

Santander Open Banking API PSD2 Sandbox

Test scenarios

Version 1.2 (new with EMBEDDED and DECOUPLED)

Document release 08.11.2021



Description and preconditions

The Sandbox is our dedicated environment for testing your application. It contains a simulator for the various API responses. You may use any REST capable client like POSTMAN for execution, but you must use the provided Santander Sandbox eIDAS test certificate.

The simulator only supports the exact requests explained in the documentation of each endpoint. To get a response the request has to match specific input parameters like IBAN, consent-ID, transaction-ID, etc. If the simulator gets a request that does not match a request from the documentation, it will return an error message. The security mechanisms of the sandbox are the same as of the productive environment.

The Sandbox is only accessible with the special **eIDAS test certificate** available in the API Market Place.

The Client ID for this certificate is:

PSDDE-SANDBOX-0006

The default PSU credentials for the REDIRECT SCA authorization process are:

User: open
Password: banking

mTAN: 123456

<u>Request</u>					<u>Response</u>			<u>Additional Information</u>	
#	Method	Endpoints/Resources	Params	Header PSU-ID	Body	http code	Header ASPSP- SCA-	Body	Description
TPP Activation Access Token Discovery Service									
pr1	POST	/tpp_registrations/mutual_tls			{ "registeredRedirectUri": ["https://tpp-redirect.com/cb"] }	200 OK		none	TPP registration.
pt1	POST	/oauth_matls/token			grant_type = client_credentials	200 OK		access_token= <variable value> token_type= bearer expires_in= <countdown>	Token request to receive basic Access Token.
gd1	GET	/.well-known/oauth-authorization-server			none	200 OK		authorization_endpoint= https://api.santander.de/scb-	Receive the authorization endpoint URL and other information about the provided API services.

Request						Response		Additional Information	
#	Method	Endpoints/Resources/Params	Header PSU-ID	TPP-Redirect-Preferred	Body IBAN & scope	http code	Header ASPS-SCA-Approach	Body	Description
AIS - POST consents Create - /v1/consents									
pc1	POST	consents	9876543210 (valid)	false	iban=DE74310108330000009001 EUR RCUR=true FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	EMBEDDED	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 (consID-1) status=received {authorisationId}: d7e192b0-9ab7-4521-8102-dec274952567	Create a recurring consent resource, defining access rights to a dedicated account.
pc2	POST	consents	9876543210 (valid)	false	iban=DE36310108330000009006 EUR RCUR=false FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	DECOUPLED	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e status=received {authorisationId}: 9a661b31-0ef1-4bbf-9c8f-825e4554da0c (authID-2)	Create a one off consent resource, defining access rights to a dedicated account.
pc3	POST	consents	not given	not given	iban=DE47310108330000009002 EUR RCUR=true FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	REDIRECT	{consentId}: 443dce6a-6244-45bc-8100-80d47b1d0996 status=received	Create a recurring consent resource, defining access rights to a dedicated account.
pc4	POST	consents	9876543210 (valid)	not given	iban=DE20310108330000009003 EUR RCUR=true FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	REDIRECT	{consentId}: 618391be-3bb4-4edd-8763-d9d77189a532 status=received	Create a recurring consent resource, defining access rights to a dedicated account.
pc5	POST	consents	9876543210 (valid)	false	iban=DE90310108330000009004 EUR RCUR=true FREQ=2 ACCESS: accounts & balances & transactions	201 CREATED	EMBEDDED	{consentId}: ee36396a-2350-4dfb-82dc-ebae191a09e2 status=received {authorisationId}: c6bad6af-5bae-4bc4-a158-e31f8bea5b86 (authID-3)	Create a recurring consent resource, defining access rights to a dedicated account.
pc6	POST	consents	1234567890 (invalid)	false	iban=DE63310108330000009005 EUR RCUR=true FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	REDIRECT	{consentId}: 9539925b-38e9-4cbf-b8c0-854267e951e9 status=received	Create a recurring consent resource, defining access rights to a dedicated account.
pc7	POST	consents	not given	false	iban=DE09310108330000009007 EUR RCUR=true FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	REDIRECT	{consentId}: 133a88c9-7738-4646-8a10-399c4ce7edb6 status=received	Create a recurring consent resource, defining access rights to a dedicated account.
pc8	POST	consents	9876543210 (valid)	false	iban=DE79310108330000009008 EUR RCUR=true FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	DECOUPLED	{consentId}: 922ff722-f27e-477b-a5aa-de94bf235ce4 status=received {authorisationId}: 2d3b8b6c-e96d-443f-ab73-570cb98b0227 (authID-4)	Create a recurring consent resource, defining access rights to a dedicated account.
pc9	POST	consents	1234567890 (invalid)	true	iban=DE52310108330000009009 EUR accounts iban=DE25310108330000009010 EUR accounts & balances iban=DE95310108330000009011 EUR accounts & transactions RCUR=false FREQ=1	201 CREATED	REDIRECT	{consentId}: e14108e9-d96a-4a6a-a2a0-fb2c47b7088c status=received	Create a one off consent resource, defining access rights to a list of accounts, associating every account with a different level of access rights.
pc10	POST	consents	9876543210 (valid)	true	iban=DE853101083300000940100 EUR RCUR=true FREQ=4 ACCESS: accounts & balances & transactions	201 CREATED	REDIRECT	{consentId}: 8679fb42-d05c-4334-bcea-56d173293d69 status=received	Create a recurring consent resource, defining access rights to a dedicated account.
pc11	POST	consents	1234567890 (invalid)	not given	availableAccounts=allPsd2 RCUR=true FREQ=4	201 CREATED	REDIRECT	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 status=received	Create a recurring Global consent.
pc12	POST	consents	not given	true	availableAccounts=allPsd2 RCUR=false FREQ=1	201 CREATED	REDIRECT	{consentId}: e14108e9-d96a-4a6a-a2a0-fb2c47b7088c status=received	Create a one off Global consent.
pc13	POST	consents	9876543210 (valid)	true	iban=DE693101083300000940000 EUR ACCESS: *	400	BAD_REQUEST		Validation error occurred. This code will cover malformed syntax in request or incorrect data in payload.
pc14	POST	consents	1234567890 (invalid)	false	iban=DE203101083300000940300 EUR ACCESS: *	403	SERVICE_BLOCKED		The request was internally blocked, e.g. because of potential fraud.
pc15	POST	consents	not given	true	iban=DE483101083300000942900 EUR ACCESS: *	429	ACCESS_EXCEEDED		The TPP has exceeded the number of requests allowed by the consent (max. 4 times per day).
pc16	POST	consents	not given	not given	iban=DE203101083300000950000 EUR ACCESS: *	500	Internal Server Error		The creation of the consent failed.
AIS - PUT authorisation - /v1/consents/{consentId}/authorisation/{authorisationId} (PUT password/mTAN - only in case of the EMBEDDED approach)									
pa1	PUT	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 (consID-1) {authorisationId}: d7e192b0-9ab7-4521-8102-dec274952567 (authID-1)	9876543210 (valid)		{ "psuData": { "password": "start123" } }	200 OK	EMBEDDED	.	PUT valid password

