



Saferpay – Authorization Interface Specification

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1 INTRODUCTION

This document describes the interfaces to the card processing system of Saferpay. This interface is formed of a set of messages exchanged by the Merchant Application (MA) and the Saferpay Payment Gateway (SPG). The interfaces are based on the Saferpay Application Component (SAC) described in [1] and [2].

1.1 SUMMARY

The financial exchange between the MA and the SPG takes place in following steps:

1. The MA will perform an authorization of the requested amount and card. The parameters required for this operation are card number, expiration date, amount, currency, transaction type and the account-id identifying the merchants account.
2. The SPG will process the authorization in cooperation with the acquirers and return an identifier for the transaction to the merchant if the request was successful, a failed message otherwise.
3. The MA will write the successful transaction to a local queue to complete the transaction.
4. The MA will use the Capture method of the SAC to transmit the completion message consistently to the SPG for financial processing.

1.2 REQUIREMENTS

The Saferpay Application Component is required for the use of this API.

For credit card transactions it is strictly required to show the following payment information to the customer:

- Date and time of the transaction
- Contract number
- Provider name
- Authorization code
- Authorization result message

For German ELV transaction it is required to show the following information to the customer:

- Date and time of the transaction
- Provider name
- Account and institute number (Kontonummer, Bankleitzahl)
- Authorization code
- Authorization result message

2 INTERFACE DESCRIPTION

The use of the Card Authorization Interface is similar to the rest of the SAC where the component is accessed through a C, COM or Java interface. The major difference is the non-interactive authorization of credit cards and direct debit (ELV) payments.

2.1 INTERACTION WITH THE COMPONENT

From the applications point of view there are two actions necessary to perform a transaction: The first step is validation of the transaction parameters, the second step is the financial exchange of the transaction. After successful authorization (step 1), the SPG will return a handle (ID, TOKEN) of the transaction to the caller. The caller will use this value to transfer the amount in step 2 to the SPG.

2.2 STEP 1: AUTHORIZATION REQUEST

This step is usually executed during user interaction with the system. A set of attributes is passed to the SAC before the request is executed. After the request has been executed *successfully* the application will receive another set of attributes used for further processing of the transaction.

Attribute	Description
Saferpay Account Information	
ACCOUNTID	The saferpay account identifier to use for the transaction. The account id is made up by the merchant's customer id (first part) and the saferpay terminal id, e.g. 99867-94913159 = test account id
Credit Card Details	
PAN	Credit card: Primary Account Number as printed on the credit card, e.g. 9451123100000004
EXP	Credit card: Expiration date as printed on the card. The format is MMY, e.g. 1206 for 12/2006
TRACK2	Credit card: Optional contains the original magstripe data.
CVC	<i>Optional:</i> Credit card: 3- or 4-digit Credit Card Verification Checknumber as printed on the card (usually in the signature field).
NAME	<i>Optional:</i> Cardholder name
CARDREFID	Credit card: Is used instead of PAN Only available with enabled "Saferpay Secure Card Data" service
Debit Card Details	
TRACK2	ELV (manual input): Contains account and institute number (BLZ) Format: ;59<BLZ[8]>=<Kontonummer[10]> BLZ 8 digits fixed length; Kontonummer 10-digits, right justified filled with 0 Kontonummer 123456 → 0000123456
NAME	<i>Optional:</i> Account holder name
PAYERNOTE	<i>Optional:</i> Additional text field for ELV payment reason, up to 27 characters

