Digital Transaction Register

Issuer Interface Agreement

Version: 4.0

Status: Final

Change History

The following table shows the history of changes to this document.

Date	Author	Change history
25/03/2020	Luca Somaruga	First version Draft
02/09/2020	Denisa Braho	Final Version
22/09/2020	Denisa Braho	Update "Payment instrument enrolment" (paragraphs 1.1.4, 1.2.5). Request and response call parameters updated
08/10/2020	Michael Desogus	Added Appendices 1 and 2 relating to authentication certificates and authentication wizard
14/10/2020	Denisa Braho	"Setting/Modifying IBAN" call parameters updated
23/10/2020	Denisa Braho	- Paragraph relating to payment instrument enrolment updated, entering the calls with specific parameters based on the payment instrument *(in review)* - Added the paragraphs relating to the new APIs envisaged on BPD: - Award Period List - Retrieving ranking - Retrieving total cashback

18/11/2020	Denisa Braho	- Added Paragraph "Unsubscribe Citizen" - Update: Paragraph 1.1.8 "List Award Periods" adding new parameters in the Response body
24/11/2020	Denisa Braho	- Added error 404 in the paragraph "Retrieve Payment Instrument Status" - Added error 409 in the API "Enrollment Payment Instrument" - Added error 404 in the API "Citizen Status" - Added note in the "Enrollment Payment Instruments" paragraph
25/11/2020	Luca Somaruga	Updated paragraphs: 1.1.3; 1.1.6, 1.2.4 and 1.25
27/11/2020	Luca Somaruga	Updated: paragraph 1.1.3.1 - changed format of the parameter brand and type
27/11/2020	Denisa Braho	Updated: paragraph 1.1.2: added new parameter in the body request
11/12/2020	Denisa Braho	Updated: paragraph 1.1.3.1 and 1.1.7 - added new parameters necessary to enroll tokenized cards.
17/12/2020	Denisa Braho	Updated: paragraph 1.1.3.2
18/12/2020	Denisa Braho	- Added: paragraph 1.1.12

		- Updated: paragraph 1.1.6
05/03/2021	Denisa Braho	- New API: 1.1.3.4 Other Payment Instrument Enrolment - Updated API: 1.1.2 “Setting/Modifying IBAN” and 1.1.5 Citizen Status in order to manage the technical Accounts
08/03/2021	Denisa Braho	- Updated API 1.1.3.1: Added new possible value in the field “brand”
09/03/2021	Denisa Braho	- Updated API 1.1.3.4: updated the description of the body parameters
25/03/2021	Denisa Braho	- Updated API 1.1.3.4: updated the body parameters
07/06/2021	Denisa Braho	- Added paragraph 1.3: Token Manager API’s

Glossary

The table below summarises the list of terms and acronyms contained in the document in question.

Term/Acronym	Definition
RTD	Digital Transaction Log
BPD	Digital Payments Bonus
FA	Automatic Billing

CF	User Tax Code
PAN	Primary Account Number
HPAN	Hash of the Primary Account Number (PAN) of a digital payment instrument
MVP	Minimum Viable Product
TBD	To Be Defined
N/A	Not applicable
T&C	Terms & Conditions

Definitions and semantics

The following table shows the semantics of the key terms used in the document in order to articulate the Platform logic.

Term	Definition
User	Identifies the person who makes a purchase transaction with a card at a particular *Merchant* and represents the subject to whom the *Bonus* will be awarded. **In the following document, some synonyms of the term User will be used, for example *Cardholder* (to underline card ownership).**
Merchant	The term *Merchant* identifies all the operators present in the system.
Acquirer	Payment institution or bank that offers its collection services to merchants, installing physical POSs at their premises or in any case intermediating

	payment transactions.
Issuer	Subject subscribing to a Circuit, which issues Cards or other payment instruments, managing the relationship with the Holders.

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Introduction and purpose of the document

The purpose of this document is to describe the application solution, in all its interfaces and the different flows of incoming or outgoing events to be managed and the related data exchange methods, as well as the High Level executive architecture, with particular reference to the interfaces presented by the PagoPa SpA systems to the Issuer subjects.

Introduction and purpose of the initiative

The objective of the project is the creation of a technological infrastructure which allows to enable new use cases and services for citizens and businesses, mainly focused on the digitalisation of payments through the use of cards and payment instruments through physical POSs.

The pillar of the new infrastructure is communications with the Acquirer entities operating in Italy.

The PagoPa platform CentroStella must manage information that must comply with all the requirements of the GDPR; in particular, it must not be allowed to trace the individual transaction and recover the personal data of the payers and/or the payment in any way.

The macro components covered by the initiative are listed below:

<table>
<tr><td colspan="2">DIGITAL TRANSACTION LOG (RTD)
Aggregates commercial transactions carried out through digital payment instruments, both by individuals and by companies through physical POSs throughout Italy. A single log that enables the creation of electronic billing, welfare and automation incentive solutions.</td></tr>
<tr><td>AUTOMATIC BILLING
Relies on the Digital Transaction Log for the automatic issuance of electronic invoices in the context of a payment made by a company.</td><td>DIGITAL PAYMENTS BONUS
Relies on the Digital Transaction Log to award bonuses to citizens who make payments through digital payment instruments.</td></tr>
</table>

Objective

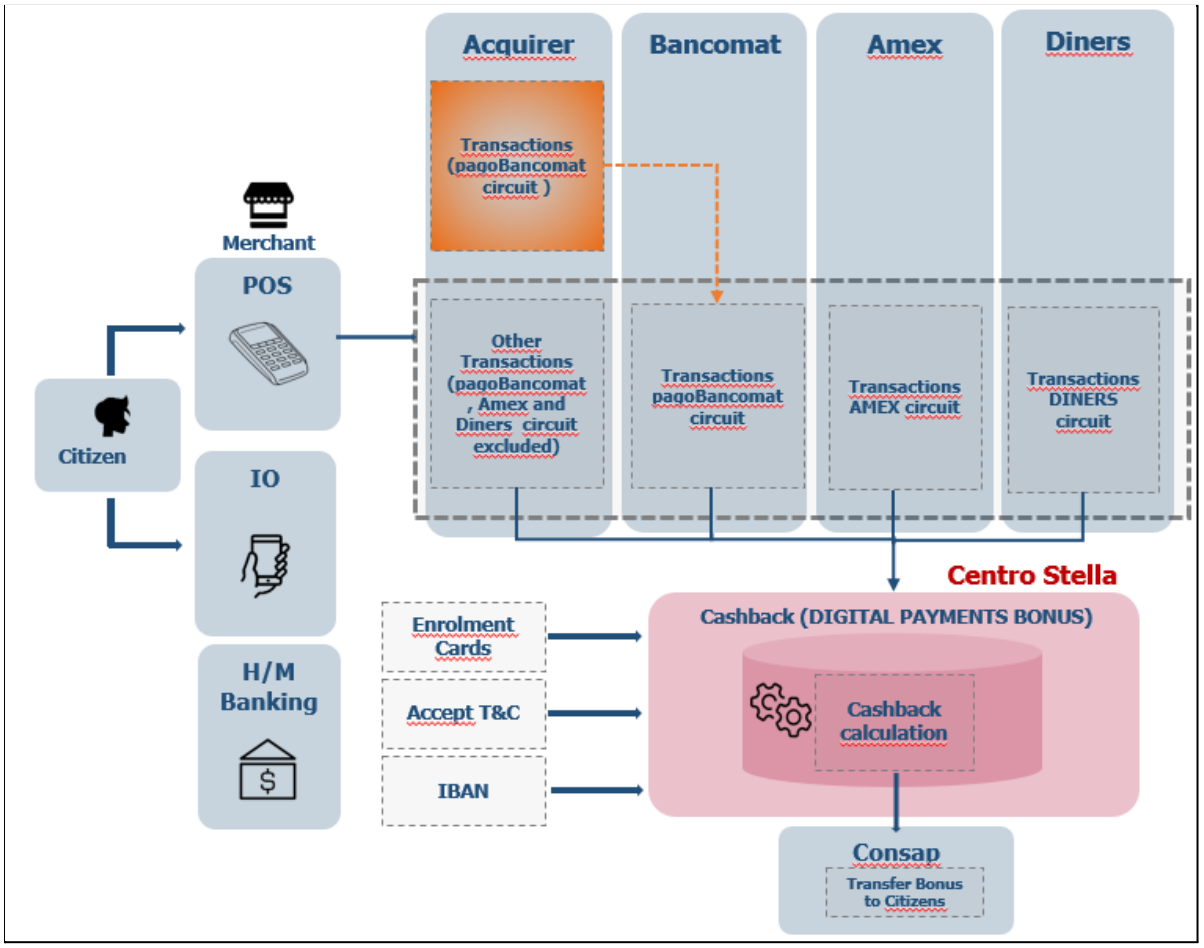
The Digital Transaction Log is the enabling platform for different and future use

