Transaction Specs - Retail

Public - Security Level 0

August 2021

REVISION HISTORY

Date	Version	Author(s)	Comments
5/10/16	2.0	C. Meaney	Reformatting, new examples throughout
7/7/16	2.1	C. Meaney	Added section "Timeout Reversal (CCR7)."
10/27/16	2.2	C. Meaney	Added section "Account Verification (CCR0)." Restructured Chapter 1 to match Restaurant specification document.
6/21/17	2.3	C. Meaney	Added section "Edit Authorization and Capture (CCRN)."
3/18/19	2.4	M. Billips	Add verbiage to support CCRA and ORIG_BATCH_ID and ORIG_TRAN_NBR for CCR9
4/3/19	2.5	M. Billips	Numerous edits to examples.
1/20/20	2.6	M. Billips	Add CCRA transaction type, INDUSTRY_TYPE tag and bring document current.
7/22/2021	2.7	M. Billips	Add online return auth only / capture only and MC pre / final auth support.
8/12/2021	2.7	M. Billips	Add ACI_EXT language to Sale CCR1 / Edit Sale CCRN

CONFIDENTIALITY STATEMENT

Contents

Retail Overview

This guide contains information on mandatory and optional fields for the following types of transactions commonly used in a retail environment:

- account verification
- sales
- authorizations
- captures
- refunds/returns
- reversals
- voids

BRIC Lifetime

The EPX BRIC (GUID/Token) can be used to create new transactions within the EPX system, it is important to understand how long the value will be available for this use. BRICs received with the response of a financial transaction, such as an authorization, will only be accessible for 13 months from creation. This limitation applies to all financial BRICs by default. Since each financial transaction created with a BRIC receives a new BRIC in the response, a common practice is for merchants to replace the previous BRIC with the new one, as this new token is valid for a new 13-month interval.

For those merchants who need the BRIC availability to exceed this limitation, the BRIC Storage transaction is available and will create BRICs that will be accessible indefinitely.

For more information on the usage of BRICs, please refer to the *EPX BRIC Reference* manual.

NOTE: Track data and CVV2 is not stored to the BRIC for future use. In order to receive the best possible interchange rates (for card present transactions), the track data must be sent with each transaction.

Field Types

The sections that follow provide examples for each transaction type. Within the examples, some fields are listed as mandatory (in **bold** text) and others as optional.

Note the following about mandatory and optional fields:

- Mandatory fields need to be submitted with the transaction request to ensure a successful response.

- Optional fields may be omitted; however, optional fields might still be used during the transaction. For example, if optional AVS fields are provided, they are validated and an AVS response is sent back. Also, some optional fields can be made mandatory in a merchant's profile to comply with Risk and Underwriting requirements.

Transaction Types

A number of different Card Entry Methods can be used for retail transactions. This document outlines the use of the Key Entered, and Track 1 or 2 Swipe transactions. "Key Entered" means that the customer's card was manually entered, while "Track 1 Swipe" or "Track 2 Swipe" means that the customer's card was swiped through a reader and the Track 1 or 2 data was captured for use during the transaction. Track Data is an optional field that should be submitted when using the swipe Card Entry Methods during a retail transaction. The purpose of sending the Track Data field is to achieve a better interchange rate for the card present transaction. Refer to the *EPX Data Dictionary* for additional information on the Card Entry Method field. For EMV-based transactions, refer to the *EMV Reference Guide* for transaction specifications.

When sending track data, you should not send the ACCOUNT_NBR, EXP_DATE, or CVV2 fields since this information is present in the track data.

Account Verification (CCR0)

The account verification transaction is used to validate a customer's account information before running a financial transaction. This is done by sending a $0.00 amount during the transaction.

NOTES:

- Not all issuers will respond with an approval on this transaction; however, the AVS and CVV responses may still be legitimate.
- An AUTH_RESP code of "00" or "85" can be returned by the issuer and should be interpreted as an approval. Any other response code should be handled as a decline.
- American Express does not validate on CVV2 for this transaction type. The AUTH_CVV2 field will contain a Null value or will be completely omitted from the EPX response message.
- TRACK_DATA and CVV2 values are not stored to the BRIC and will not be included in the BRIC if used for future transactions. Card present transactions require the TRACK_DATA to be present on the original CCR1 Sale or CCR2 Authorization.

