



**TRUSTCOMMERCE**<sup>®</sup>  
SAFEGUARDING DATA. POWERING PAYMENTS.

## TC LINK API DEVELOPER GUIDE

Version 5.3.3

**Note:** *This document is classified for Public use.*

## About Transaction Responses

Once a transaction is submitted, results are returned using an array of field/value pairs very similar to the transaction input (see [TC Link Functions](#) and [TC Link Data](#)).

The method used to retrieve these response fields depends on the Integration method used. Please see the examples for detail on how to retrieve the response values.

### General Fields

The following response fields are common to any transaction.

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Specific values that can be returned are documented in a later table.
declinetype	If the response field status is returned as "decline", the "declinetype" field will also be included, providing more detail regarding the reason for the decline.
error	If the response field status is returned as "baddata", the error field will also be included, providing more detail regarding the reason for the response.
offenders	If the error response field is included, the "offenders" response field will also be included. This will indicate the field or fields that are responsible for the error.
errortype	If the response field status is returned as "error", the "errortype" field will also be included, providing more detail regarding the reason for the error.
authcode	This is the numeric or alphanumeric code received from the processor in response to a transaction.

## Transaction Status

Transactions always return a status field, which describes the success or failure of the transaction. Properly formatted transactions always return a transaction ID. TrustCommerce uses a 14-digit alphanumeric value formatted like this example:

```
"transid", "012-1234567890"
```

The TransID is the unique identifier for each transaction. It can be used to retrieve a specific transaction from the TC Vault website, or access the transaction in the future. For example, to credit a previous transaction, you need to send the original TransID.

### Returned Transaction Statuses

Returned transaction statuses are one of the following:

Status Value	Description
approved	The transaction was successfully authorized.
accepted	The transaction has been successfully accepted into the system.
decline	The transaction was declined; see <a href="#">Decline Type Fields</a> .
baddata	Invalid fields were passed; see <a href="#">Error Type</a> .
error	System error when processing the transaction; see <a href="#">Error Type</a> .

### Approved or Accepted

The difference between accepted and approved is subtle, but important.

- An accepted response only means that the transaction was queued into the TrustCommerce system without errors, but may be rejected later.
- An approved response means that the transaction was an authorization of some sort, and has successfully cleared with the bank.

An example of the difference between approved and accepted is a Sale versus a credit transaction.

- A Sale is a real-time authorization, so it returns approved status on success.
- A credit is not real-time; there is no such thing as a credit authorization. A credit transaction is queued for processing by the bank and there is a possibility that it may be rejected later.

## Decline Type

### Declinetype Fields

When status is set to "decline", the "declinetype" field contains one of the following:

Declinetype Value	Description
decline	This is a true "decline"; it almost always is a result of insufficient funds on the card
avs	Address verification system (AVS) failed; the address entered does not match the billing address on file at the bank.
cvv	CVV failed; the number provided is not the correct verification number for the card. See <a href="#">Card Security Code (CSC)</a> .
call	The card must be authorized manually over the phone. You may choose to call the customer service number listed on the card and ask for an offline "authcode", which can be passed in the "offlineauthcode" field.
expiredcard	The card has expired. Request an updated expiration date from cardholder.
carderror	Card number is invalid, which could be a typo, or a card reported stolen.
authexpired	Attempt to Postauth an expired (more than 14 days old) Preauth.
fraud	TC CrediGuard fraud score was below requested threshold. See <a href="#">Fraud Score</a> .
blacklist	TC CrediGuard blacklist value was triggered. See <a href="#">Blacklists</a> .
velocity	TC CrediGuard velocity control was triggered. See <a href="#">Velocity</a> .

## Error Response

### Error Fields

A status of "baddata" indicates that no transaction was attempted because one or more fields were invalid. In this case, the field error will indicate the problem, and the offender field lists the offending input fields.