cases that see the role of electronic payments as central, maintaining a unique integration with Acquirer entities operating in Italy.

The main objectives of the project are therefore:

1. to encourage payments by electronic means to reduce the use of cash, creating rewarding conditions and a cumulative result even if achieved with different payment instruments.
2. to boost the adoption of e-billing by small operators by simplifying the exchange of information between all the actors involved in the process.

Functional solution proposed: Digital Payments Bonus



Happy Flow

The Happy Flow is explained below, summarising the proposed functional solution of the project:

a. The Citizen securely stores their payment instrument on the platform CentroStella
b. The Citizen makes a payment to a physical operator in Italy
c. The Acquirer, after posting the transaction, sends the transaction data to the platform BPD
    - The Acquirers participating in the service will send to Centro Stella only the transactions related to circuits different from PagoBancomat, Amex and Diners.
    - The Acquirers will send only the transactions carried out on the PagoBancomat circuit to Bancomat
    - Bancomat, Amex and Diners will send directly to CentroStella all the transactions carried out on their own circuit (including those received from the other Acquirers in case of Bancomat)
d. CentroStella assigns points to the transaction
e. Cashback awards are assigned based on the accumulated points
f. The Citizen enters the IBAN of their current account through the IO App or H/M Banking to be credited with the accrued cashback.

General Context

If an Issuer of a payment instrument decides, on its own initiative, to see to the integration with the CentroStella platform, it shall mainly:

1. recognise in strong mode (equivalent to SPID) the identity of the Citizen with particular reference to their tax code
2. allow the same to use even a minimal subset of functionalities, such as:
    a. explicit acceptance/rejection of T&Cs and subscription to the service
    b. activation/deactivation and payment instruments issued by the Issuer Bank
    c. sending IBAN for receiving cashback
    d. display total cashback accrued in the period and ranking

Main processes

Below are the main processes related to the integration with the Issuer Banking systems and common to both scenarios (Digital Payments Bonus and Automatic Billing).

1. CentroStella authentication processes via API key

The authentication process of the Issuer Bank on CentroStella is preliminary in order to ensure communication between the two systems. Individual calls to the RTD platform (and related BPD/FA sub-systems) will be made through an authentication key, *API Key,* obtained through the registration of the Issuer Bank on the *API Gateway portal*.

Process Description
a. the Issuer logs into the API Gateway portal to request registration b. Upon registration, the portal returns the API key needed to authenticate on CentroStella

2. Communication of user consent data (T&C Acceptance)

To allow the user to subscribe to the service of their interest, the contract containing the Terms & Conditions of the Digital Payments Bonus/Automatic Billing service will be made available through Home and/or Mobile Banking. Following the user's acceptance of the T&Cs, the Issuer Bank will send the request to CentroStella to save the acceptance date of the T&Cs.

Process Description
a. The Issuer Bank makes a call to CentroStella to save the T&C date; b. CentroStella saves the acceptance date of the T&Cs on its systems

3. Managing payment instruments

Exploiting the APIs made available by CentroStella, the Issuers will be able to manage, through the Home and/or Mobile Banking channels, all the payment instruments issued to the same Issuer bank.

In particular, it will be possible to enrol/deactivate a card with respect to the Digital Payments Bonus and Automatic Billing services.

Process Description
1. Enrolment of the payment instrument issued by the Issuer Bank: a. Home/Mobile Banking calls a service presented by CentroStella in order to activate the payment instrument on the BPD/FA service. The parameters sent to the Platform include the card PAN in clear form. b. CentroStella calls a hashing service presented by the PM communicating the unique ID of the card c. The PM hashes the PAN of the payment instrument and sends the HPAN to CentroStella i. The data related to the enrolled card is saved, so that it can be retrieved from the APP IO. d. CentroStella proceeds to save the following information, after which the service on the instrument will be active 2. Deactivation of the payment instrument issued by the Issuer Bank: a. the user selects the BPD/FA service deactivation request option from H/M Banking for the payment instrument. H/M Banking therefore sends the deactivation call to CentroStella. i. The parameters sent to the Platform include the card PAN in clear form b. CentroStella calls a hashing service presented by the PM communicating the unique ID of the card c. The PM hashes the PAN of the payment instrument and sends the HPAN to CentroStella d. CentroStella proceeds to deactivate the service and deactivation information is saved in the internal database.

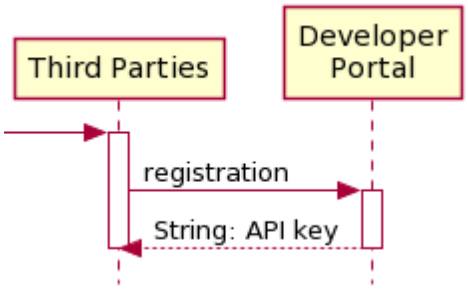
The individual interfaces will be analysed in detail in the following paragraphs.

Definition of interfaces

Issuer Registration

The “Registration” service will allow Issuers to register on the API Gateway portal in order to obtain the key used for authentication on CentroStella.

After logging into the API Gateway portal and completing the registration procedure, the portal will provide Issuers with the API key needed to authenticate on CentroStella (see Appendix 2)



Issuer Integration

The following paragraphs describe the APIs and parameters necessary for correct integration with the Digital Payments Bonus and Automatic Billing services:

1.1 BPD

1.1.1 T&C HTML File Return

API used to recover the html file containing the Digital Payments Bonus Terms and Conditions of Service.

Path: /bpd/tc/html
Method: GET

Path Parameters

No parameters envisaged

Query Parameters
No parameters envisaged

Request Header
No parameters envisaged

Request Body
No parameters envisaged

Response Code
HTTP Response Code 200

Response Header
No parameters envisaged

Response Body
The service responds with the html file, containing the Digital Payments Bonus Terms and Conditions of Service.