Track Data

In the following example, track 1 data is used to process the account verification transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR0</TRAN_TYPE>
     <AMOUNT>0.00</AMOUNT>
     <BATCH_ID>20161026</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <TRACK_DATA>B4111111111111111^CARD/TEST^49121010000000000000</TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR0&AMOUNT=0.0
0&BATCH_ID=20161026&TRAN_NBR=1&TRACK_DATA=B4111111111111111^CARD/
TEST^49121010000000000000&CARD_ENT_METH=H&INDUSTRY_TYPE=P&E2EE=0&FIRST_NAME=Test&L
AST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Sale (CCR1)

The sale transaction is an authorization and capture within the same transaction. Because of this, the authorization is immediately captured by the EPX platform so no additional transaction is required to capture the authorization. If the sale is approved, the transaction will close and settle during the next batch close time for funding to take place.

Track Data

In the following example, track 1 data is used to process the sale transaction. When the sale transaction is run against the account number, the authorization and capture will occur for the dollar amount in the transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR1</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <TRACK_DATA>B4111111111111111^CARD/TEST^49121010000000000000</TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
```

```
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR1&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&TRACK_DATA=B4111111111111111^CARD/TEST^49121010000
000000000&CARD_ENT_METH=H&INDUSTRY_TYPE=P&E2EE=0&FIRST_NAME=Test&LAST_NAME=Card&AD
DRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Account Information

In the following example, the ACCOUNT_NBR and EXP_DATE are used to process the sale transaction. When the sale transaction is run against the account number, the authorization and capture will occur for the dollar amount in the transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR1</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ACCOUNT_NBR>4111111111111111</ACCOUNT_NBR>
     <EXP_DATE>4912</EXP_DATE>
     <CARD_ENT_METH>X</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR1&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&ACCOUNT_NBR=4111111111111111&EXP_DATE=4912&CARD_EN
T_METH=X&INDUSTRY_TYPE=P&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+
Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference a previous credit card transaction BRIC in the EPX system. Since the EPX BRIC is a unique reference value, there is no need to send the account information. When the sale transaction is run against the account number from the BRIC, the authorization and capture will occur for the dollar amount in the transaction. The GUID/BRIC sale is commonly used to collect funds from a customer after the initial purchase using the card information, such as in recurring or card on file payment models. When performing a GUID/BRIC Sale transaction, it is also optional to send the EXP_DATE field with the transaction. The GUID/BRIC in the response can then be used to process new GUID/BRIC transactions using the previous account information and updated expiration date. For more information on card on file and recurring transactions, please reference the respective transaction specifications. In order to receive the best possible interchange rates, the track data should be sent with every transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR1</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ORIG_AUTH_GUID>09KE3F8LBZFF73UR4PG</ ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <EXP_DATE>4912</EXP_DATE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR1&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&ORIG_AUTH_GUID=09KE3F8LBZFF73UR4PG&CARD_ENT_METH=Z
&INDUSTRY_TYPE=P&EXP_DATE=4912&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123
+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Authorization Only (CCR2)

The authorization only transaction is an authorization that will hold funds equal to the AMOUNT of the transaction on a cardholders' account. A subsequent capture transaction is required in order for settlement and funding to take place. However, when no capture is performed, the funds that are held from the authorization will not be made available to the cardholder until

the issuing bank releases them which is typically 3-10 days later. The card brands usually allow up to 30 days to capture the authorization, because of this the EPX platform will not allow an authorization BRIC to be captured after the 30 day window. If there is no intention to capture and settle the authorization, a reversal should be performed on the authorization BRIC per card brand rules.

- EPX supports incremental and partial authorizations.
  - For additional information on incremental authorizations, reference the Incremental Authorization Transaction Specifications.
  - For additional information on partial authorizations, reference the Partial Authorization section in the Data Dictionary.

IMPORTANT!

