POS Notify Service

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Terms and Definitions

Terms

Term	Definition
Transaction	A transaction consists of a number of linked messages. At its simplest a transaction will consist of a minimum of a request message and a response message.
Payment	A payment is the equivalent to a transaction in Paygate. During a payment lifecycle, the state of a transaction will change, depending on the performed action. These actions may include authorization, capture, sale, cancel and refund. A payment is thereby defined as a sequence of actions.
Action	An action is an operation that changes the status of a payment when performed successfully.

Definitions

Data formats

Format	Description
a	alphabetical
as	alphabetical with special characters
n	numeric
an	alphanumeric
ans	alphanumeric with special characters
ns	numeric with special characters
bool	boolean expression (true or false)
3	fixed length with 3 digits/characters
..3	variable length with maximum 3 digits/characters
enum	enumeration of allowed values
dttm	ISODateTime (YYYY-MM-DDThh:mm:ss)

Abbreviations

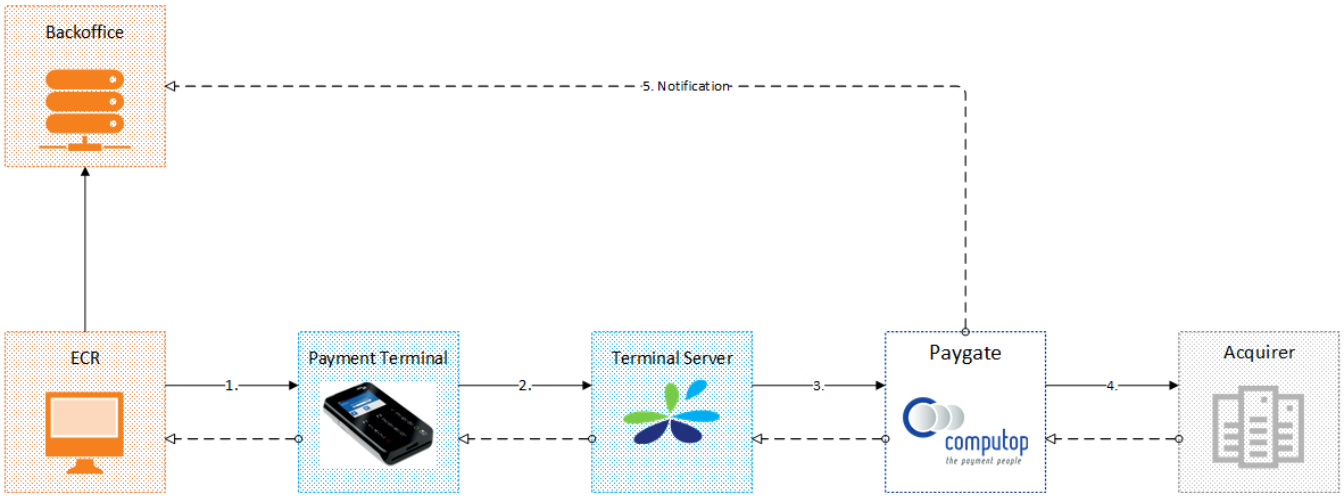
Abbreviation	Description	Comment

CND	condition	
M	mandatory	If a parameter is mandatory, then it must be present
O	optional	If a parameter is optional, then it can be present, but it is not required
C	conditional	If a parameter is conditional, then there is a conditional rule which specifies whether it is mandatory or optional

Notice: Please note that the names of parameters can be returned in upper or lower case.

Schematic overview

The following block diagram provides a high level process overview.



Process narrative

(1) ECR submits estimated amount and a Reference Number via OPI message protocol to the POI device

(2) POI device performs cardholder authentication, encrypts the PIN block and the PAN with the Computop encryption key and forwards the authorization request via SSL through a central proxy server to CCV acCEPT

(3) CCV acCEPT routes the transaction to Computop Paygate via VPN connection

(4) Paygate submits authorization request to the acquirer

(5) Authorization result are transferred via notification request

Please note that authorization and notification are two distinct asynchronous processes.

Notification request

Computop Paygate will submit a notification request via HTTP POST in order to transfer the authorization status and transaction details to the server URL as stored in the merchant configuration.

The request will be sent in real-time. If no response Paygate will retry the notification once after 2 seconds of the first submission. In case that the retry fails Merchant System may actively request the status of the transaction once the system is available again.