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
404	FILE_NOT_FOUND	file not found
500	GENERIC_ERROR	generic error

1.1.2 Setting/modifying IBAN from H/M Banking

The BPD platform will provide a service through which the user can save/update, from Home/Mobile Banking, the IBAN on which he/she wishes to receive the award payment. With IBAN entry from H/M Banking, the user can only enter IBANs associated exclusively with accounts opened at the Issuer Bank providing the portal. In case Issuers will be willing to manage technical accounts, in the API "Get User Status" the query parameter "flagTechnicalAccount" must be valued "true"

URL: bpd/hb/citizens/{id}
METHOD: PATCH

Path Parameters

field	format	Description
id	Alphanumeric	user ID, which corresponds to their tax code

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

field	format	Mandatory	Description
accountHolderCF	String	YES	Tax code of the IBAN holder
accountHolderName	String	YES	Name of IBAN holder
accountHolderSurname	String	YES	Surname of the IBAN holder
payoffInstr	String	YES	means of payment, e.g., IBAN user
payoffInstrType	enum	YES	type of payment instrument for collecting the award

technicalAccountHolder	Alphanumeric	NO* (necessary only for technical accounts)	Issuer's company Name example: CONTO TECNICO srl
issuerCardId	Alphanumeric (max 20 char)	NO* (necessary only for technical accounts)	unique identifier of the payment instrument released by the Issuer, in case of technical accounts

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
validationStatus	String	YES	Validation status following the call to check Iban, the possible values will be: ● OK: the IBAN is associated with the user (IBAN will be saved in BPD) ● KO: the IBAN is not associated with the user (IBAN will not be saved in BPD) ● UNKNOWN_PSP: could not verify (IBAN will be saved in BPD In the case of Technical accounts, the CheckIBAN service will not be invoked, hence the above results will not be shown.

HTTP Error Codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error retrieving user profile
403	TC_NOT_ACCEPTED	T&Cs were not accepted
400	IBAN_NOT_VALID	Iban entered is syntactically incorrect

1.1.3 H/M Banking Payment Instrument Enrolment

1.1.3.1 Card type payment instrument enrolment

API used to enrol a card type payment instrument (credit, debit or prepaid credit) to the digital payment bonus program.

Path: /bpd/hb/payment-instruments/card
Method: PUT

Path Parameters

No parameters envisaged

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
id	Alphanumeric	YES	id of the payment instrument encrypted with pgp key, which corresponds to the Primary Account Number (PAN) of the payment method*
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
expireYear	Number	YES	expiry year of the payment instrument (4 digits ex. 2020)
exprireMonth	Alphanumeric	YES	expiry month of the payment instrument (2 digits ex .11)
issuerAbiCode	Alphanumeric	YES	ABI code of the card issuing bank
brand	enum	YES	type of circuit String (VISA ,MASTERCARD, MAESTRO, VISA_ELECTRON, AMEX, PAGOBANCOMAT, OTHER)
holder	Alphanumeric	NO	cardholder (Name and Surname)
type	enum	YES	card type (PP=Prepaid, DEB=Debit card, CRD=Credit card) possible values: PP, DEB, CRD
channel	Alphanumeric	YES	Channel that uniquely identifies the issuer on the platform that matches the **ABI** Issuer code

tokenPanList	String List	NO	list of the tokenized PANs linked to the physical card (PAN) ex. tokenized payment instruments such as GooglePay, ApplePay etc
PAR	String	NO	corresponds to the Payment Account Reference

***Not necessary for the SIT environment**. The parameter id, once encrypted with the pgp public key, must have the following structure in the Request Body :

-----BEGIN PGP MESSAGE-----\nVersion: BCPG C# v1.6.1.0\n\nhQEMA+NENQPn0iNJAQf/ee9tRkksD+IhY84e2SG4Or51kopVtwWbysbzEpWX0oAo\n0aV Lq10BHbTs2zEG1L1Xwqf24YrrRvc6IUX73j4Xh6n//Mz7op8dCD47uMSVeSDa\n9EMd239jDKD31d6O3I1 CEPfnaTVOPy4veHxgNn6deWxdUai9a1RCZMJXO9AXWKtu\n6oVjUMWiJhpT8zK9OO2KT+YpMUWp 8CTJfoQQVMdZx8lqpYvXvmblAAtT7HZfGn41\nFYnPv07mOseniLI5jOeHcUwDb2uVZExysxfotgW8V ECUXT/39kLYkqzh4USyvVWo\nMC9XN1Jo3iXV6Z1BYDS9f/BydHPk3EGJeOk41QVY68kuVMrPTKAMlu Hg49E0vj+X\nSVEP14vqqNn0hsRJDDOYnFUVbOlEhYHW4q31mttOIw==\n=7n38\n-----END PGP MESSAGE-----\n

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
409	HPAN_OTHER_CF	The payment instrument is “active” in BPD and has been enrolled by another user
400	BAD_REQUEST	bad request.

1.1.3.2 BancomatPay payment instrument enrolment

API used to enable a BancomatPay type payment instrument in BPD

Path: /bpd/hb/payment-instruments/bpay
Method: PUT

Path Parameters

No parameter envisaged

Query Parameters

No parameter envisaged

Request Header

Field	Type	Mandatory	Description

Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
id	Alphanumeric	YES	unique id of the payment instrument, which corresponds to the encrypted value of the string “ABI+ mobile number”
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
channel	Alphanumeric	YES	Channel that uniquely identifies the issuer on the platform valued with the fixed value **“BPAY1”**
groupCode	String	YES	ABI code of the group to which the bank indicated in the InstituteCode field belongs.
instituteCode	String	YES	User Institute ABI Code.
bank	String	YES	Name of the Issuer Bank
nameHolder	String	YES	Account Holder's obscured Name
surnameHolder	String	YES	Account Holder's obscured Surname
phoneNumber	String	YES	Account Holder's obscured Mobile Number
cryptedPhoneNumber	String	YES	Account Holder's encrypted Mobile Number

serviceStatus	enum	YES	Service status: domain: ("ATT", "DIS", "SOSP", "SAT_GG", "SAT_MM", "SAT_NO", "NFC_IN_COR", "NFC_ESTINTO", "ATTPND", "DISPND")
infoPaymentInstrument		YES	basic information about the instrument. Field consisting of the fields indicated in the "InstrumentInfo" table

"InstrumentInfo" table

iban	String	YES	obscured iban
flagPreferredPaymentPI	Boolean	YES	If set to true, it indicates that the instrument with which it is associated has been set as the default instrument for outgoing payments.
flagPreferredIncomingPI	Boolean	YES	If set to true, it indicates that the instrument with which it is associated has been set as the default instrument for incoming payments.

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description

x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register, accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
409	HPAN_OTHER_CF	The payment instrument is “active” in BPD and has been enrolled by another user

1.1.3.3 Satispay payment instrument enrolment

API used to enable a payment instrument of the Satispay type for the digital payment bonus program.

Path: /bpd/hb/payment-instruments/satispay/{id}
Method: PUT

Path Parameters

field	format	Description
id	Alphanumeric	unique id of the payment instrument (Customer ID)

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
channel	Alphanumeric	YES	Channel that uniquely identifies the issuer on the platform valued with the fixed value **"STPAY"**

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description

x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register, accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
409	HPAN_OTHER_CF	The payment instrument is “active” in BPD and has been enrolled by another user

1.1.3.4 Other payment instrument enrolment

API used to enable a payment instrument different from Cards, Bpay and Satispay to digital payment bonus program.