MasterCard offers the ability to indicate an authorization transaction as a "Normal Authorization / Undefined Finality" (Pre-Auth) or "Final Authorization". The EPX platform will send all authorization only requests to MasterCard as "Normal Authorization/Undefined Finality" or "Open Auth". If there is a need to indicate the MasterCard authorization only as "Final Authorization", an ACI_EXT value of "AF" must be present in the transaction request.

NOTE: MasterCard is the only Network that currently supports the Pre-Auth / Final-Auth logic.

Track Data

In the following example, track 1 data is used to process the authorization only transaction. When the authorization only transaction is run against the account number, the authorization occurs for the AMOUNT in the transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR2</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <TRACK_DATA>B4111111111111111^CARD/TEST^49121010000000000000</TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR2&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&TRACK_DATA=B4111111111111111^CARD/TEST^49121010000
000000000&CARD_ENT_METH=H&INDUSTRY_TYPE=P&E2EE=0&FIRST_NAME=Test&LAST_NAME=Card&AD
DRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Account information

In the following example, the ACCOUNT_NBR and EXP_DATE are used to process the authorization only transaction. When the authorization transaction is run against the account number, the authorization occurs for the AMOUNT in the transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR2</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ACCOUNT_NBR>4111111111111111</ACCOUNT_NBR>
     <EXP_DATE>4912</EXP_DATE>
     <CARD_ENT_METH>X</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR2&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&ACCOUNT_NBR=4111111111111111&EXP_DATE=4912&CARD_EN
T_METH=X&INDUSTRY_TYPE=P&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+
Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference a previous credit card transaction BRIC in the EPX system. Since the EPX BRIC is a unique reference value, there is no need to send the account information. When the authorization transaction is run against the account number from the BRIC, the authorization occurs for the AMOUNT in the transaction. When performing a GUID/BRIC authorization transaction, it is also optional to send the EXP_DATE field with the transaction. The GUID/BRIC in the response can then be used to process new GUID/BRIC transactions using the previous account information and updated

expiration date. In order to receive the best possible interchange rates, the track data should be sent with every transaction.

Note: The authorization must be captured in order for settlement and funding to take place.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR2</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ORIG_AUTH_GUID>09KE3F8LBZFF73UR4PG</ ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <EXP_DATE>4912</EXP_DATE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR2&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&ORIG_AUTH_GUID=09KE3F8LBZFF73UR4PG&CARD_ENT_METH=Z
&INDUSTRY_TYPE=P&EXP_DATE=4912&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123
+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

MasterCard Final Authorization w/ Track Data

In the following example, track 1 data is used to process a MasterCard authorization only transaction as a Final Authorization with the inclusion of the ACI_EXT tag containing a value of "AF". When the authorization transaction is run against the account number, the authorization occurs for the AMOUNT in the transaction.

Note:
The authorization must be captured in order for settlement and funding to take place.
If the ACI_EXT tag with a value of "AF" is not present in the authorization only request, it will be sent as "Normal Authorization/Undefined Finality" (Pre-Auth) transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR2</TRAN_TYPE>
     <ACI_EXT>AF</ACI_EXT>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>210722</BATCH_ID>
     <TRAN_NBR>229</TRAN_NBR>
     <TRACK_DATA>B5011111111111119^CARD/TEST^49121010000000000000</TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR2&ACI_EXT=AF
&AMOUNT=77.00&BATCH_ID=210722&TRAN_NBR=229&TRACK_DATA=B5011111111111119^CARD/TEST^
49121010000000000000&CARD_ENT_METH=H&INDUSTRY_TYPE=P&E2EE=0&FIRST_NAME=Test&LAST_N
AME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

MasterCard Final Authorization w/ Account information

In the following example, the ACCOUNT_NBR and EXP_DATE are used to process a MasterCard authorization only transaction as a Final Authorization with the inclusion of the ACI_EXT tag containing a value of “AF”. When the authorization transaction is run against the account number, the authorization occurs for the AMOUNT in the transaction.