The error field may be returned as one of the following:

Field Name	Description
missingfields	One or more fields required for this transaction type were not sent.
extrafields	Fields not allowed for this transaction type were sent.
badformat	A field was improperly formatted, such as non-digit characters in a number field.
badlength	A field was longer or shorter than the server allows.
merchantcantaccept	The merchant cannot accept data passed in this field. If the offender is "cc", for example, it usually means that you tried to run a card type (such as American Express or Discover) that is not supported by your account. If it was "currency", you tried to run a currency type not supported by your account.
mismatch	Data in one of the offending fields did not crosscheck with the other offending field.

## Error Type

### errortype Fields

A status of "error" indicates an error occurred while processing the transaction. Other fields (such as AVS or BillingID) may be returned by the transaction depending on the action. See the sections covering the transaction type you are running for detailed information on the specialized return values.

If the status is error, then the "errortype" field will be returned as one of the following:

Field Name	Description
cantconnect	Could not connect to TrustCommerce. Check your Internet connection to make sure it is up.
dnsvalue	TC Link software was unable to resolve DNS hostnames. Make sure you have name resolving ability on the machine. <b>Note:</b> The "dnsfailure" response will only be given with a test transaction. Live transactions will never receive this response. It is used to identify DNS connectivity issues prior to the merchant going live.
linkfailure	The connection was established, but was severed before the transaction could complete. To avoid duplication, check the transaction independently to determine if the transaction was successfully processed.
failtoprocess	Transmission errors were encountered in TrustCommerce's connection to the payment processor.
notallowed	Certain actions are only permitted if a CustID is configured to perform that action. If a transaction is attempted that the CustID is not authorized to perform, this "errortype" will be returned.



**Important:** "linkfailure" and "failtoprocess" errors indicate a non-specific communication breakdown between the payment processor and TrustCommerce. Resubmission may result in a duplicate authorization reservation though it will not result in a duplicate capture. To avoid duplication, check the transaction independently to determine if the transaction was successfully processed.

## Platform

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A "baddata" error may occur when a transaction fails to meet TC Link internal validation checks. This may be the result of malformed data being sent to TrustCommerce or that the functionality required for processing the network failover component correctly is missing. These errors can usually be corrected by modifying the environment or your application to send the correct data through TC Link.



**Important:** Try to solve these errors in your test environment prior to moving to the production environment. This helps your business minimize interruptions when processing live transactions.

## Baddata

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When the status value is "baddata", the following errors may be returned with "comma-delimited list of input fields" named as "offenders".

Baddata Error	Description
missingfields	You are missing fields required for this transaction to be processed. Provide the fields as specified in offenders—the field names in the offenders value are comma delimited.
extrafields	You are providing fields that are not allowed for this transaction type. Do not provide the fields as specified in offenders.
badlength	The input field has minimum and maximum length restrictions. Review the field description and provide a corrected version that meets the field length requirements.
badformat	The field characteristics do not match to the value that you provided. Review the field description and re-submit the correct accepted format.
merchantcantaccept	Your CustID is not setup to process the given card type or currency type. Contact your Solutions Consultant to determine if you should be processing this type of transaction.
mismatch	The field provided contains conflicting data with another field. For example, if the "cc" field does not match the data provided in the "track1" data, you would encounter an error like this. Remove one of the fields and try again.

## Card Swipe – Common Responses

The following table demonstrates the common fields and values returned for a card swipe transaction request. For a comprehensive list, refer to [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System error when processing the transaction; see <a href="#">Error Type</a> for further details.
authcode	The numeric or alphanumeric code received from the processor in response to a transaction. A value will be provided if the Sale transaction had been approved and if the merchant is configured for this response.
avs	The "avs" response code returned by the address verification system (AVS). See Appendix B - <a href="#">Address Verification System (AVS) Response Codes</a> .