Path: /bpd/hb/payment-instruments/other
Method: PUT

Path Parameters

No parameters envisaged

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
id	Alphanumeric	YES	id of the payment instrument encrypted with pgp key* (example: contractID etc)
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
channel	Alphanumeric	YES	channel that uniquely identifies the issuer on the platform valued with the fixed value**:** • Telepass: TPASS • Telepass Pay: TPAY1 • VenPay: VNPAY
instrumentBrand	Alphanumeric	YES	a fixed value that permits to easily identify the instrument typology (based on the Issuer) ex. domain: • Telepass: TELEPASS • Telepass Pay: TPAY • VenPay: VENP_CCAPP The field value will be specific for every Issuer that will use the API and will be agreed upon

			with CentroStella.
description	Alphanumeric (max 30 char)	YES	description of the payment instrument containing further details that allow the user to uniquely identify the payment instrument. The information must be known by the user.
additionalInfo	String	NO	additional information at the discretion of the Issuer, useful to the User in order to identify the payment Instrument (ex. expiry date)
additionalInfo2	String	NO	other additional information at the discretion of the Issuer, useful to the User in order to identify the payment Instrument

***Not necessary for the SIT environment**. The parameter id, once encrypted with the pgp public key, must have the following structure in the Request Body :

-----BEGIN PGP MESSAGE-----\nVersion: BCPG C# v1.6.1.0\n\nhQEMA+NENQPn0iNJAQf/ee9tRkksD+IhY84e2SG4Or51kopVtwWbysbzEpWX0oAo\n0aVLq10BHbTs2z EG1L1Xwqf24YrrRvc6IUX73j4Xh6n//Mz7op8dCD47uMSVeSDa\n9EMd239jDKD31d6O3I1CEPfnaTVOPy4veHxgNn6 deWxdUai9a1RCZMJXO9AXWKtu\n6oVjUMWiJhpT8zK9OO2KT+YpMUWp8CTJfoQQVMdZx8lqpYvXvmblAAtT7H ZfGn41\nFYnPv07mOseniLI5jOeHcUwDb2uVZExysxfotgW8VECUXT/39kLYkqzh4USyvVWo\nMC9XN1Jo3iXV6Z1B YDS9f/BydHPk3EGJeOk41QVY68kuVMrPTKAMluHg49E0vj+X\nSVEP14vqqNn0hsRJDDOYnFUVbOlEhYHW4q31 mttOIw==\n=7n38\n-----END PGP MESSAGE-----\n

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description

activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register, accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
409	HASHID_OTHER_CF	The payment instrument is “active” in BPD and has been enrolled by another user

1.1.4 Accepting T&Cs from H/M Banking

API used to enrol the user, which in fact consists of the acceptance of the digital Payments Bonus Terms and Conditions of Service.

Path: /bpd/hb/citizens/{id}
Method: PUT

Path Parameters

Field	Format	Description
id	Alphanumeric	user ID, which corresponds to their tax code

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

Request Body

No request body

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

field	format	Mandatory	Description
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
payoffInstr	Alphanumeric	NO	identifier of the payment instrument for collecting the award
payoffInstrType	Alphanumeric	NO	type of payment instrument for collecting the award
enabled	Boolean	YES	service activation status by the citizen

timestampTC	Timestamp	YES	timestamp of T&C acceptance. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error retrieving user profile

1.1.5 Citizen H/M Banking Status

API used to retrieve information about the citizen.

Path: /bpd/hb/citizens/{id}
Method: GET

Path Parameters

field	format	Description
id	Alphanumeric	user ID, which corresponds to their tax code

Query Parameters

field	format	Description
flagTechnicalAccount	Boolean	must contain the value TRUE only in case the Issuer will be managing technical Accounts. In this case, the field IBAN in the response body will contain a placeholder

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

No parameters envisaged

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
payoffInstr	Alphanumeric	NO	identifier of the payment instrument for collecting the award. For the technical accounts, the field will contain a placeholder (CONTO TECNICO).
payoffInstrType	Alphanumeric	NO	type of payment instrument for collecting the award
enabled	Boolean	YES	status of service activation by the citizen
timestampTC	Timestamp	YES	timestamp of T&C acceptance. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX
technicalAccountHolder	Alphanumeric	NO* (necessary only for technical accounts)	Issuer's company Name example: CONTO TECNICO srl
issuerCardId	Alphanumeric (max 20 char)	NO* (necessary only for technical accounts)	unique identifier of the payment instrument released by the Issuer, in case of technical accounts

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register accepting the T&Cs of the service

500	GENERIC_ERROR	error retrieving user profile
404	CF_NOT_FOUND	Tax code not found

1.1.6 H/M Banking Payment Instrument Status

API used to retrieve the status of a payment instrument to the BPD program. If there are token related to the PAN, they will have the same status as the master payment instrument.

Path: /bpd/hb/payment-instruments/{id}
Method: GET

Path Parameters

field	format	Description
id	Alphanumeric	id of the payment instrument, which corresponds to the Primary Account Number (PAN) of the payment method

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

No Request Body

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
hpan	Alphanumeric	YES	id of the payment instrument, which corresponds to the hash of the Primary Account Number (PAN) of the payment method
fiscalCode	Alphanumeric	YES	Tax code linked to the payment instrument
Status	Alphanumeric	YES	status of the payment instrument and the eventual tokens related to the PAN. Can have the following values: • ACTIVE • INACTIVE
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX
deactivationDate	Timestamp	NO	timestamp of the eventual deactivation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register, accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
404	HPAN_NOT_FOUND	hashPan not found

1.1.7 H/M Banking Payment Instrument deactivation

API used to deactivate the payment instrument from BPD.

Path: /bpd/hb/payment-instruments/{id}
Method: DELETE

Path Parameters

field	format	Description
id	Alphanumeric	id of the payment instrument, which corresponds to the Primary Account Number (PAN) of the payment method

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

No parameters envisaged

Response Code

HTTP Response Code 204

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

No response body

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
404	HPAN_NOT_FOUND	hpan not found
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error retrieving user profile

1.1.8 Award Period List

API that returns a list containing information about the award periods.

URL: /bpd/hb/award-periods/v2
METHOD: GET

Path Parameters

No parameters envisaged

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description

x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

Request Body

No request body

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

The response body is formed as a list of objects containing the following information:

Field	Type	Mandatory	Description
awardPeriodId	Number	YES	unique identification of the award period
startDate	Date	YES	Award period start date. FORMAT ISO8601 yyyy-MM-dd
endDate	Date	YES	Award period end date. FORMAT ISO8601 yyyy-MM-dd
minTransactionNumber	Number	YES	Minimum number of transactions to access cashback

maxAmount	Number	YES	Maximum amount payable in the period
minPosition	Number	YES	Minimum position for application of the "special refund"
maxTransactionCashback	Number	YES	Maximum cumulative cashback per single transaction
maxPeriodCashback	Number	YES	Maximum cashback which can be accumulated for the entire period
cashbackPercentage	Number	YES	Cashback percentage
gracePeriod	Number	YES	Duration of the grace period
maxTransactionEvaluated	Number	YES	Maximum value attributable to the single transaction
status	String	YES	Status of the Award period: - ACTIVE (current active period) - INACTIVE (future periods) - WAITING (during grace period) - CLOSED (previous periods)

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error during user profile retrieval

1.1.9 Retrieving ranking

API used to retrieve information on the ranking, calculated based on the score

accumulated by a given user registered for the digital payment bonus service. It is assumed that the user has accepted the T&Cs and is therefore registered on the BPD system; otherwise, the API returns an error.

