



API-Interface Description

Version 3.6
20.08.2019

www.sepa.net

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1. Introduction

The SEPA.net payment supports next to the processing of one-time payments through a one click button, also a payment process for a professional implementation via an API interface, which enables using one-time payments and recurring payment collections (e.g. subscriptions, articles, memberships etc.).

Therefore, SEPA.net offers online vendors a REST interface, which can be requested through a HTTP request. Thus, SEPA.net enables online vendors to customize completely the user interface of the payment dialogue and to integrate it optimally into the frontend.

The web service interface responds with a XML document, which can be evaluated automatically by the online vendor in order to receive a response if validation errors occur. A payment through a web service can be segmented into two areas from the point of view of an online vendor:

- > **One-time creation of a user:** Firstly, a user account needs to be created for the buyer, which is the basis for all subsequent payments of a specific buyer. It contains all the basic data, which is necessary for one-time payments or recurring payment collections, e.g. name and bank account details of a buyer or the title of an optional recurring service.
- > **Triggering a periodic payment:** After a user account is created for a buyer, an online vendor can trigger a specific payment, which can be unique or recurring monthly or quarterly. This happens on the part of the online vendor, when a corresponding webservice is requested during the period concerned. Consequently, the periodic payment term can be managed through the back-office system of an online vendor. Thereby, the specific deducted amount will be handed over so that e.g. a new user account does not need to be created, if a price changes occurs.

The usage of the web service interface requires a valid online vendor SEPA.net account.

2. General Rules

The web service API can be requested through the following URL. Please take the HTTPS protocol into account. Each parameter will be handed over via HTTP GET.

`https://payment.sepa.net/capp/gateways/ [Name of the service + parameter]`

The following services are available:

- `subscription_create` (creates a new user account for a buyer)
- `subscription_edit` (edits data of an existing user account of a buyer)
- `subscription_exec` (triggers a specific payment to a user account of a buyer)
- `tan_send` (sends a TAN through a text message to a mobile phone)

2.1. Security Parameter

During each request of one of the mentioned services two security parameter need to be transferred:

- `oid`: customer ID of an online vendor
- `sec`: MD5 hash value of the security strings (will be provided by SEPA.net)

2.2. Answer-Scheme If Successful

If the webservice was requested successfully, the interface responds as followed:

```
<?xml version='1.0' encoding='UTF-8'?>
<response>
  <result>ok</result>
</response>
```

Among few web services additional TAGs can be included in the request.

2.3. Answer-Scheme If Not Successful

If security parameters, which have been specified in chapter 2.1. are missing, the requested service will be cancelled without validating the remaining parameters with the following XML error message:

```
<?xml version='1.0' encoding='UTF-8'?>
<response>
  <result>error</result>
  <errors>
    <error>security</error>
  </errors>
</response>
```

If the requested web service cannot be executed due to other reasons (e.g. because additionally required parameters are missing or invalid for this service), an error message will appear with fixed error codes according to the following scheme:

```
<?xml version='1.0' encoding='UTF-8'?>
<response>
  <result>error</result>
  <errors>
    <error>fehlercode_1</error>
    <error>fehlercode_2</error>
    <error>fehlercode_3</error>
    ...
  </errors>
</response>
```

3. Individual Web Services

3.1. Web service „subscription_create“

With this web service, a new user account can be created for a buyer (solely created, no payment triggered). In the case of success, a “subscription_id” will be returned to a newly created account, which provides the possibility to e.g. initiate a specific payment through the web service “subscription_exec”

URL for the request:

https://payment.sepa.net/capp/gateways/subscription_create [+Parameter]

| Parameter Title | Obligatory | Description |
|-------------------|------------|--|
| oid | yes | See chapter 2.1 |
| sec | yes | See chapter 2.1 |
| customer_phone | yes | Mobile phone number of the buyer |
| customer_email | yes | Email address of the buyer. Important: Needs to be validated previously by the online vendor. |
| customer_name | yes | Name of the account holder using the following format: [possible title or prefix e.g. Dr.] first name surname |
| customer_account | yes | Account number of the buyer |
| customer_bankcode | yes | Bank sort code (IBAN) of the customer |
| customer_iban | yes | IBAN of the buyer |
| customer_tan | yes | SEPA.net TAN, which has been sent to the buyer within 60 minutes via the web service “tan_send” |
| shopDomain | yes | The domain from which the subscription has been completed, from the point of view of the buyer (e.g. www.yourdomain.com) |
| productName | yes | Name of the product from the point of view of the buyer. It will be provided by SEPA.net e.g. in a bill |
| period | no | Description of the periodicity of the payment (text). Will be displayed in the prenotification and replaces the standard text “Subsequently, a subsequent collection will be arranged.”. “0” will suppress the display of this sentence. |
| productId | no | Optional ID from the system of the online vendor, labelling the product. Appears on the monthly SEPA.net settlement. |
| testmode | no | Should the new subscription be created in test mode? No real payment will be triggered. Yes=1, No=0. Default=0 |

Response if successful:

```
<?xml version='1.0' encoding='UTF-8'?>
<response>
  <result>ok</result>
  <subscription_id> [ID des neu angelegten Abos] </subscription_id>
</response>
```

Error messages if not successful:

| Code | Description |
|------------------------------|-----------------------------------|
| customer_phone_validation | Invalid mobile phone number |
| customer_email_validation | Invalid email address |
| customer_name_validation | Invalid account holder |
| customer_account_validation | Invalid account number |
| customer_bankcode_validation | Invalid bank sort code (BIC) |
| customer_iban_validation | Invalid IBAN |
| customer_tan_validation | Invalid or expired SEPA.net -TAN |
| shopDomain_validation | Invalid shop domain |
| productName_validation | Invalid product name |
| testmode_validation | Invalid test mode parameter |
| unspecified_system_error | Unspecified SEPA.net system error |

3.2. Web service „subscription_edit“

Through this web service, data of a buyer account can be altered, e.g. when the bank details need to be changed.

