                                             See below the json
                                                Json
Example
{
   "accounts": [
       {
          "resourceId": "fa2a2366-4264-473c-a3bf-df8eb079655d",
          "iban": "LU190615608573380CAD",
          "currency": "CAD",
          "cashAccountType": "CACC",
          "bic": "SGABLULL",
          "balances": [
              {
                  "balanceAmount": {
                     "currency": "CAD",
                     "amount<sup>"</sup>: "0.0"
                 }
              }
          ],
"_links": {
_____f"'` {
              "self": {
                 "href": "/v1/accounts/fa2a2366-4264-473c-a3bf-df8eb079655d"
              },
              "balances": {
```

```
"href": "/v1/accounts/fa2a2366-4264-473c-a3bf-df8eb079655d/balances"
```

PSD2 API Solution

```
},
"transactions": {
```

SOCIETE GENERALE

THE FUTURE

IS YOU

"href": "/v1/accounts/fa2a2366-4264-473c-a3bf-df8eb079655d/transactions"

```
}
  }
},
{
  "resourceld": "1d8187b3-933e-4ef6-b033-d4c8155e0367",
  "iban": "LU070615608573380USD",
  "currency": "USD",
  "cashAccountType": "CACC",
  "bic": "SGABLULL",
  "balances": [
     {
       "balanceAmount": {
         "currency": "USD",
          "amount": "39.63"
       }
    }
 ],
"_links": {
____f"' {
     "self": {
       "href": "/v1/accounts/1d8187b3-933e-4ef6-b033-d4c8155e0367"
     },
     "balances": {
       "href": "/v1/accounts/1d8187b3-933e-4ef6-b033-d4c8155e0367/balances"
     },
     "transactions": {
       "href": "/v1/accounts/1d8187b3-933e-4ef6-b033-d4c8155e0367/transactions"
    }
  }
}
```

4.1.3.2 [AIS] 2.Get last 90 days transactions of an account

- Query type:GET
- URL: https://int-api.privatebanking.societegenerale.lu/ebankingPsd2/psd2/v1/v1/accounts/{{re-sourceld}}/transactions

• Inputs:

Field	Section	Value
resourceld	URL: Resourceld of the account for which transac- tions are retrieved	One of ressources ID from previous request response (Click to see <u>RessiurceID</u>)
dateFrom	Params	Date from to retrieve transactions >=Today-90days
dateTo	Params	Date from to retrieve transactions >= dateFrom
bookingStatus	Params	Both: to retrieve executed and ongoing operations
withBalance	Params	true/false: t0 retrieve or not intermediate balance of account
Consent-ID	Headers	One of ressources ID from previous request response (Click to see)
Authorization	Headers	Bearer {{WSO2-token}}
PSD2-AUTHOR- IZATION	Headers	Bearer {{PSD2-token}}
X-Request-ID	Headers	{{id_X-Request}}

Action to perform

Click on Send button



1.PSD2-Token & Consent 26 March 2020 / Consent / [AIS	i] 4.a-TRX inf à 90 jours	🖺 Save 🗸 🚥
GET v {{api_gateway}}/v1/accounts/{{TRX-ACC	T_ressource_ID})/transactions?dateFrom=2022-05-01&	.dateTo=2022-07-30&bookingStatus=both&withBala Send V
Params Authorization Headers (15) Body Pr	e-request Script Tests • Settings	Cookies
dateFrom	2022-05-01	
dateTo	2022-07-30	
bookingStatus	both	
V withBalance	true	
Key	Value	Description
Pretty Raw Preview Visualize JSON 1 f "account": ğ "ilaan:: "LU990612756733208EUR", 4 "currency": "EUR" f 5 g, "booked": [6 "transactionId": "ID4 10 f "transactionId": "ID4 11 f "currency": f 12 i "transactionId": "ID4 14 f "currency": FUR", 15 j, "creditorAccount": f, 16 j, "creditorAccount": f, j,	G3G46b4392589d75564a55(5348bbe8113832acca86b7 0yLfAyM0IyLTA1LTI1*, 5°,	Instruction Instruction
17 debtorAccount': {		
 Outputs 		

Field	Туре	Expected Value
Status	Status code	201
Datas	Json	See below the json

4.1.3.3 [AIS] 3.Get more than 90 days transactions of an account

- Query type:GET
- URL: https://int-api.privatebanking.societegenerale.lu/ebankingPsd2/psd2/v1/v1/accounts/{{resourceld}}/transactions

•	Innute	