If the awardPeriodId is specified, the API will return a list containing the details for the requested period, otherwise will return a detailed list including current periods and all previous ones

URL: /bpd/hb/citizens/{id}/ranking
METHOD: GET

Path Parameters

field	format	Description
id	Alphanumeric	user ID, which corresponds to their tax code

Query Parameters

Field	Type	Mandatory	Description
awardPeriodId	Numeric	NO	unique identifier of the award period

Request Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

Request Body

No request body

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
ranking	Number	YES	Ranking position referring to the current award period.
totalParticipants	Number	YES	Total number of participants in the Digital Payments Bonus
maxTransactionNumber	Number	YES	Maximum number of transactions made by users who are eligible for the “special refund”
minTransactionNumber	Number	YES	Minimum number of transactions made by users eligible for the “special refund”
transactionNumber	Number	YES	Number of transactions made by the user
awardPeriodId	Number	YES	unique identifier of the award period

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401		invalid token

	TOKEN_NOT_VALID	
500	GENERIC_ERROR	error during user profile retrieval

1.1.10 Retrieving cashback total

API used to verify the calculated score based on the points accumulated by a given user registered for the digital payment bonus service.

URL: /bpd/hb/winning-transactions/total-cashback
METHOD: GET

Path Parameters

No parameter

Query Parameters

Field	Format	Mandatory	Description
awardPeriodId	Number	YES	unique identifier of the award period
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code

Request Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

Request Body

No request body

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
totalCashback	Number	YES	Sum of the accumulated cashback of all transactions, up to a ceiling defined by the period
transactionNumber	Number	YES	Number of transactions made by the user

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error during user profile retrieval

1.1.11 Unsubscribe Citizen

API used for disabling the citizen from the platform. This operation allows you to disable the user and all his active payment instruments, his transactions and ranking.

URL: /bpd/hb/citizens/{id}
METHOD: DELETE

Path Parameters

Field	Format	Description
id	Alphanumeric	user ID, which corresponds to their tax code

Query Parameters

Nessun parametro previsto

Request Header

Field	Format	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

Request Body

Field	Format	Mandatory	Description
channel	Alphanumeric	YES	the channel that identifies the Issuer calling the API: 1. Issuer's **ABI code** 2. string "BPAY1" for PagoBancomat 3. string "STPAY" for Satispay

Response Code

HTTP Response Code 204

Response Header

Field	Format	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system

			(UUID)

Response Body
No response body

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid key
500	GENERIC_ERROR	generic error
400	TOO_MANY_CHANNELS	error that occurs in case there are other payments instruments that are active and enrolled from other channels

1.1.12 H/M Banking Update Payment instrument Tokens

API used to update the tokens related to a physical Card (identified by the PAN) enrolled on BPD.

Path: /bpd/hb/payment-instruments
Method: PATCH

Path Parameters

No parameters envisaged

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description

Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
id*	Alphanumeric	YES	id of the payment instrument, which corresponds to the encrypted Primary Account Number (PAN) of the payment method
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
tokenPanList	String List	NO	list of the tokenized PANs linked to the physical card (PAN) ex. tokenized payment instruments such as GooglePay, ApplePay etc
PAR	String	NO	corresponds to the Payment Account Reference

***Not necessary for the SIT environment**. The parameter id, once encrypted with the pgp public key, must have the following structure in the Request Body :

-----BEGIN PGP MESSAGE-----\nVersion: BCPG C# v1.6.1.0\n\nhQEMA+NENQPn0iNJAQf/ee9tRkksD+IhY84e2SG4Or51kopVtwWbysbzEpWX0oAo\n0aV Lq10BHbTs2zEG1L1Xwqf24YrrRvc6IUX73j4Xh6n//Mz7op8dCD47uMSVeSDa\n9EMd239jDKD31d6O3I1 CEPfnaTVOPy4veHxgNn6deWxdUai9a1RCZMJXO9AXWKtu\n6oVjUMWiJhpT8zK9OO2KT+YpMUWp 8CTJfoQQVMdZx8lqpYvXvmblAAtT7HZfGn41\nFYnPv07mOseniLI5jOeHcUwDb2uVZExysxfotgW8V ECUXT/39kLYkqzh4USyvVWo\nMC9XN1Jo3iXV6Z1BYDS9f/BydHPk3EGJeOk41QVY68kuVMrPTKAMlu Hg49E0vj+X\nSVEP14vqqNn0hsRJDDOYnFUVbOlEhYHW4q31mttOIw==\n=7n38\n-----END PGP MESSAGE-----\n

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the physical card (identified by the PAN). FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
404	HPAN_NOT_FOUND	hpan not found
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error retrieving user profile

1.2 FA

1.2.1 T&C HTML File Return

API used to recover the Automatic Billing Terms and Conditions of Service HTML file.

Path: /fa/tc/html
Method: GET

Path Parameters

No parameters envisaged

Query Parameters
No parameters envisaged

Request Header

No parameters envisaged

Rquest Body

No parameters envisaged

Response Code
HTTP Response Code 200

Response Header
No parameters envisaged

Response Body
The service responds with HTML (MediaType = text/html) containing the Automatic Billing Terms and Conditions of Service.

HTTP Error Codes
Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
404	FILE_NOT_FOUND	file not found
500	GENERIC_ERROR	generic error

1.2.2 Accepting T&C from H/M Banking

API used to send HB's acceptance of the Terms & Conditions of a customer who wants to onboard to the automatic billing service

Path: /fa/hb/customer/{id}

Method: PUT

Path Parameters

Field	Format	Description
id	Alphanumeric	user ID, which corresponds to their tax code

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

Request Body

Field	Format	Mandatory	Description
vatNumberList	String List	NO	user ID list, which corresponds to VAT No.
SDI	Alphanumeric	YES	recipient code or certified email address

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

field	format	Mandatory	Description
fiscalCode	String	YES	user ID, which corresponds to their tax code
vatNumberList	String	NO	user ID list, which corresponds to VAT No.
timestampTC	Timestamp	YES	timestamp of T&C acceptance. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error retrieving user profile

1.2.3 Customer H/M Banking Status

API used to retrieve status information about a customer onboarded to the automatic billing program.

Path: /fa/hb/customer/{id}
Method: GET

Path Parameters

Field	Format	Description
id	Alphanumeric	customerID, which corresponds to their tax code

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

No parameters envisaged

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
id	Alphanumeric	YES	customer id, which corresponds to their tax code
vatNumberList	Alphanumeric list	NO	List of customer VAT numbers
status	Alphanumeric	YES	status of the payment instrument. Can have the following values: • ACTIVE • INACTIVE

activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX
deactivationDate	Timestamp	YES	timestamp of the deactivation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register, accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
404	CF_NOT_FOUND	tax code not found

1.2.4 H/M Banking Payment Instrument Enrolment

1.2.4.1 Card type payment instrument enrolment

API used to enrol a card type payment instrument (credit, debit or prepaid credit) to the automatic billing program.