#	Request				Response			Additional Information	
	Method	Endpoints/Resources/Params	Header PSU-ID	TPP-Redirect-Preferred	Body IBAN & scope	http code	Header ASPSP-SCA-Approach	Body	Description
pa2	PUT	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 {authorisationId}: d7e192b0-9ab7-4521-8102-dec274952567 (authID-1)	not required		{ "scaAuthenticationData": "123456" }	200 OK	EMBEDDED	.	PUT valid mTAN
pa3	PUT	{consentId}: ee36396a-2350-4dfb-82dc-ebae191a09e2 (consID-1) {authorisationId}: c6bad6af-5bae-4bc4-a158-e31f8bea5b86 (authID-3)	9876543210 (valid)		{ "psuData": { "password": "wrongpassword" } }	200 OK	EMBEDDED	.	PUT invalid password
pa4	PUT	{consentId}: ee36396a-2350-4dfb-82dc-ebae191a09e2 (consID-1) {authorisationId}: c6bad6af-5bae-4bc4-a158-e31f8bea5b86 (authID-3)	not required		{ "scaAuthenticationData": "666666" }	200 OK	EMBEDDED	.	PUT invalid mTAN
pa5	PUT	{consentId}: 5038d414-afcd-42b1-a4c2-e1c22a206132 {authorisationId}: 42b1-a4c2-e1c22a206132 (authID-5)	not required		{ "scaAuthenticationData": "999999" }	200 OK	EMBEDDED	.	Expecting the mTAN was given 3 times wrong
AIS - GET authorisation - /consents/{consentId}/authorisations/{authorisationId} (GET SCA status)									
gss1	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 (consID-1) {authorisationId}: d7e192b0-9ab7-4521-8102-dec274952567 (authID-1)				200 OK		{ "scaStatus": "psulidentified" }	GET SCA status
gss2	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {authorisationId}: 9a661b31-0ef1-4bbf-9c8f-825e4554da0c (authID-2)				200 OK		{ "scaStatus": "psulidentified" }	GET SCA status
gss3	GET	{consentId}: ee36396a-2350-4dfb-82dc-ebae191a09e2 {authorisationId}: c6bad6af-5bae-4bc4-a158-e31f8bea5b86 (authID-3)				200 OK		{ "scaStatus": "psuAuthenticated" }	GET SCA status
gss4	GET	{consentId}: 922ff722-f27e-477b-a5aa-de94bf235ce4 {authorisationId}: 2d3b8b6c-e96d-443f-ab73-570cb98b0227 (authID-4)				200 OK		{ "scaStatus": "finalised" }	GET SCA status
gss5	GET	{consentId}: 5038d414-afcd-42b1-a4c2-e1c22a206132 {authorisationId}: 42b1-a4c2-e1c22a206132 (authID-5)				200 OK		{ "scaStatus": "failed" }	GET SCA status
AIS - GET consents - /v1/consents/{consentId}									
gc1	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02				200 OK			The consent was successfully created.
gc2	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e				200 OK			The consent was successfully created.
gc3	GET	{consentId}: 443dce6a-6244-45bc-8100-80d47b1d0996				200 OK			The consent was successfully created.
gc4	GET	{consentId}: 618391be-3bb4-4edd-8763-d9d77189a532				200 OK			The consent was successfully created.
gc5	GET	{consentId}: ee36396a-2350-4dfb-82dc-ebae191a09e2				200 OK			The consent was successfully created.
gc6	GET	{consentId}: 9539925b-38e9-4cbf-b8c0-854267e951e9				200 OK			The consent was successfully created.
gc7	GET	{consentId}: 133a88c9-7738-4646-8a10-399c4ce7edb6				200 OK			The consent was successfully created.
gc8	GET	{consentId}: 922ff722-f27e-477b-a5aa-de94bf235ce4				200 OK			The consent was successfully created.
gc9	GET	{consentId}: e14108e9-d96a-4a6a-a2a0-fb2c47b7088c				200 OK			The consent was successfully created.
gc10	GET	{consentId}: f6672e9f-6d3a-40c2-9f34-a53e5f88938b				200 OK			The consent was successfully created.
gc11	GET	{consentId}: 8679fb42-d05c-4334-bcea-56d173293d69				200 OK			The consent was successfully created.
gc12	GET	{consentId}: 6bdf8d8c-6ce0-42a0-8dbd-5a452a2c47a1				200 OK			The consent was successfully created.
gc13	GET	{consentId}: 4a608e95-2f57-4bca-a15e-d17ff33d3e37				403 SERVICE_BLOCKED			The request was internally blocked, e.g. because of potential fraud.
gc14	GET	{consentId}: f5869c8d-6234-4bcc-b175-7d315c7a0d0e				403 RESOURCE_UNKNOWN			The consent does not belong to the requesting TPP.
AIS - GET consents status - /v1/consents/{consentId}/status									
gc15	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02				200 OK		received	The consent is accepted and valid for GET account data calls and others as specified in the consent object.
gc16	GET	{consentId}: 443dce6a-6244-45bc-8100-80d47b1d0996				200 OK		received	The consent data have been received and are technically correct. The data is not authorised yet.

