Card Online Processing

Merchant Specification

Version 4.4.5

wirecard

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1 Introduction

1.1 Audience

This specification is intended to be read by the technical staff in the merchant's organization responsible for implementing and administering the XML-based card processing interface. It is assumed that the reader has a working knowledge of the programming languages discussed in this specification.

1.2 Document Conventions

This document uses the following conventions:

- `Monospace/Courier` is used for example code and code listings, file names, commands, path names, directory names, Hypertext Markup Language (HTML) tags, and any text that must be typed on the screen.
- The *italic* font is used in code to represent placeholder parameters (variables) that should be replaced with an actual value, or items that require emphasis.
- Brackets ([]) are used to enclose optional parameters.
- A slash (/) is used to separate directories in a path and to indicate a blank or closing XML parameter

1.3 Software Requirements

To implement the XML interface for standard card processing, the following requirements must be met:

- Internet connection supporting SFTP
- Working knowledge of XML
- SSL server supporting 128-bit (or stronger) encryption
- Support of UTF-8 encoding

1.4 References

- Wirecard HTTPS Gateway - Specification
- Wirecard 3-D Secure Card Processing - Specification
- Wirecard Risk Management – Specification
- Wirecard Card Batch Processing – Specification
- Wirecard Card Processing – Market Segment Data

1.5 Revision History

This specification is periodically updated to reflect the modifications made to the card processing interface. With each revision a new entry is added to the table below, including the date of and the reason for the version change. Additionally, vertical revision bars are placed in the margins to indicate the changes in the text.

Date	Version	Comments
2008-04-07	3.0.0	Chapter 7 on AVS incorporated. Query date format updated.
2008-05-14	3.0.1	VAT field settings changed form mandatory to conditional - with comment "relevant for AirPlus Acceptance UATP transactions only" FareBasis data type changed from a6 to an6
2008-07-22	3.0.2	Note added to Refund examples. DTD Reference (xsi:noNamespaceSchemaLocation="wirecard.xsd")
2008-09-01	3.1.0	removed from XML examples and Appendix E (Car Rental market segment) incorporated.
2008-09-22	3.1.1.	minor updates
2008-10-15	3.2.0	Section 6.12 (Original Credits) added. Sections 6.10. (Bookback) and6.14 (Refund) updated. Some minor updates
2008-11-05	3.2.1	Section 6.12 (Original Credits) updated.
2009-02-10.	3.3.0	Phone number format updated. Cross references incorporated
2009-06-30	3.4.0	<FunctionResult>ACK</FunctionResult> in XML samples changed to <FunctionResult>PENDING</FunctionResult>. IP address format description changed. Error code 20001 included.
2011-06-03	4.0.0	Streamlined documentation, removed obsolete transaction types
2012-07-03	4.1.0	Updated POS description
2012-07-26	4.1.1.	Updated AVS information
2012-08-31	4.1.2.	Changed <CountryCode> to optional
2013-02-26	4.2.0	Added Account Updater Functionality
2013-09-16	4.2.1	Recurring Transaction Response Codes removed, Explanation Transaction Type Reversal. Extended POS element to support Terminal ID and PIN attributes.
2014-01-31	4.2.2	Added RAW DATA support for submitting encrypted credit card information from Mobile POS devices.
2014-04-02	4.3.0	Account updater functionality is documented separately. Deleted Installment transaction type as it is not currently supported. Added missing Authorization type to support MasterCard mandate rules fully.
2014-07-23	4.4.0	Added four new transaction types TERMINAL_CUTOVER,TRANSACTION_UPDATE, PURCHASE OFFLINE and REFUND OFFLINE. Added Target State field to support POS settlement transactions.
2014-07-31	4.4.1	Small corrections to include Target State in Capture and Refund transactions
2014-08-26	4.4.2	Minor corrections
2015-03-03	4.4.3	Minor corrections contd. added ISO Field 23 Sequence Number. Added New transaction SALE_ADJUSTMENT, Amex AAV (enhanced AVS) code mapping added to 8.2 AVS Codes
2015-05-07	4.4.4	Extension for MasterPass wallet indicator added to 5.6 MasterPass transactions
2015-10-26	4.4.5	Replaced MAESTRO test card number

2 Overview

The Wirecard online xml interface transactions allows transmitting transaction to a multiple of processors, acquirer and internal or external fraud prevention solutions. This document covers the standard transaction types and most frequently used extensions. Please contact Wirecard Customer support if you are missing special functionality or need support for non-documented transaction types.

2.1 Standard Payment flow

Most selling processes consists of two steps:

1) A customer places an order at the merchant's store.
2) The merchant delivers the order to the customer

Like the selling process, also the card payment process consists of following parts:

Preauthorization: The preauthorization is normally triggered by the merchant when the cardholder places his order. During the preauthorization the entered card details are verified and the specified amount is blocked for the merchant on the cardholder's card account. Both steps are done online so the merchant receives immediately a response. The successful preauthorization is normally the basis for the merchant to trigger internally the allocation of the order.

Authorization: Authorization is used to block a specific amount on the cardholder's card account, which will be submitted as the final transaction amount. In general, the payment guarantee for this type is shorter compared to the preauthorization. Depending on the card scheme, the transaction fee will be varied. Due to the nature of the authorization, mostly fee is smaller compared to the preauthorization.

Capture: When the order is ready for shipping the merchant triggers the capture. This capture is like an advice to the cardholder's bank to transfer the reserved money to the merchant.

Purchase: In case the shipment takes place on the same day as the order it is possible to authorize and capture in a single step called purchase.

The implementation of preauthorization/ capture or purchase is the minimum mandatory subset. Refunding money can be triggered manually using the Wirecard's web-based Administration Frontend.

To provide a full automation Wirecard provides a number of additional transaction types to enable an optimized integration in the merchant's processes. Except Enrollment Check for 3D enabled ecommerce merchants the support of all other additional transaction types by the merchant is optional.

NOTE: Due to the new Mastercard's authorization and preauthorization mandate for the European region, the processing rules & fees have been changed since 5th November 2013. Please refer to the new authorization rules.

2.2 Extensions

Wirecard provides various extensions for enriching the transaction process.

2.2.1 3D Secure

Visa, Mastercard, American Express and JCB offers an additional authentication process for ecommerce transactions. These processes are called Verified-by-Visa, Mastercard Secure, SafeKey or JSecure. The authentication process starts with the Enrollment check and takes place before the preauthorization or purchase is done.

Please refer to the 3D Secure Specification about details to the 3D process.

2.2.2 Risk Management and Fraud Prevention

Wirecard provides a large bandwidth of internal and external Risk Management and Fraud Prevention solutions. These solutions can be configured at Wirecard and are called within the standard transaction flow. No separate callout has to be implemented for most solutions.

Please refer to the Wirecard Risk Management Specification for details about the solutions and Corperate Trustcenter Data and Cost Center Data for a description of available data elements.

2.2.3 AVS

The Address Verification Service (AVS) is a system to proof the identity of the customer by comparing parts of the address data. Please refer to Address Verification Service for a detailed description.

2.2.4 Market Segment Data

Wirecard's Online XML Interface provides the option to submit market specific addendum data.

Following market segments are supported:

- ☐ Airline Market Segment

Please refer Market Segment Data for a detailed description.

2.2.5 Point of Sale Transaction

Wirecard offers different interfaces for POS transactions. One of these interfaces is the online-xml API described in this document. Please note that additional requirements and certifications apply. Please contact Wirecard Customer Support prior any implementation if you intend to process POS transactions.

3 Transaction Types

This chapter describes the most frequently used request messages available in the Wirecard Online XML Interface and the supported elements. Following transaction types are described in this chapter:

Debit Transaction Types

Authorization	– Validation of credit card details and reservation of a final amount
Preauthorization	– Validation of credit card details and reservation of an amount
Capture	– Advice to capture the previous reserved amount
Purchase	–Authorization and Capture in one single step
Preauthorization Supplement	– Increases the amount of a Preauthorization
Notification	– Needed for processing voice-authorization transaction
Reversal	– Cancel a previous Authorization, Capture or Purchase
Purchase Offline	– An offline sale transaction executed within the POS terminal

Credit Transaction Types

Reversal	– Cancel a previous Credit
Bookback	– Credit a previously captured amount back to the card holder (limits apply)
Refund	– Credit an amount back to the cardholder (restrictions and limits apply)
Original Credit	– Special credit transaction (OCT) for remittances, payouts, claims, dividends or winnings (restrictions apply)
Refund Offline	– An offline refund transaction executed within the POS terminal

Additional Transaction Type

Authorization Check	– Validates a card number
Query	– Retrieve the status of a previous transaction
Terminal Cutover	– Indicates that the transactions coming from the POS terminal for the last period can be settled.
Transaction Update	– Upload and store the signature taken from the MPOS terminal and the final EMV Transaction Certificate (TC) that was calculated by the chip to confirm the response sent from the issuer.
Sale Adjustment	- Allows to update the amount of a previous settlement transaction

NOTE: Wirecard offers payment processing for a multitude of acquirers using different protocols. Please be aware that not all functionality is provided by every acquirer and not all specific functionality is described in this document. Please contact Wirecard Customer Support prior to implementation to verify the availability of the intended transaction types.

3.1 Preauthorization

Description:

During a preauthorization, the transaction information is sent to Wirecard, which in turn sends the information to the cardholder's issuing financial institution. A preauthorization is not a guarantee of payment. It only confirms that the card exists and that funds are available at the time of preauthorization to cover a purchase amount. The funds are not credited at this time but the preauthorization reduces the available credit limit for that card, so in a sense the funds are reserved for the purchase.

The duration of that reservation depends on multiple factors like card scheme or card type. Typically, the limit ranges from three to twenty-one days. If a card authorization expires before the settlement request is sent, higher charges may apply and the issuer may raise a chargeback.

In most cases, a preauthorization remains valid for a period of seven days. Many merchants try to limit the time between preauthorization and settlement to seven days, in order to minimize settlement problems. While this is a good policy, it is not a definitive rule. Policies and rates vary between cards and financial institutions, and this information is not included in the preauthorization response. It is up to the merchant's responsibility to be aware of the possible consequences and decide how to handle them.

Availability and Restrictions:

This transaction type is generally available.

Please refer to new MasterCard Mandate rules & authorization conversion service.

Examples:

Please refer to Preauthorization Example for examples.

Request message:

The following table lists the most common used fields for submitting a Preauthorization Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_PREAUTHORIZATION	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
GuWID	con	To be provided for 3d Secure or "repeated" transactions only (see Recurring Transactions).
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	

Element	Sett.	Remarks
CountryCode	opt.	
Usage	opt	
RECURRING_TRANSACTION	opt	
Type	man.	
CREDIT_CARD_DATA	con.	This collection can be omitted if it is a "repeated" transaction (see Recurring Transactions).
CreditCardNumber	con.	For 3d secure transactions only the CVC2 has to be provided as the card details were already provided in the Enrollment Request. For POS transactions no CVC2 has to be provided. In case track-2 data is present none of these fields have to be provided.
CVC2	con.	
ExpirationYear	con.	
ExpirationMonth	con.	
CardHolderName	con.	
CardIssueNumber	opt	
Track2Data	con.	Only to be provided for POS transactions, depending on the POS_DATA/EntryMode RAW_DATA contains encrypted card details like track2 data coming directly from the card reader. In case other credit card details are present the decrypted RAW_DATA contents will be validated against this.
RAW_DATA	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
EMVICCData	con.	
encoding	man.	
format	opt.	
PIN	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
POS_DATA	con.	
EntryMode	con.	
PinInputLengthCapability	con.	

Element	Sett.	Remarks
TerminalID	con.	
CardAcceptorID	con.	
TargetState	opt.	
CONTACT_DATA	opt.	
IPAddress	opt.	
DeviceIdentification	opt.	
CORPTRUSTCENTER_DATA	opt.	
(additional elements)	con.	
MARKET_SEGMENT	con.	
(additional elements)	con.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.2 Authorization

Description:

During a card authorization, the transaction information is sent to Wirecard, which in turn sends the information to the cardholder's issuing financial institution. An Authorization is not a guarantee of payment. It only confirms that the card exists and that funds are available at the time of Authorization to cover a purchase amount. The funds are not credited at this time but the Authorization reduces the available credit limit for that card, so in a sense the funds are reserved for the purchase.

The reserved amount can be settled later by a Capture request (Capture Authorization). If both the Authorization request and the Capture Request are processed in real time, the captured amount must be identical to the amount authorized.

Availability and Restrictions:

This transaction type is generally available.

Every authorization request has a time limit set by the card schemes. Typically, the limit ranges from four to thirty days. It is recommended to check with the card schemes for details. If an authorization expires before the settlement request is sent, Settlement may be denied if the cardholder‘s Credit limit is reached, or you may be charged a higher rate for the transaction, in line with the terms of service of the credit card company.

In most cases, it is safe to assume that an authorization remains valid for a period of seven days. Many merchants try to limit the time between authorization and settlement to seven days, in order to minimize settlement problems. While this is a good policy, it is not a definitive rule. Policies and rates vary between cards and financial institutions, and this information is not included in the authorization response. It is up to you to be aware of the possible consequences and decide how to handle them.

Please refer to new MasterCard Mandate rules & authorization conversion service.

Examples:

Please refer to Authorization Example for examples.

Request message:

The following table lists the most common used fields for submitting an Authorization Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_AUTHORIZATION	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
GuWID	con	To be provided for 3d Secure or “repeated” transactions only (see Recurring Transactions).

Element	Sett.	Remarks
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
CountryCode	opt.	
Usage	opt	
RECURRING_TRANSACTION	opt	
Type	man.	
CREDIT_CARD_DATA	con.	This collection can be omitted if it is a “repeated” transaction (see Recurring Transactions).
CreditCardNumber	con.	For 3d secure transactions only the CVC2 has to be provided as the card details were already provided in the Enrollment Request. For POS transactions no CVC2 has to be provided. In case track-2 data is present none of those fields have to be provided.
CVC2	con.	
ExpirationYear	con.	
ExpirationMonth	con.	
CardHolderName	con.	
CardIssueNumber	opt	
Track2Data	con.	Only to be provided for POS transactions, depending on the POS_DATA/EntryMode RAW_DATA contains encrypted card details like track2 data coming directly from the card reader. In case other credit card details are present the decrypted RAW_DATA contents will be validated against this.
RAW_DATA	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
EMVICCData	con.	
encoding	man.	
format	opt.	
PIN	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	

Element	Sett.	Remarks
POS_DATA	con.	
EntryMode	con.	
PinInputLengthCapability	con.	
TerminalID	con.	
CardAcceptorID	con.	
TargetState	opt.	
CONTACT_DATA	opt.	
IPAddress	opt.	
DeviceIdentification	opt.	
CORPTRUSTCENTER_DATA	opt.	
(additional elements)	con.	
MARKET_SEGMENT	con.	
(additional elements)	con.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.3 Authorization Check

Description:

The Authorization Check allows merchants to validate credit cards used in online transactions in real-time against the database of the card-issuing bank. The Authorization Check is almost identical to the Preauthorization Request described in the previous section. The only thing that sets it apart from a standard preauthorization is that the amount specified in this check request is not reserved for a later capture but automatically reversed. As the name indicates, an Authorization Check is a verification of the credit card only and does not replace the standard preauthorization request.

Availability and Restrictions:

This transaction type is generally available.

It is not intended to perform standalone Preauthorization Checks. This transaction type should only be used in combination with subsequent transaction processing.

If an Authorization Check is immediately followed by a Preauthorization it may be possible that the subsequent Preauthorization is rejected by the issuing bank.

Examples:

Please refer to Authorization Check Example for examples.

Request message:

The following table lists the most common used fields for submitting an Authorization Check to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_AUTHORIZATION_CHECK	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
GuWID	con	To be provided for 3d Secure or “repeated” transactions only (see Recurring Transactions).
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
CountryCode	opt.	
RECURRING_TRANSACTION	opt	
Type	man.	

Element	Sett.	Remarks
CREDIT_CARD_DATA	con.	This collection can be omitted if it is a "repeated" transaction (see Recurring Transactions).
CreditCardNumber	con.	For 3d secure transactions only the CVC2 has to be provided as the card details were already provided in the Enrollment Request. For POS transactions no CVC2 has to be provided. In case track-2 data is present none of those fields have to be provided.
CVC2	con.	
ExpirationYear	con.	
ExpirationMonth	con.	
CardHolderName	con.	
CONTACT_DATA	opt.	
IPAddress	opt.	
DeviceIdentification	opt.	
CORPTRUSTCENTER_DATA	opt.	
(additional elements)	con.	
MARKET_SEGMENT	con.	
(additional elements)	con.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.4 Capture

Description:

After an order is shipped, a previous authorized amount can be settled (captured). The card-issuing bank credits the funds to the merchant's bank account and updates the cardholder's statement. Card regulations require a merchant to ship goods before settling the funds for an order.

A Capture Request must include a valid GuWID referencing the previous Preauthorization Request. If the amount captured is less than the authorized amount (Partial Capture) the remaining amount is still available for another capture (Split Capture). The sum of all captured amount must be less or equal to the authorized amount. If no amount or the authorized amount is specified the complete authorized amount is captured (full capture).

A capture should be made before the preauthorization expires. The preauthorization validity duration depends on the card type and card brand and varies between 7 and 21 days for standard credit cards and standard business. Triggering the capture within 7 days is therefore a good practice.

Most Acquirer and issuers also accepts captures send after the preauthorization expired. But then the issuer has the right to raise a chargeback with reasons like "Late Presentment" or "Non-Authorized Transaction".

Availability and Restrictions:

Full Capture is supported by all Acquirers.

Partial and Split Capture are supported for Visa and MasterCard with a Wirecard Bank acquiring contract. For more information about the support of other brands or acquirers please contact Wirecard Customer Support.

Examples:

Please refer to Capture Example for examples.

Request message:

The following table lists the most common used fields for submitting a Capture Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_ CAPTURE	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
PaymentGroupID	opt	
GuWID	man	
SalesDate	opt	
Amount	opt	If the amount is specified it has to be equal or less than the authorized amount.
Minorunits	opt	

Element	Sett.	Remarks
action	opt	
CountryCode	opt.	
Usage	opt	
POS_DATA	con.	
EntryMode	con.	
PinInputLengthCapability	con.	
TerminalID	con.	
CardAcceptorID	con.	
TargetState	opt.	
CONTACT_DATA	opt.	
IPAddress	opt.	
DeviceIdentification	opt.	
CORPTRUSTCENTER_DATA	opt.	
(additional elements)	con.	
MARKET_SEGMENT	con.	
(additional elements)	con.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.5 Purchase

Description:

A purchase combines a authorization and a capture in one-step. This transaction type is intended when the goods or services can be immediately provided to the customer.

Availability and Restrictions:

This transaction type is generally available.

Examples:

Please refer to Purchase Example for examples.