Path: /fa/hb/payment-instruments/card
Method: PUT

Path Parameters
No parameters envisaged

Query Parameters
No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
id	Alphanumeric	YES	id of the payment instrument encrypted with pgp key, which corresponds to the Primary Account Number (PAN) of the payment method*
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
expireYear	Number	YES	expiry year of the payment instrument (4 digit es. 2020)
exprireMonth	Alphanumeric	YES	expiry month of the payment instrument (2 digit es .11)
issuerAbiCode	Alphanumeric	YES	ABI code of the card issuing bank
brand	enum	YES	type of circuit String: (VISA,MASTERCARD, MAESTRO,VISA_ELECTRON, AMEX, OTHER)
holder	Alphanumeric	NO	cardholder (Name and Surname)
type	enum	YES	card type (PP=Prepaid,

			DEB=Debit card, CRD=Credit card) possible values: PP, DEB, CRD
channel	Alphanumeric	YES	Channel that uniquely identifies the issuer on the platform that matches the **ABI** Issuer code
tokenPanList	String List	NO	list of the tokenized PANs linked to the physical card (PAN) ex. tokenized payment instruments such as GooglePay, ApplePay etc
PAR	String	NO	corresponds to the Personal Account Reference

***Not necessary for the SIT environment**. The parameter id, once encrypted with the pgp public key, must have the following structure in the Request Body :

-----BEGIN PGP MESSAGE-----\nVersion: BCPG C# v1.6.1.0\n\nhQEMA+NENQPn0iNJAQf/ee9tRkksD+IhY84e2SG4Or51kopVtwWbysbzEpWX0oAo\n0aVLq10BHbTs2zEG1L1Xwqf24YrrRvc6IUX73j4Xh6n//Mz7op8dCD47uMSVeSDa\n9EMd239jDKD31d6O3I1CEPfnaTVOPy4veHxgNn6deWxdUai9a1RCZMJXO9AXWKtu\n6oVjUMWiJhpT8zK9OO2KT+YpMUWp8CTJfoQQVMdZx8lqpYvXvmblAAtT7HZfGn41\nFYnPv07mOseniLI5jOeHcUwDb2uVZExysxfotgW8VECUXT/39kLYkqzh4USyvVWo\nMC9XN1Jo3iXV6Z1BYDS9f/BydHPk3EGJeOk41QVY68kuVMrPTKAMluHg49E0vj+X\nSVEP14vqqNn0hsRJDDOYnFUVbOlEhYHW4q31mttOIw==\n=7n38\n-----END PGP MESSAGE-----\n

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Code

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register, accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
409	HPAN_OTHER_CF	The payment instrument is “active” in BPD and has been enrolled by another user
400	BAD_REQUEST	bad request.

1.2.4.2 BancomatPay payment instrument enrolment

API used to enable a BancomatPay type payment instrument in FA

Path: /fa/hb/payment-instruments/bpay
Method: PUT

Path Parameters

No parameters envisaged

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
id	Alphanumeric	YES	unique id of the payment instrument, which corresponds to the encrypted value of the string "ABI+ mobile number"
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
channel	Alphanumeric	YES	Channel that uniquely identifies the issuer on the platform valued with the fixed value **"BPAY1"**
groupCode	String	YES	ABI code of the group to which the bank indicated in the InstituteCode field belongs.
instituteCode	String	YES	User Institute ABI Code.
bank	String	YES	Name of the Issuer Bank
nameHolder	String	YES	Account Holder's obscured Name
surnameHolder	String	YES	Account Holder's obscured

			Surname
phoneNumber	String	YES	Account Holder's obscured Mobile Number
cryptedPhoneNumber	String	YES	Account Holder's encrypted Mobile Number
serviceStatus	enum	YES	Service status: domain: ("ATT", "DIS", "SOSP", "SAT_GG", "SAT_MM", "SAT_NO", "NFC_IN_COR", "NFC_ESTINTO", "ATTPND", "DISPND")
infoPaymentInstrument		YES	basic information about the instrument. Field consisting of the fields indicated in the "InstrumentInfo" table

"InstrumentInfo" table

iban	String	YES	obscured iban
flagPreferredPaymentPI	Boolean	YES	If set to true, it indicates that the instrument with which it is associated has been set as the default instrument for outgoing payments.
flagPreferredIncomingPI	Boolean	YES	If set to true, it indicates that the instrument with which it is associated has been set as the default instrument for incoming payments.

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
409	HPAN_OTHER_CF	The payment instrument is “active” in FA and has been enrolled by another user

1.2.4.3 Satispay payment instrument enrolment

API used to enable a payment instrument of the Satispay type for the FA program.

Path: /fa/hb/payment-instruments/satispay/{id}
Method: PUT

Path Parameters

field	format	Description
id	Alphanumeric	unique id of the payment instrument (Customer ID)

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
channel	Alphanumeric	YES	Channel that uniquely identifies the issuer on the platform valued with the fixed value **“STPAY”**

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
409	HPAN_OTHER_CF	The payment instrument is “active” in FA and has been enrolled by another user

1.2.5 H/M Banking Payment Instrument Status

API used to retrieve the status of a payment instrument to the FA program. If there are token related to the PAN, they will have the same status as the master payment instrument.

Path: /fa/hb/payment-instruments/{id}

Method: GET

Path Parameters

field	format	Description
id	Alphanumeric	id of the payment instrument, which corresponds to the Primary Account Number (PAN) of the payment method

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	Alphanumeric	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

No parameters envisaged

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description

hpan	Alphanumeric	YES	id of the payment instrument, which corresponds to the hash of the Primary Account Number (PAN) of the payment method
fiscalCode	Alphanumeric	YES	Tax code linked to the payment instrument
Status	Alphanumeric	YES	status of the payment instrument and the eventual tokens related to the PAN. Can have the following values: • ACTIVE • INACTIVE
activationDate	Timestamp	YES	timestamp of the activation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX
deactivationDate	Timestamp	NO	timestamp of the eventual deactivation of the payment instrument. FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid token
403	TC_NOT_ACCEPTED	Terms & Conditions not accepted. To enable a payment instrument, the user must first register, accepting the T&Cs of the service
500	GENERIC_ERROR	error retrieving user profile
404	HPAN_NOT_FOUND	hpan non presente

1.2.6 H/M Banking Payment Instrument deactivation

API used to deactivate the payment instrument from the automatic billing program.

Path: /fa/hb/payment-instruments/{id}
Method: DELETE

Path Parameters

field	format	Description
id	Alphanumeric	id of the payment instrument, which corresponds to the Primary Account Number (PAN) of the payment method

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

No parameters envisaged

Response Code

HTTP Response Code 204

Response Header

Field	Type	Mandatory	Description

x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

No response body

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
404	HPAN_NOT_FOUND	hpan not found
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error retrieving user profile

1.2.7 Unsubscribe Customer

API used for disabling the user from the platform. This operation allows you to disable the user and all his active payment instruments.

URL: /fa/hb/customer/{id}
METHOD: DELETE

Path Parameters

Field	Format	Description
id	Alphanumeric	user ID, which corresponds to their tax code

Query Parameters

Nessun parametro previsto

Request Header

Field	Format	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer

Request Body

Field	Format	Mandatory	Description
channel	Alphanumeric	YES	the channel that identifies the Issuer calling the API: 1. Issuer's ABI code 2. string "BPAY1" for PagoBancomat 3. string "STPAY" for Satispay

Response Code

HTTP Response Code 204

Response Header

Field	Format	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

No response body

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
401	TOKEN_NOT_VALID	invalid key

500	GENERIC_ERROR	generic error
400	TOO_MANY_CHANNELS	error that occurs in case there are other payments instruments that are active and enrolled from other channels

1.2.8 H/M Banking Update payment instruments Token

API used to update the tokens related to a physical Card (identified by PAN) enrolled on FA.