#	Request			Response			Additional Information Description
	Method	Endpoints/Resources/Params	Header PSU-ID	Body TPP-Redirect-Preferred	http code	Header ASPSP-SCA-Approach	
gc17	GET	{consentId}: 618391be-3bb4-4edd-8763-d9d77189a532			200 OK		The consent data have been rejected e.g. since no successful authorisation has taken place.
gc18	GET	{consentId}: 6bdf8d8c-6ce0-42a0-8dbd-5a452a2c47a1			200 OK		The consent expired, e.g. 90-day limit exceeded.
gc19	GET	{consentId}: 9539925b-38e9-4cbf-b8c0-854267e951e9			200 OK		The corresponding TPP has terminated the consent by applying the DELETE method to the consent resource.
gc20	GET	{consentId}: 8679fb42-d05c-4334-bcea-56d173293d69			200 OK		The consent has been revoked by the PSU towards the ASPSP.
gc21	GET	{consentId}: e14108e9-d96a-4a6a-a2a0-fb2c47b7088c			200 OK		The consent has been revoked by the PSU towards the ASPSP.
gc22	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e			200 OK		The consent has been revoked by the PSU towards the ASPSP.
gc23	GET	{consentId}: 133a88c9-7738-4646-8a10-399c4ce7edb6			200 OK		The consent has been revoked by the PSU towards the ASPSP.
gc24	GET	{consentId}: 922ff722-f27e-477b-a5aa-de94bf235ce4			200 OK		The consent has been revoked by the PSU towards the ASPSP.
gc25	GET	{consentId}: ee36396a-2350-4dfb-82dc-ebae191a09e2			200 OK		The consent has been revoked by the PSU towards the ASPSP.
gc26	GET	{consentId}: f6672e9f-6d3a-40c2-9f34-a53e5f88938b			200 OK		The consent has been revoked by the PSU towards the ASPSP.
gc27	GET	{consentId}: 9029d61c-cce0-4339-b5fc-fccb37b46c82			200 OK		The consent data have been rejected e.g. since no successful authorisation has taken place.
gc28	GET	{consentId}: 967c7d5f-d8c9-4d80-bbc7-d6e249cdcddeb			200 OK		The consent data have been rejected e.g. since no successful authorisation has taken place.
gc29	GET	{consentId}: 4a608e95-2f57-4bca-a15e-d17ff33d3e37			403 SERVICE_BLOCKED		The request was internally blocked, e.g. because of potential fraud.
gc30	GET	{consentId}: f5869c8d-6234-4bcc-b175-7d315c7a0d0e			403 RESOURCE_UNKNOWN		The consent does not belong to the requesting TPP.
AIS - DELETE consents - /v1/consents/{consentId}							
dc1	DELETE	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e			204 No Content		Consent was successfully deleted.
dc2	DELETE	{consentId}: 4a608e95-2f57-4bca-a15e-d17ff33d3e37			403 SERVICE_BLOCKED		The request was internally blocked, e.g. because of potential fraud.
dc3	DELETE	{consentId}: f5869c8d-6234-4bcc-b175-7d315c7a0d0e			403 RESOURCE_UNKNOWN		The requested consent does not belong to the requesting TPP.
AIS - GET accounts - /v1/accounts (consentId in header)							
ga1	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02			200 OK		The request successfully retrieved the resourceId for the given consent.
ga2	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e			200 OK		The request successfully retrieved the resourceId for the given consent.
ga3	GET	{consentId}: ee36396a-2350-4dfb-82dc-ebae191a09e2			200 OK		The request successfully retrieved the resourceId for the given consent.
ga4	GET	{consentId}: 133a88c9-7738-4646-8a10-399c4ce7edb6			200 OK		The request successfully retrieved the resourceId for the given consent.
ga5	GET	{consentId}: 922ff722-f27e-477b-a5aa-de94bf235ce4			200 OK		The request successfully retrieved the resourceId for the given consent.
ga6	GET	{consentId}: e14108e9-d96a-4a6a-a2a0-fb2c47b7088c			200 OK		The request successfully retrieved the resourceId's for the given consent.
ga7	GET	{consentId}: 8679fb42-d05c-4334-bcea-56d173293d69			200 OK		The request successfully retrieved the resourceId's for the given consent.
ga8	GET	{consentId}: 03871f7d-840e-4646-b178-997877f70eef			400 CONSENT_UNKNOWN		Validation error occurred. This code will cover malformed syntax in request or incorrect data in payload.
ga9	GET	{consentId}: 19713094-fad8-4fea-83c1-5a6afd11bc6f			401 CONSENT_INVALID		The consent was created by this TPP but is not valid for the addressed service/resource.
ga10	GET	{consentId}: 443dce6a-6244-45bc-8100-80d47b1d0996			401 CONSENT_INVALID		The consent was created by this TPP but is not valid for the addressed service/resource.
ga11	GET	{consentId}: 618391be-3bb4-4edd-8763-d9d77189a532			401 CONSENT_INVALID		The consent was created by this TPP but is not valid for the addressed service/resource.