Note:
The authorization must be captured in order for settlement and funding to take place.
If the ACI_EXT tag with a value of “AF” is not present in the authorization only request, it will be sent as "Normal Authorization/Undefined Finality" (Pre-Auth) transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR2</TRAN_TYPE>
     <ACI_EXT>AF</ACI_EXT>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>210722</BATCH_ID>
     <TRAN_NBR>230</TRAN_NBR>
     <ACCOUNT_NBR>5011111111111119</ACCOUNT_NBR>
     <EXP_DATE>4912</EXP_DATE>
     <CARD_ENT_METH>X</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
     <USER_DATA_1>Customer ID 123</USER_DATA_>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR2&ACI_EXT=AF
&AMOUNT=77.00&BATCH_ID=210722&TRAN_NBR=230&ACCOUNT_NBR=5011111111111119&EXP_DATE=4
912&CARD_ENT_METH=X&INDUSTRY_TYPE=P&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRES
S=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345&USER_DATA_1=Customer ID
123
```

MasterCard Final Authorization w/ GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference a previous credit card transaction BRIC in the EPX system to process a MasterCard authorization only transaction as a Final Authorization with the inclusion of the ACI_EXT tag containing a value of "AF". Since the EPX BRIC is a unique reference value, there is no need to send the account information. When the authorization transaction is run against the account number from the BRIC, the authorization occurs for the AMOUNT in the transaction. When performing a GUID/BRIC authorization transaction, it is also optional to send the EXP_DATE field with the transaction. The GUID/BRIC in the response can then be used to process new GUID/BRIC transactions using the previous account information and updated expiration date.

Note:
The authorization must be captured in order for settlement and funding to take place.
If the ACI_EXT tag with a value of "AF" is not present in the authorization only request, it will be sent as "Normal Authorization/Undefined Finality" (Pre-Auth) transaction.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR2</TRAN_TYPE>
     <ACI_EXT>AF</ACI_EXT>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>210722</BATCH_ID>
     <TRAN_NBR>231</TRAN_NBR>
     <ORIG_AUTH_GUID>09KYNHHFED6B4A8EDR7</ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
     <USER_DATA_1>Customer ID 123</USER_DATA_>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR2&ACI_EXT=AF
&AMOUNT=77.00&BATCH_ID=210722&TRAN_NBR=231&ORIG_AUTH_GUID=09KYNHHFED6B4A8EDR7&CARD
_ENT_METH=Z&INDUSTRY_TYPE=P&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123+Ma
in+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345&USER_DATA_1=Customer ID 123
```

Capture Only (CCR4)

The capture transaction is used to capture a previous authorization to allow settlement to occur. A capture can be run for an AMOUNT equal or less than the amount of the referenced authorization. If the capture is approved, the transaction will close and settle during the next batch close time in order for funding to take place.

GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference the previous authorization BRIC in the EPX system. Since the EPX BRIC is a unique reference value, there is no need to send additional information such as the account number or customer information. If the capture is approved, the transaction will close and settle during the next batch close time for funding to take place.