## Card Swipe Transaction Example

The following is an example of a card swipe transaction with "track2" data submitted.

```
TCLinkPushParam(handle, "custid", "962100");
TCLinkPushParam(handle, "password", "xxxxxx");
TCLinkPushParam(handle, "action", "sale");
TCLinkPushParam(handle,
"track2", ";4111111111111111=07120000000000000000?");
TCLinkPushParam(handle, "amount", "1500");
```

## Encrypted Card Swipe Processing

TrustCommerce key-injected point-of-sale (POS) swipe devices return the track data in an encrypted format for added security. TrustCommerce systems then securely decrypt and process the track data. In this scenario, instead of sending the track1 or track2 fields, use the encryptedtrack field.

 **Important:** Not all POS swipe devices have this functionality. Consult a TrustCommerce Solutions Consultant to discuss your specific needs: (800) 915-1680, Option 2.

## Encrypted Card Swipe Fields

Field Name	Description
encryptedtrack	track1 or track2 data encrypted at the swipe device

## Encrypted Card Swipe - Common Responses

The following table demonstrates the common fields and values returned for an encrypted card swipe transaction request; for a comprehensive list please refer to [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.
authcode	The numeric or alphanumeric code received from the processor in response to a transaction. A value will be provided if the Sale transaction had been approved and if the merchant is configured for this response.
avs	The "avs" response code returned by the address verification system (AVS). See Appendix B - <a href="#">Address Verification System (AVS) Response Codes</a> .

## Signature Capture - Common Responses

The following table demonstrates the common fields and values returned for after the authorization signature request; for a comprehensive list please refer to [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>accepted</b> - The signature was received. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.

## Signature Capture Transaction Example

The following is an example of an after the authorization signature submission:

```
TCLinkPushParam(handle, "custid", "962100");
TCLinkPushParam(handle, "password", "xxxxxxx");
TCLinkPushParam(handle, "action", "signature");
TCLinkPushParam(handle, "transid", "012-1234567890");
TCLinkPushParam(handle, "sigparts", "2");
TCLinkPushParam(handle,
"sigdata1", "89504E470D0A1A0A0000000D49484452000000C80000004B0806000000357CC8
E800000017352474200AECE1CE90000000467414D410000B18F0BFC6105000000206348524D00007A2
6000080840000FA00000080E8000075300000EA6000003A98000017709CBA513C000007674944415478
5EED5CCB4A25311075FEC8C7A70822B8134410972E4570E30F88206E5C8A4B77FE895B3722EEF407EC9
9BA43393545D2A9CEA393BE39BDB9E3BD79D5A973924A253DBF863FCF061E200004DC089040F0000120
E0466003C0000120E0470002013B80C008021008E801042010700008C4218015240E37D4EA040108A41
347C3CC3804209038DC50AB130420904E1C0D33E3108040E27043AD4E1080403A7134CC8C43000289C3
0DB53A410002E9C4D130330E0108240E37D4EA040108A41347C3CC3804209038DC50AB130420904E1C0
D33E3108040E27043AD4E1080403A7134CC8C43000289C30DB53A410002E9C4D130330E0108240E37D4
EA040108A41347C3CC3804209038DC50AB130420904E1C0D33E3108040E27043AD4E1080401A73F4C7C
7C7F0F4F434D0279EFA08402033F880496F213E95D9DCDC5C89044F7D042090197CC0A4B7101F0299C1
2113BA80402680155B54923E143A4120B12897A9078194C1F5BF56ADA427F15C5E5EAE422CFA0C89698
6A177DFC56204B2E4CDAB45");
TCLinkPushParam(handle,
"sigdata2", "2039C43165AFD33DF38D002C46201692196D9EBD9865ECA90291F52D7B9DD941
58688710C80C8E0B0924A7382834B364CB66307B2DBA684A2063615488642D7B2334F6D7D7D7616F6F2
F29BDBBE410B465DF35259031228548D632C8F7F7F72BF2D3A77E52578F5276633FF317D94508A45512
59C839B63AD4B0CB427C2E43A2EE7D3FD3BC406A90C8427C6B19B97AE8B4");
```

## Card Not Present (CNP)

### E-Commerce or Mail Order/Telephone Order

Merchants who process payments through the telephone or mail are considered direct marketing Mail Order/Telephone Order (MOTO) merchants. Because these transactions are not face-to-face, acquirers often charge higher fees to mitigate the higher risk.