#	Request			Response			Additional Information
	Method	Endpoints/Resources/Params	Header PSU-ID	Body TPP-Redirect-Preferred	Header ASPSP-SCA-Approach	Body IBAN & scope	
ga12	GET	{consentId}: 6bdf8d8c-6ce0-42a0-8dbd-5a452a2c47a1			401	CONSENT_EXPIRED	The consent was created by this TPP but has expired and needs to be renewed.
ga13	GET	{consentId}: f6672e9f-6d3a-40c2-9f34-a53e5f88938b			403	SERVICE_BLOCKED	The request was internally blocked, e.g. because of potential fraud.
ga14	GET	{consentId}: d3494847-0daa-4b27-b174-1eb41f89f102			404	PRODUCT_UNKNOWN	The addressed payment product is not supported by the ASPSP.
AIS - GET accounts details - /v1/accounts/{resourceId} (+ consentId in header)							
ga15	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 {resourceId}: 3b5a3b70-ceec-4518-b23e-ee5d1302f532			200	OK iban=DE74310108330000009001 ownerName="My account owner name" expected=EUR 175387.25 authorised=EUR 180387.25	Retrieve the account balance for the account-1
ga16	GET	{consentId}: 8679fb42-d05c-4334-bcea-56d173293d69 {resourceId}: 0a0afa33-4db9-4748-818d-2223a66d679			200	OK iban=DE85310108330000940100 ownerName="My account owner name" expected=EUR 175387.25 authorised=EUR 180387.25	The consent was created by this TPP but is not valid for the addressed service/resource.
ga17	GET	{consentId}: 837b1d18-521a-4d9a-9e8f-05edc6832e7b {resourceId}: *			401	CONSENT_INVALID	The consent was created by this TPP but is not valid for the addressed service/resource.
ga17	GET	{consentId}: 6bdf8d8c-6ce0-42a0-8dbd-5a452a2c47a1 {resourceId}: *			401	CONSENT_EXPIRED	The consent was created by this TPP but has expired and needs to be renewed.
ga18	GET	{consentId}: f6672e9f-6d3a-40c2-9f34-a53e5f88938b {resourceId}: *			403	SERVICE_BLOCKED	The request was internally blocked, e.g. because of potential fraud.
ga19	GET	{consentId}: d3494847-0daa-4b27-b174-1eb41f89f102 {resourceId}: *			404	PRODUCT_UNKNOWN	The addressed payment product is not supported by the ASPSP.
AIS - GET accounts balances - /v1/accounts/{resourceId}/balances (+ consentId in header)							
ga20	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 {resourceId}: 3b5a3b70-ceec-4518-b23e-ee5d1302f532			200	OK iban=DE74310108330000009001 expected=EUR 175387.25 authorised=EUR 180387.25	Retrieve the account balance for the account-1
ga21	GET	{consentId}: 133a88c9-7738-4646-8a10-399c4ce7edb6 {resourceId}: 13b2bb5c-eb1f-4678-9231-0ea05ab83b8e			200	OK iban=DE09310108330000009007 expected=EUR -1387.55 authorised=EUR -1387.55	Retrieve the account balance for the account-1
ga22	GET	{consentId}: e14108e9-d96a-4a6a-a2a0-fb2c47b7088c {resourceId}: 4917db47-9f0b-4281-b839-445007721987			401	CONSENT_INVALID	The consent was created by this TPP but is not valid for the addressed service/resource.
ga23	GET	{consentId}: 6bdf8d8c-6ce0-42a0-8dbd-5a452a2c47a1 {resourceId}: *			401	CONSENT_EXPIRED	The consent was created by this TPP but has expired and needs to be renewed.
ga24	GET	{consentId}: f6672e9f-6d3a-40c2-9f34-a53e5f88938b {resourceId}: *			403	SERVICE_BLOCKED	The request was internally blocked, e.g. because of potential fraud.
ga25	GET	{consentId}: d3494847-0daa-4b27-b174-1eb41f89f102 {resourceId}: *			404	PRODUCT_UNKNOWN	The addressed payment product is not supported by the ASPSP.
AIS - GET accounts transactions - /v1/accounts/{resourceId}/transactions (+ consentId in header)							
ga26	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 {resourceId}: 3b5a3b70-ceec-4518-b23e-ee5d1302f532 application/json			200	OK tx-ID-3=3102900000015BH48100001000120190313 tx-ID-4=4041700000003BH22899999000120190313	Retrieve transactions in JSON-format for the actual date without balance information.
ga27	GET	{consentId}: 3087d8e2-2eb0-4e54-9af9-32ea8c6eef02 {resourceId}: 3b5a3b70-ceec-4518-b23e-ee5d1302f532 application/json			200	OK tx-ID-3=3102900000015BH48100001000120190313 tx-ID-4=4041700000003BH22899999000120190313 expected=EUR 175387.25 authorised=EUR 180387.25	Retrieve transactions in JSON-format with balance information.
ga28	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {resourceId}: bd0c44a4-2828-49bc-9885-c2a41e2c6d7d FROM=2019-03-12 TO=2019-03-13 application/json			200	OK tx-ID-1=4000100000015IP88799999000120190312 tx-ID-2=4001200000015BH89599999000220190313	Retrieve transactions in JSON-format without balance information.