Note: A void can be performed on an open capture that has not been closed or settled and this course of action will reopen the original authorization BRIC for it to be captured again. This is typically used when there previous capture AMOUNT needs to be adjusted.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR4</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ORIG_AUTH_GUID>09KE3FA0WXAHTTW3522</ ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR4&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&ORIG_AUTH_GUID=09KE3FA0WXAHTTW3522&CARD_ENT_METH=Z
&INDUSTRY_TYPE=P
```

Track Data with AUTH_CODE

In the following example, the AUTH_CODE from the authorization response is being used with track 1 data to reference the previous authorization. The EPX platform will perform a lookup and attempt to link the capture to the original authorization BRIC. Preferably, merchants should use the original Authorization BRIC when performing a capture; however, the AUTH_CODE is available to support merchants who may not have the original Authorization BRIC for reasons such as having a voice authorization environment. If the capture is approved, the transaction will close and settle during the next batch close time for funding to take place.

Note: A void can be performed on an open capture that has not been closed or settled and this course of action will reopen the original authorization BRIC for it to be captured again. This is typically used when there previous capture AMOUNT needs to be adjusted.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR4</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <TRACK_DATA>B4111111111111111^CARD/TEST^49121010000000000000
     </TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <AUTH_CODE>006654</AUTH_CODE>
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
```

```
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR4&AMOUNT=16.
00&BATCH_ID=20160511&TRAN_NBR=1&TRACK_DATA=B4111111111111111^CARD/TEST^49121010000
000000000&CARD_ENT_METH=H&INDUSTRY_TYPE=P&AUTH_CODE=006654&E2EE=0&FIRST_NAME=Test&
LAST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Account Information with AUTH_CODE

In the following example, the AUTH_CODE from the authorization response is being used with the ACCOUNT_NBR and EXP_DATE to reference the previous authorization. The EPX platform will perform a lookup and attempt to link the capture to the original authorization BRIC. Preferably, merchants should use the original Authorization BRIC when performing a capture; however, the AUTH_CODE is available to support merchants who may not have the original Authorization BRIC for reasons such as having a voice authorization environment. If the capture is approved, the transaction will close and settle during the next batch close time for funding to take place.

Note: A void can be performed on an open capture that has not been closed or settled and this course of action will reopen the original authorization BRIC for it to be captured again. This is typically used when there previous capture AMOUNT needs to be adjusted.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR4</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ACCOUNT_NBR>4111111111111111</ACCOUNT_NBR>
     <EXP_DATE>4912</EXP_DATE>
     <CARD_ENT_METH>X</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <AUTH_CODE>006654</AUTH_CODE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR4&AMOUNT=16.00&BATCH_ID=20160511&TRAN_NBR=1&ACCOUNT_NBR=4111111111111111&EXP_DATE=4912&CARD_ENT_METH=X&INDUSTRY_TYPE=P&AUTH_CODE=006654&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Non-Auth BRIC with AUTH_CODE

In the following example, a non-Authorization BRIC is being used to provide account information while using the AUTH_CODE from the original authorization and sending the AUTH_SOURCE field with a value of "OTHER". The EPX platform will perform a lookup and attempt to link the capture to the original authorization BRIC. If the capture is approved, the transaction will close and settle during the next settlement time.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR4</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ORIG_AUTH_GUID>09KE3FAN7BJPBDX856W</ ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <AUTH_SOURCE>OTHER</AUTH_SOURCE>
     <AUTH_CODE>006654</AUTH_CODE>
     <EXP_DATE>4912</EXP_DATE>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR4&AMOUNT=16.00&BATCH_ID=20160511&TRAN_NBR=1&ORIG_AUTH_GUID=09KE3FAN7BJPBDX856W&CARD_ENT_METH=Z&INDUSTRY_TYPE=P&AUTH_SOURCE=OTHER&AUTH_CODE=006654&EXP_DATE=4912&CVV2=123&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Refund/Return (CCR9)

The refund or return transaction is a transaction used to return funds to an account previously acted upon by a settled sale or capture transaction. A single refund for the full amount of the

original transaction or numerous partial refunds can be performed with dollar amounts less than and not to exceed the total amount of the original sale or capture being acted upon.

IMPORTANT!

Before sending the refund/return request to the Issuer, the EPX platform will automatically convert TRAN_TYPE "CCR9" in the transaction request to a "CCRA" (Return Authorization & Capture) only for the supporting card brands and to accommodate Network processing requirements. As a result, the response message will contain the newly returned "CCRA" value in the TRAN_TYPE field (instead of CCR9).

* An AUTH_RESP code of "00" or "85" can be returned by the issuer and should be interpreted as an approval. Any other response code should be handled as a decline.

The original TRAN_TYPE "CCR9" that was included in the initial request will be in the ORIG_TRAN_TYPE response field and can be used for matching purposes by the client.

As a general rule, please ensure the client application is never hardcoded to the TRAN_TYPE field and value in the response message.

NOTE: To receive the optional ORIG_TRAN_TYPE tag in the response message from EPX, the EPX terminal profile must be set with a minimum Response Version of 8.

EPX recommends that the client application implements logic to support the submission of the ORIG_BATCH_ID and ORIG_TRAN_NBR fields in the transaction request for the Refund/Return CCR9 transaction.

To help reduce the scope of potential refund abuse, and based on Underwriting/Risk rules, in some circumstances merchant accounts may require these tags to be present in all Return/Refund request messages. The Card Networks may eventually make this a mandate as well. To accommodate this possibility, EPX recommends that these fields are dynamically supported by the client application.

The ORIG_BATCH_ID and ORIG_TRAN_NBR fields must contain the original values that were sent in the BATCH_ID and TRAN_NBR fields within the original transaction request message of the following types:

- Sale Authorization and Capture (CCR1)
- Authorization Only (CCR2)
- Capture Only (CCR4)

These values must be populated in the respective ORIG_BATCH_ID and ORIG_TRAN_NBR fields and included with the Refund/Return (CCR9) request message.

NOTE: Some merchants' business models may require the support of "saleless" refunds/returns. For these cases, the aforementioned logic for ORIG_BATCH_ID and ORIG_TRAN_NBR can be overridden by parameters within the merchant Profile. This will need to be accessed and approved by Risk/Underwriting.

GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference the previous sale or capture BRIC in the EPX system. Since the EPX BRIC is a unique reference value, there is no need to send additional information such as the account number or customer information. If the return is approved, the transaction will close and settle during the next batch close time in order for the funds to move from the merchant account back to the cardholder account being acted upon.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR9</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>137</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ORIG_AUTH_GUID>09KGYDTQ170EQKDRGRW</ ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>321</ORIG_TRAN_NBR>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR9&AMOUNT=16.
00&BATCH_ID=137&TRAN_NBR=1&ORIG_AUTH_GUID=09KGYDTQ170EQKDRGRW&CARD_ENT_METH=Z&INDU
STRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=321
```