Field	Section	Value
resourceld	URL: Resourceld of the account for which transac- tions are retrieved	One of ressources ID from previous request response
dateFrom	Params	Date from to retrieve transactions <today-90days< td=""></today-90days<>
dateTo	Params	Date from to retrieve transactions >= dateFrom
bookingStatus	Params	Both: to retrieve executed and ongoing operations
withBalance	Params	true/false: te retrieve or not intermediate balance of account
Consent-ID	Headers	
Authorization	Headers	Bearer {{ <u>WSO2-token</u> }}
PSD2-AUTHOR- IZATION	Headers	Bearer {{ <u>PSD2-token</u> }}
X-Request-ID	Headers	{{id_X-Request}}

Action to perform

Click on Send button

Outputs

Field	Туре	Expected Value
Status	Status code	401:To retrieve Transactions elder than 90 days ,SCA is required
Datas	Json	See below the json



4.2 Regenerate tokens

The tokens expire and should be regenerated before relaunching the queries

4.2.1 Regenerate Access Token

Go to query:[AUTH] 1 - CREATE WSO2 ACCESS TOKEN and click on "Send" button

- Query type: POST
- URL: {{wso2-url}}/oauth2/token
- Inputs:

Field	Section	Value
Username	authorization	wso2-consumer-key
Password	authorization	wso2-consumer-secret
grant_type	Body	client_credentials

• Action to perform

Click on Send button

POST	\[({wso2-url})]/oauth2/token \]			Send	~
Params	Authorization Headers (13)	Body Pre-request Script	Tests Settings	Cor	okies
Туре	Basic Auth 🗸 🗸	Heads up! These parameters recommend using variables.	s hold sensitive data. To keep this data secure while working in a collaborative environm Learn more about variables ${\bf A}$	nent, we	×
generated v Learn more	zation header will be automatically when you send the request. about authorization A	Username	{{wso2-consumer-keyTPP4}}		
		Password	{{wso2-consumer-secretTPP4}}		
			Show Password		(
Body Cool	kies (1) Headers (13) Test Results	(1/1)	🖓 Status: 200 OK Time: 5.37 s Size: 625 B	Save Respon	nse v
Pretty	Raw Preview Visualize	JSON ~ 📅		6	Q
1 2 3 4 5 0	"access_token": " "scope": "am_application_sco "token_type": "Bearer", "expires_in": 3600	pe default",			I

Outputs Field Type Expected Value Status Request status 200 OK access_token Token /

Exemple:



1.PSD2-Token & C	onsent 26 March 2020 / C	onsent / [AUTH] 1 - CREATE WSO2	ACCESS TOKEN Copy	E
POST V	{{wss2-url}}/oauth2/token		Send	
Params Authori	zation • Headers (13)	Body Pre-request Script	Tests Settings Co	ookies
Гуре	Basic Auth 🗸 🛩	Heads up! These parameter recommend using variable	is hold sensitive data. To keep this data secure while working in a collaborative environment, we $_{\rm L}$ Learn more about variables $^{\rm A}$	×
The authorization hi jenerated when you learn more about a	eader will be automatically u send the request, utherization #	Username	((wso2-consumer-wyTPP4))	
		Password	((wso2-consumer-secretTPP4)) Show Pessword	
	freedow 100 - Test West			
ody Cookes (1)	Headers (12) Test Resul	IS (1/1)	G Status: 200 OK Time: 1033 ms Size: 493 B Save Respo	onse
Pretty Raw	Preview Visualize	JSON 🗸 😅	0.	a
1 (2 *acci 3 *sco 4 *toki	ess_token": "142bda30- pe": "am_application_s en_type": "Bearer",	de65-3d61-b281-202e03sa314e", cope default*,		
6 3	1105_1010 2141			

4.2.2 Regenerate Refresh Tocken

Go to query: REFRESH

- Query type:POST
- **URL:** {{ASO}}/{{tenantId}}/oauth/token?grant_type=refresh_token&redirect_uri={{redirect_uri_tpp}}&refresh_token={{refresh_token}}
- Inputs:

Field	Section	Value
grant_type	Params	'refresh_token'
redirect_uri	Params	redirect uri tpp
refresh_token	Params	refresh token
Username	authorization	wso2-consumer-key
Password	authorization	wso2-consumer-secret

I.PSD2-Token	& Consent 26 Marc	h 2020 / Consent / Refresh		🖺 Save 🗸	•••