#	Request			Response		Additional Information	
	Method	Endpoints/Resources/Params	Header PSU-ID	Body TPP-Redirect-Preferred	Header ASPSP-SCA-Approach	Body	Description
ga29	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {resourceId}: bd0c44a4-2828-49bc-9885-c2a41e2c6d7d FROM=2019-03-12 TO=2019-03-13 application/json				tx-ID-1=4000100000015IP88799999000120190312 tx-ID-2=4001200000015BH89599999000220190313 openingBooked=95000.00 closingBooked=150000.00	Retrieve transactions in JSON-format with balance information.
ga30	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {resourceId}: bd0c44a4-2828-49bc-9885-c2a41e2c6d7d FROM=2019-03-13 TO=2019-03-14 application/json				tx-ID-1=4001200000015BH89599999000220190313 tx-ID-2=3102900000015IP99900001000120190314 openingBooked=110000.00 closingBooked=147500.00	Retrieve transactions in JSON-format with balance information.
ga31	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {resourceId}: bd0c44a4-2828-49bc-9885-c2a41e2c6d7d FROM=2019-03-12 TO=2019-03-13 application/xml				tx-ID-1=4000100000015IP88799999000120190312 tx-ID-2=4001200000015BH89599999000220190313	Retrieve transactions in CAMT-format without balance information.
ga32	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {resourceId}: bd0c44a4-2828-49bc-9885-c2a41e2c6d7d FROM=2019-03-12 TO=2019-03-13 application/xml				tx-ID-1=4000100000015IP88799999000120190312 tx-ID-2=4001200000015BH89599999000220190313 PRCD=95000.00 CLBD=150000.00	Retrieve transactions in CAMT-format with balance information.
ga33	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {resourceId}: bd0c44a4-2828-49bc-9885-c2a41e2c6d7d FROM=2019-03-13 TO=2019-03-14 application/xml				tx-ID-1=4001200000015BH89599999000220190313 tx-ID-2=3102900000015IP99900001000120190314 PRCD=110000.00 CLBD=147500.00	Retrieve transactions in CAMT-format with balance information.
ga34	GET	{consentId}: fb7a12ea-0e95-49a3-9c69-7da5afa8467e {resourceId}: bd0c44a4-2828-49bc-9885-c2a41e2c6d7d				debtorAccount=DE36310108330000009006 creditorAccount=DE40100100103307118608 creditorName="My creditor" instructedAmount=EUR 12.34 remittanceInformationUnstructured="My standing order" startDate="2019-03-14" endDate="2021-03-14" frequency="Monthly" multiplier=4 dayOfExecution="17"	Retrieve standing order information.
ga35	GET	{consentId}: e14108e9-d96a-4a6a-a2a0-fb2c47b7088c {resourceId}: a7fe833e-7ba7-4396-8ae9-8d3542740969					The consent was created by this TPP but is not valid for the addressed service/resource.
ga36	GET	{consentId}: 6bdf8d8c-6ce0-42a0-8dbd-5a452a2c47a1{resourceId}: *					The consent was created by this TPP but has expired and needs to be renewed.
ga37	GET	{consentId}: f6672e9f-6d3a-40c2-9f34-a53e5f88938b{resourceId}: *					The request was internally blocked, e.g. because of potential fraud.
ga38	GET	{consentId}: d3494847-0daa-4b27-b174-1eb41f89f102{resourceId}: *					The addressed payment product is not supported by the ASPSP.

#	Request					Response			Additional Information	
	Method	Endpoints/Resources/Params	Header PSU-ID	TPP-Redirect-Preferred	Body IBAN & scope	http code	Header ASPS-SCA-Approach	Body	Description	
PIS - POST Payments - /v1/payments/{payment-product}										
pp1	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	false	debtor given and valid debtorAccount= DE74310108330000009001	201 OK	EMBEDDED	paymentid=73c52dc3-bd44-42b3-bc86-6b61c3167b63 status=RCVD authorisationId = d7e192b0-9ab7-4521-8102-dec274952567 (authID-1)	Payment-id for SEPA-transfer successfully created.	
pp2	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	false	debtor given and valid debtorAccount= DE36310108330000009006	201 OK	DECOUPLED	paymentid=e1cb8e97-a4bc-43f2-bc33-42e4db7208e0 status=RCVD authorisationId=2d3b8b6c-e96d-443f-ab73-570cb98b0227	Payment-id for SEPA-transfer successfully created.	
pp3	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE47310108330000009002	201 OK	REDIRECT	paymentid=2f67e2b4-6d54-4ba3-9238-5a9f207302b9 status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp4	POST	{payment-product}: sepa-credit-transfers	1234567890 (invalid)	false	debtor given and valid debtorAccount= DE20310108330000009003	201 OK	REDIRECT	paymentid=1ab0dac7-dd1f-4e8a-be2a-140ec3cabf31 status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp5	POST	{payment-product}: sepa-credit-transfers	1234567890 (invalid)	true	debtor given and valid debtorAccount= DE90310108330000009004	201 OK	REDIRECT	paymentid=1ca90d02-a572-4b3a-aa17-db1ccec3f7c5 status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp6	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	false	debtor account <u>not</u> given <u>creditor</u> Account= DE40100100103307118608	201 OK	REDIRECT	paymentid=6053e0eb-cf0f-4094-b863-ec4e79f3d7fd status=RCVD	Request a SEPA transfer without a given debtor account.	
pp7	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	false	debtor account <u>not</u> given <u>creditor</u> Account= DE67100100101306118605	201 OK	REDIRECT	paymentid=72fd0c79-b174-4517-9276-404a5b0120a3 status=RCVD	Request a SEPA transfer without a given debtor account.	
pp8	POST	{payment-product}: pain.001-sepa-credit-transfers	not given	false	debtor given and valid debtorAccount= DE74310108330000009001	201 OK	REDIRECT	paymentid=1c62ab4d-c5d1-4c66-9fee-8cf76697843f status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp9	POST	{payment-product}: pain.001-sepa-credit-transfers	not given	not given	debtor given and valid debtorAccount= DE36310108330000009006	201 OK	REDIRECT	paymentid=55c1eba8-0c2e-4fc2-9395-4bc55ea03d9f status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp10	POST	{payment-product}: pain.001-sepa-credit-transfers	1234567890 (invalid)	not given	debtor given and valid debtorAccount= DE47310108330000009002	201 OK	REDIRECT	paymentid=a0a07500-3344-490a-ab22-b047e94987a6 status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp11	POST	{payment-product}: pain.001-sepa-credit-transfers	9876543210 (valid)	not given	debtor given and valid debtorAccount= DE20310108330000009003	201 OK	REDIRECT	paymentid=d8129ea4-a901-4174-93a3-11e299d018a1 status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp12	POST	{payment-product}: pain.001-sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE90310108330000009004	201 OK	REDIRECT	paymentid=86538519-45f9-44cd-95e6-5182a680fd9f status=RCVD	Payment-id for SEPA-transfer successfully created.	
pp13	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE42310108330000940001	400	FORMAT_ERROR		The parsing of the SEPA pain.001 request fields failed.	
pp14	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE31310108330000940005	400	PAYMENT_FAILED		The payment initiation POST request failed during the initial process.	
pp15	POST	{payment-product}: sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE20310108330000940300	403	SERVICE_BLOCKED		The request was internally blocked, e.g. because of potential fraud.	
pp16	POST	{payment-product}: instant-sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE36310108330000940400	404	PRODUCT_UNKNOWN		The addressed payment product is not supported by the ASPSP.	