Key	Format	CND	Description	Config
mid	ans..30	M	MerchantID, assigned by Computop	
PayID	an32	M	ID assigned by Paygate for the payment, e.g. for referencing in batch files as well as for capture or credit request.	
XID	an32	M	ID for all single transactions (authorisation, capture, credit note) for one payment assigned by Paygate	
TransID	ans..64	M	TransactionID provided by you which should be unique for each payment	

RefNr	ans..30	M	Unique reference number	
Status	a..50	M	OK or AUTHORIZED (URLSuccess) as well as FAILED (URLFailure)	
Description	ans..1024	M	Further details in the event that payment is rejected. Please **do not** use the **Description but** the Code parameter for the transaction status analysis!	
Code	n8	M	Error code according to Paygate Response Codes (A4 Error codes)	
MAC	an64	M	Hash Message Authentication Code (HMAC) with SHA-256 algorithm. Details can be found here: • HMAC Authentication (Request) • HMAC Authentication (Notify)	
POSTerminalID	an..20	M	Terminal Identification Number assigned and linked to a specific point-of-sale (POS) terminal	
MessageType	n2	M	Message Type describing the performed action: 01=Sale, 02=Reversal, 03=Credit, 05=Authorisation /Reservation, 06=Incremental Authorisation, F0=Autoreversal	
DMACKSN	an..20	M	Serial Number of the key (DUKPT) that was used to generate the DMAC	
DMAC	an16	M	Message Authentication Code	
CodeExt	an..10	O	Original code from external payment system	
AQ	a..5	O	Acquirer	X
EMVData	an..2028	O	EMV Data	X
CCNr	n12..19	O	Credit card number at least 12-digit, numerical without spaces	X
PCNr	n16	O	Paygate card token	X
CCBrand	a..22	O	Credit card brand (e.g. Visa, MasterCard, Maestro etc.)	X
CCExpiry	n6	O	Card expiry date	X
MaskedPan	an12..19	M	Masked card number (6X4)	
IBANEMVfield	an..64	C	IBAN, hex-coded, only available with Girocard	
baseAmount	n..10	M	Amount in its smallest currency unit of merchant's local currency at the Point of Sale (POS)	
baseCurrency	a3	M	Merchant's local currency at the Point of Sale (POS)	
Amount	n..10	C	Amount in its smallest currency unit of card currency	
Currency	a3	C	Cardholder's currency	
dccRateValue	ans13	C	Applicable FX rate with 4 decimal places (e.g. '3.0245')	
schemeReferenceID	ans..64	C	Card scheme specific transaction ID required for subsequent credential-on-file payments, delayed authorizations and resubmssions.	
FormFactor	ans..64	O	Defines the form / device which has been used for payment. Currently possible values: • Card • Mobile Device • Watch / Wristband	
Device	an..20	O	Serial number of POS device	
TransactionId	ans..64	C	Card scheme specific transaction ID required for subsequent credential-on-file payments, delayed authorizations and resubmissions. Mandatory: CredentialOnFile – initial false – unscheduled MIT / recurring TransactionId is a value used with 3DS1 payments. Pls. ensure that you are prepared for 3DS2 payments where schemeReferenceID is returned instead.	
VUNr	an..12	O	Contract partner number	
ApprovalCode	an..6	O	Authorising code of transaction	
additionalresponsedata	an..128	O	Additional text which the operator's processing system can send optionally in replies to payment/cutover requests.	
TerminalID	a..20	O	ID of the terminal	
IBAN	an..34	O	International Bank Account Number	
TrxTime	ans21	O	Time stamp of transaction in the format dd.MM.yyyy HH:mm:ssff	

Key	Format	CND	Description	Beschreibung

PayID	an32	M	ID assigned by Paygate for the payment, e.g. for referencing in batch files as well as for capture or credit request.	Vom Paygate vergebene ID für die Zahlung; z.B. zur Referenzierung in Batch-Dateien sowie im Capture- oder Credit-Request.