Response Example with Terminal Response Version of 8, to include ORIG_TRAN_TYPE

```
<RESPONSE>
<FIELDS>
<FIELD KEY="MSG_VERSION">003</FIELD>
<FIELD KEY="CUST_NBR">1234</FIELD>
<FIELD KEY="MERCH_NBR">1234567</FIELD>
<FIELD KEY="DBA_NBR">1</FIELD>
<FIELD KEY="TERMINAL_NBR">1</FIELD>
<FIELD KEY="TRAN_TYPE">CCRA</FIELD>
<FIELD KEY="BATCH_ID">137</FIELD>
<FIELD KEY="TRAN_NBR">1</FIELD>
<FIELD KEY="LOCAL_DATE">040319</FIELD>
<FIELD KEY="LOCAL_TIME">080820</FIELD>
<FIELD KEY="AUTH_GUID">09KGYDU0FZX54X5FY3W</FIELD>
<FIELD KEY="AUTH_RESP">00</FIELD>
<FIELD KEY="AUTH_CODE">001249</FIELD>
<FIELD KEY="AUTH_AVS">Y</FIELD>
<FIELD KEY="AUTH_RESP_TEXT">EXACT MATCH</FIELD>
<FIELD KEY="AUTH_CARD_TYPE">V</FIELD>
<FIELD KEY="AUTH_TRAN_DATE_GMT">04/03/2019 02:08:19 PM</FIELD>
<FIELD KEY="AUTH_AMOUNT_REQUESTED">16.00</FIELD>
```

```
<FIELD KEY="AUTH_AMOUNT">16.00</FIELD>
<FIELD KEY="AUTH_CURRENCY_CODE">840</FIELD>
<FIELD KEY="NETWORK_RESPONSE">00</FIELD>
<FIELD KEY="AUTH_CARD_COUNTRY_CODE">840</FIELD>
<FIELD KEY="AUTH_CARD_CURRENCY_CODE">840</FIELD>
<FIELD KEY="AUTH_CARD_B">C</FIELD>
<FIELD KEY="AUTH_CARD_C">F</FIELD>
<FIELD KEY="AUTH_CARD_E">N</FIELD>
<FIELD KEY="AUTH_CARD_F">Y</FIELD>
<FIELD KEY="AUTH_CARD_G">N</FIELD>
<FIELD KEY="AUTH_CARD_I">Y</FIELD>
<FIELD KEY="AUTH_MASKED_ACCOUNT_NBR">************1111</FIELD>
<FIELD KEY="ORIG_TRAN_TYPE">CCR9</FIELD>
</FIELDS>
</RESPONSE>
```