#	Request					Response			Additional Information	
	Method	Endpoints/Resources/Params	Header PSU-ID	TPP-Redirect-Preferred	Body IBAN & scope	http code	Header ASPS-SCA-Approach	Body	Description	
pp17	POST	{payment-product}: target-2-payments	9876543210 (valid)	true	debtor given and valid debtorAccount= DE36310108330000940400	404	PRODUCT_UNKNOWN		The addressed payment product is not supported by the ASPSP.	
pp18	POST	{payment-product}: cross-border-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE36310108330000940400	404	PRODUCT_UNKNOWN		The addressed payment product is not supported by the ASPSP.	
pp21	POST	!Future Payments! {payment-product}: sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE3631010833000009006	201	OK	REDIRECT paymentid=9544dc70-8dc8-4cbe-9b76-809bb2a38bd6 status=RCVD	Future Payment-id for SEPA-transfer successfully created.	
pp22	POST	!Future Payments! {payment-product}: pain.001-sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE3631010833000009006	201	OK	REDIRECT paymentid=e8dce2bb-8740-451f-94e9-f233ad73cee3 status=RCVD	Future Payment-id for SEPA-transfer successfully created.	
pp23	POST	! periodic-payments ! {payment-product}: sepa-credit-transfers	9876543210 (valid)	true	debtor given and valid debtorAccount= DE3631010833000009006	201	OK	REDIRECT paymentid=aa02162c-ba9f-4489-b295-237b65eb03c0 status=RCVD	Create a standing order initiation resource for recurrent i.e. periodic payments addressable under (paymentid).	
PIS - PUT authorisation - /v1/payments/{payment-product}/{paymentid}/authorisation/{authorisationid} (PUT password/mTAN - only in case of the EMBEDDED approach)										
ppa1	PUT	{payment-product}: sepa-credit-transfers {paymentid}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationid}: d7e192b0-9ab7-4521-8102-dec274952567 (authID-1)	9876543210 (valid)		{ "psuData": { "password": "start123" } }	200	OK	EMBEDDED .	PUT password - good flow.	
ppa2	PUT	{payment-product}: sepa-credit-transfers {paymentid}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationid}: d7e192b0-9ab7-4521-8102-dec274952567 (authID-1)	not required		{ "scaAuthenticationData": "123456" }	200	OK	EMBEDDED .	PUT mTAN - good flow.	
ppa3	PUT	{payment-product}: sepa-credit-transfers {paymentid}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationid}: 9a661b31-0ef1-4bbf-9c8f-825e4554da0c (authID-2)	9876543210 (valid)		"psuData": { "password": "wrongpassword"	200	OK	EMBEDDED .	PUT password with wrong password good flow.	
ppa4	PUT	{payment-product}: sepa-credit-transfers {paymentid}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationid}: 9a661b31-0ef1-4bbf-9c8f-825e4554da0c (authID-2)	not required		{ "scaAuthenticationData": "666666" }	200	OK	EMBEDDED .	PUT mTAN, the given mTAN was wrong	
ppa5	PUT	{payment-product}: sepa-credit-transfers {paymentid}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationid}: c6bad6af-5bae-4bc4-a158-e31f8bea5b86 (authID-3)	not required		{ "scaAuthenticationData": "999999" }	200	OK	EMBEDDED .	PUT mTAN, expecting the mTAN was given 3 times wrong	