If you ship products to customers and use the Postauth transaction, you can specify the "shipdate" field. By default, the "shipdate" is the day the Postauth is initiated, as this is consistent with industry clearing requirements. The ship date is in the form "MM-DD-YYYY" where "MM" represents the two-digit month, "DD" represents the two-digit day, and "YYYY" represents the four-digit year.

### E-Commerce and MOTO Fields

Merchants are set up as direct marketing by default, which encompasses MOTO, and e-commerce. In this setup, they process within the application as if the transactions are e-commerce. If a merchant wants to process the transactions as occurring via telephone or mail order, they would submit "type=moto" for a Preauth, Postauth, or Sale transaction.

Field Name	Description
shipdate	The date the products are shipped.
type	"moto"

### E-Commerce and MOTO – Common Responses

The following table demonstrates the common fields and values returned for an encrypted card swipe transaction request. For a comprehensive list, refer to [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.

### PIN-based Debit Sale Fields

The fields described in the table below are generally required to process a debit sale transaction:

Field Name	Required	Description
pin	Y	This field includes the DUKPT encrypted pin block (16 hex characters) followed by the KSN (16 or 20 hex characters).
surcharge	N	This is the amount in cents of the surcharge assessed on the transaction. This is commonly used by merchants wanting to charge some arbitrary amount of money for using their device. It is the portion of the "amount" field indicating the surcharge. Merchants who wish to charge a surcharge must provide this information as required by the acquiring bank. This amount may be "0" and if this field is omitted altogether, the "surcharge" amount is considered to be "0".
cashback	N	This is the amount of money, in cents, the merchant will return to the cardholder. It is the portion of the "amount" field indicating the cash back. Merchants who want to provide cash back to the cardholder must provide this information as required by the acquiring bank. This amount may be "0" and if this field is omitted altogether, the "cashback" amount is considered to be "0".

### PIN-based Debit – Common Responses

The following table demonstrates the common fields and values returned for a PIN-based debit transaction request. For a comprehensive list, refer to [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for details.
authcode	The numeric or alphanumeric code received from the processor in response to a transaction. A value will be provided if the Sale transaction had been approved and if the merchant is configured for this response.
avs	The "avs" response code returned by the address verification system (AVS). See <a href="#">Appendix B - Address Verification System (AVS) Response Codes</a> .

## PIN-less Debit

PIN-less debit transactions are Card Not Present (CNP) transactions where a customer can use their debit card to make payments online or over the phone without entering their PIN. PIN-less debit processing allows certain industry segments to process payments while taking advantage of lower processing fees than traditional credit card transactions. PIN-less debit transactions may be credited as any other debit transaction.

The use of PIN-less debit cards is supported for e-commerce/MOTO integrations with some platforms. Your CustID must be configured to support this transaction type. Contact your TrustCommerce Account Manager or Solutions Consultant for details regarding the support and setup of this functionality.

When integrating PIN-less debit, it is important to be able to distinguish between cards that do or do not support the concept. Functionality has been added to TC Link to assist in that determination.

### PIN-less Debit Fields

Field Name	Required	Description
pinless_debit	Y	Indicates the transaction should be processed as PIN-less debit.
pinless_lookup	N	If set to "y", a BIN lookup on the "cc" number provided is performed first. Depending on the results of the lookup, the transaction is submitted once as a "pinless_debit" transaction or as a standard "cc" transaction.

