

Special remarks - Recurring transactions credit card

Introduction

With Payment Service Directive 2 (PSD2) it's required that all credit card payments have to be authenticated by the customer using strong customer authentication (SCA). See [3-D Secure](#).

Of course, this is only possible if the end customer is also present at the time of payment and can carry out an SCA (like 3-D Secure 1.0 or 3-D Secure 2.x).

This is precisely not the case with subscription models and micropayments (virtual account / billing), since these are carried out in the absence of the customer. For this purpose, the model "cards on file" or "credentials on file" (CoF in short) is offered, with which such payments are specially marked and then excluded from the SCA. Likewise, the first, initial payment must be authenticated using SCA to meet the PSD2 guidelines. Subsequent payment transactions can be initiated with reference to the initial payment transaction. The reference to the initial transaction will then be handled by the PAYONE platform.

CoF can also be used to speed checkout by first depositing a credit card for a customer and then referencing it for follow-up payments. This function has already been offered for a long time by the pseudo card number of the PAYONE Platform - but now CoF also makes it PSD2-compliant.

With CoF you may re-use a credit card number for recurring transactions where the customer can not proceed to the SCA process. To do so **the initial payment process has to be authenticated via SCA** and the customer has to be informed that their credit card number will be stored for subsequent payments, the purpose of payment and the amount that is expected. The CoF consent token will be stored referencing to the combination of merchantid (MID) and creditcardnumber (PPAN).

All online merchants who initiate recurring transactions in the form of CoF payments and have their customers' card data stored by themselves or their PSP storing the data must obtain the explicit consent of the cardholder / customer. This approval must include the following elements:

- The confirmation of the stored card number (PCI compliant, e.g., as a masked card number indicating the last four digits of the card number)
- The purpose for which the card data is used and the duration of the agreement
- Confirmation from the merchant that the cardholder will be notified of any changes in an agreed way

CoF and PAYONE Platform

With the support for CoF Payments we want to make the transition for our merchants as smooth as possible. To do this, we need to take care of the many different implementation ways our merchants are using today. We decided to deliver the CoF integration in different steps.

The first steps will be based on the already known parameters **recurrence** und **customer_is_present**. With this parameters, the merchant is able to set the use-case that needs to be processed.

After this step, we take care of our current integrations. We want to make sure that integrations based on **ecommercemode=internet** will still work in the beginning of 2021. With this step the merchants are able to plan the implementation of **recurrence** and **customer_is_present** while still being able to process with **ecommercemode=internet**.

For every transaction with **ecommercemode=internet**, we will internally set **recurrence=recurring** and **customer_is_present=no**, to flag that transaction as a subsequent recurring transaction.

The last step will be a more detailed way of integrating the CoF use cases. That will give our merchants every possible way of setting up exact recurring cycles and define for themselves, if a transaction is an initial transaction or not. We will deliver new parameters, that the merchant can use for a more detailed definition of CoF use cases. For this last step we already made some preparations in our api and you can take a closer look on the parameters, but the functionality in the PAYONE Platform is not finished yet.

So if you want to update your integration right now, you're fine with using the parameters **recurrence** and **customer_is_present**. An updated documentation with more details to the upcoming extensions will be coming soon.

While the solution for our merchants with **ecommercemode=internet** is based on our internal interpretation of **recurrence** and **customer_is_present**, this documentation will describe the definition of the use cases and how to set the 2 parameters.

Using recurrence and customer_is_present for CoF use cases

The PAYONE Platform already supports parameters for:

- Introduction
- CoF and PAYONE Platform
- Using recurrence and customer_is_present for CoF use cases
 - Initial transaction, followed by recurring payment
 - Subscription / contract / abo (recurring) - PAYONE contract module
 - Micropayment / Billing / vauthorization (recurring)
 - Reservation / Sale with "oneclick" using CoF (one-click)

- [customer_is_present](#)
- [recurrence](#)

These parameters will be used for credit card payments to indicate CoF payments.

Here's an overview of different use cases **with credit card payments and recurring transactions**.

Initial transaction, followed by recurring payment

Description: The customer wants to save their credit card for future payments. the first initial transaction will be handled with 3-D Secure. The following transactions will be without 3-D Secure.

Step	Use case	Server-API request	Parameters to set	Comments
1a	a) Get customer agreement for CoF - only get agreement, amount is sent with 1.	preauthorization	<ul style="list-style-type: none"> • amount=1 • recurrence=recurring • customer_is_present=yes 	<ul style="list-style-type: none"> • In this case, the amount that will be authorized later is not known yet. • Merchant must obtain consent that data will be stored and be used for subsequent payments • Customer has to agree to CoF • Initial payment will be handled with 3-D secure
1b	b) OR get customer agreement for CoF - with amount is sent	preauthorization/authorization	<ul style="list-style-type: none"> • amount=<amount> • recurrence=recurring • customer_is_present=yes 	<ul style="list-style-type: none"> • Merchant must obtain consent that data will be stored and be used for subsequent payments • Customer has to agree to CoF • Initial payment will be handled with 3-D secure <p>Amount has to be captured by request "capture" if preauthorization is used.</p>
2	Subsequent payments	preauthorization/authorization	<ul style="list-style-type: none"> • amount=<amount> • recurrence=recurring • customer_is_present=no • userid or pseudocardpan 	<ul style="list-style-type: none"> • Subsequent payments will be handled with CoF if customer agreed to the initial payment process <p>Amount has to be captured by request "capture" if preauthorization is used.</p>