Key	Format	CND	Description	Beschreibung
XID	an32	M	ID for all single transactions (authorisation, capture, credit note) for one payment assigned by Paygate	Vom Paygate vergebene ID für alle einzelnen Transaktionen (Autorisierung, Buchung, Gutschrift), die für eine Zahlung durchgeführt werden

Key	Format	CND	Description	Beschreibung
TransID	ans..64	M	TransactionID provided by you which should be unique for each payment	Ihre eigene TransaktionsID, die für jede Zahlung eindeutig sein muss

Key	Format	CND	Description	Beschreibung
RefNr	ans..30	M	Unique reference number	Eindeutige Referenznummer

Key	Format	CND	Description	Beschreibung
Status	a..50	M	OK or AUTHORIZED (URLSuccess) as well as FAILED (URLFailure)	OK oder AUTHORIZED (URLSuccess) sowie FAILED (URLFailure)

Key	Format	CND	Description	Beschreibung
Description	ans..1024	M	Further details in the event that payment is rejected. Please **do not** use the **Description but** the Code parameter for the transaction status analysis!	Nähere Beschreibung bei Ablehnung der Zahlung. Bitte nutzen Sie **nicht** den Parameter **Description, sondern** Code für die Auswertung des Transaktionsstatus!

Key	Format	CND	Description	Beschreibung
Code	n8	M	Error code according to Paygate Response Codes (A4 Error codes)	Fehlercode gemäß Paygate Antwort-Codes (A4 Fehlercodes)

Key	Format	CND	Description	Beschreibung
MAC	an64	M	Hash Message Authentication Code (HMAC) with SHA-256 algorithm. Details can be found here: • HMAC Authentication (Request) • HMAC Authentication (Notify)	Hash Message Authentication Code (HMAC) mit SHA-256-Algorithmus. Details finden Sie hier: • HMAC-Authentisierung (Anfrage) • HMAC-Authentisierung (Notify)

Key	Format	CND	Description	Beschreibung	Config
POSTerminalID	an..20	M	Terminal Identification Number assigned and linked to a specific point-of-sale (POS) terminal	Terminal-Identifikationsnummer, die einem bestimmten POS-Terminal zugeordnet und damit verknüpft ist	
MessageType	n2	M	Message Type describing the performed action: 01=Sale, 02=Reversal, 03=Credit, 05=Authorisation /Reservation, 06=Incremental Authorisation, F0=Autoreversal	Der Message Type beschreibt die ausgeführte Aktion: 01=Verkauf, 02=Storno, 03=Gutschrift, 05=Autorisierung /Reservierung, 06=Inkrementelle Autorisierung, F0=Autostorno	
DMACKSN	an..20	M	Serial Number of the key (DUKPT) that was used to generate the DMAC	Seriennummer des Schlüssels (DUKPT), der zum Erzeugen des DMAC verwendet wurde	
DMAC	an16	M	Message Authentication Code	Nachrichten-Authentisierungscode	
CodeExt	an..10	O	Original code from external payment system	Originaler Code vom externen Zahlungssystem	
AQ	a..5	O	Acquirer	Acquirer	X
EMVData	an..2028	O	EMV Data	EMV Daten	X
CCNr	n12..19	O	Credit card number at least 12-digit, numerical without spaces	Kreditkartennummer, mindestens 12 Ziffern ohne Leerzeichen	X
PCNr	n16	O	Paygate card token	Paygate-Kartentoken	X

CCBrand	a..22	O	Credit card brand (e.g. Visa, MasterCard, Maestro etc.)	Kreditkartenmarke (z.B. Visa, MasterCard, Maestro usw.)	X
CCExpiry	n6	O	Card expiry date	Ablaufdatum der Karte	X
MaskedPan	an12..19	M	Masked card number (6X4)	Maskierte Kartennummer (6X4)	
IBANEMVfield	an..64	C	IBAN, hex-coded, only available with Girocard	HEX-kodierte IBAN, nur für Girocard	
baseAmount	n..10	M	Amount in its smallest currency unit of merchant's local currency at the Point of Sale (POS)	Betrag in der kleinsten Währungseinheit der lokalen Währung des Händlers am Point of Sale (POS)	
baseCurrency	a3	M	Merchant's local currency at the Point of Sale (POS)	Lokale Währung des Händlers am Point of Sale (POS)	
Amount	n..10	C	Amount in its smallest currency unit of card currency	Betrag in der kleinsten Währungseinheit der Kartenwährung	
Currency	a3	C	Cardholder's currency	Währung des Karteninhabers	
dccRateValue	ans13	C	Applicable FX rate with 4 decimal places (e.g. '3.0245')	Anwendbarer Wechselkurs mit 4 Dezimalstellen (z.B. '3.0245')	
schemeReferenceID	ans..64	C	Card scheme specific transaction ID required for subsequent credential-on-file payments, delayed authorizations and resubmssions.	Spezifische Transaktions-ID des Kartenschemas, die für nachfolgende Zahlungen mit gespeicherten Zugangsdaten, verzögerte Autorisierungen und Wiedereinreichungen erforderlich ist.	
FormFactor	ans..64	O	Defines the form / device which has been used for payment. Currently possible values: • Card • Mobile Device • Watch / Wristband	Definiert das Gerät, das zur Zahlung verwendet wurde. Derzeit mögliche Werte: • Card • Mobile Device • Watch / Wristband	
Device	an..20	O	Serial number of POS device	Seriennummer des POS-Terminals	