### PIN-less Debit – Common Responses

The following table demonstrates the common fields and values returned for a PIN-less debit transaction request. For a comprehensive list, see [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.
authcode	The numeric or alphanumeric code received from the processor in response to a transaction. A value will be provided if the Sale transaction had been approved and if the merchant is configured for this response.
avs	The "avs" response code returned by the address verification system (AVS). See Appendix B - <a href="#">Address Verification System (AVS) Response Codes</a> .

## Electronic Checks/ACH

Automated Clearing House (ACH) is the back-end process through which electronic checks may be processed. ACH is used to move money to and from checking and savings accounts. The concept of "authorization" does not apply to ACH transactions; it is purely a money transfer. For this reason, the only transaction types available for ACH are Sale and Credit.

- ACH "credits" are identical to all other types of credits in the TrustCommerce system. Please refer to [Credit2 \(Standalone Refund\)](#) for more details on issuing credits.
- ACH "sales" use the same fields as payment card sales, with the exception of the "cc" and "exp" fields. Instead, they use the following fields: "account", "routing".
- The address verification system (AVS) is not available for ACH transactions, so the AVS setting is ignored.



**FYI:** ACH transactions can sometimes be associated with savings accounts instead of checking accounts. Not all processing platforms support the "savings" field. Consult a TrustCommerce Solutions Consultant to discuss your specific needs: (800) 915-1680, Option 2.

### ACH Fields

Field Name	Description
routing	checking or savings account routing number
account	checking or savings account number
media	media=ach
savings	This field can be set to "y" to indicate that the referenced routing/account field values are for a savings account. Otherwise, it is assumed to be a checking account.

### ACH – Common Responses

The following table demonstrates the common fields and values returned for an ACH transaction request.

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>accepted</b> - The transaction was successfully accepted into the system. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.

## Purchase Level II – Common Responses

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen, formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.
authcode	The numeric or alphanumeric code received from the processor in response to a transaction. A value will be provided if the Sale transaction had been approved and if the merchant is configured for this response.
avs	The "avs" response code returned by the address verification system (AVS) for the transaction when the verify parameter (verify=y) is included in the request; see Appendix B - <a href="#">Address Verification System (AVS) Response Codes</a> .
commercialcard	This indicator specifies whether the card is a purchase, corporate or business card; returned as "S" if it is a purchasing card, "R" if it is a corporate card and "B" if it is a business card.

## Purchase Level II Transaction Example - Sale

The following is an example of a Purchase Level II Sale transaction:

```

TCLinkPushParam(handle, "custid", "962100");
TCLinkPushParam(handle, "password", "xxxxxx");
TCLinkPushParam(handle, "action", "sale");
TCLinkPushParam(handle, "cc", "4111111111111111");
TCLinkPushParam(handle, "exp", "0412");
TCLinkPushParam(handle, "amount", "1000");
TCLinkPushParam(handle, "name", "John Smith");
TCLinkPushParam(handle, "purchaselevel", "2");
TCLinkPushParam(handle, "purchaseordernum", "12345678901234567");
TCLinkPushParam(handle, "taxidentifier", "localsales");
TCLinkPushParam(handle, "tax", "100");
  
```

### Purchase Level III – Common Responses

The following table demonstrates the common fields and values returned for a Purchase Level III transaction request. For a comprehensive list, refer to [About Transaction Responses](#).



**FYI:** If the processor does not support the "commercialcard" identifier return and TrustCommerce does not return the "commercialcard" identifier, please submit the data on every transaction to avoid non-compliance fees and potential discount rate downgrades.

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.
authcode	The numeric or alphanumeric code received from the processor in response to a transaction. A value will be provided if the Sale transaction had been approved and if the merchant is configured for this response.
avs	The "avs" response code returned by the address verification system (AVS) for the transaction when the verify parameter (verify=y) is included in the request; see Appendix B - <a href="#">Address Verification System (AVS) Response Codes</a> .
commercialcard	This indicator specifies whether the card is a purchase, corporate or business card; returned as "S" if it is a purchasing card, "R" if it is a corporate card and "B" if it is a business card.