Request message:

The following table lists the most common used fields for submitting a Purchase Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_PURCHASE	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
GuWID	con	To be provided for “repeated” transactions only (see Recurring Transactions)
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
CountryCode	opt.	
Usage	opt	
RECURRING_TRANSACTION	opt	
Type	man.	
CREDIT_CARD_DATA	con.	This collection can be omitted if it is a “repeated” transaction (see Recurring Transactions).
CreditCardNumber	con.	For 3d secure transactions only the CVC2 has to be provided as the card details were already provided in the Enrollment Request.
CVC2	con.	
ExpirationYear	con.	
ExpirationMonth	con.	

Element	Sett.	Remarks
CardHolderName	con.	For POS transactions no CVC2 has to be provided. In case track-2 data is present none of those fields have to be provided.
CardIssueNumber	opt	
Track2Data	con.	Only to be provided for POS transactions, depending on the POS_DATA/EntryMode RAW_DATA contains encrypted card details like track2 data coming directly from the card reader. In case other credit card details are present the decrypted RAW_DATA contents will be validated against this.
RAW_DATA	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
EMVICCData	con.	
encoding	man.	
format	opt.	
PIN	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
POS_DATA	con.	
EntryMode	con.	
PinInputLengthCapability	con.	
TerminalID	con.	
CardAcceptorID	con.	
TargetState	opt.	
OriginalTransactionTime	opt.	
OriginalTransactionTimeTz	opt.	
CONTACT_DATA	opt.	
IPAddress	opt.	
DeviceIdentification	opt.	
CORPTRUSTCENTER_DATA	opt.	
(additional elements)	con.	

Element	Sett.	Remarks
MARKET_SEGMENT	con.	
(additional elements)	con.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.6 Preauthorization Supplement

Description:

The 'preauthorization supplement' function enables the user to upwardly alter the amount reserved on a card by a previous preauthorization or preauthorization supplement.

A preauthorization supplement request requires a valid GuWID and acquirer Authorization Code from a former preauthorization request.

Availability and Restrictions:

Please note that this transaction type is not supported by all acquirers and that it can only be captured once.

Examples:

Please refer to Preauthorization Supplement Example for examples.

Request message:

The following table lists the most common used fields for submitting a Preauthorization Supplement Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_PREAUTHORIZATION_ SUPPLEMENT	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
PaymentGroupID	opt	
GuWID	con	This is the GUWID of the corresponding Preauthorization
Amount	man	
Minorunits	opt	
action	opt	
CONTACT_DATA	opt	
IPAddress	opt	
DeviceIdentification	opt	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.7 Notification

Description:

A Notification Request is typically sent when a preauthorization or purchase has been rejected with error code 02: 'Call Voice-authorization number'. In this case, the merchant should contact his acquirer's voice authorization center by phone and request a voice authorization number. The acquirer refers the request to cardholder's bank (issuer). When the issuer has authorized the transaction, the acquirer gives the merchant an authorization code, which the merchant then includes in his notification request. If this request (and authorization code) is processed successfully the transaction is approved.

Availability:

The Notification functionality is available for Mastercard with a WDB Acquiring contract. For information about the support of other brands or acquirers please contact Wirecard Customer Support.

Examples:

Please refer to Notification Example for examples.

Request message:

The following table lists the most common used fields for submitting a Notification Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_NOTIFICATION	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
PaymentGroupID	opt	
GuWID	con	
SalesDate	opt	
AuthorizationCode	opt	
Usage	opt	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.8 Reversal

Description:

The reversal function enables the user to cancel a previous request.

A reversal of a monetary transaction (e.g. ‘purchase’, ‘capture’, ‘bookback’, ‘notification’, ’refund’) is possible until the transaction is processed by the Acquirer. The exact deadline depends on the acquirer and the used protocol. Reversed transactions do not appear on the cardholder’s card statement.

A reversal of a preauthorization can be made up to 14 days following the original request, depending on the issuer.

A reversal of a capture reactivates the original preauthorization resulting in reduced credit limit of the credit card. To free reserved amounts on a credit card please cancel also the preauthorizations.

For a reversal request, a valid GuWID from a previous request is required. The amount defined in the ‘reversal’ request has to match the amount given in the respective request that needs to be cancelled.

Availability and Restrictions:

This transaction type is available for WDB and many other Acquirers.

Examples:

Please refer to Reversal Example for examples.

Request message:

The following table lists the most common used fields for submitting a Reversal Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_REVERSAL	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
PaymentGroupID	opt	
GuWID	con	
Amount	con.	
Minorunits	opt	
action	opt	
Usage	opt	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.9 Bookback

Description:

A Bookback allows to credit the customer, e.g. in case of returned goods or cancelation. To post a Bookback request, a valid GuWID from a former Capture or Purchase (debit) transaction is required. It is only possible to credit an amount less than or equal to the initial transaction using the same currency as with the original transaction. A bookback is listed separately on the cardholder's card statement

NOTE: It is recommended that merchants check their chargeback records before processing a refund transaction.

Availability and Restrictions:

This transaction type is generally available.

The use of the bookback functionality is subject to constraints imposed by the acquirer's risk management system. Please contact your Acquirer for details.

Examples:

Please refer to Bookback Example for examples.

Request message:

The following table lists the most common used fields for submitting a Bookback Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_BOOKBACK	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
PaymentGroupID	opt	
GuWID	con	
Amount	con.	
Minorunits	opt	
action	opt	
Usage	opt	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.10 Refund

Description:

The Refund transaction type can be used to credit funds to a payment card. It is listed separately on the payment card statement The funds can be credited as a standalone transaction (with no connection to a previous settlement) or to reimburse a consumer for a returned product or service. Although it is supported by Wirecard's payment platform it is disabled for general use. If you wish to use it, please contact Wirecard Customer Support.

A Refund Request is similar to the Bookback Request, except that it does not necessarily require a valid GuWID from a previous Capture Request.

NOTE: It is recommended that merchants check their chargeback records before processing a refund transaction.

Availability and Restrictions:

The use of this transaction type is de-activated by default. Please contact your Wirecard Account Manager prior the use of this transaction type.

Examples:

Please refer to Refund Example for examples.

Request message:

The following table lists the most common used fields for submitting a Refund Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_REFUND	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
CountryCode	opt.	
Usage	opt	
CREDIT_CARD_DATA	con.	This collection can be ommited if it is a "repeated" transaction (see Recurring Transactions).
CreditCardNumber	con.	

Element	Sett.	Remarks
CVC2	con.	For 3d secure transactions only the CVC2 has to be provided as the card details were already provided in the Enrollment Request. For POS transactions no CVC2 has to be provided. In case track-2 data is present none of those fields have to be provided.
ExpirationYear	con.	
ExpirationMonth	con.	
CardHolderName	con.	
CardIssueNumber	opt	
Track2Data	con.	Only to be provided for POS transactions, depending on the POS_DATA/EntryMode RAW_DATA contains encrypted card details like track2 data coming directly from the card reader. In case other credit card details are present the decrypted RAW_DATA contents will be validated against this.
RAW_DATA	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
EMVICCData	con.	
encoding	man.	
format	opt.	
POS_DATA	con.	
EntryMode	con.	
PinInputLengthCapability	con.	
TerminalID	con.	
CardAcceptorID	con.	
TargetState	opt.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.11 Original Credits

Description:

An Original Credit (Visa: Original Credit Transaction and MasterCard: Payment Transaction) is a transaction type used to credit funds (remittances, payouts, claims, dividends or winnings) to a card, provided the merchant's acquiring bank and the beneficiary's card issuing bank participate in this scheme. For the purpose of processing, an original credit is referred to OCT (Original Credit Transaction) in the Wirecard environment.

Original credits are supported by Wirecard Bank (acquirer) and Wirecard Technologies processing system. This transaction type may, however, not be available to all merchants.

Availability and Restrictions:

The use of Original Credits requires a separate acquiring contract with Wirecard Bank. If you wish to use this service, please contact your sales representative or Wirecard Customer Services.

Examples:

Please refer to Original Credits Example for examples.

Request message:

The following table lists the most common used fields for submitting a OCT Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_OCT	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
GuWID	con	
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
CountryCode	opt.	
Usage	opt	
CREDIT_CARD_DATA	con.	
CreditCardNumber	man.	
CVC2	con.	
ExpirationYear	man.	
ExpirationMonth	man.	

Element	Sett.	Remarks
CardHolderName	man.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.12 Query

Description:

With the Query Request function the merchant can obtain information about the status of a transaction. For example, he can query the status of a captured amount that was previously displayed with the Function Result 'PENDING' to make sure that the transaction has been processed successfully and now returns the Function Result 'ACK' in the Query response message. To send the Query Request, the user must provide the GuWID returned with the former Capture response message or Transaction Reference ID, which originates in the transaction ID sent by the merchant.

Availability and Restrictions:

This transaction type is generally available.

A query request can be posted with only one ID. This can be either a ReferenceTransactionID or a GuWID. Both IDs cannot be queried at the same time.

Examples:

Please refer to Query Example for examples.

Request message:

The following table lists the most common used fields for submitting a Query Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_QUERY	man	
type	opt	
CC_TRANSACTION	man	
mode	opt	Without this element the response will only include the result of the queried transaction. If specified with "detail", also the request data elements will be included.
ReferenceTransactionID	con	If ReferenceTransactionID and no time frame is specified a default time frame is used. This is currently 6 month.
StartTime	opt	
EndTime	opt	
GuWID	con	If GuWID is specified no time frame is needed. No limitation apply.

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.13 Terminal Cutover

Description:

This function offers the client application (POS Terminal or ISO message Host application) to submit a list of transaction parameters incl. Merchant ID and Terminal ID, which will be used to fetch all previously submitted sale & refund transactions stored in the payment-processing gateway due to be cleared by the issuer for a given period. All those transactions are in status "INCOMPLETE" and will not be processed until this cutover message is sent.

The primary role of the client application will be to translate the settlement message from the terminal, extract the batch reference number & cutover date from the last successful settlement, calculate the transaction count as well as sum of the amounts of the sale & refund transactions, compare the results coming from terminal to the results stored in the Host application.

Availability and Restrictions:

This transaction type generally does not fully implement settlement process initiated at the terminal therefore; the client application must manage the matching process after receiving the settlement message from the terminal.

Examples:

Please refer to Terminal Cutover Example for examples.

Request message:

The following table lists the most common used fields for submitting a Terminal Cutover Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_ TERMINAL_CUTOVER	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
Currency	con.	
POS_DATA	man	
CardAcceptorID	man	
TerminalID	man	
CaptureReference	man	
LastCutover	man	
TargetState	opt	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.14 Transaction Update

Description:

This transaction type offers to store mainly Transaction Certificate generated in the POS terminal after successfully evaluating authorization response from the issuer. In addition, this function allows the MPOS terminal to submit image of the signature in a specific supported format.

Availability and Restrictions:

This information have to be stored in case of an open dispute. This transaction will not be stored as an individual transaction and therefore will not be displayed in WEP.

Examples:

Please refer to Transaction Update for examples.

Request message:

The following table lists the most common used fields for submitting a Transaction Update Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_TRANSACTION_UPDATE	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
GuWID	con	
CREDIT_CARD_DATA	con.	
EMVICCData	con.	Holds TC or AAC generated with second “Generate AC” command
encoding	man.	
format	opt.	
POS_DATA	Man	
SignatureImage	con.	
type	man.	
encoding	man.	
TargetState	opt	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.15 Purchase Offline

Description:

For the online authorization approval, this transaction type will not be sent to the acquirer. The transaction will be executed offline in the POS terminal for several reasons mostly in the unattended environments (or) if there are network connectivity issues.

Availability and Restrictions:

These are standalone transactions and therefore no reference to the previous transaction is required. However, a reversal is possible for this transaction. EMV data transferred with this transaction will be stored and forwarded to the acquirer.

Examples:

Please refer to Purchase Offline for examples.

Request message:

The following table lists the most common used fields for submitting a Purchase Offline Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_PURCHASE	man	
type	man	Only possible value is 'offline'
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
AuthorizationCode	opt	
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
CountryCode	opt.	
Usage	opt	
CREDIT_CARD_DATA	con.	This collection can be ommited if it is a "repeated" transaction (see Recurring Transactions).
CreditCardNumber	con.	For POS transactions no CVC2 has to be provided.
CVC2	con.	
ExpirationYear	con.	

Element	Sett.	Remarks
ExpirationMonth	con.	In case track-2 data is present none of those fields have to be provided.
CardHolderName	con.	
CardIssueNumber	opt	
Track2Data	con.	Only to be provided for POS transactions, depending on the POS_DATA/EntryMode RAW_DATA contains encrypted card details like track2 data coming directly from the card reader. In case other credit card details are present the decrypted RAW_DATA contents will be validated against this.
RAW_DATA	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
EMVICCData	con.	
encoding	man.	
format	opt.	
POS_DATA	con.	
EntryMode	con.	
PinInputLengthCapability	con.	
CardAcceptorID	con.	
TerminalID	con.	
TargetState	opt.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.16 Refund Offline

Description:

This transaction will be executed offline in the POS terminal for several reasons mostly in the unattended environments (or) if there are network connectivity issues.

Availability and Restrictions:

These are standalone transactions and therefore no reference to the previous transaction is required. However, a reversal is possible for this transaction. EMV data transferred with this transaction will be stored and forwarded to the acquirer.

Examples:

Please refer to Refund Offline for examples.

Request message:

The following table lists the most common used fields for submitting a Refund Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_REFUND	man	
Type		Only possible value is 'offline'
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	
PaymentGroupID	opt	
AuthorizationCode	opt	
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
CountryCode	opt.	
Usage	opt	
CREDIT_CARD_DATA	con.	This collection can be omitted if it is a "repeated" transaction (see Recurring Transactions).
CreditCardNumber	con.	For POS transactions no CVC2 has to be provided. In case track-2 data is present none of those fields have to be provided.
CVC2	con.	
ExpirationYear	con.	
ExpirationMonth	con.	
CardHolderName	con.	

Element	Sett.	Remarks
CardIssueNumber	opt	
Track2Data	con.	Only to be provided for POS transactions, depending on the POS_DATA/EntryMode RAW_DATA contains encrypted card details like track2 data coming directly from the card reader. In case other credit card details are present the decrypted RAW_DATA contents will be validated against this.
RAW_DATA	con.	
EncryptionContext	con.	
Version	man.	
Algorithm	man.	
Parameter	man.	
Padding	man.	
Data	con.	
encoding	opt.	
format	con.	
EMVICCData	con.	
encoding	man.	
format	opt.	
POS_DATA	con.	
EntryMode	con.	
PinInputLengthCapability	con.	
TerminalID	con.	
CardAcceptorID	con.	
TargetState	opt.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

3.17 Sale Adjustment

Description:

A sale adjustment is generally applied to a tip transaction on the EFT POS terminal. This transaction is performed after the original settlement transaction is processed on the terminal. Typical manual activity includes, customer verifies the original amount, offers a tip and signs the receipt.

Availability and Restrictions:

This transaction type is available only for card present transactions. The adjustment is only possible as long as the original transaction was not settled yet at the acquirer. This transaction can only be performed if the original tranaction is one of the following types FNC_CC_PURCHASE, FNC_CC_CAPTURE, FNC_CC_CAPTURE_AUTHORIZATION and FNC_CC_CAPTURE_PREAUTHORIZATION. Multiple adjustment transactions are allowed where the last adjustment amount wins. A reversal is not possible on this transaction.

Examples:

Please refer to Sale Adjustment for examples.

Request message:

The following table lists the most common used fields for submitting a Sale Adjustment Request to Wirecard. All mandatory marked elements have to be included in the request. Please refer to Standard Request Message for a detailed description of the elements.

Element	Sett.	Remarks
FNC_CC_ADJUST	man	
FunctionID	man	
CC_TRANSACTION	man	
mode	opt	
TransactionID	man	
CommerceType	opt	Supported value is “CustomerPresent”
PaymentGroupID	opt	
GuWID	man	
Amount	con.	
Minorunits	opt	
action	opt	
Currency	con.	
Usage	opt	
CREDIT_CARD_DATA	opt.	
Track2Data	opt.	Only to be provided for POS transactions, depending on the POS_DATA/EntryMode
EMVICCData	opt.	
encoding	man.	
format	opt.	

Element	Sett.	Remarks
POS_DATA	con.	
EntryMode	con.	
TerminalID	con.	
CardAcceptorID	con.	
TargetState	con.	

Response message:

Please refer to Standard Response Message for a definition of the response message.

4 Message Format

This section describes the general structure of the XML messages and a description of the elements.

4.1 General Considerations

4.1.1 Message Validation

Merchants may validate the generated XML Requests against the Wirecard.xsd.

The Merchant must not validate the responses sent by Wirecard against the Wirecard.xsd. Wirecard is continuously extending the XML interface and may add new data elements in the XML message without notice.

4.1.2 UTF-8 Character Encoding

As credit cards are accepted from customers around the world, the XML text messages of credit card transactions may contain data in different languages. To cater to these cross-border card transactions, merchants are advised to configure their system to send XML text messages in the 8-bit Unicode Transformation Format (UTF-8), a variable-length character encoding described in ISO/IEC 10646.

NOTE: All field length values in this specification are byte values. The actual number of characters allowed in a field may be less than the given byte value as certain UTF-8 characters are represented using up to 4 bytes.

4.1.3 Required Settings

The exchange of XML messages is based on certain requirements. If these are not met, the XML request/response communication will fail. It is therefore imperative that the message elements are defined as required. The request elements are defined as mandatory, optional, or conditional.

Mandatory

A mandatory (man.) message is necessary to ensure the proper routine and posting of an XML message. Any mandatory message element not included as requested will cause the process request type to be rejected.

Optional

The inclusion or omission of an optional (opt.) message field is at the discretion of the merchant. A transaction request is also processed if an optional field is missing.

Conditional

A conditional (con.) message field must be included in some instances. Its omission may cause the process request type to be rejected.

4.1.4 Data Type Definitions

The following notations define the data type formats of message elements.

Notation	Description
a	alphabetic A-Z, a-z
n	numeric digits, 0-9
an	alphanumeric characters A-Z, a-z, 0-9
ans	alphanumeric and special characters, ASCII characters Code 32-38 and 40-126.
DD	Day, 01 through 31
MM	Month, 01 to 12
YY	Year, 00-99 where 00=2000, 01=2001, etc.
hh	hour, 00 to 23
mm	minute, 00 to 59
ss	second, 00 to 59
3	Fixed length of 3 bytes
..17	Variable length up to a maximum of 17 bytes.
c	collection of elements

NOTE: Some card schemas or acquirer don't support all special characters. In these cases the characters are replaced.

4.2 Standard Request Message

Wirecard uses a similar message structure throughout all transaction types. The following table describes the general structure of these request messages.

Including additional supported elements of Request Messages to be send from the Merchant to Wirecard. Please refer to the transaction type description which elements are supported for each transaction type.