Key	Format	CND	Description	Beschreibung
TransactionId	ans..64	C	Card scheme specific transaction ID required for subsequent credential-on-file payments, delayed authorizations and resubmissions. Mandatory: CredentialOnFile – initial false – unscheduled MIT / recurring TransactionId is a value used with 3DS1 payments. Pls. ensure that you are prepared for 3DS2 payments where schemeReferenceID is returned instead.	Spezifische Transaktions-ID des Kartenschemas, die für nachfolgende Zahlungen mit gespeicherten Zugangsdaten, verzögerte Autorisierungen und Wiedereinreichungen erforderlich ist. Pflicht: CredentialOnFile – initial false – unschedule MIT / recurring TransactionId ist ein Wert, der für 3DS1-Zahlungen verwendet wird. Bitte stellen Sie sicher, dass Sie für 3DS2 vorbereitet sind, wo schemeReferenceID verwendet wird.

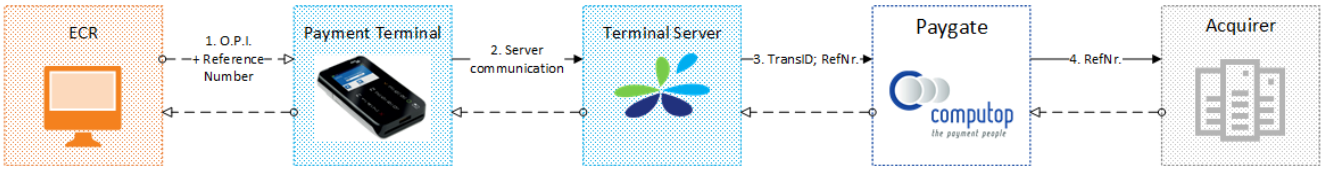
Key	Format	CND	Description	Beschreibung
VUNr	an..12	O	Contract partner number	Vertragspartnernummer
ApprovalCode	an..6	O	Authorising code of transaction	Autorisierungscode der Transaktion
additionalresponsedata	an..128	O	Additional text which the operator's processing system can send optionally in replies to payment/cutover requests.	Zusätzlicher Text, den das Verarbeitungssystem des Betreibers optional als Antwort auf Zahlungs-/Umstellungsanforderungen senden kann.
TerminalID	a..20	O	ID of the terminal	ID des Terminals
IBAN	an..34	O	International Bank Account Number	International Bank Account Number
TrxTime	ans21	O	Time stamp of transaction in the format dd.MM.yyyy HH:mm:ssff	Zeitstempel der Transaktion im Format TT.MM.JJJJ HH:mm:ssff

Notice: The parameters baseAmount, baseCurrency, and dccRateValue will be only present when DCC was used. In this case the Amount and the Currency parameter correspond to the foreign values. For transaction that have been carried out without DCC the parameter Amount will refer to the amount in the merchant's local currency as given in the parameter Currency.

References

Paygate supports two external references, TransID and RefNr. For POS environments the parameter TransID holds a unique identifier from CCV acCEPT. Thus, the merchant may submit a unique reference via RefNr to Computop Paygate.

For reconciliation purposes, Computop maps the parameter RefNr against suitable elements in the corresponding acquirer protocol in order to make sure that values are shown in the electronic merchant statements (e.g. EPA file). As RefNr is an optional element, Computop automatically reverts to the TransID if RefNr is not given in the request message.