POST	 {{ASO}}/{{tena 	antId)}/oauth/token?grant_type	=refresh_token&redirect_uri={{redirect_uri_tpp}}&r	refresh_token={{refresh_token}}	Send v
arams • A	Authorization	Headers (9) Body Pre-	request Script Tests • Settings		Cookies
KEY			VALUE	DESCRIPTION	••• Bulk Edi
grant_ty	pe		refresh_token		
redirect_	_uri		{{redirect_uri_tpp}}		
refresh_t	token		{{refresh_token}}		
Key			Value	Description	
Key Iy Cookies	(1) Headers (16)	Test Results (1/1)	Value	Description	KB Save Response 💊
Key dy Cookies Pretty Ra	(1) Headers (16) aw Preview	Test Results (1/1) Visualize JSON ~	Value	Description	KB Save Response ✓



○ Outputs			
Field	Туре	Expected Value	
Status	Request status	200 OK	
access_token	Token	/	
refresh_token	Token		



5 References

Description	Hyperlink
Short introduction to PSD2 by Berlin Group Initiative	https://docs.wix- static.com/ugd/c2914b_c6a8a0dca83e4af8859be266415d3d79.pdf
Directive (EU) 2015/2366 of the European parliament and of the council on payment services in the internal market (PSD2) of 25 November 2015	English: https://eur-lex.europa.eu/legal-con- tent/EN/TXT/?uri=CELEX:32015L2366
Regulatory Technical Standards on strong customer authentication and secure com- munication under PSD2 (RTS document)	https://www.eba.europa.eu/regulation-and-policy/payment-ser- vices-and-electronic-money/regulatory-technical-standards-on- strong-customer-authentication-and-secure-communication-un- der-psd2
Commision delegated regulation (EU) 2018/389 of 27 November 2017 supplementing Di- rective (EU) 2015/2366 of the European Parliament and of the Council with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication	https://eur-lex.europa.eu/legal-con- tent/EN/TXT/?uri=OJ:L:2018:069:TOC
Consultation on RTS specifying the re- quirements on strong customer authentica- tion and common and secure communica- tion under PSD2	https://www.eba.europa.eu/regulation-and-policy/payment-ser- vices-and-electronic-money/regulatory-technical-standards-on- strong-customer-authentication-and-secure-communication-un- der-psd2/-/regulatory-activity/consultation-paper
Discussion on RTS on strong customer au- thentication and secure communication under PSD2	https://www.eba.europa.eu/regulation-and-policy/payment-ser- vices-and-electronic-money/regulatory-technical-standards-on- strong-customer-authentication-and-secure-communication-un- der-psd2/-/regulatory-activity/discussion-paper
EBA Fallback document	https://eba.europa.eu/-/eba-publishes-final-guidelines-on-the-ex- emption-from-the-fall-back-mechanism-under-the-rts-on-sca-and- csc
 NextGenPSD2 Access to Account Interoperability Framework (Berlin Group Standard) Documentation Technial documentation / API description OpenAPI File 	https://www.berlin-group.org/nextgenpsd2-downloads
WSO2 API Manager	Description: https://wso2.com/api-management/
	Documentation: https://docs.wso2.com/display/AM250/WSO2+API+Man- ager+Documentation
WSO2 Analytics	https://docs.wso2.com/display/AM250/Analytics
WSO2 Admin Guide	https://docs.wso2.com/display/AM250/Product+Administration



6 ANNEXES

6.1 Glossary

PSD2 abbreviation	Meaning	Usage
2FA	Two Factor Authentication	
AIS	Account Information Service means an online service to provide consolidated information on one or more payment accounts held by the pay- ment service user with either another payment service provider or with more than one payment service provider; according to article 4 (16) of [PSD2] and as regulated by article 67 of [PSD2].	This service may be used by an AISP to request information about the account of a PSU. The account is managed by the ASPSP providing the XS2A Interface. Functionality and restrictions of this service comply with the requirements defined by article 67 of [PSD2].