Element	Data Type	Description
W_REQUEST	c	This is a collection of Card Refund message elements and their values.
W_JOB	c	This is a collection of elements that defines a job within the request. The job may comprise of multiple transactions.
JobID	ans..32	This ID is reserved for merchant system data and can be used for tracking purposes.
BusinessCaseSignature	an..16	This is the unique merchant identifier against which the request is made.
FNC_CC_ *FunctionName*	c	This is a collection of data elements for this specific function. Valid element names are: FNC_CC_PREAUTHORIZATION FNC_CC_AUTHORIZATION FNC_CC_CAPTURE FNC_CC_PURCHASE FNC_CC_PREAUTHORIZATION_ SUPPLEMENT FNC_CC_NOTIFICATION FNC_CC_REVERSAL FNC_CC_BOOKBACK FNC_CC_REFUND FNC_CC_OCT FNC_CC_QUERY
type	o	This attribute is used in the combination of a specific function. For example, can be provided with a Query Request and defines the detail level of the Query Response. The possible value is 'detail'. This attribute can be used only in combination with a GuWID. Other possible values are: 'non-referenced' – used in airline BSP transactions to submit standalone captures 'offline' – used in terminal transactions to submit offline sale/purchase transactions
FunctionID	ans..32	This ID is reserved for merchant system data and is intended for tracking purposes. It is mandatory but can be empty if not needed.

Element	Data Type	Description
CC_TRANSACTION	c	This is a collection of card specific transaction data elements and their values.
mode	a..32	This attribute allows to flag a transaction as “demo”. Only specific “demo” cards are allowed for that mode. Supported values are: • demo • live (default)
TransactionID	ans..32	This ID is reserved for merchant system data and can be used for tracking purposes. Also the element has to be provided, it can be empty if not needed.
CommerceType	an..32	This defines the commerce type of the transaction. Supported values are: • eCommerce • MOTO • CardPresent
ReferenceTransactionID	ans..32	
StartTime	YYYY-MM-DD hh:mm:ss	This field indicated the start date and time of the original transaction for a Query
EndTime	YYYY-MM-DD hh:mm:ss	This field indicated the end date and time for a query.
PaymentGroupID	an..22	This optional identifier references transaction types of different payment methods (e.g. credit card and direct debit) and represents them in a single group for easy monitoring via the WEP. Please refer to Unified Payment Management for details.
GuWID	an..22	This is the GuWID of the associated initial transaction. It is mandatory if the transaction type is ‘Repeated’ or if there was an initial 3d enrollment request.
SalesDate	YYYY-MM-DD	This is the calendar date of the purchase. It is optional and can be included if the sales date is different from the date the transaction is posted for processing. It can be backdated up to 30 days.
AuthorizationCode	an..10	This is a numerical or alphanumerical code provided by the card issuer in the preauthorization Call verifying that the original transaction request.
Amount	n..16	This is the integer amount, defined in the smallest currency unit, for which the transaction is requested (e.g., $10.00 = 1000). The <Amount> element is mandatory . For ‘Repeated’ (recurring) transaction where the amount equals the amount of the initial transaction it is optional.

Element	Data Type	Description
Minorunits	n..1	The attribute <minorunits> specify the number of decimal places of the amount.
action	a..8	The attribute <action> defines what action needs to be taken if the value of the attribute <minorunits> does not match the number of decimals defined in ISO standard 4217. The following actions are available: • convert the amount is converted to the number of ISO-defined decimals • validate The transaction is rejected if the value of <minorunits> does not match the number of decimals defined in ISO 4217. This is the default setting.
Currency	a 3	This is the ISO 4217 currency code used for the transaction. It is mandatory if the type of transaction is 'Single' or 'Initial' or if the currency of a 'Repeated' transaction differs from the currency of the related 'Initial' transaction.
CountryCode	a 2	This is the ISO 3166-1 code of the country where the transaction takes place (the merchant resides).
Usage	an..256	This is the field, which is shown on the customer's card statement and can be used by the merchant for reference purposes. This feature is not supported by all the acquirers. The size of this field depends on the acquirer. Please contact Wirecard technical support for further clarification.
RECURRING_ TRANSACTION	c	This is a collection of recurring information. Please refer to Recurring Transaction for details.
Type	an..8	Supported values: • Single • Initial • Repeated Please refer to Recurring Transaction for details.
CREDIT_CARD_DATA	c	This is a collection of credit card data. It is mandatory if the type of transaction is 'Single' or 'Initial'.
CreditCardNumber	n..19	The card number used for this transaction
CVC2	n..4	The 3- or 4-digit security code (called CVC2, CVV2 or CID depending on the card brand) that appears on the back of a credit card. This code does not appear on imprints.
ExpirationYear	YYYY	The expiry year of the card
ExpirationMonth	MM	The expiry month of the card

Element	Data Type	Description
CardIssueNumber	n..3	A number distinguishing between separate cards with the same primary account number or primary account number extended. For EMV transactions: to be filled with TAG 5F34 from the ICC
Track2Data	38 or 40	ASCII (text representing the card track 2 data. It can be provided without start and end sentinel. For example, 5232050000010003=840191210112345. This field must be submitted in all card present/POS transactions
RAW_DATA		Collection of elements to submit the credit card information encrypted from the MPOS terminal.
EncryptionContext	an..256	Parameter is a reference to necessary information to decrypt the data. This value will be provided by Wirecard
Version		Value will be provided by Wirecard. In most cases a predefined value 1 will be used
Algorithm		Value will be provided by Wirecard. E.g. dukpt, simple3des, zka. Widely used is dukpt
Parameter		This value is hex encoded data and is used to determine the session key for decryption. Format can differ depending on the algorithm. Key is represented as KSN when DUKPT algorithm is used
Padding		Defines the padding type for the encrypted data. Possible values: • none • zero • pkcs • ff
Data	an..1024	This element holds credit card related data in a proprietary and possibly encrypted format
encoding		The encoding method of the credit card data. Possible values: • base64 (recommended) • hex

Element	Data Type	Description
format		Currently supported formats are used mostly in Wirecard MPOS devices. • track2 • thor-unimag123 (or) thor-posmate-magstripe • thor-posmate-chip • thor-bbpos If one of the above formats does not fit your requirements then please request at Wirecard. For more details see here
EMVICCData	an..1340	Data read through a chip on the EMV card.
encoding		Defines the encoding of the ICC data. Supported values: • base64 • hex
format		This value is optionally provided. Supported formats are: emvlab, gicc. By default if the value is not given, emvlab is used.
PIN		Collection of elements to submit the encrypted Online-PIN from all supported POS devices
EncryptionContext	an..256	Value will be provided by Wirecard during certification
Version		Value will be provided by Wirecard during certification
Algorithm		Value will be provided by Wirecard. E.g.dukpt, simple3des, zka. Widely used is dukpt
Parameter		This value is hex encoded data and is used to determine the session key for decryption. Format can differ depending on the algorithm. Key is represented as KSN when DUKPT algorithm is used
Padding		In general there is no need of padding because the ISO PIN format is always 8 byte. This attribute can be optionally submitted.
Data	an..24	This parameter contains the encrypted online-PIN
encoding		The encoding method of the online-pin. Possible values: • base64 • hex

Element	Data Type	Description
format		The provided format of the PIN Block. Supported values: • ISO-0 (recommended) • ISO-1 • ISO-3
POS_DATA		This is a collection of POS specific data.
EntryMode	an..3	The first 2 characters define the actual PAN Entry Mode and the third character defines the PIN Entry Capability.
PinInputLengthCapability	n..1	This parameter defines the PIN length of the terminal.
Terminal ID	an ..20	Identifies the POS terminal that was used to create this transaction.
CardAcceptorID	an..20	Merchant identifier stored on the terminal.
CaptureReference	an..10	This is the batch reference number generated by the terminal application based on the previous successful settlement.
LastCutover	YYYY-MM-DD HH24:MI:SS	This is the timestamp used for the previous successful settlement, which is generated by the terminal application.
CutoverDate	YYYY-MM-DD HH24:MI:SS	This is the timestamp used for a successful settlement, which is generated by the terminal application.
TargetState		Possible values are: • INCOMPLETE – this state is necessary to not clear the transaction until a settlement is triggered on the POS terminal. • PENDING – By default this state is used even it is not submitted but the user can force to change the state to pending if required
OriginalTransactionTime	YYYY-MM-DD HH24:MI:SS	This is the local time of the transaction at the POS terminal
OriginalTransactionTimeTz		This is the time zone of local time of the transaction at the POS terminal. For example, CET.
SignatureImage type encoding		 Possible value is: png Possible value is: base64
CardHolderName	ans..80	The name written on the card.

Element	Data Type	Description
CONTACT_DATA	c	This is the collection of the contact information.
IPAddress	ans..15	This is the IPv4 address of the end user making the purchase. It must be provided in dot-decimal notation consisting of up to 15 characters in length.
DeviceIdentification	an..4096	This is the device identification string obtained from the *iovation ReputationShield Client.*
CORPTRUSTCENTER_DATA		This is a collection of additional data fields which may be required for risk management or fraud prevention solutions. Please see Corperate Trustcenter Data for a list of possible elements
(additional elements)		
MARKET_SEGMENT		This is a collection of additional data fields which may be required for risk management or fraud prevention solutions. Please see Wirecard Addendum Data Specification for a list of possible elements.
(additional elements)		

4.3 Standard Response Message

For every submitted transaction request, the Wirecard system returns a response message, regardless of the outcome of the transaction process (one for a failed process and one for a successful process). Included in every response message is a collection element field called '*Function name'* which is the same value then in the request.

NOTE: If the request includes risk management functionality, the response message may also contain a collection of risk management related elements and values.

Element	Sett.	Data Type	Remarks
W_RESPONSE	man	c	This is a collection of Card Transaction response message elements and their values.
W_JOB	man	c	This is a collection of elements that defines a job within the response. The job may comprise of multiple transactions.
JobID	opt.	an..32	This field is echoed back from the original XML request message.
FNC_CC_[Name of Request Function]	man	an..32	This is a collection of transaction data elements and their values.
FunctionID	opt.	an..32	This field is echoed back from the original XML request message.
CC_TRANSACTION	man	c	This is a collection of transaction data elements and their values.
mode	opt.	an..32	This is echoed back from the request. Possible values are: • demo • live
TransactionID	man	an..32	This field is echoed back from the original XML request message.
PROCESSING_STATUS	man	c	This is a collection of transaction result elements and values.
GuWID	man	an..22	This is an alphanumeric string generated by the Wirecard system. It is required when reporting a transaction problem to Wirecard Technical Support (support@wirecard.com).
AuthorizationCode	con	n	This is the authorization code provided by the scheme. It is only returned if available.
StatusType	opt	an..32	This element describes the transaction status. For standard CC processing is returned value 'INFO' only.

Element	Sett.	Data Type	Remarks
FunctionResult	opt.	a 32	The data returned in this line of the response message shows the result of the executed transaction. Valid values are: • ACK (Successful transaction) • NOK (Failed transaction) • PENDING (the transaction was successfully received and is now queued for transmitting to the provider
ERROR	man	c	This is a collection of error result elements and values. This collection is provided only if the FunctionResult is NOK. This collection can be repeated if there are multiple errors. This collection may also be placed in a higher XML level if the error is more general.
Type	man	an..32	Provides basic information about the type of error. It may have one of the following values: • REJECTED- transaction was rejected by acquirer. • DATA_ERROR - XML request data is not valid and could not be processed. • SYSTEM_ERROR - transaction could not be processed because of a system error. • CLIENT_ERROR - error on the client side. This value is returned only if the merchant uses Wirecard's locally installed XML client server software.
Number	opt.	n..5	This is the error number associated with the failure.
Message	opt.	an..1024	This is the error message associated with the failed condition.
Advice	opt.	an..1024	This is the system-generated guidance for correction of the failed condition. This element can be repeated if there is a need for multiple advises.
TimeStamp	man	YYYY-MMDD hh:mm:ss	This is CET (Central European Time) date/time of the completion of the transaction.
CREDIT_CARD_DATA	Con.		This is a collection of credit card data. It is only provided for EMV POS transactions.

Element	Sett.	Data Type	Remarks
EMVICCData		an..1340	Data provided by the issuer, base64 / hex encoded.
Encoding			Defines the encoding of the ICC data. Possible values: • base64 • hex

NOTE: If a transaction is rejected by an error the ERROR collection is placed within the PROCESSING_STATUS. But in case of a more general error the ERROR collection can also be placed in higher level of the xml tree. Wirecard may also provide multiple error collections in case of multiple errors.

4.4 Unified Payment Management

Standard payment data processing doesn't enable referencing of transactions between different payment methods. By extending the card processing XML request message with the PaymentGroupID element, merchants can easily reference between transactions initiated by different payment methods (e.g. a hotel booking or purchase where one part of the total is paid for by credit card and the other by direct debit).

The PaymentGroupID is a system-generated identifier. In the Wirecard system, this can typically be the Global unique Wirecard ID (GuWID) which is returned with the response message to the very first transaction request (Authentication, Pre-Authentication or Purchase). The use of PaymentGroupID is optional which means that merchants can choose to include it in all request messages (except Query) so as to consolidate transaction types of different payment methods (like credit card and direct debit) into a single transaction flow and unified representation for easy management via the web-based user interface WEP (Wirecard Enterprise Portal). Only the XML request message contains the PaymentGroupID element. It is not returned with the XML response message. The GuWID element, which references the previous XML request message in the payment flow of the same payment method remains in all card transaction request messages.

4.5 Timeout Recovery

For the communication between Merchant and Wirecard the internet is most oftenly used. Also it is usually reliable but it may happen that the commumication breaks e.g. due to network packet lost. In this case a merchant cannot be sure if the request has been (sucessfully) processed by Wirecard or if the communication error occured.

Therefore Wirecard provides the Query functionality. The merchant can query for the status of the previous transaction. If it is positive the merchant can continue with the process or reverse the transaction, whatever is more applicable to the merchant process.

5 Extensions

This chapter describes extensions to the standard credit card process. Please contact your Wirecard representative or Wirecard support if you intend to use any of these extensions.

5.1 Recurring Transaction

Description:

A recurring transaction describes a payment where the cardholder's account is periodically charged for a repeated delivery and use of a product or service (subscription, membership fee, etc.) over time. It consists of an initial request (which is identical in form and content to a single request) and one or several repeated transaction request messages.

The "initial" request message (which in most cases is an preauthorization) contains all relevant card and cardholder data.

All subsequent "repeated" message (which can be another Preauthorization, or a Capture or a Purchase) simply references an identifier (the Global Unique Wirecard ID) which is returned with the response message to the initial request.

Cardholders can instruct their issuers to reject recurring payments charged to their card. This they can do for goods and services purchased globally or for a particular merchant. In this case all transactions will be automatically flagged accordingly by the issuing bank and rejected by the Wirecard system. The transaction response message sent to the merchant will return error code 78 or 79. For more details see these codes defined in the Error Code List in Section 8.

Availability and Restrictions:

Recurring transactions are available for Visa, Mastercard, Maestro in conjunction with a Wirecard Bank Acquiring contract. If activated by Wirecard these transactions are send to the Issuer with the flag "Recurring". Special regulations of the card schemes apply.

It is also possible to use Recurring Transactions if it is not activated or with acquirer/brands not supporting the flag "Recurring". In this case Wirecard simulates the recurring functionality but the transaction passed to the Issuers are not explicitly flagged as "Recurring".

Merchants who wish to post recurring transactions please contact the Wirecard Technical Support at support@wirecard.com for implementation requirements.

Examples:

Please refer to Recurring Example for XML examples.

Request message:

The element RECURRING_TRANSACTION / Type has to be provided in the "initial" and in all "repeated" transactions.

Following transaction types qualify for recurring:

- ☐ Authorization
- ☐ Purchase
- ☐ Refund

Response message:

The Standard Response Message does also apply for Recurring transactions.

For Recurring in conjunction with Wirecard Bank Acquiring extended recurring response information can be activated. In this case the response will contain the additional collection “RECURRING” as outlined in the following table:

Element	Sett.	Data Type	Remarks
PROCESSING_STATUS	man	c	This is a collection of transaction result elements and values.
[…]			other elements as specified in Standard Response Message.
RECURRING	man	can..22	This is an alphanumeric string generated by the Wirecard system. It is required when reporting a transaction problem to Wirecard Technical Support (support@wirecard.com).
AdviceCode	man	an..2	This Code is provided by the issuer and advices the merchant how to proceed: 01 – New account information available 02 – Try again later 03 – Do not try again 21 – Recurring Payment Cancellation Service
Message	opt.	an..1024	This is the error message associated with the failed condition.
SuggestedAction	opt.	an..1024	This is the system-generated guidance for correction of the failed condition. This element can be repeated if there is a need for multiple advises.

5.2 Address Verification Service

Description:

The Address Verification System (AVS) is an advanced level of credit card security that is built in to the Wirecard credit card processing network to help thwart identity theft. When a user makes an online purchase with a credit card their billing address is required. The house number and postal code of the billing address the user enters is compared to the billing address held on file by the card issuing bank. If the address does not match then the transaction can be declined. AVS is an on-demand service which is configured by Wirecard for each merchant.

If AVS is configured, the customer's address data is sent together with payment transaction to an acquirer. The acquirer then sends back an AVS response code, which is represented by two characters, e.g. "5M". Wirecard supports AVS for American Express (Amex), MasterCard and Visa. Each card brand generates its own AVS return code which is then mapped byWirecard to common Wirecard AVS code for representation in the transaction XML response.

Examples:

Please refer to AVS Example for XML examples.

Request message:

Address data of the user has to be provided in the CORPTRUSTCENTER_DATA. Following table points out the relevant fields vor AVS. For a complete list and a field definition please refer to Corporate Trust Center Data.

Element	Sett.	Remarks
CORPTRUSTCENTER_DATA	man	
ADDRESS	man.	
FirstName	man.	
LastName	man.	
Address1	man.	
Address2	opt.	
City	man	
ZipCode	man	
State	con	

Response message:

The PROCESSING_STATUS of the response is extended by the collection AVS:

Element	Sett.	Data Type	Remarks
AVS	con.	c	This is the collection if AVS specific return parameters
ResultCode	con.	an..1	The Wirecard specific AVS result code
Message	con.	an..128	The description of the ResultCode
AuthorizationEntity	con.	an..1	The entity who generated the response
AuthorizationEntityMessage	con.	an..128	The description of the entity

ProviderResultCode	con.	an..1	The provider specific AVS result code
ProviderResultMessage	con.	an..128	The description of the provider specific result code

Please refer to AVS Codes for a description of additional error codes.

5.3 Corporate Trust Center Data

Description:

Wirecard offers different risk management and fraud prevention services. These services can be accessed via a seperate API or within a card payment transaction. For details please refer to the Risk Management Specification or contact Wirecard Support.

If risk management, fraud prevention services or AVS are activated the CORPTRUSTCENTER_DATA has in most cases to be provided. Otherwise this collection is optional.

Availability and Restrictions:

This extension is generally available.

Examples:

Please refer to CorpTrustCenter_Data for XML examples.

Request message:

The following table specifies the CorpTrustCenter Element. These collection can be part of a request message. Also some fields are mentioned as optional in the table they may be necessary for specific risk services. E.g. an address validation can only be performed if the Country is known.