Merchant may transfer his Reference Number in the OPI protocol to the acCEPT server. CCV will map this element against the Paygate parameter RefNr.

Please note that acquirers do have different size limits for references that can be submitted depending on the message protocol and host capabilities.

Acquirer	Protocol / Protokoll	Size limit / Größenlimit
ConCardis	GICC	30
JPMorgan Chase	ISO8583	22
American Express	GICC	30
AirPlus	GICC	30
Worldpay	APACS	20

Status inquiry

In order to inquire about the status of a payment via a Server-to-Server connection, please use the following URL:

https://www.computop-paygate.com/getStatus.aspx

Notice: For security reasons, Computop Paygate rejects all payment requests with formatting errors. Therefore, please use the correct data type for each parameter.

The following table describes the encrypted payment request parameters:

Key	Format	CND	Description
MerchantID	ans..30	M	MerchantID, assigned by Computop. Additionally this parameter has to be passed in plain language too.
RefNr	ans..30	M	Merchant's unique reference number. Reference used at the Point of Sale (POS)
MAC	an64	M	Hash Message Authentication Code (HMAC) with SHA-256 algorithm. Details can be found here: • HMAC Authentication (Request) • HMAC Authentication (Notify)

Key	Format	CND	Description	Beschreibung
RefNr	ans..30	M	Merchant's unique reference number. Reference used at the Point of Sale (POS)	Eindeutige Referenznummer des Händlers. Am Point of Sale (POS) verwendete Referenz.

Key	Format	CND	Description	Beschreibung
MAC	an64	M	Hash Message Authentication Code (HMAC) with SHA-256 algorithm. Details can be found here: • HMAC Authentication (Request) • HMAC Authentication (Notify)	Hash Message Authentication Code (HMAC) mit SHA-256-Algorithmus. Details finden Sie hier: • HMAC-Authentisierung (Anfrage) • HMAC-Authentisierung (Notify)

Parameters for status inquiries via socket connections

The following table describes the result parameters with which the Computop Paygate responds to your system

pls. be prepared to receive additional parameters at any time and do not check the order of parameters

the key (e.g. MerchantId, RefNr) should not be checked case-sentive

Key	Format	CND	Description	Config
mid	ans..30	M	MerchantID, assigned by Computop	
PayID	an32	M	ID assigned by Paygate for the payment, e.g. for referencing in batch files as well as for capture or credit request.	
Status	a..50	M	OK (URLSuccess) or FAILED (URLFailure)	
Description	ans..1024	M	Further details in the event that payment is rejected. Please **do not** use the **Description but** the Code parameter for the transaction status analysis!	
Code	n8	M	Error code according to Paygate Response Codes (A4 Error codes)	
LastStatus	an32	M	Payment status which can be either of the following: AUTHORIZED, FAILED, CAPTURE_REQUEST, CREDIT_REQUEST, OK (=captured)	
LastXCode	n8	O	Response code of the most recent payment action	X
LastXAmount	n..10	O	Amount of the most recent payment action	X
XID	an32	O	Identifier of the most recent payment action assigned by Paygate	X
AmountAuth	n..10	M	Sum of authorized amounts	
AmountCap	n..10	M	Sum of captured amounts	
AmountCred	n..10	M	Sum of refunded amounts	
CCNr	n12..19	O	Credit card number at least 12-digit, numerical without spaces	X
CCBrand	a..22	O	Credit card brand (e.g. Visa, MasterCard, Maestro etc.)	X
CCExpiry	n6	O	Card expiry date	X
MaskedPan	an12..19	M	Masked card number (6X4)	
IBANEMVfield	an..64	C	IBAN, hex-coded, only available with Girocard	
baseAmount	n..10	C	Amount in its smallest currency unit of merchant's local currency at the Point of Sale (POS)	
baseCurrency	a3	C	Merchant's local currency at the Point of Sale (POS)	
dccRateValue	ans13	C	Applicable FX rate with 4 decimal places (e.g. '3.0245')	
schemeReferenceID	ans..64	C	Card scheme specific transaction ID required for subsequent credential-on-file payments, delayed authorizations and resubmssions.	

Key	Format	CND	Description	Beschreibung
PayID	an32	M	ID assigned by Paygate for the payment, e.g. for referencing in batch files as well as for capture or credit request.	Vom Paygate vergebene ID für die Zahlung; z.B. zur Referenzierung in Batch-Dateien sowie im Capture- oder Credit-Request.