Path: /fa/hb/payment-instruments/{id}
Method: PATCH

Path Parameters

No parameters envisaged

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	Alphanumeric	YES	Subscription key associated with the issuer
x-request-id	String	NO	Request ID, unique identifier determined by initialisation (UUID)

Request Body

Field	Type	Mandatory	Description

id*	Alphanumeric	YES	id of the payment instrument, which corresponds to the encrypted Primary Account Number (PAN) of the payment method
fiscalCode	Alphanumeric	YES	user ID, which corresponds to their tax code
tokenPanList	String List	NO	list of the tokenized PANs linked to the physical card (PAN) ex. tokenized payment instruments such as GooglePay, ApplePay etc
PAR	String	NO	corresponds to the Payment Account Reference

***Not necessary for the SIT environment**. The parameter id, once encrypted with the pgp public key, must have the following structure in the Request Body :

-----BEGIN PGP MESSAGE-----\nVersion: BCPG C# v1.6.1.0\n\nhQEMA+NENQPn0iNJAQf/ee9tRkksD+IhY84e2SG4Or51kopVtwWbysbzEpWX0oAo\n0aV Lq10BHbTs2zEG1L1Xwqf24YrrRvc6IUX73j4Xh6n//Mz7op8dCD47uMSVeSDa\n9EMd239jDKD31d6O3I1 CEPfnaTVOPy4veHxgNn6deWxdUai9a1RCZMJXO9AXWKtu\n6oVjUMWiJhpT8zK9OO2KT+YpMUWp 8CTJfoQQVMdZx8lqpYvXvmblAAtT7HZfGn41\nFYnPv07mOseniLI5jOeHcUwDb2uVZExysxfotgW8V ECUXT/39kLYkqzh4USyvVWo\nMC9XN1Jo3iXV6Z1BYDS9f/BydHPk3EGJeOk41QVY68kuVMrPTKAMlu Hg49E0vj+X\nSVEP14vqqNn0hsRJDDOYnFUVbOlEhYHW4q31mttOIw==\n=7n38\n-----END PGP MESSAGE-----\n

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
x-request-id	String	NO	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
activationDate	Timestamp	YES	timestamp of the activation of the physical card (identified by the PAN). FORMAT ISO8601 yyyy-MM-ddTHH:mm:ss.SSSXXXXX

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Description
404	HPAN_NOT_FOUND	hpan not found
401	TOKEN_NOT_VALID	invalid token
500	GENERIC_ERROR	error retrieving user profile

1.3 Token Manager API's

Both APIs will be exposed to the Issuers from the Payment Manager in order to provide the possibility to send, modify or get the status of the citizen's consent for the Use of tokenized cards.

1.3.1 Create or Change Token Consent

API used to send or change the Citizen's consent to use the tokens related to a physical Card (identified by PAN) .

Path: /tkm/consentm/consent
Method: POST

Path Parameters

No parameters envisaged

Query Parameters

No parameters envisaged

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	String	YES	Subscription key associated with the issuer
tax-Code	String	YES	user ID, which corresponds to their tax code

Request Body

Field	Type	Mandatory	Description
consent	Enum	YES	Type of consent: - Allow - Deny
pgpPan	String	NO	Pan crypted with PGP
services	Array enum	NO*	List of the services (ex: FA, BPD) If this parameter is blank, the changes will be referred to all services. ***Note**: If the parameter "services" contains a value, also the "pgpPan" field must contain a value (it cannot be blank)

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description

Request-id	String	SI	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
consent	Enum	YES	Type of consent: -Allow - Deny - Partial Allow and Deny are applied to all hpans. If the field contains the value "Partial", the field "details" must contain a value
lastUpdateDate	Timestamp	YES	timestamp of the last update (ddTHH:mm:ss.SSSXXXXX)
details*	Array	NO*	Details of the hash pan. Blank if consent is Allow or Deny ***Note**: if the consent is "Partial", this parameter can not be blank.

"details" table

hpan	String	YES	Pan hash to specify a single card. If blank, the change is referred to all cards linked to tax code
consent	enum	YES	Type of consent: - Allow - Deny
service	enum	YES	Type of service: - FA - BPD

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code	Body	Description
400	BAD_REQUEST	*{"statusCode": 1002,* *"message": "Cannot give a partial consent after a global consent"}*	Bad Request
401	ACCESS_DENIED	*{"statusCode": 1002,* *"message": "Cannot give a partial consent after a global consent"}*	Access Denied
500	GENERIC_ERROR		Internal Server Error

1.3.2 Get Status Token Consent

API used to retrieve the status of the Citizen's consent to use the tokens related to a physical Card (identified by PAN) .

Path: /tkm/consentm/consent
Method: GET

Path Parameters

No parameters envisaged

Query Parameters

Field	Type	Mandatory	Description
services	Array enum	NO	List of the services involved. If blank, the change is referred to all services (example: FA, BPD) If the parameter contains a value, the "pgp-Pan" must be filled in.

Request Header

Field	Type	Mandatory	Description
Ocp-Apim-Subscription-Key	String	YES	Subscription key associated with the issuer
tax-Code	String	YES	user ID, which corresponds to their tax code
pgp-Pan	String	NO*	Pan crypted with PGP ***Note**: if the query parameter "services" contains a value, this field must contain the card information.

Request Body

No parameters envisaged

Response Code

HTTP Response Code 200

Response Header

Field	Type	Mandatory	Description
Request-id	String	SI	Request ID, unique identifier determined by caller or system (UUID)

Response Body

Field	Type	Mandatory	Description
consent	enum	YES	Type of consent: -Allow - Deny - Partial

			Allow and Deny are applied to all Hpans. If the field contains the value “PARTIAL” the parameter “details” must be filled in.
lastUpdateDate	Timestamp	YES	timestamp of the consent/dissent (ddTHH:mm:ss.SSSXXXXX)
details	Array	NO	Details of the hash pan. Blank if consent is Allow or Deny ***Note**: if the consent is “Partial”, this parameter can not be blank.

“details” **table**

hpan	String	YES	Pan hash to specify a single card blank the changes is referred to cards linked to tax code
consent	enum	YES	Type of consent: - Allow - Deny
service	enum	YES	Type of service: - FA - BPD

HTTP Error Codes

Below is the list of error messages and the associated response codes

HTTP Response Code	Error code		Description
400	BAD_REQUEST	*{"statusCode": 1002,* *"message": "Cannot give a partial consent after a global consent"}*	Bad Request
404	CF_HPAN_NOT_FOUND		Tax Code or Hpan not found

401	ACCESS_DENIED	*{"statusCode": 1002,* *"message": "Cannot give a partial consent after a global consent"}*	Access Denied
500	GENERIC_ERROR		Internal Server Error

Appendix 1 - Issuer Authentication

The interactions of the issuer use a mutual authentication mechanism over TLS 1.2 protocol, through the exchange of public certificates, issued by a CA (certifying authority), used for verification by both actors with respect to the keys in their possession. For this mechanism to be applicable, the following is therefore necessary:

- the Client must be configured to send requests over TLS 1.2 protocol, indicating a store containing the chain of certificates necessary to verify the reliability of the server on which the request is made; in addition, a store containing at least the private and public key with which the client authenticates with the machine contacted.
- the API must be configured to accept requests over TLS 1.2 protocol, it must be configured to use a collection of keys on which to apply certificate verification, it must be configured to provide a public certificate, used by the Client for the authentication of the machine to which the request is directed.

To generate the Certificate Signed Request it is necessary to use the client-certificate.cnf configuration template (suitably reconfigured with the information of the specific Issuer). The command to invoke for generating the csr and its private key (using OpenSSL) is as follows:

openssl req -new -config client-certificate.cnf -keyout client-certificate.key -out client-certificate.csr

To enable the authentication process, certificates related to CAs in ".cer" format must be provided to the API publisher (since they must contain only the public key, the password is not mandatory, otherwise it must also be provided).

N.B: for tests in the sit environment, the client certificate can be self-signed, and must be provided to the API publisher in ".cer" format, while for higher environments it must be signed by the PagoPA internal CA, and it is not necessary to share it with the API Publisher. Consequently, the file containing the CA's public key should only be provided by the Issuers in the SIT environment. In higher environments the PagoPA CA certificate will already be preconfigured. If it is necessary to obtain a certificate with a signature valid for environments above SIT, send the .csr to be signed to *security@pagopa.it*.