Sample Initial Request

Initial Request

```
mid=23456 (your mid)
portalid=12345123 (your portalid)
key=abcdefghijklmnl23456789 (your key)
api_version=3.10
mode=test (set to „live“ for live-requests)
request=preauthorization
recurrence=recurring
customer_is_present=yes
encoding=UTF-8
aid=12345 (your aid)
clearingtype=cc
cardtype=M
cardexpiredate=2110
pseudocardpan=9911192220202920292
cardholder=Testperson Approved
amount=3000 (or 1 for initial authentication, without knowing the
recurring amount)
currency=EUR
lastname=Approved
firstname=Testperson
salutation=Herr
country=DE
language=de
gender=m
birthday=19600707
street=Hellersbergstraße 14
city=Musterstadt
zip=12345
email=youremail@email.com
telephonenumber=01512345678
```


Sample Subsequent Request

Initial Request

```
mid=23456 (your mid)
portalid=12345123 (your portalid)
key=abcdefghijklmnl23456789 (your key)
api_version=3.10
mode=test (set to „live“ for live-requests)
request=preauthorization
recurrence=recurring
customer_is_present=no
encoding=UTF-8
aid=12345 (your aid)
clearingtype=cc
cardtype=M
cardexpiredate=2110
pseudocardpan=9911192220202920292
cardholder=Testperson Approved
amount=3000
currency=EUR
lastname=Approved
firstname=Testperson
salutation=Herr
country=DE
language=de
gender=m
birthday=19600707
street=Hellensbergstraße 14
city=Musterstadt
zip=12345
email=youremail@email.com
telephonenumber=01512345678
```

Subscription / contract / abo (recurring) - PAYONE contract module

Description: This use case applies if you want to use our Contract module to handle subscriptions where the amount for a trail period and subsequent periods are fixed and known when starting the contract.

Step	Use case	Server-API request	Mandatory Parameters	Comments
1	Initial create access - customer is present	createaccess	<ul style="list-style-type: none">customer_is_present=yesSuccess-URLBack-URLError-URL	<ul style="list-style-type: none">Merchant must obtain consent that data will be stored and be used for subsequent paymentsCustomer has to agree to CoFInitial payment will be handled with 3-D secure <div style="border: 1px solid orange; padding: 10px; margin-top: 10px;"><p> Important Note</p><p>If <i>Success-</i>, <i>Error</i> and <i>Back-URL</i> are not provided or empty in the <i>createaccess</i> request, 3-D Secure will not be triggered and issuers will most likely respond with a soft-decline (error -120).</p><p>In the future, <i>createaccess</i> requests without those parameters or empty values will be declined over the Server- and Client-API.</p></div>
2	Subsequent payments	handled automatically		<ul style="list-style-type: none">Subsequent payments will be handled with CoF if customer agreed to the initial create access

Sample Initial Createaccess

Initial Request

```
mid=23456 (your mid)
portalid=12345123 (your portalid)
key=abcdefghijklmnl23456789 (your key)
api_version=3.10
access_starttime=1608685709
customerid=1234567
mode=test (set to „live“ for live-requests)
request=createaccess
recurrence=recurring
customer_is_present=yes
successurl=https://example.com/success
errorurl=https://example.com/error
backurl=https://example.com/back
encoding=UTF-8
aid=12345 (your aid)
clearingtype=cc
cardtype=M
cardexpiredate=2110
pseudocardpan=9911192220202920292
cardholder=Testperson Approved
amount=3000
currency=EUR
lastname=Approved
firstname=Testperson
salutation=Herr
country=DE
language=de
gender=m
birthday=19600707
street=Hellensbergstraße 14
city=Musterstadt
zip=12345
email=youremail@email.com
telephonenumber=01512345678
```

Micropayment / Billing / vauthorization (recurring)

Description: This use case applies if you want to use our Billing module for micro payments. The accumulated amount is then settled after a given period of time. Typically the amounts per settlement period are different.