Element	Sett.	Data Type	Description
CORPTRUSTCENTER_DATA	con	c	A collection of risk management related elements and values. This request level along with the related elements listed below are mandatory if the type of transaction is 'Single' or 'Initial' and risk validation should be included.
ADDRESS	man.	c	A collection of cardholder's billing address elements and values. It is highly recommended to provide these elements. This element is mandatory if the CORPTRUSTCENTER_DATA level is to be included in the XML request.
FirstName	man.	an..128	Cardholder first name.
LastName	man.	an..128	Cardholder last name.
Address1	man.	an..256	First address field of the cardholder. It is recommended to enter the street name in this field.
Address2	opt.	an..256	Second address field of the cardholder. It is recommended to enter the street number in this field.
City	con	an..32	City of cardholder address
ZipCode	opt.	an..12	Zip code of cardholder address
State	con	a 2	State of cardholder address Only to be provided for US and Canadian addresses

Country	opt.	a 2	ISO 3166-1 2-digit country code of the cardholder address
Phone	opt.	an..32	This is the cardholder's phone number. It can be provided in one of the following formats: +xxx(yyy)zzz-zzzz-ppp +xxx (yyy) zzz zzzz ppp +xxx(yyy)zzz/zzzz/ppp +xxx(yyy)zzzzzzzppp where: xxx = country code yyy = national direct dialing prefix zzzzzzz = area / city code and local number ppp = PBX extension Separators such as /, \ or - are permissible. Example: a typical international number would be "+44(0)555-5555-739" indicating PBX extension 739 at phone number 555- 5555 with the national prefix 0 and country code 44. For countries which do not have a national prefix, the format must be configured with or without a space in brackets. Example: +420()52-5454-742.
Email	con	ans..256	cardholder email address.
PERSONINFO	opt.	c	This is a collection of personal information. It is required by some countries for risk assessment of payment transactions.
DRIVERS_LICENSE	opt.	c	This collection contains fields for driver license information.
LicenseNumber	opt.	an..32	driver license number.
State	con	a 2	state code of the US or Canadian state where the license was issued
Country	opt.	a 2	ISO 3166-1 2-digit country country code of where the license was issued.
BirthDate	opt.	YYYY-MM-DD	cardholder birth date.
TaxIdentification Number	opt.	an..32	cardholder TIN.

Response message:

Please refer to Standard Response Message for a definition of the response message.

If risk management or fraud prevention services are activated additional error codes may occure, specifying the reason for a rejection.

5.4 Cost Center Data

Description:

The Cost Center Data allows to submit additional data about the affected cost center and/or account.

Availability and Restrictions:

These transaction type is generally available.

Examples:

Please contact Wirecard Customer Support for examples.

Request message:

The following table specifies the CorpTrustCenter Element. These collection can be part of a request message. Also some fields are mentioned as optional in the table they may be necessary for specific risk services. E.g. an address validation can only be performed if the Country is known.

Element	Sett.	Data Type	Description
COST_CENTER_DATA	opt.	c	This is a collection of the cost center data of an organization
EmployeeID	opt.	an..17	Identifcation ID of an employee
DepartmentCode	opt.	an..17	A code of the organization's department
CostAccountNumber	opt.	an..17	A number defining the cost account
AccountingUnit	opt.	an..17	Accounting units
AccountNumber	opt.	an..17	This is the account number
ServiceDate	opt.	YYYY-MMDD	This field shows the date the service is provided (departure date), e.g. 2006-10-14.
ProjectNumber	opt.	an..17	The number of the project
OrderNumber	opt.	an..17	The order number
ActionNumber	opt.	an..32	The action number
Destination	opt.	an..17	This element defines the travel destination

Response message:

Please refer to Standard Response Message for a definition of the response message.

5.5 Point of Sale Transaction

Point of Sale Transaction, also known as card present transactions, are triggered normally at a terminal which communicates directly with the credit card. This can either be a magnetic stripe reader or a a EMV capable terminal with chip and contactless communication.

The type of the POS transaction is defined by the POS Entry Mode and the PIN Entry Capability.

5.5.1 EMV ICC Data

Please refer to ISO 7816-6 for a detailed description of this data.

5.5.2 EntryMode

The EntryMode is a combined value defining how the PAN (card number) and the PIN is entered into the terminal.

The first two bytes describes the PAN Entry mode as described in the following table.

Value	Description
01	Manual Entry
02	Magnetic stripe read, but full unaltered contents not provided
05	PAN auto entry via chip
07	Auto-entry via contactless magnetic chip
79	Chip card at chip-capable terminal was unable to process transaction using data on the chip or magnetic stripe on the card - therefore, PAN entry via manual entry
80	Chip card at chip-capable terminal was unable to process transaction using data on the chip therefore the terminal defaulted to the magnetic stripe read for the PAN. This is referred to as fallback.
90	Complete contents of magnetic stripe, track 2 have been read and checked
91	Auto-entry via contactless magnetic stripe

The third and last byte defines the PIN Entry Capability of the specific terminal. It is defined in the following table:

Value	Description
1	Terminal has PIN entry capability
2	Terminal does not have PIN entry capability (default)
3	EMV & PIN Entry capability
4	EMV capability

5.5.3 RAW Data Format

We are currently supporting the following RAW_DATA format variations:

The description looks on the data after it was decrypted using the specified EncryptionContext. If no EncryptionContext is given the data is taken as it is.

track2

This is the same format as in the Track2Data xml element.

thor-unimag123 or thor-posmate-magstripe

This format support track1 and track2 data. They are encrypted separately and the encrypted tracks are separated by a ‘:’ character. The decrypted data tracks include the start- and end-sentinels and ASCII encoded.

thor-posmate-chip

This format supports only track2 data. The decrypted data is packed bcd encoded. Odd length is filled with '\0' character. Track2 does not include start & end sentinels.

thor-bbpos
This format supports only track2 data. The decrypted data is packed bcd encoded and contains start- and end-sentinels. There can be trailing '\0' characters.

5.6 MasterPass transactions

In order to accept the transactions made using the MasterPass wallet service proivided by MasterCard it is possible to include the MasterPass wallet indicator (WID) inside the `CREDIT_CARD_DATA/WalletID` element. If WID is provided, no CVC data is required.

Without WID the transaction will not be considered to be a MasterPass transaction but rather as a regular credit card transaction.

Examples:

Please refer to Authorization using MasterPass for XML examples.

6 Test Gateway and Certification

Merchants planning to integrate the Wirecard platform can test the integration on a dedicated test gateway. It is basically identical to the Live HTTPS gateway with the exception that none of the submitted payment requests actually trigger a movement of moneys. As part of the Wirecard quality assurance, merchants are requested to perform several tests on the test gateway in cooperation with the Wirecard support organization prior to connecting to the Live HTTPS Gateway. This is to ensure a smooth and flawless communication and transaction data flow between the integrating company and Wirecard.

6.1 Transaction Modes

Merchants can post payment transactions to the Wirecard processing platform using different modes and methods. The use of two distinct transaction mode helps merchants distinguish between demo transaction and live transaction.

6.1.1 Demo

Merchants who process with Wirecard for the first time are connected to the payment processing platform in *Demo* mode. This is to ensure that while testing the card processing XML interface the posted transactions are not accidently routed to the Acquiring Bank for settlement. When a transaction is sent in demo mode using demo card data), the Wirecard system automatically verifies if the merchant is configured in demo mode. If the merchant's business case is not configured in demo mode, the system generates a response message informing the merchant that the request could not be processes in demo mode as requested. In the parameter tag <CC_TRANSACTION> the merchant can add the attribute <mode='demo'>. This attribute must be provided if the merchant wishes to test the card processing interface using a real credit card data instead of the demo data.

6.1.2 Live

When a new merchant has successfully tested his XML interface with the processing platform, the merchant's business case is configured for live processing which means the payment transaction is no longer simulated in demo mode but the data is fully processed and settled by the acquiring bank. Any amount posted in live mode with parameter `<Amount>` to the Wirecard system will be treated as a real transaction with complete settlement

Response Example

The following is a response to a request sent with demo card data on an XML interface configured for live processing:

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML
xsi:noNamespaceSchemaLocation="wirecard.xsd">
    <W_RESPONSE>
    <W_JOB>
        <JobID>ACCEPTANCE-TEST</JobID>
        <FNC_CC_TRANSACTION>
            <FunctionID>12345</FunctionID>
            <CC_TRANSACTION>
                <TransactionID>1</TransactionID>
                <PROCESSING_STATUS>
                <GuWID>C895978124540997772104</GuWID>
                <AuthorizationCode></AuthorizationCode>
                <Info>THIS IS A DEMO TRANSACTION USING CREDIT CARD NUMBER
                420000****0000. NO REAL MONEY WILL BE TRANSFERED.</Info>
                <StatusType>INFO</StatusType>
                <FunctionResult>NOK</FunctionResult>
```

```
                <ERROR>
                <Type>DATA_ERROR</Type>
                <Number>24998</Number>
                <Message>Demo-card or demo-mode transactions are not allowed
                without demo terminal mode.</Message>
                <Advice>Inspect your card number or remove attribute
                mode=''demo'' of tag 'CC_TRANSACTION'</Advice>
            </ERROR>
            <TimeStamp>2009-06-19 13:12:57</TimeStamp>
        </PROCESSING_STATUS>
        </CC_TRANSACTION>
        </FNC_CC_TRANSACTION>
    </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

6.2 Test Access

For testing please use following connection data:

- ☐ URL for HTTPS : **https://c3-test.wirecard.com/secure/ssl-gateway**
- ☐ Username: **56501**
- ☐ Password: **TestXAPTER**
- ☐ Business Case Signature: **56501**
- ☐ Content-Type: **text/xml**
- ☐ Available currencies: **BWP, CHF, DKK, EUR, GBP, INR, JPY, KWD, MYR, NOK, PHP, RUB, SEK, USD, ZAR**
- ☐ Transaction Mode: **demo**

6.3 Demo Test cards

Brand	Card Number
JCB	3528000000000000
AIRPLUS	122000000000000
DINERS	38000000000000
AMEX	370000000000000
VISA	4200000000000000
MASTER	5500000000000000
DISCOVER	6011000000000000
Maestro	6767100000000000

6.4 Simulation of response codes using amounts

When sending test transactions to our system you can create specific error messages. To do so, please use card number 4200000000000000 and flag the transaction with the mode type ‘demo’.

1. Amounts below EUR 1000.00 or any other currency will generate an acknowledgement (ACK) with the response status error code 9500.

2. Amounts between EUR 1000.02 and EUR 1000.98 are reserved for response codes in the WEP error code range.

Amount: 100002 - 02 Call Voice Authorization Number.

Amount: 100003 - 03 Invalid Merchant Number.

Amount: 100004 - 04 Retain Card.

Amount: 100005 - 05 Authorization Declined.

Amount: 100006 - 06 Error in Sequence Number.

Amount: 100009 - 09 Wait Command.

.....

Amount: 100098 - 98 Date and Time Not Plausible.

Example:

The amount of EUR 1000.02 (`<Amount>100002<Amount>`) will produce response code 02:

```
<Type>REJECTED</Type>
<Number>02</Number>
<Message>Call voice authorization number.</Message>
```

Any failure not specified by the Wirecard system will produce error code 250

```
<Type>REJECTED</Type>
<Number>250</Number>
<Message>System Error.</Message>
```

For a complete list of WEP error codes, see Errorcodes.

7 Examples

7.1 Demo Mode Processing

7.1.1 Request Example

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML>
    <W_REQUEST>
        <W_JOB>
            <JobID>example ID Purchase J1</JobID>
            <BusinessCaseSignature>123</BusinessCaseSignature>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>example ID Purchase F1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>Authorization Initial 1</TransactionID>
                    <Amount>1000</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <Usage>Y6162</Usage>
                    <RECURRING_TRANSACTION>
                        <Type>Initial</Type>
                    </RECURRING_TRANSACTION>
                    <CREDIT_CARD_DATA>
                        <CardHolderName>John Doe</CardHolderName>
                        <CreditCardNumber>5500000000000000</CreditCardNumber>
                        <ExpirationYear>2010</ExpirationYear>
                        <ExpirationMonth>12</ExpirationMonth>
                        <CVC2>471</CVC2>
                    </CREDIT_CARD_DATA>
                    <CORPTRUSTCENTER_DATA>
                        <ADDRESS>
                            <FirstName>John</FirstName>
                            <LastName>Doe</LastName>
                            <Address1>550 South Winchester blvd.</Address1>
                            <Address2>P.O. Box 850</Address2>
                            <City>San Jose</City>
                            <ZipCode>95128</ZipCode>
                            <State>CA</State>
                            <Country>US</Country>
                            <Phone>+1(1)8323933406</Phone>
                            <Email>John.Doe@email.com</Email>
                        </ADDRESS>
                        <PERSONINFO>
                            <BirthDate>1982-04-17</BirthDate>
                        </PERSONINFO>
                    </CORPTRUSTCENTER_DATA>
                    <CONTACT_DATA>
                        <IPAddress>127.0.0.1</IPAddress>
                    </CONTACT_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.1.2 Response Example

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML>
 <W_RESPONSE>
       <W_JOB>
             <JobID>example ID Purchase J1</JobID>
             <FNC_CC_PREAUTHORIZATION>
                   <FunctionID>example ID Purchase J1 F1</FunctionID>
                   <CC_TRANSACTION>
                         <TransactionID>Authorization Initial
1</TransactionID>
                         <PROCESSING_STATUS>
                               <GuWID>C822947124395249138105</GuWID>
                               <AuthorizationCode>076427</AuthorizationCode>
                               <Info>THIS IS A DEMO TRANSACTION USING CREDIT
CARD NUMBER 550000****0000. NO REAL MONEY WILL BE TRANSFERED.</Info>
                               <StatusType>INFO</StatusType>
                               <FunctionResult>ACK</FunctionResult>
                               <TimeStamp>2009-06-02 16:21:31</TimeStamp>
                         </PROCESSING_STATUS>
                   </CC_TRANSACTION>
             </FNC_CC_PREAUTHORIZATION>
       </W_JOB>
 </W_RESPONSE>
</WIRECARD_BXML>
```

7.2 Preauthorization Example

Please refer to Preauthorization for a functional and to Standard Request Message and Standard Response Message for field definitions.

7.2.1 Single / Initial Preauthorization Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>authorization 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <Amount minorunits="2">500</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <Usage>OrderNo-FT345S71 Thank you</Usage>
                    <RECURRING_TRANSACTION>
                        <Type>Initial</Type>
                    </RECURRING_TRANSACTION>
                    <CREDIT_CARD_DATA>
                        <CreditCardNumber>4200000000000000</CreditCardNumber>
```

```
                        <CVC2>001</CVC2>
                        <ExpirationYear>2019</ExpirationYear>
                        <ExpirationMonth>01</ExpirationMonth>
                        <CardHolderName>John Doe</CardHolderName>
                    </CREDIT_CARD_DATA>
                    <CONTACT_DATA>
                        <IPAddress>192.168.1.1</IPAddress>
                    </CONTACT_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.2.2 Repeated Preauthorization Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>authorization 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C328668112556109425394</GuWID>
                    <RECURRING_TRANSACTION>
                        <Type>Repeated</Type>
                    </RECURRING_TRANSACTION>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.2.3 Preauthorization Magnetic stripe

```
<?xml version='1.0' encoding='UTF-8'?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>000000316A92F78E</BusinessCaseSignature>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID/>
                <CC_TRANSACTION mode='live'>
                <TransactionID>8DE1C414071E4BE4AEB107109EBE2214</TransactionID>
                    <CommerceType>CustomerPresent</CommerceType>
                    <Amount minorunits='2'>4000</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>US</CountryCode>
                    <Usage/>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
```

```
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>022</EntryMode>
                    </POS_DATA>
                    <CONTACT_DATA>
                        <IPAddress>172.20.1.196</IPAddress>
                    </CONTACT_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.2.4 Preauthorization POS / EMV without online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes'?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>8f90efbf5864496baa47170c95096e90</FunctionID>
                <CC_TRANSACTION>
    <TransactionID>8f90efbf5864496baa47170c95096e90</TransactionID>
                    <Amount minorunits="2">1000</Amount>
                    <Currency>INR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                    <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F0206000000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C000000000000000000420344039F34034203008407A00000000430609F1E083
23030303635345359F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                        <PinInputLengthCapability>6</PinInputLengthCapability>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.2.5 Preauthorization POS / EMV with online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes' ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
```

```
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>8f90efbf5864496baa47170c95096e90</FunctionID>
                <CC_TRANSACTION>
                <TransactionID>8f90efbf5864496baa47170c95096e90</TransactionID>
                    <Amount minorunits="2">1000</Amount>
                    <Currency>INR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                        <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F0206000000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C000000000000000000420344039F34034203008407A00000000430609F1E083
23030303635345359F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                        <PIN>
                        <EncryptionContext algorithm="dukpt" version="1"
parameter="FFFF9876543210E00003" padding="pkcs">paymentengine.thor-
2</EncryptionContext>
                     <Data encoding="hex" format="ISO-0">66A3134DF7702E7F</Data>
                        </PIN>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                        <PinInputLengthCapability>6</PinInputLengthCapability>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.2.6 Preauthorization with credit card information in RAW format (1)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>JOB-ID-0009</JobID>
            <BusinessCaseSignature>920</BusinessCaseSignature>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>PA-12102006-000909</FunctionID>
                <CC_TRANSACTION mode="live">
                    <TransactionID>000909-001</TransactionID>
                    <CommerceType>CardPresent</CommerceType>
                    <Amount>1509</Amount>
                    <Currency>USD</Currency>
                    <CountryCode>US</CountryCode>
```