Key	Format	CND	Description	Beschreibung
Status	a..50	M	OK (URLSuccess) or FAILED (URLFailure)	OK (URLSuccess) oder FAILED (URLFailure)

Key	Format	CND	Description	Beschreibung
Description	ans..1024	M	Further details in the event that payment is rejected. Please **do not** use the **Description but** the Code parameter for the transaction status analysis!	Nähere Beschreibung bei Ablehnung der Zahlung. Bitte nutzen Sie **nicht** den Parameter **Description, sondern** Code für die Auswertung des Transaktionsstatus!

Key	Format	CND	Description	Beschreibung
Code	n8	M	Error code according to Paygate Response Codes (A4 Error codes)	Fehlercode gemäß Paygate Antwort-Codes (A4 Fehlercodes)

Key	Format	CND	Description	Beschreibung	Config
LastStatus	an32	M	Payment status which can be either of the following: AUTHORIZED, FAILED, CAPTURE_REQUEST, CREDIT_REQUEST, OK (=captured)	Zahlungsstatus, der folgende Werte annehmen kann: AUTHORIZED, FAILED, CAPTURE_REQUEST, CREDIT_REQUEST, OK (=gebucht)	
LastXCode	n8	O	Response code of the most recent payment action	Antwortcode der letzten Zahlungsaktion	X
LastXAmount	n..10	O	Amount of the most recent payment action	Betrag der letzten Zahlungsaktion	X
XID	an32	O	Identifier of the most recent payment action assigned by Paygate	Vom Paygate vergebene ID der letzten Zahlungsaktion	X
AmountAuth	n..10	M	Sum of authorized amounts	Summe der autorisierten Beträge	
AmountCap	n..10	M	Sum of captured amounts	Summe der gebuchten Beträge	
AmountCred	n..10	M	Sum of refunded amounts	Summe der gutgeschriebenen Beträge	
CCNr	n12..19	O	Credit card number at least 12-digit, numerical without spaces	Kreditkartennummer, mindestens 12 Ziffern ohne Leerzeichen	X
CCBrand	a..22	O	Credit card brand (e.g. Visa, MasterCard, Maestro etc.)	Kreditkartenmarke (z.B. Visa, MasterCard, Maestro usw.)	X
CCExpiry	n6	O	Card expiry date	Ablaufdatum der Karte	X
MaskedPan	an12..19	M	Masked card number (6X4)	Maskierte Kartennummer (6X4)	
IBANEMVfield	an..64	C	IBAN, hex-coded, only available with Girocard	HEX-kodierte IBAN, nur für Girocard	
baseAmount	n..10	C	Amount in its smallest currency unit of merchant’s local currency at the Point of Sale (POS)	Betrag in der kleinsten Währungseinheit der lokalen Währung des Händlers am Point of Sale (POS)	
baseCurrency	a3	C	Merchant’s local currency at the Point of Sale (POS)	Lokale Währung des Händlers am Point of Sale (POS)	
dccRateValue	ans13	C	Applicable FX rate with 4 decimal places (e.g. ‘3.0245’)	Anwendbarer Wechselkurs mit 4 Dezimalstellen (z.B. ‘3.0245’)	
schemeReferenceID	ans..64	C	Card scheme specific transaction ID required for subsequent credential-on-file payments, delayed authorizations and resubmssions.	Spezifische Transaktions-ID des Kartenschemas, die für nachfolgende Zahlungen mit gespeicherten Zugangsdaten, verzögerte Autorisierungen und Wiedereinreichungen erforderlich ist.	

Notice: The parameter baseAmount, baseCurrency and dccRateValue will be only present when DCC was used. In this case AmountAuth, AmountCap and AmountCred are given in the cardholder's currency. For transaction that have been carried out without DCC all Amounts refer the merchant's local currency.

Code Listings

Brands

Code	Brand / Kartenmarke
VISA	Visa
MasterCard	MasterCard
Maestro	Maestro
AMEX	American Express
Diners	Diners Club
Discover	Discover
AirPlus	AirPlus Corporate Accounts (UATP)

Acquirer

Code	Acquirer
CON	Concardis
CHASE	Chase Paymentech
AME	American Express
AIR	AirPlus
WLP	Worldpay