## Recurring/Installment Payments (Non TC Citadel)

Merchants who initiate recurring or installment payments outside of TC Citadel system must send the fields below. These represent transactions that are part of a previously established recurring/installment payment plan.

- Transactions with only the "paymentnumber" field are marked as recurring.
- Transactions with both fields are sent as installment payments.
- Only Sale transactions support this indicator.
- In addition to the fields below, it is recommend you submit address verification system (AVS) data on the first transaction and whenever the cardholder changes their address in your records.

### Recurring/Installment Fields

Field Name	Description
paymentnumber	This field is the payment number associated with the transaction. It is required for both recurring and installment payment transactions and is required for a transaction to be flagged as recurring.
totalpayments	This field indicates the number of installments. It is required for installment payment transactions.

### Recurring/Installment – Common Responses

The following table demonstrates the common fields and values returned for a recurring/installment transaction request. For a comprehensive list, see [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.
authcode	The numeric or alphanumeric code received from the processor in response to a transaction. A value will be provided if the Sale transaction had been approved and if the merchant is configured for this response.
avs	The "avs" response code returned by the address verification system (AVS) for the transaction when the verify parameter (verify=y) is included in the request; see <a href="#">AVS Response Codes</a> .

Field Name	Description
	to "y", which tells us to perform the "unstore".
firstamount	Used if the first payment for a recurring or installment payment is to be different from the regular payment.
lastamount	Used if the final payment for an installment payment is to be different from the regular payment.

## Creating a Billing ID

The following is an example of how to use TC Citadel for the purpose of storing customer payment account information:

```

TCLinkPushParam(handle, "custid", "962100");
TCLinkPushParam(handle, "password", "xxxxxx");
TCLinkPushParam(handle, "action", "store");
TCLinkPushParam(handle, "name", "John Smith");
TCLinkPushParam(handle, "cc", "4111111111111111");
TCLinkPushParam(handle, "exp", "1215");
TCLinkPushParam(handle, "zip", "90000");
  
```

## TC Citadel – Responses

The following table demonstrates the common fields and values returned for a store transaction request. For a comprehensive list, see [About Transaction Responses](#).

Field Name	Description
transid	TransID is the 14-character unique identifier assigned to each transaction regardless of the status. It is composed of 13 numbers and 1 hyphen formatted as follows: "123-1234567890"
status	This is a status indicator of your transaction request. Possible values include: <b>approved</b> - The transaction was successfully authorized. <b>declined</b> - The transaction was declined; see <a href="#">Decline Type Fields</a> for further details. <b>baddata</b> - Invalid fields were passed; see <a href="#">Error Type</a> for further details. <b>error</b> - System Error when processing the transaction; see <a href="#">Error Type</a> for further details.
billingid	This is a six-character alphanumeric token used to reference customer payment card and ACH information for future, one-time and recurring/installment transactions.

## Card Security Code (CSC)

Visa, MasterCard, Discover, and American Express implement an additional security feature known as Card Security Code (CSC). The CSC is a three- or four-digit value printed on the card or signature strip, but not encoded on the magnetic stripe. It is a generally accepted best practice to send this data when the card is not present.

The codes have different names unique to each brand, as follows:

- Visa - CVV2 (Card Verification Value)
- MasterCard - CVC2 (Card Validation Code)
- Discover - CID (Card Identification Number)
- American Express - CID or unique card code

This data (or an appropriate indicator if it is unavailable) should be sent for non-swiped transactions. In some cases non-compliance fees may be assessed if no information is submitted. TrustCommerce will attempt to send a response if available. In some cases, this response may be a space (which doesn't indicate anything at all) in the "cvv" field.