```
                    <CREDIT_CARD_DATA>
                        <RAW_DATA>
                            <EncryptionContext algorithm="thor-singular"
parameter="A1BBF789A1BBF789" version="1" padding="pkcs">wd-pos-
x</EncryptionContext>
                            <Data encoding="hex" format="thor-posmate-
magstripe">2C64A1E4947CB6CB56A713AF116F149E9F0B8017622A86B336BB5C257EEB811B5A23
D737DF116F10EE81702D8E5C6C85BB971050C19F76DFBE686B3C82B0231C106B45720A113C6C25A
35F4DEC06BED2AE44CC5DF7388B5B24C58FDE599AE97057BB7DB24B746E3B567EAE7447552A7F67
F51775F275A60C</Data>
                        </RAW_DATA>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>022</EntryMode>
                        <TerminalID>07K00600</TerminalID>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.2.7 Preauthorization with credit card information in RAW format (2)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
   <W_REQUEST>
      <W_JOB>
         <JobID>JOB-ID-0009</JobID>
         <BusinessCaseSignature>920</BusinessCaseSignature>
         <FNC_CC_PREAUTHORIZATION>
            <FunctionID>PA-12102006-000909</FunctionID>
            <CC_TRANSACTION mode="live">
               <TransactionID>000909-001</TransactionID>
               <CommerceType>CardPresent</CommerceType>
               <Amount>1509</Amount>
               <Currency>USD</Currency>
               <CountryCode>US</CountryCode>
               <CREDIT_CARD_DATA>
                  <RAW_DATA format=”track2”>
            5232050000010003=840191210112345
                  </RAW_DATA>
               </CREDIT_CARD_DATA>
               <POS_DATA>
                  <TargetState>INCOMPLETE</TargetState>
                  <EntryMode>022</EntryMode>
                  <TerminalID>07K00600</TerminalID>
               </POS_DATA>
            </CC_TRANSACTION>
         </FNC_CC_PREAUTHORIZATION>
      </W_JOB>
   </W_REQUEST>
</WIRECARD_BXML>
```

7.2.8 Preauthorization Successful Response (1)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C2427201813239665048 20</GuWID>
                        <AuthorizationCode>153620</AuthorizationCode>
                        <FunctionResult>ACK</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.2.9 Preauthorization Successful Response (2)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>8f90efbf5864496baa47170c95096e90</FunctionID>
                <CC_TRANSACTION>

    <TransactionID>8f90efbf5864496baa47170c95096e90</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C8987561381912144817 43</GuWID>
                        <AuthorizationCode>005479</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2013-10-16 10:29:04</TimeStamp>
                    </PROCESSING_STATUS>
                    <CREDIT_CARD_DATA>
                        <EMVICCData
encoding="hex">910ADEA1053BA675FD1100128A023030</EMVICCData>
                    </CREDIT_CARD_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.2.10 Preauthorization Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_PREAUTHORIZATION>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504827</GuWID>
                        <AuthorizationCode>799961</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>05</Number>
                            <Message>Authorization Declined.</Message>
                            <Advice>It is not possible to book the given amount
                        from the credit account, e. g. limit is
                        exceeded.</Advice>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.3 Authorization Check Example

Please refer to Authorization Check for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.3.1 Authorization Check Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
<W_REQUEST>
    <W_JOB>
        <JobID>ACCEPTANCE-TEST</JobID>
        <BusinessCaseSignature>790</BusinessCaseSignature>
        <FNC_CC_AUTHORIZATION_CHECK>
            <FunctionID>test</FunctionID>
            <CC_TRANSACTION>
                <TransactionID>1</TransactionID>
                <Amount>1000</Amount>
                <Currency>EUR</Currency>
                <CountryCode>DE</CountryCode>
```

```
                <CREDIT_CARD_DATA>
                    <CreditCardNumber>1234****0001</CreditCardNumber>
                    <CVC2>***</CVC2>
                    <ExpirationYear>2019</ExpirationYear>
                    <ExpirationMonth>12</ExpirationMonth>
                    <CardHolderName>Joe Test</CardHolderName>
                </CREDIT_CARD_DATA>
            </CC_TRANSACTION>
        </FNC_CC_AUTHORIZATION_CHECK>
    </W_JOB>
</W_REQUEST>
```

7.4 Capture Example

Please refer to Capturefor a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.4.1 Capture Request Message

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_CAPTURE>
                <FunctionID>capture 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C2427201813239665048 20</GuWID>
                    <Usage>OrderNo-FT345S71 Thank you</Usage>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_CAPTURE>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.4.2 Capture Successful Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>ACCEPTANCE_TEST</JobID>
            <FNC_CC_CAPTURE>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>8</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C3058301127144111233 51</GuWID>
                        <StatusType>INFO</StatusType>
```

```
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2010-09-19 17:32:22</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_CAPTURE>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.4.3 Capture Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_CAPTURE>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C2427201813239665048 27</GuWID>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>21</Number>
                            <Message>No action taken.</Message>
                        </ERROR>
                        <TimeStamp>2010-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_CAPTURE>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.5 Purchase Example

Please refer to Purchase for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.5.1 Single / Initial Purchase Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_PURCHASE>
                <FunctionID>transaction 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
```

```
                    <SalesDate>2007-04-30</SalesDate>
                    <Amount minorunits="2">500</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <Usage>OrderNo-FT345S71 Thank you</Usage>
                    <RECURRING_TRANSACTION>
                        <Type>Initial</Type>
                    </RECURRING_TRANSACTION>
                    <CREDIT_CARD_DATA>
                        <CreditCardNumber>4200000000000000</CreditCardNumber>
                        <CVC2>001</CVC2>
                        <ExpirationYear>2019</ExpirationYear>
                        <ExpirationMonth>01</ExpirationMonth>
                        <CardHolderName>John Doe</CardHolderName>
                    </CREDIT_CARD_DATA>
                    <CONTACT_DATA>
                        <IPAddress>192.168.1.1</IPAddress>
                    </CONTACT_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.5.2 Purchase POS / EMV without online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes'?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_PURCHASE>
                <FunctionID>transaction 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <SalesDate>2007-04-30</SalesDate>
                    <Amount minorunits="2">500</Amount>
                    <Currency>EUR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                    <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F0206000000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C000000000000000000420344039F34034203008407A00000000430609F1E083
230303036353435 9F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
```

```
                        <OriginalTransactionTime>2015-02-27
10:51:55</OriginalTransactionTime>
                    <OriginalTransactionTimeTz>CET</OriginalTransactionTimeTz>
                         <PinInputLengthCapability>6</PinInputLengthCapability>
                     </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.5.3 Purchase POS / EMV with online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes' ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_PURCHASE>
                <FunctionID>transaction 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <SalesDate>2007-04-30</SalesDate>
                    <Amount minorunits="2">500</Amount>
                    <Currency>EUR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                        <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F0206000000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C0000000000000000420344039F34034203008407A00000000430609F1E083
2303030363534359F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                        <PIN>
                        <EncryptionContext algorithm="dukpt" version="1"
parameter="FFFF9876543210E00003" padding="pkcs">paymentengine.thor-
2</EncryptionContext>
                    <Data encoding="hex" format="ISO-0">66A3134DF7702E7F</Data>
                        </PIN>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                        <PinInputLengthCapability>6</PinInputLengthCapability>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.5.4 Repeated Purchase Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_PURCHASE>
                <FunctionID>transaction 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C3286681125561094253 94</GuWID>
                    <RECURRING_TRANSACTION>
                        <Type>Repeated</Type>
                    </RECURRING_TRANSACTION>
                    <COST_CENTER_DATA>
                        <CostAccountNumber>78500</CostAccountNumber>
                    </COST_CENTER_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.5.5 Purchase Successful Response (1)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_PURCHASE>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C2427201813239665048 20</GuWID>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.5.6 Purchase Successful Response (2)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_PURCHASE>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
```

```
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504820</GuWID>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                    <CREDIT_CARD_DATA>
                        <EMVICCData
encoding="hex">910ADEA1053BA675FD1100128A023030</EMVICCData>
                    </CREDIT_CARD_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.5.7 Purchase Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_PURCHASE>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504827</GuWID>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>05</Number>
                            <Message>Authorization Declined.</Message>
                            <Advice>It is not possible to book the given amount
from the
                        credit account, e. g. limit is exceeded.</Advice>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.6 Preauthorization Supplement Example

Please refer to Preauthorization Supplement for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.6.1 Preauthorization Supplement Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
```

```
        <W_REQUEST>
            <W_JOB>
                <JobID>job 1</JobID>
                <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
                <FNC_CC_PREAUTHORIZATION_SUPPLEMENT>
                    <FunctionID>supplement 1</FunctionID>
                    <CC_TRANSACTION mode="demo">
                        <TransactionID>9457892347623478</TransactionID>
                        <GuWID>C242720181323966504820</GuWID>
                        <Amount minorunits="2">500</Amount>
                        <CONTACT_DATA>
                            <IPAddress>192.168.1.1</IPAddress>
                        </CONTACT_DATA>
                    </CC_TRANSACTION>
                </FNC_CC_PREAUTHORIZATION_SUPPLEMENT>
            </W_JOB>
        </W_REQUEST>
    </WIRECARD_BXML>
```

7.6.2 Preauthorization Supplement Successful Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_PREAUTHORIZATION_SUPPLEMENT>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504820</GuWID>
                        <AuthorizationCode>153620</AuthorizationCode>
                        <FunctionResult>ACK</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION_SUPPLEMENT>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.6.3 Preauthorization Supplement Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_PREAUTHORIZATION_SUPPLEMENT>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504827</GuWID>
```

```
                        <AuthorizationCode>799961</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>05</Number>
                            <Message>Authorization Declined.</Message>
                            <Advice>It is not possible supplement the original
                    authorization, e. g. limit is exceeded.</Advice>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_PREAUTHORIZATION_SUPPLEMENT>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.7 Authorization Example

Please refer to Authorization for a functional and to Standard Request Message and Standard Response Message for field definitions.

7.7.1 Single / Initial Authorization Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>authorization 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <Amount minorunits="2">500</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <Usage>OrderNo-FT345S71 Thank you</Usage>
                    <RECURRING_TRANSACTION>
                        <Type>Initial</Type>
                    </RECURRING_TRANSACTION>
                    <CREDIT_CARD_DATA>
                        <CreditCardNumber>4200000000000000</CreditCardNumber>
                        <CVC2>001</CVC2>
                        <ExpirationYear>2019</ExpirationYear>
                        <ExpirationMonth>01</ExpirationMonth>
                        <CardHolderName>John Doe</CardHolderName>
                    </CREDIT_CARD_DATA>
                    <CONTACT_DATA>
                        <IPAddress>192.168.1.1</IPAddress>
                    </CONTACT_DATA>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
```

```
</WIRECARD_BXML>
```

7.7.2 Repeated Authorization Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>authorization 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C328668112556109425394</GuWID>
                    <RECURRING_TRANSACTION>
                        <Type>Repeated</Type>
                    </RECURRING_TRANSACTION>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.7.3 Authorization using MasterPass

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>authorization 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <Amount minorunits="2">500</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <Usage>OrderNo-FT345S71 Thank you</Usage>
                    <RECURRING_TRANSACTION>
                        <Type>Initial</Type>
                    </RECURRING_TRANSACTION>
                    <CREDIT_CARD_DATA>
                        <CreditCardNumber>4200000000000000</CreditCardNumber>
                        <ExpirationYear>2019</ExpirationYear>
                        <ExpirationMonth>01</ExpirationMonth>
                        <CardHolderName>John Doe</CardHolderName>
                        <WalletID>101</WalletID>
                    </CREDIT_CARD_DATA>
                    <CONTACT_DATA>
                        <IPAddress>192.168.1.1</IPAddress>
                    </CONTACT_DATA>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
```

7.7.4 Authorization Magnetic stripe

```
<?xml version='1.0' encoding='UTF-8'?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>000000316A92F78E</BusinessCaseSignature>
            <FNC_CC_AUTHORIZATION>
                <FunctionID/>
                <CC_TRANSACTION mode='live'>
                <TransactionID>8DE1C414071E4BE4AEB107109EBE2214</TransactionID>
                    <CommerceType>CustomerPresent</CommerceType>
                    <Amount minorunits='2'>4000</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>US</CountryCode>
                    <Usage/>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <EntryMode>022</EntryMode>
                        <TargetState></TargetState>
                    </POS_DATA>
                    <CONTACT_DATA>
                        <IPAddress>172.20.1.196</IPAddress>
                    </CONTACT_DATA>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.7.5 Authorization POS / EMV without online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes' ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>8f90efbf5864496baa47170c95096e90</FunctionID>
                <CC_TRANSACTION>

    <TransactionID>8f90efbf5864496baa47170c95096e90</TransactionID>
                    <Amount minorunits="2">1000</Amount>
                    <Currency>INR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>

    <Track2Data>5232050000010003=840191210112345</Track2Data>
                        <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F02060000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C000000000000000000420344039F34034203008407A00000000430609F1E083
2303030363534359F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
```

```
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState></TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                        <PinInputLengthCapability>6</PinInputLengthCapability>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.7.6 Authorization POS / EMV with online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes' ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>8f90efbf5864496baa47170c95096e90</FunctionID>
                <CC_TRANSACTION>
                <TransactionID>8f90efbf5864496baa47170c95096e90</TransactionID>
                    <Amount minorunits="2">1000</Amount>
                    <Currency>INR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                        <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F0206000000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C000000000000000000420344039F34034203008407A00000000430609F1E083
23030303635343 59F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                        <PIN>
                            <EncryptionContext algorithm="dukpt" version="1"
parameter="FFFF9876543210E00003" padding="pkcs">paymentengine.thor-
2</EncryptionContext>
                            <Data encoding="hex" format="ISO-
0">66A3134DF7702E7F</Data>
                        </PIN>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState></TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                        <PinInputLengthCapability>6</PinInputLengthCapability>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
```

```
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.7.7 Authorization with credit card information in RAW format (1)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
   <W_REQUEST>
      <W_JOB>
         <JobID>JOB-ID-0009</JobID>
         <BusinessCaseSignature>920</BusinessCaseSignature>
         <FNC_CC_ AUTHORIZATION>
            <FunctionID>PA-12102006-000909</FunctionID>
            <CC_TRANSACTION mode="live">
               <TransactionID>000909-001</TransactionID>
               <CommerceType>CardPresent</CommerceType>
               <Amount>1509</Amount>
               <Currency>USD</Currency>
               <CountryCode>US</CountryCode>
               <CREDIT_CARD_DATA>
                  <RAW_DATA>
                     <EncryptionContext algorithm="thor-singular"
parameter="A1BBF789A1BBF789" version="1" padding="pkcs">wd-pos-
x</EncryptionContext>
                     <Data encoding="hex" format="thor-posmate-
magstripe">2C64A1E4947CB6CB56A713AF116F149E9F0B8017622A86B336BB5C257EEB811B5A23
D737DF116F10EE81702D8E5C6C85BB971050C19F76DFBE686B3C82B0231C106B45720A113C6C25A
35F4DEC06BED2AE44CC5DF7388B5B24C58FDE599AE97057BB7DB24B746E3B567EAE7447552A7F67
F51775F275A60C</Data>
                  </RAW_DATA>
               </CREDIT_CARD_DATA>
               <POS_DATA>
                  <TargetState></TargetState>
                  <EntryMode>022</EntryMode>
                  <TerminalID>07K00600</TerminalID>
               </POS_DATA>
            </CC_TRANSACTION>
         </FNC_CC_AUTHORIZATION>
      </W_JOB>
   </W_REQUEST>
</WIRECARD_BXML>
```

7.7.8 Authorization with credit card information in RAW format (2)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
   <W_REQUEST>
      <W_JOB>
         <JobID>JOB-ID-0009</JobID>
         <BusinessCaseSignature>920</BusinessCaseSignature>
         <FNC_CC_AUTHORIZATION>
            <FunctionID>PA-12102006-000909</FunctionID>
```

```
            <CC_TRANSACTION mode="live">
               <TransactionID>000909-001</TransactionID>
               <CommerceType>CardPresent</CommerceType>
               <Amount>1509</Amount>
               <Currency>USD</Currency>
               <CountryCode>US</CountryCode>
               <CREDIT_CARD_DATA>
                  <RAW_DATA format=”track2”>
            5232050000010003=840191210112345
                  </RAW_DATA>
               </CREDIT_CARD_DATA>
               <POS_DATA>
                  <EntryMode>022</EntryMode>
                  <TerminalID>07K00600</TerminalID>
               </POS_DATA>
            </CC_TRANSACTION>
         </FNC_CC_AUTHORIZATION>
      </W_JOB>
   </W_REQUEST>
</WIRECARD_BXML>
```

7.7.9 Authorization Successful Response (1)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504820</GuWID>
                        <AuthorizationCode>153620</AuthorizationCode>
                        <FunctionResult>ACK</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.7.10 Authorization Successful Response (2)

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>8f90efbf5864496baa47170c95096e90</FunctionID>
```

```
                <CC_TRANSACTION>
                <TransactionID>8f90efbf5864496baa47170c95096e90</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C898756138191214481743</GuWID>
                        <AuthorizationCode>005479</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2013-10-16 10:29:04</TimeStamp>
                    </PROCESSING_STATUS>
                    <CREDIT_CARD_DATA>
                        <EMVICCData
encoding="hex">910ADEA1053BA675FD1100128A023030</EMVICCData>
                    </CREDIT_CARD_DATA>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.7.11 Authorization Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_AUTHORIZATION>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504827</GuWID>
                        <AuthorizationCode>799961</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>05</Number>
                            <Message>Authorization Declined.</Message>
                            <Advice>It is not possible to book the given amount
                        from the credit account, e. g. limit is
                        exceeded.</Advice>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_AUTHORIZATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.8 Notification Example

Please refer to Notification for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.8.1 Notification Request Message

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_NOTIFICATION>
                <FunctionID>capture 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C242720181323966504820</GuWID>
                    <SalesDate>2007-04-30</SalesDate>
                    <AuthorizationCode>575023</AuthorizationCode>
                    <Usage>OrderNo-FT345S71 Thank you</Usage>
                </CC_TRANSACTION>
            </FNC_CC_NOTIFICATION>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.8.2 Notification Successful Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_NOTIFICATION>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504820</GuWID>
                        <AuthorizationCode>153620</AuthorizationCode>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_NOTIFICATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.8.3 Notification Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
```

```
            <FNC_CC_NOTIFICATION>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C2427201813239665048 27</GuWID>
                        <AuthorizationCode>799961</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>21</Number>
                            <Message>No action taken.</Message>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_NOTIFICATION>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.9 Reversal Example

Please refer to Reversal for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.9.1 Reversal Request Message

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_REVERSAL>
                <FunctionID>reversal 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C2427201813239665048 20</GuWID>
                </CC_TRANSACTION>
            </FNC_CC_REVERSAL>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.9.2 Reversal Successful Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_REVERSAL>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
```

```
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504820</GuWID>
                        <FunctionResult>ACK</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_REVERSAL>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.9.3 Reversal Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_REVERSAL>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504827</GuWID>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>21</Number>
                            <Message>No action taken.</Message>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_REVERSAL>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.10 Bookback Example

Please refer to Bookback for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.10.1 Bookback Request Message

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_BOOKBACK>
                <FunctionID>reversal 1</FunctionID>
```

```
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C242720181323966504820</GuWID>
                    <Amount minorunits="2">500</Amount>
                    <Usage>Refund of orderNo-FT345S71</Usage>
                </CC_TRANSACTION>
            </FNC_CC_BOOKBACK>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.10.2 Bookback Successful Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_BOOKBACK>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504820</GuWID>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_BOOKBACK>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.10.3 Bookback Error Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_BOOKBACK>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504827</GuWID>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>DATA_ERROR</Type>
                            <Number>20071</Number>
                            <Message>Expiration date invalid.</Message>
                            <Advice>Expiration date must not be
exceeded.</Advice>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
```

```
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_BOOKBACK>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.11 Refund Example

Please refer to Refund for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.11.1 Single / Initial Refund Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_REFUND>
                <FunctionID>refund 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <Amount minorunits="2">1200</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <Usage>Refund of orderNo-FT345S71</Usage>
                    <RECURRING_TRANSACTION>
                        <Type>Initial</Type>
                    </RECURRING_TRANSACTION>
                    <CREDIT_CARD_DATA>
                        <CreditCardNumber>4200000000000000</CreditCardNumber>
                        <ExpirationYear>2019</ExpirationYear>
                        <ExpirationMonth>01</ExpirationMonth>
                        <CardHolderName>John Doe</CardHolderName>
                    </CREDIT_CARD_DATA>
                </CC_TRANSACTION>
            </FNC_CC_REFUND>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.11.2 Refund POS / EMV without online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes'?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_REFUND>
                <FunctionID>refund 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <Amount minorunits="2">1200</Amount>
```