URL for the request:

https://payment.sepa.net/capp/gateways/subscription_edit [+Parameter]

Expected Parameters:

| Parameter Title | Obligatory | Description |
|-------------------|------------|---|
| oid | yes | See chapter 2.1 |
| sec | yes | See Chapter 2.1 |
| subscription_id | yes | ID of the buyer account (see subscription_create) |
| customer_phone | yes | Mobile phone number of the buyer |
| customer_email | yes | Email address of the buyer. Important: Needs to be validated previously by the online vendor. |
| customer_name | yes | Name of the account holder using the following format: [possible title or prefix e.g. Dr.] first name surname |
| customer_account | yes | Account number of the buyer |
| customer_bankcode | yes | Bank sort code (IBAN) of the customer |
| customer_iban | yes | IBAN of the buyer |
| period | no | Description of the periodicity of the payment (text). Will be displayed in the prenotification (see above). |

Response if successful:

```
<?xml version='1.0' encoding='UTF-8'?>
<response>
<result>ok</result>
</response>
```

Error codes if not successful:

| Code | Description |
|------------------------------|-----------------------------------|
| customer_phone_validation | Invalid mobile phone number |
| customer_email_validation | Invalid email address |
| customer_name_validation | Invalid account holder |
| customer_account_validation | Invalid account number |
| customer_bankcode_validation | Invalid bank sort code (BIC) |
| customer_iban_validation | Invalid IBAN |
| unspecified_system_error | Unspecified SEPA.net system error |

3.3. Web service „subscription_exec“

Through this web service a specific payment can be triggered for a previously created buyer account. The web service for recurring payments must be requested from the system of the online vendor within the frequency of the payment period (e.g. monthly at the preferred booking day).

SEPA.net creates during a first-time execution of a payment from a customer account, as well during a subsequent payment with an altered collection amount or with an altered IBAN, an automated prenotification email to the buyer. This prenotification occurs one working day before the creation of the SEPA direct debit file. Additional prenotifications will not be created automatically. Through the usage of the below mentioned parameter “preno_force”, a prenotification can also be created for other cases manually by an online vendor.

URL for the request:

https://payment.sepa.net/capp/gateways/subscription_exec [+Parameter]

Expected Parameter:

| Parameter Title | Obligatory | Description |
|-----------------|------------|---|
| oid | yes | See chapter 2.1 |
| sec | yes | See chapter 2.1 |
| subscription_id | yes | ID of the buyer account (see subscription_create), which has been returned. |
| price | yes | The amount, which needs to be collected from the buyer. Format: Use a decimal point instead of a comma. E.g.: 3.99 |
| tax | yes | Value added tax, which the online vendor takes as a basis. Format: 2 decimal places, use a decimal point instead a of comma. |
| billing | no | Should SEPA.net send an email to the buyer after the transaction? (Yes=1, No=0, Default=1). |
| testmode | no | Should the triggering of the payment process occur during test mode? Real payments will not be triggered. (Yes=1, No=0, Default=0). |
| preno_force | no | Prenotification will be enforced. (Default=0, Enforced=1) |

Response if successful:

```
<?xml version='1.0' encoding='UTF-8'?>
<response>
  <result>ok</result>
</response>
```

Error codes if not successful:

| Code | Description |
|----------------------------|---|
| subscription_id_validation | Reference to a wrongly created buyer account (subscription_id invalid) |
| price_validation | Price has an invalid format or is outside of the permitted price range |
| tax_validation | Parameter "tax" invalid or in an invalid format |
| billing_validation | Parameter "billing" Invalid |
| testmode_validation | Parameter 'testmode' invalid |
| fraud_limit | Fraud prevention: Buyer has exceeded the permitted transaction limit within a 10 or 60-day range |
| fraud_indebted | Fraud prevention: Buyer has been blocked temporarily in the SEPA.net system due to a payment delay. |
| unspecified_system_error | Unspecified SEPA.net system error |

3.4. Web service „tan_send“

Through this web service a TAN can be sent to the mobile device of a buyer. The TAN is valid for 60 minutes.

URL for request:

https://payment.sepa.net/capp/gateways/tan_send [+Parameter]

Expected Parameter:

| Parameter Title | Obligatory | Description |
|-----------------|------------|--|
| oid | ja | See chapter 2.1 |
| sec | ja | See chapter 2.1 |
| customer_phone | ja | Mobile phone number of the buyer, which will receive the TAN through a text message. Only German phone numbers are permitted. Different formats are possible: with or without country code, with or without area code separator. |

Response if successful:

```
<?xml version='1.0' encoding='UTF-8'?>
<response>
<result>ok</result>
</response>
```

Error codes if not successful:

| Code | Description |
|---------------------------|--|
| customer_phone_validation | Mobile phone number invalid |
| blocking_period | The phone number is temporarily blocked, since less than 60 seconds before a text message has been sent to the mentioned number. |
| sms_provider | Malfunction in the SMS gateway. |
| unspecified_system_error | Unspecified SEPA.net system error |

4. Support

If you have any further questions, please feel free to contact our support at: support@sepa.net