The APIs will be presented and configured to enable the mutual authentication process based on a given certificate. In the case of services used by Issuers, a dedicated policy is introduced to allow the authentication process through multiple certificates, to allow the use of certificates for the Issuers.

Appendix 2 - Issuer Services Authorisation

Issuer system developers who need to use the published APIs must include a valid subscription key in HTTP requests when making calls to those APIs. Otherwise, the calls are immediately rejected by the API Management gateway and, as a result, are not forwarded to back-end services.

To obtain a subscription key for API access, a subscription is required. A subscription is essentially a container for a pair of subscription keys. Developers who need to use published APIs can obtain the subscriptions in two ways (depending on how they were configured):

- with the approval of API publishers;
- without the need for API publisher approval.

API publishers can also create subscriptions directly for API consumers.

After subscribing, the client can invoke the services (for which it has subscribed) by entering the field **Ocp-Apim-Subscription-Key** as the parameter of the request header. The value of the field must match the code obtained after registering with the Azure portal.

Below are the steps necessary to register to test the behaviour of the services;
Access the dev address dedicated to developers (see Appendix 3)

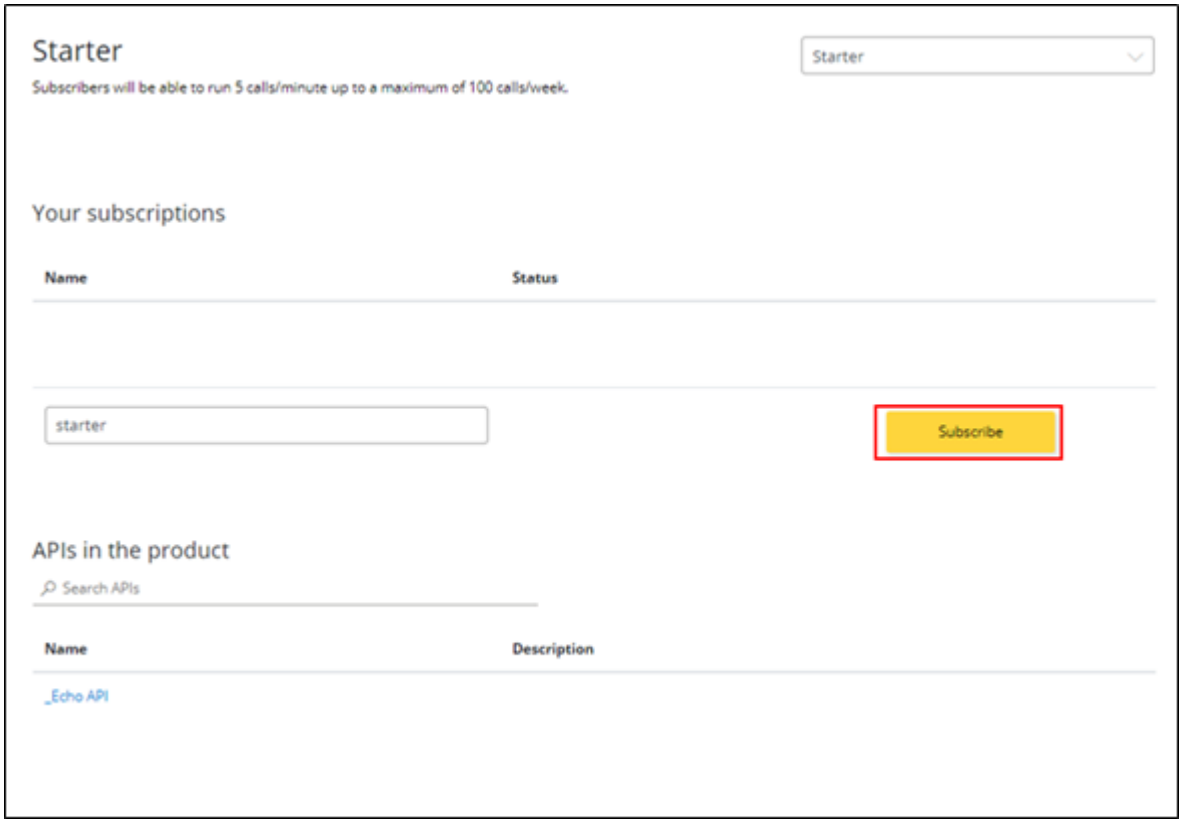
1. After clicking on the yellow button, you will be directed to the registration page where the credentials for the account configuration must be entered.

2. After completing the credential entry process, we will receive via email the necessary configurations to complete the verification via a link.

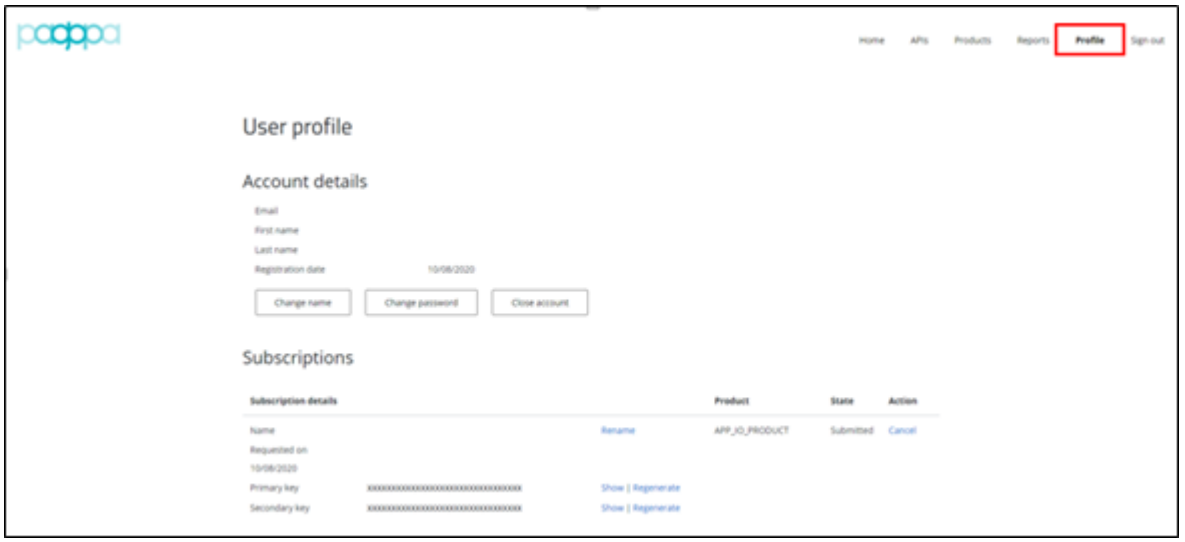
3. After clicking on the link contained in the email, you will be redirected to the login page where you will have to authenticate with the created user. To create the subscription and its keys you must select the "Products" option.

4. At this stage, you must select the subscription type

5. Enter a name and select the Subscribe option



6. The outcome of the subscription will be visible under “Profile” in the menu.



Appendix 3 - Environments

Environment	IP API Gateway	URL API Gateway	Developer Portal URL
SIT	104.40.204.96	https://bpd-dev.azure-api.net	https://bpd-dev.developer.azure-api.net
UAT	20.54.178.216	https://test.cstar.pagopa.it/	https://developer-test.cstar.pagopa.it/
PROD	51.137.18.218	https://prod.cstar.pagopa.it/	https://developer.cstar.pagopa.it/