```
                    <Currency>EUR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                    <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F0206000000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C0000000000000000420344039F34034203008407A00000000430609F1E083
2303030363534359F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                        <PinInputLengthCapability>6</PinInputLengthCapability>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_REFUND>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.11.3 Refund POS / EMV with online-PIN

```
<?xml version='1.0' encoding='UTF-8' standalone='yes' ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>8f90efbf5864496baa47170c95096e90</JobID>
            <BusinessCaseSignature>000000316A83863C</BusinessCaseSignature>
            <FNC_CC_REFUND>
                <FunctionID>refund 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <Amount minorunits="2">1200</Amount>
                    <Currency>EUR</Currency>
                    <CommerceType>CustomerPresent</CommerceType>
                    <CREDIT_CARD_DATA>
                    <Track2Data>5232050000010003=840191210112345</Track2Data>
                        <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000430609F0206000000000010009F03060000
000000009F26084834F9F0011E93459F360200029F0902008C8202300050074D41455354524F8C2
09F02069F03069F1A0295055F2A029A039C019F37049F35019F45029F34039B028D08910A8A0295
059B029F2701808E0C0000000000000000420344039F34034203008407A00000000430609F1E083
2303030363534359F10120210A0800F2400000000000000000000000FF9F160F3638313533353500
000000000000009F330360F8C89F1A0203569F1C0861303030303034349F3501229505009004000
05F2A0203569A031310169F410212169B02C8009C01099F370477663AE25F340125</EMVICCData
>
                        <PIN>
                        <EncryptionContext algorithm="dukpt" version="1"
parameter="FFFF9876543210E00003" padding="pkcs">paymentengine.thor-
2</EncryptionContext>
                     <Data encoding="hex" format="ISO-0">66A3134DF7702E7F</Data>
                        </PIN>
```

```
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <TargetState>INCOMPLETE</TargetState>
                        <EntryMode>053</EntryMode>
                        <TerminalID>a0000044</TerminalID>
                        <PinInputLengthCapability>6</PinInputLengthCapability>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_REFUND>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.11.4 Repeated Refund Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>job 1</JobID>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_REFUND>
                <FunctionID>refund 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <GuWID>C3286681125561094253 94</GuWID>
                    <RECURRING_TRANSACTION>
                        <Type>Repeated</Type>
                    </RECURRING_TRANSACTION>
                </CC_TRANSACTION>
            </FNC_CC_REFUND>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.11.5 Refund Successful Response Message

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_REFUND>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C2427201813239665048 20</GuWID>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_REFUND>
        </W_JOB>
    </W_RESPONSE>
```

```
</WIRECARD_BXML>
```

7.11.6 Refund Error Response Message

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_REFUND>
                <FunctionID>function 1</FunctionID>
                <CC_TRANSACTION mode="demo">
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C242720181323966504827</GuWID>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>14</Number>
                            <Message>Invalid card.</Message>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_REFUND>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.12 Original Credit Example

Please refer to Original Credits for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.12.1 OCT Request - Referenced

The prime element of this request type is a unique identifier called GuWID which ties this credit request to a previous card transaction.

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>ACCEPTANCE_TEST</JobID>
            <BusinessCaseSignature>793</BusinessCaseSignature>
            <FNC_CC_OCT>
                <FunctionID>XCOM-e-commerce</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID>6.2.2.3.85.R</TransactionID>
                    <GuWID>C8136901223906110644461</GuWID>
                    <Amount>1000</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                </CC_TRANSACTION>
            </FNC_CC_OCT>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.12.2 OCT Response - Referenced

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>ACCEPTANCE_TEST</JobID>
            <FNC_CC_OCT>
                <FunctionID>XCOM-e-commerce</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID>6.2.2.3.85.R</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C897759122458567984915</GuWID>
                        <AuthorizationCode>639782</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2008-10-21 12:41:19</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_OCT>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.12.3 OCT Request - Non-Referenced

A non-referenced request message contains no GuWID but instead the number of a card to which the amount is to be remitted.

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>ACCEPTANCE_TEST</JobID>
            <BusinessCaseSignature>793</BusinessCaseSignature>
            <FNC_CC_OCT>
                <FunctionID>XCOM-e-commerce</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID>6.2.2.3.85.R</TransactionID>
                    <Amount>1000</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <CREDIT_CARD_DATA>
                        <CreditCardNumber>4126410000000002</CreditCardNumber>
                        <ExpirationYear>2019</ExpirationYear>
                        <ExpirationMonth>02</ExpirationMonth>
                        <CardHolderName>VISA-I</CardHolderName>
                    </CREDIT_CARD_DATA>
                </CC_TRANSACTION>
            </FNC_CC_OCT>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.12.4 OCT Response - Non-Referenced

The response message to a non-referenced request is identical to that of a referenced request.

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>ACCEPTANCE_TEST</JobID>
            <FNC_CC_OCT>
                <FunctionID>XCOM-e-commerce</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID>6.2.2.3.85.R</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C897759122458567984 3245</GuWID>
                        <AuthorizationCode>639782</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>PENDING</FunctionResult>
                        <TimeStamp>2008-10-21 12:41:19</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_OCT>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.13 Query Example

Please refer to Query for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.13.1 Query Request - based on GuWID

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_QUERY>
                <CC_TRANSACTION>
                    <GuWID>C2427201813239665048 20</GuWID>
                </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.13.2 Query Request (detailed) - based on GuWID

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_QUERY type="detail">
                <CC_TRANSACTION>
                    <GuWID>C2427201813239665048 20</GuWID>
```

```
                </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.13.3 Query Request - based on ReferenceTransactionID (near past)

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_QUERY>
                <CC_TRANSACTION>
                <ReferenceTransactionID>WTQ-6354552</ReferenceTransactionID>
                </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.13.4 Query Request - based on ReferenceTransactionID (history search)

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0123456789ABCDEF</BusinessCaseSignature>
            <FNC_CC_QUERY>
                <CC_TRANSACTION>
                <ReferenceTransactionID>WTQ-6354552</ReferenceTransactionID>
                    <StartTime>2007-08-07 17:30:00</StartTime>
                    <EndTime>2007-08-07 17:30:00</EndTime>
                </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.13.5 Query Response - based on GuWID

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
<W_REQUEST>
    <W_JOB>
        <JobID>ACCEPTANCE-TEST</JobID>
        <FNC_CC_QUERY>
        <FunctionID>ATOS-B AND S</FunctionID>
        <CC_TRANSACTION>
            <TransactionID>31</TransactionID>
            <PROCESSING_STATUS>
                <GuWID>C885511118700326859262</GuWID>
                <Info>THIS IS A TEST</Info>
                <StatusType>INFO</StatusType>
                <FunctionResult>PENDING</FunctionResult>
                <TimeStamp>2007-08-13 13:07:48</TimeStamp>
```

```
            </PROCESSING_STATUS>
        </CC_TRANSACTION>
        </FNC_CC_QUERY>
    </W_JOB>
</W_RESPONSE>
</WIRECARD_BXML>
```

7.13.6 Query Response (detailed) - based on GuWID

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>ACCEPTANCE-TEST</JobID>
            <FNC_CC_QUERY type="detail">
                <FunctionID>ATOS-B AND S</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID>1</TransactionID>
                    <PaymentGroupID>C885511118700326859262</PaymentGroupID>
                    <TransactionType>CaptureAuthorization</TransactionType>
                    <TransactionType>1</TransactionType>
                    <Amount>2005</Amount>
                    <Currency>EUR</Currency>
                    <CountryCode>DE</CountryCode>
                    <Usage>DE1823737</Usage>
                    <CREDIT_CARD_DATA>
                        <CreditCardNumber>5413****0422</CreditCardNumber>
                        <ExpirationYear>2017</ExpirationYear>
                        <ExpirationMonth>12</ExpirationMonth>
                        <CardHolderName>MCC 42</CardHolderName>
                    </CREDIT_CARD_DATA>
                    <PROCESSING_STATUS>
                        <GuWID>C885511118700326859262</GuWID>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>12</Number>
                            <Message>Invalid transaction.</Message>
                        </ERROR>
                        <TimeStamp>2007-08-13 13:07:48</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.13.7 Query Response - based on ReferenceTransactionID (near past)

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
<W_REQUEST>
    <W_JOB>
        <JobID>ACCEPTANCE-TEST</JobID>
        <FNC_CC_QUERY>
```

```
            <FunctionID>ATOS-B AND S</FunctionID>
            <CC_TRANSACTION>
                <TransactionID>31</TransactionID>
                <PROCESSING_STATUS>
                    <GuWID>C885511118700326859262</GuWID>
                    <Info>THIS IS A TEST</Info>
                    <StatusType>INFO</StatusType>
                    <FunctionResult>PENDING</FunctionResult>
                    <TimeStamp>2007-08-13 13:07:48</TimeStamp>
                </PROCESSING_STATUS>
            </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_RESPONSE>
    </WIRECARD_BXML>
```

7.13.8 Query Response - based on ReferenceTransactionID (history search)

```
<?xml version="1.0" encoding="UTF-8" ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>ACCEPTANCE-TEST</JobID>
            <FNC_CC_QUERY>
            <FunctionID>ATOS-B AND S</FunctionID>
            <CC_TRANSACTION>
                <TransactionID>31</TransactionID>
                <PROCESSING_STATUS>
                    <GuWID>C885511118700326859262</GuWID>
                    <Info>THIS IS A TEST</Info>
                    <StatusType>INFO</StatusType>
                    <FunctionResult>PENDING</FunctionResult>
                    <TimeStamp>2007-08-13 13:07:48</TimeStamp>
                </PROCESSING_STATUS>
            </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.13.9 Query Error Response

This query response is returned, if the original transaction was declined.

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>job 1</JobID>
            <FNC_CC_QUERY>
                <FunctionID>Query 5</FunctionID>
                <CC_TRANSACTION >
                    <TransactionID>9457892347623478</TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C2427201813239665048 27</GuWID>
                        <StatusType>INFO</StatusType>
```

```
                        <FunctionResult>NOK</FunctionResult>
                        <ERROR>
                            <Type>REJECTED</Type>
                            <Number>05</Number>
                            <Message>Authorization Declined.</Message>
                            <Advice>It is not possible to book the given amount
from the
                        credit account, e. g. limit is exceeded.</Advice>
                        </ERROR>
                        <TimeStamp>2001-01-31 20:39:24</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_QUERY>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.14 Terminal Cutover Example

Please refer to Terminal Cutover for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.14.1 Terminal Cutover Request

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>adbd996b19e1422780c9bbd061708a0e</JobID>
            <ENTITY_DATA lookup="internal">
                <Item id="2" name="TerminalID">10000001</Item>
                <Item id="1" name="CardAcceptorID">123410000001</Item>
            </ENTITY_DATA>
            <BusinessCaseSignature>0000003169A020E9</BusinessCaseSignature>
            <FNC_CC_TERMINAL_CUTOVER>
                <CC_TRANSACTION>
                <TransactionID>f3b4998001384059bf250a0a22a16fd4</TransactionID>
                    <Currency>MMK</Currency>
                    <POS_DATA>
                        <TargetState>PENDING</TargetState>
                        <LastCutover>2014-04-25 16:25:09</LastCutover>
                        <TerminalID>10036010</TerminalID>
                        <CardAcceptorID>500029659</CardAcceptorID>
                        <CaptureReference>000001</CaptureReference>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_TERMINAL_CUTOVER>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.14.2 Terminal Cutover Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
     <W_RESPONSE>
         <W_JOB>
           < FNC_CC_TERMINAL_CUTOVER >
              <CC_TRANSACTION>
                <TransactionID>f3b4998001384059bf250a0a22a16fd4</TransactionID>
                <PROCESSING_STATUS>
                   <GuWID>C070615139843230929975</GuWID>
                    <AuthorizationCode></AuthorizationCode>
                   <StatusType>INFO</StatusType>
                  <FunctionResult>PENDING</FunctionResult>
                  <TimeStamp>2014-04-25 16:25:09</TimeStamp>
                </PROCESSING_STATUS>
               </CC_TRANSACTION>
             </ FNC_CC_TERMINAL_CUTOVER >
           </W_JOB>
      </W_RESPONSE>
</WIRECARD_BXML>
```

7.15 Transaction Update Example

Please refer to Transaction Update for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.15.1 Transaction Update Request

```
<?xml version='1.0' encoding='UTF-8' standalone='yes' ?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>adbd996b19e1422780c9bbd061708a0e</JobID>
            <ENTITY_DATA lookup="internal">
                <Item id="2" name="TerminalID">10000001</Item>
                <Item id="1" name="CardAcceptorID">123410000001</Item>
            </ENTITY_DATA>
            <BusinessCaseSignature>0000003169A020E9</BusinessCaseSignature>
            <FNC_CC_TRANSACTION_UPDATE>
                <FunctionID>Six-Telekurs Test</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID></TransactionID>
                    <CommerceType>CustomerPresent</CommerceType>
                    <GuWID>C068602139843230822783</GuWID>
                    <CREDIT_CARD_DATA>
                        <EMVICCData
encoding="hex">9F4005F000F0E0019F0607A00000000310109F02060000000052369F26080869
78C36383BC579F360200029F0902008C82025C00500B56495341204352454449548C159F02069F0
3069F1A0295055F2A029A039C019F37048D178A029F02069F03069F1A0295055F2A029A039C019F
37049F2701808E0E0000000000000000001E0302031F009F34031E03008407A00000000310109F1E0
832303030363531349F100706010A03A000009F160F3638313533353500000000000000005F3401
019F330360F8C89F1A0203569F1C0861303030303034349F3501229505000000080005F2A0203569
A031307319F410203249B02C8009C01009F3704F9432F10</EMVICCData>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
```

```
                        <SignatureImage type="png"
encoding="base64">RGllcyBpc3QgZWluIFRlc3Qu</SignatureImage>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_TRANSACTION_UPDATE>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.15.2 Transaction Update Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
     <W_RESPONSE>
        <W_JOB>
           <JobID>adbd996b19e1422780c9bbd061708a0e</JobID>
           <FNC_CC_TRANSACTION_UPDATE>
                 <FunctionID>Six-Telekurs Test</FunctionID>
                 <CC_TRANSACTION>
                    <TransactionID></TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C0706151398432309299 75</GuWID>
                        <AuthorizationCode></AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>ACK</FunctionResult>
                        <TimeStamp>2014-04-25 15:25:09</TimeStamp>
                    </PROCESSING_STATUS>
                 </CC_TRANSACTION>
           </FNC_CC_TRANSACTION_UPDATE>
         </W_JOB>
      </W_RESPONSE>
</WIRECARD_BXML>
```

7.16 Purchase Offline Example

Please refer to Purchase Offline for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.16.1 Purchase Offline Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0000003169A020E9</BusinessCaseSignature>
            <JobID>208310</JobID>
            <ENTITY_DATA lookup="internal">
                <Item id="2" name="TerminalID">10000001</Item>
                <Item id="1" name="CardAcceptorID">123410000001</Item>
            </ENTITY_DATA>
            <FNC_CC_PURCHASE type="offline">
                <FunctionID>Function1</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID></TransactionID>
```

```
                    <Amount>100</Amount>
                    <Currency>EUR</Currency>
                    <CREDIT_CARD_DATA>
                                                <RAW_DATA>
                                                                    <Data
encoding="none" format="track2">5413339000001133=1512101060930619</Data>
                                                </RAW_DATA>
                     </CREDIT_CARD_DATA>
                                 <POS_DATA>
                                     <EntryMode>022</EntryMode>
                                      <TerminalID>a0001511</TerminalID>
                                 </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
            </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.16.2 Purchase Offline Successful Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_RESPONSE>
        <W_JOB>
            <JobID>208310</JobID>
            <FNC_CC_PURCHASE type="offline">
                <FunctionID>Function1</FunctionID>
                <CC_TRANSACTION>
                    <TransactionID></TransactionID>
                    <PROCESSING_STATUS>
                        <GuWID>C084384140602822908573</GuWID>
                        <AuthorizationCode>371806</AuthorizationCode>
                        <StatusType>INFO</StatusType>
                        <FunctionResult>ACK</FunctionResult>
                        <TimeStamp>2014-07-22 13:23:49</TimeStamp>
                    </PROCESSING_STATUS>
                </CC_TRANSACTION>
            </FNC_CC_PURCHASE>
        </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

7.17 Refund Offline Example

Please refer to Refund Offline for a functional description and to Standard Request Message and Standard Response Message for field definitions.