#	Request			Response			Additional Information	
	Method	Endpoints/Resources/Params	Header PSU-ID	Body TPP-Redirect-Preferred IBAN & scope	http code	Header ASPS-SCA-Approach	Body	Description
AIS - GET authorisation (GET SCA status) - /v1/payments/{payment-product}/{paymentId}/authorisations/{authorisationId}								
pgss1	GET	{payment-product}: sepa-credit-transfers {paymentId}: f12bf48f-72e9-4822-9d61-442b502795c8 {authorisationId}: 5038d414-afcd-42b1-a4c2-e1c22a206132 (authID-5)	not required		200 OK	not given	{ "scaStatus": "psuIdentified" }	Request SCA status
pgss2	GET	{payment-product}: sepa-credit-transfers {paymentId}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationId}: 9a661b31-0ef1-4bbf-9c8f-825e4554da0c (authID-2)	not required		200 OK	not given	{ "scaStatus": "psuAuthenticated" }	Request SCA status
pgss3	GET	{payment-product}: sepa-credit-transfers {paymentId}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationId}: d7e192b0-9ab7-4521-8102-dec274952567 (authID-1)	not required		200 OK	not given	{ "scaStatus": "finalised" }	Request SCA status
pgss4	GET	{payment-product}: sepa-credit-transfers {paymentId}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63 {authorisationId}: c6bad6af-5bae-4bc4-a158-e31f8bea5b86 (authID-3)	not required		200 OK	not given	{ "scaStatus": "failed" }	Request SCA status
pgss5	GET	{payment-product}: sepa-credit-transfers {paymentId}: e1cb8e97-a4bc-43f2-bc33-42e4db7208e0 {authorisationId}: 2d3b8b6c-e96d-443f-ab73-570cb98b0227 (authID-4)	not required		200 OK	not given	{ "scaStatus": "psuIdentified" }	Request SCA status
PIS - GET payments details - /v1/payments/{payment-product}/{paymentId}								
gp1	GET	{payment-product}: sepa-credit-transfers {paymentId}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63			200 OK		debtorAccount=DE74310108330000009001 creditorAccount=DE40100100103307118608 creditorName="Sunny AG" instructedAmount=EUR 90.01 remittanceInformationUnstructured="Invoice" status=RCVD	Payment initiation has been received by the receiving agent.
gp2	GET	{payment-product}: sepa-credit-transfers {paymentId}: 6053e0eb-cf0f-4094-b863-ec4e79f3d7fd			200 OK		creditorAccount=DE40100100103307118608 creditorName="Well known creditor" instructedAmount=EUR 137.99 remittanceInformationUnstructured="Unconfirmed purchase" status=RCVD	Payment initiation has been received by the receiving agent without debtor account. As the payment has not yet been confirmed by the PSU it is still lacking the debtor account.
gp3	GET	{payment-product}: sepa-credit-transfers {paymentId}: 72fd0c79-b174-4517-9276-404a5b0120a3			200 OK		debtorAccount=DE63310108330000009005 creditorAccount=DE67100100101306118605 creditorName="Well known creditor" instructedAmount=EUR 122.95 remittanceInformationUnstructured="Confirmed purchase" status=ACFC	Payment initiation has been received by the receiving agent without debtor account. As the payment was confirmed by the PSU it contains the debtor account chosen during the SCA process.

#	Request			Response			Additional Information	
	Method	Endpoints/Resources/Params	Header PSU-ID	Body TPP-Redirect-Preferred IBAN & scope	http code	Header ASPS-SCA-Approach	Body	Description
gp4	GET	{payment-product}: pain.001-sepa-credit-transfers {paymentId}: e1cb8e97-a4bc-43f2-bc33-42e4db7208e0			200 OK		<DbtrAcct><Id><IBAN>DE36310108330000009006 <CdtrAcct><Id><IBAN>DE40100100103307118608 <Cdtr><>Nm>Sunny AG <InstdAmt>Eur 90.06 <RmtInf><Ustrd>Invoice	Preceding check of technical validation was successful. Customer profile check was also successful.
PIS - GET payments status - /v1/payments/{payment-product}/{paymentId}/status								
gp5	GET	{payment-product}: sepa-credit-transfers {paymentId}: 73c52dc3-bd44-42b3-bc86-6b61c3167b63			200 OK		RCVD (Received)	Payment initiation has been received by the receiving agent.
gp6	GET	{payment-product}: sepa-credit-transfers {paymentId}: e1cb8e97-a4bc-43f2-bc33-42e4db7208e0			200 OK		ACTC (AcceptedTechnicallyChecked) fundsAvailable=true	Preceding check of technical validation was successful. Customer profile check was also successful.
gp7	GET	{payment-product}: sepa-credit-transfers {paymentId}: 2f67e2b4-6d54-4ba3-9238-5a9f207302b9			200 OK		ACFC (AcceptedFundsCheckComplete)	Payment initiation has been accepted for execution.
gp8	GET	{payment-product}: sepa-credit-transfers {paymentId}: 6053e0eb-cf0f-4094-b863-ec4e79f3d7fd			200 OK		RCVD (Received)	Payment initiation has been received by the receiving agent.
gp9	GET	{payment-product}: sepa-credit-transfers {paymentId}: 72fd0c79-b174-4517-9276-404a5b0120a3			200 OK		ACFC (AcceptedFundsCheckComplete)	Payment initiation has been accepted for execution.
gp10	GET	{payment-product}: sepa-credit-transfers {paymentId}: 1ab0dac7-dd1f-4e8a-be2a-140ec3cabf31			200 OK		RJCT (Rejected)	Payment initiation or individual transaction included in the payment initiation has been rejected.
gp11	GET	{payment-product}: sepa-credit-transfers {paymentId}: 1ca90d02-a572-4b3a-aa17-db1ccec3f7c5			403 SERVICE_BLOCKED			The request was internally blocked, e.g. because of potential fraud.
gp12	GET	{payment-product}: pain.001-sepa-credit-transfers {paymentId}: 1c62ab4d-c5d1-4c66-9fee-8cf76697843f			200 OK		RCVD (Received)	Payment initiation has been received by the receiving agent.
gp13	GET	{payment-product}: pain.001-sepa-credit-transfers {paymentId}: 55c1eba8-0c2e-4fc2-9395-4bc55ea03d9f			200 OK		ACTC (AcceptedTechnicallyChecked) fundsAvailable=true	Preceding check of technical validation was successful. Customer profile check was also successful.
gp14	GET	{payment-product}: pain.001-sepa-credit-transfers {paymentId}: a0a07500-3344-490a-ab22-b047e94987a6			200 OK		ACFC (AcceptedFundsCheckComplete)	Payment initiation has been accepted for execution.
gp15	GET	{payment-product}: pain.001-sepa-credit-transfers {paymentId}: d8129ea4-a901-4174-93a3-11e299d018a1			200 OK		RJCT (Rejected)	Payment initiation or individual transaction included in the payment initiation has been rejected.