Step	Use case	Server-API request	Params to set	Comments
1a	a) Get customer agreement for CoF - only get agreement, amount=1 is sent	preauthorization	<ul style="list-style-type: none">amount=1recurrence=recurring or recurrence=oneclickcustomer_is_present=yes	<ul style="list-style-type: none">Merchant must obtain consent that data will be stored and be used for subsequent paymentsCustomer has to agree to CoFInitial payment will be handled with 3-D secure
1b	b) OR get customer agreement for CoF - with amount is sent	preauthorization	<ul style="list-style-type: none">amount=<amount>recurrence=recurring or recurrence=oneclickcustomer_is_present=yes	<ul style="list-style-type: none">Merchant must obtain consent that data will be stored and be used for subsequent paymentsCustomer has to agree to CoFInitial payment will be handled with 3-D secure <p>Amount has to be captured by request "capture".</p>

2	Create micropayment transactions	vauthorization	<ul style="list-style-type: none"> recurrence=recurring or recurrence=oneclick customer_is_present=no userid or pseudocardpan 	<ul style="list-style-type: none"> set recurring or oneclick depending on the recurrence value you set in the initial transaction
3	Settlement of micropayment transactions	handled automatically		<ul style="list-style-type: none"> Settlement of the open amount marked as CoF transactions

Sample Initial Request

Initial Request
<pre> mid=23456 (your mid) portalid=12345123 (your portalid) key=abcdefghijklmnl23456789 (your key) api_version=3.10 mode=test (set to „live“ for live-requests) request=preauthorization recurrence=recurring customer_is_present=yes encoding=UTF-8 aid=12345 (your aid) clearingtype=cc cardtype=M cardexpiredate=2110 pseudocardpan=9911192220202920292 cardholder=Testperson Approved amount=3000 (or 1 for initial authentication, without knowing the recurring amount) currency=EUR lastname=Approved firstname=Testperson salutation=Herr country=DE language=de gender=m birthday=19600707 street=Hellersbergstraße 14 city=Musterstadt zip=12345 email=youremail@email.com telephonenumber=01512345678 </pre>

Sample Subsequent VAuthorization

Subsequent Request

```
mid=23456 (your mid)
portalid=12345123 (your portalid)
key=abcdefghijklmnl23456789 (your key)
api_version=3.10
vreference=merchantreference
vaccountname=newaccount
settle_period_length=1
settle_period_unit=M
customerid=1234567
mode=test (set to „live“ for live-requests)
request=vauthorization
recurrence=recurring
customer_is_present=no
encoding=UTF-8
aid=12345 (your aid)
clearingtype=cc
cardtype=M
cardexpiredate=2110
pseudocardpan=9911192220202920292
cardholder=Testperson Approved
amount=3000
currency=EUR
lastname=Approved
firstname=Testperson
salutation=Herr
country=DE
language=de
gender=m
birthday=19600707
street=Hellensbergstraße 14
city=Musterstadt
zip=12345
email=youremail@email.com
telephonenumber=01512345678
```

Reservation / Sale with "oneclick" using CoF (one-click)

Description: This use case applies if you want to store a credit card and use it for the following transactions in order to process them without 3-D Secure. These transaction are always customer initiated, so SCA could apply. You should always send customer_is_present=yes. This can help prevent challenges for returning customers, depending on issuer.

Step	Use case	Server-API request	Params to set	Comments
1	Initial transaction and get customer agreement for CoF	preauthorization authorization	<ul style="list-style-type: none">recurrence=oneclickcustomer_is_present=yes	<ul style="list-style-type: none">Merchant must obtain consent that data will be stored and be used for subsequent paymentsCustomer has to agree to CoFInitial payment will be handled with 3-D secure <p>Amount has to be captured by request "capture" if only reserved with "preauthorization".</p>

2	Subsequent transaction, customer is present	preauthorization authorization	<ul style="list-style-type: none"> • recurrence=oneclick • customer_is_present=yes • userid or pseudocardpan 	<ul style="list-style-type: none"> • Customer selects and confirms stored credit card data • 3-D Secure may not be required • Subsequential payment will be handled with CoF <p>Amount has to be captured by request "capture" if only reserved with "preauthorization".</p>
---	---	--------------------------------	---	---

Sample Initial Request

Initial Request
<pre> mid=23456 (your mid) portalid=12345123 (your portalid) key=abcdefghijklmn123456789 (your key) api_version=3.10 mode=test (set to „live“ for live-requests) request=preauthorization recurrence=oneclick customer_is_present=yes encoding=UTF-8 aid=12345 (your aid) clearingtype=cc cardtype=M cardexpiredate=2110 pseudocardpan=9911192220202920292 cardholder=Testperson Approved amount=3000 currency=EUR lastname=Approved firstname=Testperson salutation=Herr country=DE language=de gender=m birthday=19600707 street=Hellersbergstraße 14 city=Musterstadt zip=12345 email=youremail@email.com telephonenumber=01512345678 </pre>

Sample Subsequent Oneclick

Subsequent Request

```
mid=23456 (your mid)
portalid=12345123 (your portalid)
key=abcdefghijklmnl23456789 (your key)
api_version=3.10
customerid=1234567
mode=test (set to „live“ for live-requests)
request=authorization
recurrence=oneclick
customer_is_present=yes
encoding=UTF-8
aid=12345 (your aid)
clearingtype=cc
cardtype=M
cardexpiredate=2110
pseudocardpan=9911192220202920292
cardholder=Testperson Approved
amount=3000
currency=EUR
lastname=Approved
firstname=Testperson
salutation=Herr
country=DE
language=de
gender=m
birthday=19600707
street=Hellersbergstraße 14
city=Musterstadt
zip=12345
email=youremail@email.com
telephonenumber=01512345678
```