Attribute	Description
Amount	
AMOUNT	Authorization amount in minor currency unit e.g. 1230 in EUR means EUR 12,30.
CURRENCY	ISO 4217 three-letter currency code e.g. CHF, USD, EUR
TOLERANCE	Amount tolerance in percent. The finally captured amount is AMOUNT + TOLERANCE.
3-D Secure Optional attributes needed for 3-D Secure flagging	
ECI	<i>Optional:</i> Electronic Commerce Indicator 0 = SSL secured transaction (default) 1 = 3-D Secure transaction, cardholder authenticated 2 = 3-D Secure transaction, cardholder not enrolled
XID	<i>Optional:</i> 3-D Secure Transaction Identifier, needed if ECI=1
CAVV	<i>Optional:</i> Cardholder Authentication Verification Value or UCAF field, needed if ECI=1
Operational Settings	
ACTION	<i>Optional:</i> Payment action, default value is "Debit" "Debit" "Credit" Payment, cardholder pays merchant (default) or Refund, merchant pays cardholder (credit cards only).
AUTHCODE	<i>Optional:</i> Authorization code may be provided if the transaction was previously authorized e.g. by phone (referral).
AUTHFLAGS	<i>Optional:</i> Options for authorization. Default is online authoriza- tion. See "Authorization Options" for details.
Additional Data	
ORDERID	<i>Optional:</i> Identification number of the order process, will be passed to the payment provider.

2.3 STEP 2: AUTHORIZATION RESPONSE

A successful request-response operation *does not* imply the successful authorization of the requested reservation. The Merchant Application *must* evaluate the RESULT attribute of the response to retrieve the authorization status.

A run-time error is returned from the SAC if the received response is wrong or missing.

Attribute	Description
Authorization Result	
RESULT	The authorization result code, see 2.3.2 <i>Result Codes</i>
Authorization Response	
AUTHRESULT¹	<i>Optional</i> reason for declination by card processor.
AUTHMESSAGE	<i>Optional</i> message describing the result. May be an empty if no message was provided by the processor.
AUTHREFERRAL	<i>Optional</i> referral telephone number supplied by the processor.
AUTHCODE	<i>Optional</i> authorization code supplied by the processor.
Card's country of origin	
CCOUNTRY	<i>Optional:</i> ISO 4217 two-letter country code, e.g. CH, DE
CCOUNTRYNAME	<i>Optional:</i> Name of the country
Provider Information	
PROVIDERID	<i>Optional:</i> Identifier for the processor of the transaction

¹ This codes are system specific.

Attribute	Description
PROVIDERNAME	<i>Optional:</i> Name of the processor
Transaction Handle	
ID [80]	If (RESULT=0) unique transaction identifier assigned by saferpay. This attribute is used for settlement and referencing.
TOKEN [Text]	If (RESULT=0) arbitrary string used for later settlement.
Receipt	
RECEIPTTEXT	<i>Optional</i> Sent back only if transaction was approved (RESULT=0), contains receipt text information for ELV.

2.3.1 AUTHORIZATION OPTIONS

Specify what checks are made on the card before authorization is given. The value may be a combination (sum) of the following values:

Option	Value	Description
Default	0	Default processing; the SPG will perform online authorization of the transaction.
Referral	4	The transaction was authorized through other media (e.g. phone); the authorization code received by the external source must be indicated in the AUTHCODE attribute.
Own Risk	16	The transaction is not validated at the merchants acquirer before approval (offline authorization by merchant).

2.3.2 RESULT CODES

The following codes may be returned in the RESULT attribute. A value different from "0" indicates an unsuccessful authorization.

Value	Name	Description
0	Authorization Successful	
5	Access Denied	The access to the specified account was denied by Saferpay.
21	Invalid Structure	Invalid structure of request.
22	Unknown Action	Unknown action attribute.
23	Invalid Action	Invalid action attribute or action not possible.
61	Invalid Card	The static checks failed on this card (range check, LUHN check digit).
62	Invalid Date	Invalid expiration date.
63	Card Expired	The card has expired.
64	Unknown Card	The card type is unknown, the BIN range could not be assigned to a known card brand.
65	Authorization Denied	The processor has denied the transaction request.
67	No Contract	No contract exists for the card/currency combination specified.
68	Ambiguous Contract	More than one contracts exist for the specified card/currency combination.
75	Missing Parameter	One or more mandatory parameters are missing
76	Connect Failed	The connection to the card processor could not be established or was broken during the request. Retry the request.
77	No Endpoint	No endpoint is specified for the processor of the card. This processor may not support online authorization of cards.
78	Internal Error	A system error has occurred during processing the request. Retry the request if possible.