**Important:** For PCI compliance and security reasons, never store or save the CSC value to temporary files.

### Card Security Code Fields

Field Name	Description
cvv	The three- or four-character field located in the front or back of the card. For Visa, MasterCard, and Discover, this is a three-character field located on the back of the card to the far right. For American Express, it is a four-character value located on the front of the card above the primary account number.
cvvstatus	<p>This field should be assigned if the "cvv" field is not submitted. Possible values include "present", "notpresent", and "illegible". By default, it will be treated as "notpresent" although some processors may treat it otherwise if this field is not submitted by the integrator.</p> <ul style="list-style-type: none"> <li>• The "present" value states that the integrator did not provide the card code stated above even though it was present.</li> <li>• The "notpresent" value states that the integrator did not see a card code.</li> <li>• The "illegible" value states that the integrator could not read the card code.</li> </ul> <p>In all cases, this field is used when the CSC is not submitted. By submitting a CSC, the merchant is stating that the CSC is present and the value is the "cvv" indicated above. Only used if "cvv" is <b>not</b> provided.</p>
checkcvv	"y" or "n". By default, this is set to "y". This determines whether TrustCommerce should decline the transaction on behalf of the integrator if the CSC does not match as reported by the card issuing bank. Only used if "cvv" is provided.

## Using Card Security Codes (CSC)

The following example sends a Sale transaction, including the CVV value of "123".

```
TCLinkPushParam(handle, "custid", "962100");
TCLinkPushParam(handle, "password", "xxxxxx");
TCLinkPushParam(handle, "action", "sale");
TCLinkPushParam(handle, "cc", "4111111111111111");
TCLinkPushParam(handle, "exp", "1215");
TCLinkPushParam(handle, "amount", "1299");
TCLinkPushParam(handle, "cvv", "123");
```

The following example sends a Sale transaction where the CVV was not present.

```
TCLinkPushParam(handle, "custid", "962100");
TCLinkPushParam(handle, "password", "xxxxxx");
TCLinkPushParam(handle, "action", "sale");
TCLinkPushParam(handle, "cc", "4111111111111111");
TCLinkPushParam(handle, "exp", "1215");
TCLinkPushParam(handle, "amount", "1299");
TCLinkPushParam(handle, "cvvstatus", "notpresent");
```

### Handling CVV Response Codes

The "cvv" response field result code is included in the transaction response if the "cvv" input field was included. The following table details possible response codes:

CVV Result Code	Meaning	Implementation Comments
M	CVV2/CVC2/Discover CID Match.	None
N	CVV2/CVC2/Discover CID No Match.	None
P	Not Processed.	This data was not forwarded to the issuer.
S	Acknowledgement that CVV2/CVC2/CID was not sent.	This would happen because the "cvvstatus" was set to "notpresent".
U	Issuer doesn't support this field.	None

## Appendix B — AVS Response Codes

Use the information below to determine the meaning of each Address Verification System (AVS) response code.

AVS Code	Description
A	Street address matches, but five-digit and nine-digit postal code do not match.
B	Street address matches, but postal code not verified.
C	Street address and postal code do not match.
D	Street address and postal code match. Code "M" is equivalent.
E	AVS data is invalid or AVS is not allowed for this card type.
F	Card member's name does not match, but billing postal code matches.
G	Non-U.S. issuing bank does not support AVS.
H	Card member's name does not match. Street address and postal code match.
I	Address not verified.
J	Card member's name, billing address, and postal code match.
K	Card member's name matches but billing address and billing postal code do not match.
L	Card member's name and billing postal code match, but billing address does not match.
M	Street address and postal code match. Code "D" is equivalent.
N	Street address and postal code do not match.
O	Card member's name and billing address match, but billing postal code does not match.
P	Postal code matches, but street address not verified.
Q	Card member's name, billing address, and postal code match.
R	System unavailable.

AVS Code	Description
S	Bank does not support AVS.
T	Card member's name does not match, but street address matches.
U	Address information unavailable.
V	Card member's name, billing address, and billing postal code match.
W	Street address does not match, but nine-digit postal code matches.
X	Street address and nine-digit postal code match.
Y	Street address and five-digit postal code match.
Z	Street address does not match, but five-digit postal code matches.