#	Request			Response		Additional Information		
	Method	Endpoints/Resources/Params	Header PSU-ID	Body TPP-Redirect-Preferred IBAN & scope	http code Header ASPSP-SCA-Approach	Body	Description	
gp16	GET	{payment-product}: pain.001-sepa-credit-transfers {paymentId}: 86538519-45f9-44cd-95e6-5182a680fd9f			403	SERVICE_BLOCKED	The request was internally blocked, e.g. because of potential fraud.	
gp17	GET	! Future Payments ! {payment-product}: sepa-credit-transfers {paymentId}: 9544dc70-8dc8-4cbe-9b76-809bb2a38bd6			200	OK	debtorAccount=DE36310108330000009006 creditorAccount=DE40100100103307118608 creditorName="Sunny AG" instructedAmount=EUR 123.10 remittanceInformationUnstructured="Birthday" requestedExecutionDate="2019-04-14" status=ACCP (Accepted)	Preceding check for Future Payments was successful. Customer profile check was also successful.
gp18	GET	! Future Payments ! {payment-product}: pain.001-sepa-credit-transfers {paymentId}: e8dce2bb-8740-451f-94e9-f233ad73cee3			200	OK	<DbtrAcct><Id><IBAN>DE36310108330000009006 <CdtrAcct><Id><IBAN>DE40100100103307118608 <Cdtr><Nm>Sunny AG <InstAmt>EUR 456.90 <RmtInf><Ustrd>Chargeback <ReqdExctnDt>2019-04-14 ACCP (Accepted)	Preceding check for Future Payments was successful. Customer profile check was also successful.
gp19	GET	! Future Payments ! {payment-product}: sepa-credit-transfers {paymentId}: 9544dc70-8dc8-4cbe-9b76-809bb2a38bd6			200	OK	ACCP (Accepted)	Preceding check for Future Payments was successful. Customer profile check was also successful.
gp20	GET	! Future Payments ! {payment-product}: pain.001-sepa-credit-transfers {paymentId}: e8dce2bb-8740-451f-94e9-f233ad73cee3			200	OK	ACCP (Accepted)	Preceding check for Future Payments was successful. Customer profile check was also successful.
PIS - GET periodic-payments details - /v1/periodic-payments/{payment-product}/{paymentId}								
gp21	GET	! periodic-payments ! periodic-payments/sepa-credit-transfers/{paymentId} {paymentId}: aa02162c-ba9f-4489-b295-237b65eb03c0			200	OK	debtorAccount=DE36310108330000009006 creditor IBAN=DE40100100103307118608 creditorName="Sunny AG" instructedAmount=EUR 500.00 remittanceInformationUnstructured="Monthly rental" startDate="2019-03-14" endDate="2020-03-14" frequency="Monthly" status=ACCP	Read the details of an initiated standing order for recurring/periodic payments.
PIS - GET periodic-payments status - /v1/periodic-payments/{payment-product}/{paymentId}/status								
gp22	GET	! periodic-payments ! {payment-product}: sepa-credit-transfers {paymentId}: aa02162c-ba9f-4489-b295-237b65eb03c0			200	OK	ACCP (Accepted)	Read the transaction status of the standing order for recurring/periodic payments.
PIS - DELETE payments - /v1/payments/{payment-product}/{paymentId}								
dp1	DELETE	{payment-product}: sepa-credit-transfers {paymentId}: 9544dc70-8dc8-4cbe-9b76-809bb2a38bd6			204	OK		Request cancellation of a Future Payment
PIS - DELETE periodic-payments - /v1/periodic-payments/{payment-product}/{paymentId}								
dp2	DELETE	{payment-product}: pain.001-sepa-credit-transfers {paymentId}: aa02162c-ba9f-4489-b295-237b65eb03c0			204	OK		Request cancellation of a Standing Order

#	Request					Response		Additional Information	
	Method	Endpoints/Resources	Params	Header PSU-ID	Body IBAN & scope	http code	Header ASPSP-SCA- Approach	Body	Description
CoF - Funds Confirmation									
pf1	POST	funds-confirmations			iban=DE42310108330000940001	200 OK		true	The requested account has sufficient funds.
pf2	POST	funds-confirmations			iban=DE36310108330000090006	200 OK		false	The requested account hasn't sufficient funds.
pf3	POST	funds-confirmations			iban=DE04310108330000940006	400 NO_PIIS_ACTIVATION			The PSU has not activated the addressed account for the usage of the PIIS associated with the TPP.
pf4	POST	funds-confirmations			iban=DE20310108330000940300	403 CONSENT_UNKNOWN			The request was internally blocked, e.g. because of potential fraud.