7.17.1 Refund Offline Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <BusinessCaseSignature>0000003169A020E9</BusinessCaseSignature>
            <JobID>736963</JobID>
            <ENTITY_DATA lookup="internal">
```

```
                    <Item id="2" name="TerminalID">10000001</Item>
                    <Item id="1" name="CardAcceptorID">123410000001</Item>
                </ENTITY_DATA>         <FNC_CC_REFUND type="offline">
                    <FunctionID>Function1</FunctionID>
                    <CC_TRANSACTION>
                        <TransactionID></TransactionID>
                        <Amount>100</Amount>
                        <Currency>EUR</Currency>
                        <CREDIT_CARD_DATA>
                            <RAW_DATA>
                                <Data encoding="none"
format="track2">5413339000001133=1512101060930619</Data>
                            </RAW_DATA>
                        </CREDIT_CARD_DATA>
                        <POS_DATA>
                            <EntryMode>022</EntryMode>
                            <TerminalID>a0001511</TerminalID>
                        </POS_DATA>
                    </CC_TRANSACTION>
                </FNC_CC_REFUND>
            </W_JOB>
        </W_REQUEST>
    </WIRECARD_BXML>
```

7.17.2 Refund Offline Successful Response

```
    <?xml version="1.0" encoding="UTF-8"?>
    <WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
        <W_RESPONSE>
            <W_JOB>
                <JobID>736963</JobID>
                <FNC_CC_REFUND type="offline">
                    <FunctionID>Function1</FunctionID>
                    <CC_TRANSACTION>
                        <TransactionID></TransactionID>
                        <PROCESSING_STATUS>
                            <GuWID>C085590140602822985052</GuWID>
                            <AuthorizationCode>208811</AuthorizationCode>
                            <StatusType>INFO</StatusType>
                            <FunctionResult>ACK</FunctionResult>
                            <TimeStamp>2014-07-22 13:23:49</TimeStamp>
                        </PROCESSING_STATUS>
                    </CC_TRANSACTION>
                </FNC_CC_REFUND>
            </W_JOB>
        </W_RESPONSE>
</WIRECARD_BXML>
```

7.18 Sale Adjustment Example

Please refer to Sale adjustment for a functional and to Standard Request Message and Standard Response Message for field definitions.

7.18.1 Sale Adjustment Request

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
    <W_REQUEST>
        <W_JOB>
            <JobID>Test Purchase J0</JobID>
            <ENTITY_DATA lookup="internal">
                <Item id="2" name="TerminalID">10000001</Item>
                <Item id="1" name="CardAcceptorID">123410000001</Item>
            </ENTITY_DATA>
            <FNC_CC_ADJUST>
                <FunctionID>Adjust 1</FunctionID>
                <CC_TRANSACTION>
                    <CommerceType>CustomerPresent</CommerceType>
                <TransactionID>0dd3c96aa6ba4e7096344dcb42a87340</TransactionID>
                    <Currency>USD</Currency>
                    <Amount>1000</Amount>
                    <GuWID>C754448141708400103800</GuWID>
                    <CREDIT_CARD_DATA>
                    <Track2Data>4149011500000147=1412201022400870</Track2Data>
                    </CREDIT_CARD_DATA>
                    <POS_DATA>
                        <EntryMode>022</EntryMode>
                        <TerminalID>10000001</TerminalID>
                        <CardAcceptorID>123410000001</CardAcceptorID>
                    </POS_DATA>
                </CC_TRANSACTION>
            </FNC_CC_ADJUST>
        </W_JOB>
    </W_REQUEST>
</WIRECARD_BXML>
```

7.18.2 Sale Adjustment Successful Response

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
   <W_RESPONSE>
      <W_JOB>
         <JobID>Test Purchase J0</JobID>
         <FNC_CC_ADJUST>
            <FunctionID>Adjust 1</FunctionID>
            <CC_TRANSACTION>
               <TransactionID>0dd3c96aa6ba4e7096344dcb42a87340</TransactionID>
               <PROCESSING_STATUS>
                  <GuWID>C843601116412726820173</GuWID>
                  <AuthorizationCode>597307</AuthorizationCode>
                  <StatusType>INFO</StatusType>
                  <FunctionResult>ACK</FunctionResult>
```

```
                    <TimeStamp>2014-12-03 17:41:08</TimeStamp>
                </PROCESSING_STATUS>
            </CC_TRANSACTION>
        </FNC_CC_ADJUST>
    </W_JOB>
</W_RESPONSE>
</WIRECARD_BXML>
```

7.19 AVS Example

7.19.1 AVS Response Message

AVS check data can be sent with any single or initial Preauthorization or Purchase transaction request.It is posted with the CORPTRUSTCENTER_DATA element to the Wirecard core system. The following is an example of an AVS response message:

```
<?xml version="1.0" encoding="UTF-8"?>
<WIRECARD_BXML xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance">
<W_RESPONSE>
<W_JOB>
    <JobID>ACCEPTANCE_TEST</JobID>
    <FNC_CC_PURCHASE>
        <FunctionID>AVS XCOM-e-commerce</FunctionID>
        <CC_TRANSACTION>
            <TransactionID>1</TransactionID>
            <PROCESSING_STATUS>
                <GuWID>C806922119825918638975</GuWID>
                <AuthorizationCode>555135</AuthorizationCode>
                <StatusType>INFO</StatusType>
                <FunctionResult>PENDING</FunctionResult>
                    <AVS>
                        <ResultCode>F</ResultCode>
                        <Message>Exact Match</Message>
                        <AuthorizationEntity>5</AuthorizationEntity>
                        <AuthorizationEntityMessage>Response provided by issuer
                        processor.</AuthorizationEntityMessage>
                        <ProviderResultCode>X</ProviderResultCode>
                        <ProviderResultMessage>For U.S. addresses, nine-digit
                        postal code and address match. For addresses outside
U.S.,
                        postal code and address match.</ProviderResultMessage>
                    </AVS>
                    <TimeStamp>2007-12-21 18:46:26</TimeStamp>
                </PROCESSING_STATUS>
            </CC_TRANSACTION>
        </FNC_CC_PURCHASE>
    </W_JOB>
    </W_RESPONSE>
</WIRECARD_BXML>
```

8 Returncodes

8.1 Error Codes

The error code is returned by the core system and uses a number element of the response XML message. The are three different error types:

- ☐ Data error
- ☐ System error
- ☐ Rejected

While the data and system errors are generated by the payment gateway (Wirecard backend), 'rejected' error messages are returned by an acquirer and signal a malfunctioning that originates in the Wirecard platform.

The following table contains all the Wirecard error codes and descriptions that might be returned while sending transaction requests.

Error Code	Description	Meaning
0	Successful system entry.	Transaction OK.
2	Call Voice Authorization Number.	Voice authorization is not possible in case of Internet payment.
3	Invalid Merchant Number.	Invalid Merchant Number.
4	Retain Card.	Retain Card.
5	Authorization Declined.	It is not possible to book the given amount from the Credit account, e.g. limit is exceeded.
6	Error in Sequence Number.	Error in sequence number while communicating with the CC company.
8	Honnor with ID	The transaction was approved by additional ID processing
9	Wait Command.	Wait Command.
10	Partial Approval	The transaction was partially approved. Please contact the acquiring processor for further information.
12	Invalid transaction.	Invalid transaction.
13	Invalid amount.	Invalid amount.
14	Invalid card.	Invalid card.
15	Unknown card issuer	The card issuer ID provided is unknown in the payment industry.
17	Customer cancellation	The cardholder cancelled the transaction.
19	Try transaction again later.	The issuing system is currently unavailable. Please try again later.
20	Incorrect response (error in the issuer area)	The issuing system responsed incorrectly.
21	No action taken.	No action taken.
22	Stop Payment Purchase Order	The subscription was stopped by the cardholder.
23	Revocation of the authorized order	The cardholder rejected that authorized purchase.

24	Revocation of all authorized orders	The cardholder rejected all authorized purchases referencing to that payment.
25	Unable to locate record in file	The issuing system could not reference the transaction transferred.
26	Duplicate record, previous recor replaced.	The validation function showed duplicat processing and rejected.
27	Edit error in file update field	The issuing system could not update an rejected the processing.
28	Access to file unauthorized	An unauthorized processing occurred.
29	Unable to update file	The issuing system could not update an rejected the processing.
30	Format Error.	Format Error.
31	Acquirirng Institution Identifie unknown	The issuing institute rejected th transaction because of incorrect values.
32	Partial Reversal	The transaction was partially reversed.
33	Card expired.	Card expired.
34	Suspicion of Manipulation.	Suspicion of Manipulation. Maybe th CVD code is wrong.
35	Cash service not available.	The cash service is not enabled.
36	Cash request exeeds issuer limit.	The amount exceeds the limit given.
37	Decline for CVV2 failure	The CVV2 value in the transaction I invalid.
38	Number of PIN entry attempt exceeded.	The PIN was entered too many times.
40	Requested function not supported.	Requested function not supported
41	Lost card.	The card number used is indicated as lost.
43	Stolen Card - pick up.	Stolen Card, pick up.
49	Transaction not permitted t cardholder.	The cardholder is not allowed to mak requested transaction.
51	Issued funds or credit limit exceeded.	The transaction ammout exceeds th available fund or the card‘s credit limit.
52	No checking account.	The account used is not defined fo checking account.
53	No savings account	The account used is not defined a savings account
54	Expired card.	The card has expired.
55	Incorrect PIN.	Incorrect PIN
56	Card not in authorizer's database.	Card not in authorizer's database
57	No Referencing Transaction.	Referencing transaction was not carried out with the card which was used for the original transaction (e.g. reversal, booking pre-authorization,...).
58	Terminal ID Unknown.	Given Terminal has no valid entry at the Credit Card Institute.
59	Suspected fraud.	The issuer rejected the transaction for suspected fraud.
60	Card acceptor must contact acquirer	Response reason not specified. Please contact your acquirer.

61	Card acceptor must contact acquirer	The given floor limit is exceeded. Please execute an online transaction to prove the card's balance.
62	Restricted Card.	Restricted Card.
63	No compliance with security regulations.	The card /use of card does not comply with security regulations.
64	Referencing amount too high.	Transaction amount of the referencing transaction is higher than the transaction amount of the original transaction.
65	Exceeds witrhdrawal count limit.	The withdrawal limited has been exceeded.
68	Response did not reach destination or received too late.	The response message to the initial transaction request was not received by the processing system on time.
69	Blocked, first used. The transaction is from a new cardholder and the card has not been properly unblocked	Error occurred in the card setup processing.
71	PIN not changed	The online PIN change was not successful.
72	Invalid/nonexistent “To Account” specified.	Error in the card processing.
73	Invalid/nonexistent “From Account” specified.	Error in the card processing.
74	Invalid/nonexistent account specified (general).	Error in the card processing.
75	PIN entered incorrectly too often.	PIN entered incorrectly too often.
77	PIN entry necessary.	PIN entry necessary.
78	Stop Payment Order	This error code pertains to recurring or installment payments. The transaction was declined or returned because the cardholder requested the issuer to stop a specific recurring or installment payment transaction.
79	Revocation of Authorization Order	This error code pertains to recurring or installment payments. The transaction was declined or returned because the cardholder requested the issuer to stop a specific recurring or installment payment transaction for a specific merchant account.
80	Amount no longer available.	Amount no longer available.
81	Message-flow error.	Message-flow error.
82	Authorization center not available for 60 seconds.	The transaction could not be authorized over a period of 60 seconds due to lack of connection to authorization centre.
83	Authorization center not available for 300 seconds.	The transaction could not be authorized over a period of 300 seconds due to lack of connection to authorization centre.
84	Negative CAM, dCVV, iCVV, or CVV results.	The card identifying values do not match.
85	No reason to decline a request for account number verification, address verification, CVV2 verification, or a credit voucher or merchandise return.	The issuing system did not specify the reason for rejecting but could exclude some.

86	PIN Validation not possible.	The PIN validation could not be accomplished.
87	Purchase Amount Only, No Cash Back Allowed.	The cash back processing is not allowed.
88	Automatic re-initialization is required (terminal).	Automatic re-initialization is required (terminal).
89	Automatic re-initialization is required (user).	Automatic re-initialization is required (user).
90	Cryptographic failure	The issuing system lead to an encryption failure.
91	Card issuer temporarily not reachable.	Card issuer temporarily not reachable.
92	Card Type not Processed by Authorization Centre.	The card type is not processed by the authorization centre.
94	Transaction cannot be completed due to legal violation.	The transaction request conflicts with applied law.
96	Processing Temporarily not possible.	Processing temporarily not possible
97	Security Breach.	Security breach
98	Date and Time Not Plausible.	Date and time not plausible
99	Error in PAC Encryption Detected.	Error in PAC encryption detected
200	Mandatory elements are missing.	Missing elements in XML-Request.
201	Terminal acquisition failure	An unlocked terminal was not found within the time allotted for locking a terminal.
202	Transaction processing refused.	An unlocked brick was not found within the time allotted for locking a brick.
203	Time-out while Contacting Credit Card Processor	Time-out while contacting CC processor.
204	Time-out while Making Transaction Reversal	Time-out while making transaction reversal.
205	Invalid Config Number	Content of ConfigNumber must be hexadecimal with a size of 0 to 16 characters.
206	Invalid Business Case Signature	Content of ConfigNumber must be hexadecimal with a size of 0 to 16 characters.
207	Invalid FunctionID	Content of FunctionID must be alphanumerical with a size of 0 to 3 characters.
208	Invalid JobID	Content of JobID must be alphanumerical with a size of 0 to 32 characters.
209	Invalid	Content of TransactionID must be alphanumerical with a size of 0 to 32 characters.
210	Invalid CountryCode	Content of CountryCode must be capital with a size of 2 characters.
211	Invalid Amount	Content of Amount must be numerical with a size of 1 to 9 digits.
212	Invalid Currency	Content of Currency must be capital with a size of 3 characters.
213	Invalid Credit Card Number	Content of CreditCardNumber must be numerical with a size of 13 to 16 digits.
214	Invalid ExpirationYear	Content of ExpirationYear must be numerical with a size of 4 digits.

215	Invalid Expiration Month	Content of ExpirationMonth must b numerical with a size of 2 digits.
216	Invalid Card Holder Name	Content of CardHolderName must be ASCII with a size of 1 to 80 characters.
217	Invalid IP Address	Content of IPAddress must be numerical with dots with a size of 0 to 15 characters.
218	Invalid GuWID	Content of GuWID must be alphanumerical with a size of 21 to 24 characters.
219	Invalid Authorization Code	Authorization Code is usually numerical with 6 digits.
220	Invalid CVC number	Content of CVC must be numerical with a size of 3 to 4 characters.
221	Invalid Luhn checksum	Invalid Luhn checksum
222	Expired card	Expiration date invalid.
223	Unknown Currency	The requested currency is not listed in data base.
224	No referenced transaction	Could not find referenced transaction for GuWID.
225	Invalid elements	Invalid XML tag elements.
226	Invalid transaction flow	Referenced transaction is of wrong type
227	Invalid transaction type	This transaction type is not allowed for this specific Business Case
228	Wrong Recurring Transaction-Type	Error in XML data stream (in the recurring part)
229	Invalid commerce type	Content of 'CommerceType' must be one of 'eCommerce', 'MOTO' or 'CustomerPresent'.
230	Referenced transaction failed	Referenced transaction type failed
234	Invalid content	Content of 'Usage' must be alphanumerical with a size of 0 to 256 characters.
235	Unequal Amount	TRANS_AMOUNT must be equal to amount of referenced transaction in case of REVERSAL or CAPTURE.
236	Unequal Currency	CUR_CODE must be equal to referenced transaction in case of BOOKBACK, BOOKPREAUTH, CAPTURE or REVERSAL
237	Unequal Authorization Code	ACQ_AUTHORIZATION must be equal to authorization code of referenced transaction.
238	Unequal Country Code	TRANS_COUNTRY_CODE must be equal to country code of referenced transaction.
239	Referenced amount unequal	Referenced amount must be equal or less to amount of referenced Transaction in case of AMEX Capture
240	Unknown credit card type	Credit card ype for card no. unknown / rejected.
241	Terminal not available	Terminal for the credit-card type + the currency is not available.
242	Terminal not ready	Terminal for the credit card type + the currency is not ready.

243	Amount larger	The sum of all bookbacks must be equal or less to amount of referenced transaction in case of
244	Amount smaller	The requested amount is smaller than the minimum amount.
245	Transaction processing not possible	Processing functions BOOKBACK, REFUND and REVERSAL not allowed for terminal (credit card)
246	Black listed Credit Card number.	Credit Card was rejected because of suspicious pattern.
247	WD blacklist check failure.	Wirecard blacklist check - failure 1.
248	WD blacklist check failure.	Wirecard blacklist check - failure 2.
249	Credit restriction violation	Credit restriction violation
250	System error.	System error.
251	No permission	to use the requested service
252	Merchant Blacklist - Reason 502	Declined by Wirecard risk management - based on merchant's blacklist (no information for cardholder!)
253	WD Blacklist Error	Declined by Wirecard risk management (no information for cardholder!)
254	WD Blacklist Error 2	Declined by Wirecard risk management (no information for cardholder!)
255	Merchant Blacklist - Reason 501	Declined by Wirecard risk management - based on merchant's blacklist (no information for cardholder!)
256	Entry found in OFAC Specially Designated Nationals list (SDN).	Declined by Wirecard risk management (no information for cardholder!)
257	Reserved for Risk Management	Declined by Wirecard risk management (no information for cardholder!)
258	Reserved for Risk Management	Declined by Wirecard risk management (no information for cardholder!)
259	Reserved for Risk Management	Declined by Wirecard risk management (no information for cardholder!)
260	Credit card number not allowed in demo mode	Only demo card number is allowed for this currency in demo mode.
261	Credit card number not allowed outside demo mode	Use of demo card number is only allowed in demo mode.
262	Unsuccessful demo run	Operation failed due to use of demo card number '4200000000000'.
270	Invalid credit card.	Credit card number did not pass Cybersource basic checks.
271	Invalid data.	Data provided to Cybersource is not consistent with the request.
272	Missing field.	Request provided to Cybersource is missing a field.
273	Missing required field(s).	Request is missing a required field(s).
275	Score result exceeds	Cybersource Score result exceeds the score threshold.
280	SC1-AVS has a negative result	SC1 risk management declines
281	SC1-DELPHI/Score1 and AVS have negative results	SC1 risk management declines
282	SC1-DELPHI/Score1 has a negative result	SC1 risk management declines
283	SC1-System Error	SC1 risk management declines
284	SC1-Data Error	SC1 risk management declines

285	SC1-Missing required parameter	SC1 risk management declines
286	SC1-No Delphi/Score1 (0)	SC1 risk management declines
287	reserved for SC1	SC1 risk management declines
288	SC1 - reserved GICC	SC1 risk management declines
289	SC1 - reserved for future use	SC1 risk management declines
290	Unequal BC Signature	The Business Case Signature has to be equal to the referencing transaction.
301	EBS blacklist check failure.	EBS blacklist check failure
302	EBS scoring analysis failure.	EBS scoring analysis failure
303	US AVS check failed - no match in address or zip code	US AVS check failure
304	US CVV2 check failure.	US CVV2 check failure
305	US blacklist check failure.	US blacklist check failure
306	eFalcon scoring analysis failure.	eFalcon scoring analysis failure
307	US Authorization Declined.	US Authorization Declined
309	US AVS check error – Parameters missing or invalid	Parameters inside <ADDRESS> are checked and not found or in a wrong format.
310	US AVS check failed – address matches	American AVS declines
311	US AVS check failed - 9 digit zip code matches	American AVS declines
312	US AVS check failed - 5 digit zip code matches	American AVS declines
314	US AVS check – address information is unavailable	American AVS declines
315	US AVS check failed – system unable to process	American AVS declines
316	US AVS check failed – not supported	American AVS declines
317	US AVS check failed – not supported for this industry	American AVS declines
318	US AVS check failed – not performed	American AVS declines
319	US AVS check failed – unknown response from issuer	American AVS declines
320	US AVS check failed - system error	American AVS declines
321	SC2 Location not found	SC2 risk management declines
322	SC2 Only part of address matches	SC2 risk management declines
323	SC2 Bad credit score	SC2 risk management declines
324	SC2 System Error	SC2 risk management declines
325	Blocked by Wirecard	Declined by Wirecard risk management (no information for cardholder!)
340	Wirecard Negative List	Declined by Wirecard risk management (no information for cardholder!)
351	Pick up card.	Pick up card
352	Pick up card - special condition.	A special condition happened, pick up the card
353	Card lost - pick up.	Card was lost by cardholder

354	Stolen Card - pick up.	card holder declared card as stolen
355	Do not honor card.	Do not honor card
400	SFC system error	Technical error at the acquirer
401	Transaction input error	This error code is not uses yet.
402	Not authorized transaction	This error code is not uses yet.
403	Authorization refused due to high risk	Declined by Wirecard risk management (no information for cardholder!)
404	Authorization refused due to exceeding authorization	The authorization of this transaction has been exceeded
405	Third party authorization failed	Third party authorization failed
406	Credit request rejected due to exceeding the credit	Credit request rejected due to exceeding the credit
407	Canceled by Acquirer	Safecharge fraud-driven cancellation / bookbacks (status changed manually).
450	XML Document Invalid	There is an error in the XML data stream
451	BC signature not found	The wrong Business Case Signature was used
452	Config Number not found for BC signature	The wrong Business Case Signature or the wrong config.ini was used
453	Partially successful batch update	Partially successful batch update
454	Batch not processed	Batch not processed
455	OCT (formerly CFT) transaction is not supported	Issuer / Card Organization do not support the OCT/CFT transaction.
456	Attribute 'type' of a function element does not conform to the specification.	Attribute 'type' must have the value 'cft' if provided.
457	Card has not been processed yet.	Card must have been used previously by processor before OCT/CFT transaction can be made.
458	Inconsistent referenced transaction information found.	Inconsistent referenced transaction information found.
459	Function is not supported.	Function is not supported.
500	Time-out while using the Wirecard applet.	Time-out while using the Wirecard applet.
501	Client Communication Link Failure	A Problem occurred during the communication to the client
502	Client Communication Link Failureprocessed	A Problem occurred during the communication to the client
507	General Risk Management Rejection	General risk management rejection
508	Missing input data for Risk Management	Missing input data for the Risk Management
510	The country of the Issuer does not match with the country of the transaction.	The country of the Issuer does not match with the country of the transaction.
511	Unknown error received from the acquirer	An unknown error is received from the acquirer.
520	The card velocity check failed.	The sum of all submitted transactions exceeds the permissible limit.
521	The card velocity check failed.	The sum of all authorized amounts exceeds the permissible limit.

522	A system error prevented enrollment from completing.	This card is not eligible for 3-D Secure processing. Card should be accepted for payment. Merchant may not claim a liability shift on this transaction under any circumstances.
523	Unable to verify enrollment.	This card is not eligible for 3-D Secure processing. Card should be accepted for payment. Merchant may not claim a liability shift on this transaction under any circumstances.
524	Cardholder not participating.	This card is eligible but not enrolled in the 3-D Secure program. It does not require authentication.Merchant may claim liability shift with the ECI code if allowed by the Card Association.
525	Verification failed.	Cardholder failed or cancelled 3-D Secure authentication.
526	Transaction processing refused.	It is not possible to process the transaction using requested 'Recurring Type'.
527	Attribute 'minorunits' of the 'Amount' element does not conform to the specification.	The attribute 'minorunits' must be one digit.
528	Amount 'minorunits' refused.	The minor unit of currency 'XXX' is '?' according to ISO 4217:2001. Value '0' means that there is no minor unit for that currency, whereas values '1','2' and '3' signify a ratio of 10:1, 100:1 and 1 000:1 respectively.
538	Sales Date out of interval	A capture had been attempted outside the valid sales date interval. The default interval for a capture is 35 days following the sales date. The sales date interval can be configured per business case. Please contact Wirecard customer services at support@wirecard.com if you wish to have a sales date time interval changed.
539	Card brand is not participating.	The card is not eligible for 3-D Secure processing, yet it may be accepted for payment. With transactions made on this card, the merchant may, however, not claim a liability shift under any circumstances.
700	Timeout, Diagnostic successful	A Timeout has happened, which went successfully through a timeout diagnostic
701	Timeout, Diagnostic failed	A Timeout has happened, which failed to run through the timeout diagnostic
711	Response contained wrong Credit Card number.	Response contained wrong card number
712	Response contained wrong amount.	Response contained wrong amount
713	Response contained wrong Currency Code.	Response contained wrong currency code
714	Response contained wrong Trace Number.	Response contained wrong trace number
715	Response contained wrong Terminal ID.	Response contained wrong terminal ID

716	Response contained wrong Merchant Number.	Response contained wrong VU number.
717	Response contained wrong Credit Card Institute Number.	Response contained wrong cctiid.
850	Scoring OK	Scoring passed successfully.
900	Batch transaction pending	Transaction is waiting to be sent to the acquirer.
901	Batch transaction validated	Transaction is waiting to be sent to the acquirer for clearing.
902	Demo batch transaction validated	Transaction is waiting to be sent to the acquirer for clearing (only for demo transactions).
903	Batch transaction was cancelled	Transaction was canceled manually by Wirecard.
999	Transaction is in process	Transaction is in process.
9500	Demo Transaction OK	Demo transaction was successful.
10000	Internal System error	Internal System error.
10001	Wrong config pair	Wrong config pair.
10002	Function processing not possible	Function processing not possible.
10003	Job refused	Job refused.
10004	Invalid Function	Invalid Function.
10005	System error	System error.
10006	Customer is deactivated at Server	Customer is deactivated at Server.
10007	No parameters	No parameters.
10008	Corrupted HTTP Stream	Corrupted HTTP Stream.
10009	Wrong Parameters	Wrong Parameters.
10010	XML document contains no Data	XML document contains no data.
10011	Invalid transaction	Invalid transaction.
10012	Encryption of XML document failed.	Please contact Wirecard customer services at support@wirecard.com for further information.
10013	Could not resolve the entity mapping.	Please contact Wirecard customer services at support@wirecard.com for further information.
10020	connection timeout	Connection timeout.
20000	Missing elements in XML-Request.	Some elements required for successful processing of a request are missing in the XML document. Please refer to the documentation for debugging.
20001	Error mapped to GICC code 204.	Data Error.
20030	Content of ConfigNumber is not according to the given content restrictions.	Content of tag ConfigNumber must be hexadecimal with a size of 0 to 16 characters.
20031	Content of tag ConfigNumber must be hexadecimal with a size of 0 to 16 characters.	Content of tag Business Case Signature must be hexadecimal with a size of 0 to 16 characters.
20032	Content of FunctionID is not according to the given content restrictions.	Content of tag Function ID must be alphanumerical with a size of 0 to 32 characters.

20033	Content of JobID is not according to the given content restrictions.	Content of tag Job ID must be alphanumerical with a size of 0 to 32 characters.
20050	Content of TransactionID is not according to the given content restrictions.	Content of tag Transaction ID must be alphanumerical with a size of 0 to 32 characters.
20051	Content of CountryCode is not according to the given content restrictions.	Content of tag Country Code must be capital with a size of 2 characters. Please provide 2 capitals according to ISO 3166-1.
20052	Content of Amount is not according to the given content restrictions.	Content of tag Amount must be numerical with a size of 1 to 9 digits.
20053	Content of Currency is not according to the given content restrictions.	Content of tag Currency must be capital with a size of 3 characters.
20054	Content of CreditCardNumber is not according to the given content restrictions.	Content of tag Credit Card Number must be numerical with a size of 13 to 16 digits.
20055	Content of ExpirationYear is not according to the given content restrictions.	Content of tag Expiration Year must be numerical with a size of 4 digits.
20056	Content of ExpirationMonth is not according to the given content restrictions. Content of CardHolderName is not according to the given content restrictions.	Content of tag Expiration Month must be numerical with a size of 1 to 2 digits.
20057	Content of IPAddress is not according to the given content restrictions.	Content of tag CardHolder Name must be ASCII with a size of 1 to 80 characters.
20058	Content of IPAddress is not according to the given content restrictions.	Content of tag IP address. It must be written in dot-decimal notation consisting of up to 15 characters in length.
20059	Content of GuWID is not according to the given content restrictions.	Content of tag GuWID must be alphanumerical with a size of 21 to 24 characters. A GuWID consists of the character 'C' followed by 21 alphanumerical digits.
20060	Content of AuthorizationCode is not according to the given content restrictions.	Content of tag authorization Code must be alphanumerical with a size of 0 to 10 characters. Authorization Code is usually numerical with 6 digits.
20061	CVC number invalid.	Content of tag CVC2 must be numerical with a size of 3 to 4 characters.
20062	Content of 'RECURRING_TRANSACTION/Type' is not according to the given content restrictions.	Content o 'RECURRING_TRANSACTION/Type' must be one of 'Single','Initial' or 'Repeated'.
20063	Content of StartYear is not according to the given content restrictions.	Content of StartYear must be numerical with a size of 4 digits.
20064	Content of StartMonth is not according to the given content restrictions.	Content of StartMonth must be numerical with a size of 2 digits. Please provide two digits in the range of 01..12.
20065	Content of Issue is not according to the given content restrictions.	Card Issue Number is variable length and must be 1 or 2 digits long.
20066	Content of 'CommerceType' is not according to the given content restrictions.	Content of 'CommerceType' must be one of 'eCommerce','MOTO' or 'CustomerPresent'.

20067	Content of 'Usage' is not according to the given content restrictions.	Content of 'Usage' must be alphanumerical with a size of 0 to 256 characters.
20070	Credit card number invalid.	The given credit card number did not pass the check digit routine for a card number [Luhn check].
20071	Expiration date invalid.	Expiration date must not be exceeded.
20072	The requested currency is not listed in data base.	Expiration date must not be exceeded.
20073	Invalid transaction flow	The requested function is not applicable for the referenced transaction.
20080	Could not find referenced transaction for GuWID %s.	This error usually occurs in case of authorizations, captures, cancellation /reversals, when a former transaction's GuWID is required but the given GuWID is unknown to the Wirecard system or was generated for a transaction which is not accessible by the business case in use.
20081	Content of 'TransactionType' is not according to the given content restrictions.	Content of 'TransactionType' must be one of the strings 'FNC_CC_TRANSACTION' or 'FNC_CC_AUTHORIZATION'.
20100	Transaction processing not possible.	This occurs if the user tries to capture an authorization that was not successful. Please refer to Wirecard customer service in case of further questions.
20101	Transaction processing not possible.	This occurs if the user tries to capture a authorization that was not successful. Please refer to Wirecard customer service in case of further questions.
20102	Transaction processing not possible.	This occurs if the user tries to capture a authorization supplement that was not successful. Please refer to Wirecard customer service in case of further questions.
20103	Transaction processing not possible.	This occurs if the user tries to reverse a transaction that was not successful. Please refer to Wirecard customer service in case of further questions.
20104	Transaction processing not possible.	This occurs if the user tries to book back a transaction that was not successful. Please refer to Wirecard customer service in case of further questions.
20105	Transaction processing refused.	TRANS_AMOUNT must be equal to the amount of the referenced transaction in case of REVERSAL or CAPTURE.
20106	Transaction processing refused.	CUR_CODE must be equal to the currency used for the referenced request.
20107	Transaction processing refused.	ACQ_AUTHORIZATION must be equal to authorization code of referenced request.
20108	Transaction processing refused.	TRANS_COUNTRY_CODE must be equal to country code of referenced request.
20109	Transaction processing refused.	Credit card type for a given card number is unknown / rejected.

20110	Transaction processing refused.	The terminal required for a given transaction is not available. Please contact Wirecard customer service.
20111	Transaction processing refused.	The terminal required for a given transaction is not available. Please contact Wirecard customer service.
20112	Transaction processing refused.	Transaction processing refused.
20113	Transaction processing refused.	The amount to be booked back has to be equal to or less than the amount of the referenced transaction.
20114	The requested amount is smaller than the minimum amount.	The requested amount is smaller than the minimum amount.
20115	Transaction processing not possible.	Please contact Wirecard customer service.
20117	Transaction processing refused.	Transaction processing refused.
20118	Transaction processing not possible.	The transaction couldn't be processed, e.g. because of an invalid transaction flow.
20120	Transaction processing refused.	Please contact Wirecard customer service.
20121	Transaction processing refused.	It is not possible to process the transaction using requested 'CommerceType'.
23000	DINVALIDCARD: The credit card number did not pass basic checks	Please contact Wirecard customer service for further details on the rejected card.
23001	DINVALIDDATA: Data provided is not consistent with the request.	Please contact Wirecard customer service to resolve this error.
23002	The request is missing a required field.	Check the following fields: customer_firstname, customer_lastname, customer_email, bill_address1, bill_country, bill_city, customer_cc_number, customer_cc_expmo, customer_cc_expyr, amount. The fields bill_state and bill_zip are required if bill_country is set to "US" or "CA".
23003	The request is missing a required field.	Check the following fields: customer_firstname, customer_lastname, customer_email, bill_address1, bill_country, bill_city, customer_cc_number, customer_cc_expmo, customer_cc_expyr, amount. The fields bill_state and bill_zip are required if bill_country is set to "US" or "CA".
24997	Credit card number not allowed in demo mode.	Only demo card numbers are allowed in demo mode.
24998	Credit card number not allowed outside demo mode.	Use of demo card numbers is only allowed in demo mode.
24999	Unsuccessful demo run.	Operation failed due to use of demo card number. The credit card number used simulate s a not acknowledged transaction in demo mode.
25000	The transaction was rejected by acquirer. This message should not appear.	Please contact Wirecard customer service.
27000	You have no permission to use the requested service.	Please contact Wirecard customer service.

27001	Transaction processing refused.	This error usually occurs in case of heavy load and is caused by restrictions in the processing systems of credit card acquirers. Additional terminals can be requested from the acquirer to resolve this problem. Please contact Wirecard customer service.
27002	Transaction processing refused.	Please contact Wirecard customer service.
29000	System error	Please contact Wirecard customer service.
29001	Transaction processing refused.	Transaction processing refused.
29002	Client communication failure.	Transaction processing refused.

8.2 AVS Codes

Each card scheme maintain an own set of return codes. To facilitate the implementation Wirecard maps those codes to a uniformed set of scheme independent response codes.

8.2.1 Wirecard Response Code

The following table outlines the set of codes used by Wirecard. This uniformed could should be the preferred source for decisions related to AVS.

Response Code	Message	Description
0	Reserved	Reserved
F	Exact Match	Street address and zip code match.
P	Partial Match	Either street address or zip codes do not match.
U	AVS Unavailable	Address information is unavailable or the Issuer does not support AVS.
E	Error	AVS not performed due to an error or insuficient data.
N	No Match	Neither address nor zip code match.

8.2.2 Authorization Entity

The Authorization Entity defines the party responding to the AVS Request.

Authorization Entity	Message
2	Response provided by Intermediate processor.
5	Response provided by issuer processor.

8.2.3 Provider Response Code

The Provider Response Code is the code returned from the provider. If the business case was activated for AVS the code it is returned together in the response, together with the human readable Provider Response Message. The following table lists the current set of codes used by the card schemes and outlines the mapping between the Provider Response Code and the unified Wirecard Response Code. Please note that the actual Provider Response Code

depends on the actual used provider and could be also changed and extended by the provider. So it may differ from the table below. Therefore Wirecard recommends the preferred usage of the Wirecard Response code.

American Express

American Express Code	Wirecard Code	Description
A	P	CSC and Address Matched
F	F	All Data Matched
N	P	CSC Match
U	U	Data Not Checked
Y	F	All Data Matched
Z	P	CSC and Postcode Matched
F	Exact Match	Street address and zip code match.

American Express AAV (enhanced AVS)

American Express Code	Wirecard Code	Description
Y	F	Yes, Billing Address and Postal Code are both correct.
N	N	No, Billing Address and Postal Code are both incorrect.
A	P	Billing Address only correct.
Z	P	Billing Postal Code only correct.
U	U	Information unavailable.
S	U	SE not allowed AAV function.
R	E	System unavailable; retry.
L	P	CM Name and Billing Postal Code match.
M	F	CM Name, Billing Address and Postal Code match.
O	P	CM Name and Billing Address match.
K	P	CM Name matches.
D	P	CM Name incorrect, Billing Postal Code matches.
E	P	CM Name incorrect, Billing Address and Postal Code match.
F	P	CM Name incorrect, Billing Address matches.
W	N	No, CM Name Billing Address and Postal Code are all incorrect.

Mastercard

Mastercard Code	Wirecard Code	Description

A	P	Adress matches, postal code does not.
N	N	Neither address nor postal code match.
R	E	Retry - system unable to process.
S	U	AVS currently not supported.
U	U	No data from issuer authorization system.
W	P	For U.S. addresses, nine-digit postal code matches, address does not. For addresses outside U.S., postal code matches, address does not.
X	F	For U.S. addresses, nine-digit postal code and address match. For addresses outside U.S., postal code and address match.
Y	F	For U.S. addresses only, five-digit postal code and address match.
Z	P	For U.S. addresses only, five-digit postal code matches, address does not.

Visa

Visa Code	Type	Wirecard Code	Description
A	Domestic	P	The address information matches. The postcode does not match.
B	International	P	Street address matches, but postal code not verified. Returned only for non U.S.-issued Visa cards.
C	International	N	Street address and postal code do not match. Returned only for non U.S.-issued Visa cards.
D	International	F	The match is exact: both the address and the postcodes match. No representment rights.
E	Domestic	E	AVS data is invalid or AVS is not allowed for this card type.
G	International	U	Address information is unavailable, or the Issuer does not support AVS. Acquirer has representment rights.
I	International	U	Address information is unavailable, or the Issuer does not support AVS. Acquirer has representment rights.
P	International	P	Postal code matches, but street address not verified. Returned only for non U.S.-issued Visa cards.
R	Domestic	U	System unavailable.
S	Domestic	U	U.S.-issuing bank does not support AVS.
M	International	F	The match is exact: both the address and the postcodes match. No representment rights.
N	Domestic	N	The match is not exact, either because the postcode and/or the addresses do not match.
U	Domestic	U	Address information unavailable. Returned if the U.S. bank does not support non-U.S. AVS or if the AVS in a U.S. bank is not functioning properly.
W	Domestic	P	Street address does not match, but 9-digit postal code matches.

X	Domestic	F	Street address and 9-digit postal code match.
Y	Domestic	F	Street address and 5-digit postal code match.
Z	Domestic	P	The postcode information matches. The address information does not match.

9 MasterCard Europe New Authorization Rules

9.1 Motivation

Enable a more accurate and transparent management of the card account's "open-to-buy", in order to improve cardholder satisfaction and address regulatory concerns with the current situation;

Redefine the issuer payment guarantee that is engaged when authorizing a transaction by introducing a maximum time limit in place of the currently unlimited duration and by defining it based on characteristics of the authorization or pre-authorization request; and

Permit acquirers and issuers to identify and clearly distinguish a pre-authorization from a final authorization, thus giving them the option to treat them differently, to the ultimate benefit of their cardholders.

These rules are only valid for MasterCard/Maestro/Cirrus transactions initiated in the European region.

NOTE: A final authorization in the MasterCard terminology is referred to as an authorization in this document. For more details on the type of transaction used, see here.

9.2 Authorization Conversion Service

This is an additional service offered by Wirecard to help merchants in Europe avoid quoting incorrect authorization type and further help avoid paying the penalty fees for using the incorrect authorization type. It is important to note that the conversion service only partly facilitate the new processing rules defined by MasterCard. All it does is to let merchant quote the desired authorization type. For more information on the new rules & penalty fees, please contact Wirecard Sales Operation team (Sales_Operations@wirecard.com).

9.2.1 Already Contracted Merchants

Wirecard provides a conversion approach to the existing European merchants to quote/choose between the desired authorization types. It is up to the merchant to inform the Wirecard Support Team in advance of the required conversion. The conversion service mainly filters on the business case signature.

Following are the facts,

1) Up until now whatever authorization type (authorization/preauthorization) merchant submitted over the XML interface it is always quoted as an authorization type to the MasterCard.
2) If the merchant would like to have this rule changed then it should be possible to quote the transaction in the following combinations,
    a. Authorization to Authorization
    b. Authorization to Preauthorization
    c. Preauthorization to Authorization
    d. Preauthorization to Preauthorization

9.2.2 New Merchants

If merchant, did not explicitly quote a desired authorization type in the signed acceptance contract then by default always an authorization transaction type is used. It is up to the merchant to contact Wirecard Support Team to request for get the right combinations. Below are the possibilities,

a. Authorization to Authorization
b. Authorization to Preauthorization
c. Preauthorization to Preauthorization
d. Preauthorization to Authorization