Value	Name	Description
80	No Terminal	Terminal does not exist.
82	Not Found	Transaction not found.
83	Invalid Currency	The specified currency code is invalid.
84	Invalid Amount	The specified amount is invalid or does not match the rules for the currency.
87	Prevalidate Denied	Access denied.
88	Reservation Invalid	Reservation invalid.
89	Reservation Overbooked	Amount of reservation overbooked.
90	Contract Disabled	The contract for this card is currently disabled.
97	Already Captured	Transaction already captured (PayComplete)
98	Invalid Signature	Invalid signature
102	Not Supported	Function not supported by provider.
104	Denied Blacklist	Card number in customer black list.
105	Denied Country	Card number not in country BIN range list.
151	Timeout Response	Timeout waiting on authorization response. Retry the request.
152	Unknown Error	Unknown (system) error.
301	Authentication Error	An error happened during the authentication request. The merchant application could choose to - continue the payment without authentication or - ask customer for other payment method or - stop the payment.

2.4 EXAMPLES

2.4.1 CREDIT CARD (VBSCRIPT)

```

Set mf = CreateObject("Saferpay.MessageFactory")
Set areq = mf.CreateRequest("Authorization")

Call areq.SetAttribute("PAN", "9451123100000004")
Call areq.SetAttribute("EXP", "1206")
Call areq.SetAttribute("AMOUNT", "100") ' 1.00 EUR
Call areq.SetAttribute("CURRENCY", "EUR")
Call areq.SetAttribute("ACCOUNTID", "99867-94913159")

Set ares = areq.Execute

RESULT = ares.GetAttribute("RESULT")

if RESULT = 0 then
    ID = ares.GetAttribute("ID")
    TOKEN = ares.GetAttribute("TOKEN")
else
    ... Error handling
end if

```

2.4.2 GERMAN ELV AND ORDERID (VBSCRIPT)

```

: ' manual entry of account information
: ' Konto 6644332, BLZ 760 260 00
Call areq.SetAttribute("TRACK2", ";5976026000=0006644332")
Call areq.SetAttribute("ORDERID", "11223799")
Call areq.SetAttribute("AMOUNT", "200")
Call areq.SetAttribute("CURRENCY", "EUR")
Call areq.SetAttribute("ACCOUNTID", "99867-94913159")

```

```
Set ares = areq.Execute  
:
```

2.5 STEP 3: FINANCIAL EXCHANGE

This step will eventually transfer the transaction to Saferpay for settlement. The application will need to call the Capture function of the message object as with other Saferpay transactions. There the ID and TOKEN values from step 1 are required (if TOKEN is not available use the string "(not used)" instead of TOKEN).

```
Set mf = CreateObject("Saferpay.MessageFactory")  
Set creq = mf.CreatePayComplete(ID, TOKEN)  
  
creq.Capture
```

If this function fails a runtime error will be raised. Retrying the command will not affect financial flow. This application may also make use of the Transaction Queue Component. Find more details about it at [1].

2.6 TESTING NOTES

You may use the card number 9451 1231 0000 0004 (12/06) for testing purposes. It will work together with the Testing Account you receive after subscription.

3 APPENDIX

3.1 REFERENCE

The documents listed below are integral part of this specification.

	Description	Version	Date
1	http://www.saferpay.com/help		
2	Saferpay Implementation Guide	1.4	01.09.2003
3	Saferpay MPI Integration Guide	1.4	03.05.2004

3.2 VERSION HISTORY

The documents listed below are integral part of this specification.

Version	Date	Description
1.63	03.02.2005	New attribute PAYERNOTE for ELV transactions.

3.3 GLOSSARY

API	Application Programming Interface
AID	Authorization Identifier (POZ)
CAVV	Cardholder Authentication Verification Value (3-D Secure)
CVC	Card Verification Checksum
CVV	Card Verification Value
ECI	Electronic E-Commerce Indicator
ELV	„Elektronisches Lastschrift Verfahren“ - German direct debit payment
MA	Merchant Application
PAN	Primary Account Number
POS	Point of Sale
POZ	„POS ohne Zahlungsgarantie“ – POS without payment guarantee
SAC	Saferpay Application Component
SPG	Saferpay Payment Gateway
XID	Unique Transaction Identifier (3-D Secure)