AISP	Account Information Service Provider means a payment service provider pursuing account information services, according to article 4 (19) and Annex I of [PSD2].	
ASPSP	Account Servicing Payment Service Provider means a payment service provider providing and maintaining a payment account for a payer, ac- cording to article 4 (17) of [PSD2]. For example a bank.	
FCS	Fund confirmation service	This service may be used by a PIISP to request a confirmation of the availabil- ity of specific funds on the account of a PSU. The account is managed by the ASPSP providing the XS2A Interface. Functionality and restrictions of this service comply with the requirements defined by article 65 of [PSD2].
eIDAS	electronic ID entification, Authentication and trust S ervices is an EU regulation on electronic identification and trust services for electronic transactions in the internal market. It is a set of standards for electronic identification and trust services for electronic transactions in the Euro- pean Single Market. It was established in EU Regulation 910/2014 of 23 July 2014 on elec- tronic identification and repeals directive 1999/93/EC from 13 December 1999.	
MVP	Minimum Viable Product	Focus on scope in agile development
NA/NCA	National (Competent) Authority. Holds a list of TPPs registered in that particular country.	
PIS	Payment Initiation Service means a service to ini- tiate a payment order at the request of the pay- ment service user with respect to a payment ac- count held at another payment service provider	This service may be used by a PISP to initiate a single payment on behalf of a PSU using a given account of that PSU. The account is managed by the ASPSP



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	according to article 4 (15) of [PSD2] and as regulated by article 66 of [PSD2].	providing the XS2A Interface. Func- tionality and restrictions of this service comply with the requirements defined by article 66 of [PSD2].
PISP	Payment initiation service provider means a pay- ment service provider offering a PIS to its cus- tomer, according to article 4 (18) and point (7) of Annex I of [PSD2].	
PIISP	Payment Instrument Issuer Service Provider ac- cording to article 4 (14) and 45) of [PSD2]. A PIISP can use the service "Confirmation on the availability of funds" as regulated by article 65 of [PSD2].	
PSU	Payment Service User means a natural or legal person making use of a payment service in the capacity of payer, payee, or both according to article 4 (10) of [PSD2].	
QTSP	Qualified Trust Service Provider, e.g. a trust cen- tre issuing qualified certificates. Luxembourg: LuxTrust S.A.	
SCA	Strong Customer Authentication – authentication procedure based on two factors compliant with the requirements of [PSD2] and [EBA-RTS].	
TPP	Third Party Provider – generic term for AISP/PIISP/PISP.	
TSP/QTSP	Trust Service Provider according to [eIDAS]. Within the context of the XS2A interface specifi- cation only qualified TSPs (QTSPs) according to section 3 of [eIDAS] issuing qualified certificates for electronic seals and/or qualified certificates for website authentication which are compliant with the requirements of [EBA-RTS] are relev ant.	
XS2A	Access to account interface – interface provided by an ASPSP to TPP for accessing accounts.	
QSealC	Qualified Electronic Seal Certificates	
QWAC	Qualified Website Authentication Certificates	