Track Data

In the following example, track 1 data is being used to reference a previous sale or capture in the EPX system. If the return is approved, the transaction will close and settle during the next batch close time in order for the funds to move from the merchant account back to the cardholder account being acted upon.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR9</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>1</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <TRACK_DATA>B4111111111111111^CARD/TEST^49121010000000000000
     </TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>323</ORIG_TRAN_NBR>
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR9&AMOUNT=16.
00&BATCH_ID=1&TRAN_NBR=1&TRACK_DATA=B4111111111111111^CARD/TEST^491210100000000000
00&CARD_ENT_METH=H&INDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=323&E2EE=0&FIRS
T_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CO
DE=12345
```

Account Information

In the following example, the ACCOUNT_NBR and EXP_DATE are being used to reference a previous sale or capture in the EPX system. If the return is approved, the transaction will close and settle during the next batch close time in order for the funds to move from the merchant account back to the cardholder account being acted upon.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR9</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>1</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <ACCOUNT_NBR>4111111111111111</ACCOUNT_NBR>
     <EXP_DATE>4912</EXP_DATE>
     <CARD_ENT_METH>X</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>323</ORIG_TRAN_NBR>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR9&AMOUNT=16.
00&BATCH_ID=1&TRAN_NBR=1&ACCOUNT_NBR=4111111111111111&EXP_DATE=4912&CARD_ENT_METH=
X&INDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=323&FIRST_NAME=Test&LAST_NAME=Ca
rd&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CODE=12345
```

Refund/Return Authorization and Capture (CCRA)

The return CCRA transaction is an authorization and capture within the same transaction. Because of this, the authorization is immediately captured by the EPX platform so no additional transaction request is required to capture the authorization. When a return authorization and capture transaction is run against an account number or BRIC, the authorization occurs and will appear on the cardholder account for the dollar amount in the transaction. If the return authorization and capture is approved, the transaction will close and settle during the next batch close time in order for the funds move from the merchant account back to the cardholder account being acted upon.

IMPORTANT!

- The CCRA return authorization and capture is supported by card brands Visa, MasterCard, and Discover. American Express does not support this transaction type.
- Not all Visa and MasterCard issuers support the CCRA return authorization and capture.
- An AUTH_RESP code of "00" or "85" can be returned by the issuer and should be interpreted as an approval. Any other response code should be handled as a decline.

EPX recommends that the client application implements logic to support the submission of the ORIG_BATCH_ID and ORIG_TRAN_NBR fields in the transaction request for the refund/return authorization and capture CCRA transaction.

To help reduce the scope of potential refund abuse, and based on Underwriting/Risk rules, in some circumstances merchant accounts may require these tags to be present in all return/refund request messages. The Card Networks may eventually make this a mandate as well. To accommodate this possibility, EPX recommends that these fields are dynamically supported by the client application.

The ORIG_BATCH_ID and ORIG_TRAN_NBR fields will need to contain the original values that were sent in the BATCH_ID and TRAN_NBR fields within the original transaction request message of the following types:

- Sale Authorization and Capture (CCR1)
- Authorization Only (CCR2)
- Capture Only (CCR4)

These values must be populated in the respective ORIG_BATCH_ID and ORIG_TRAN_NBR fields and included with the refund/return authorization and capture (CCRA) request message.

NOTE: Some merchants' business models may require the support of "saleless" refunds/returns. For these cases, the aforementioned logic for ORIG_BATCH_ID and ORIG_TRAN_NBR can be overridden by parameters within the merchant Profile. This will need to be accessed and approved by Risk/Underwriting.

GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference the previous sale or capture BRIC in the EPX system. Since the EPX BRIC is a unique reference value, there is no need to send additional information such as the account number or customer information. If the return authorization and capture is approved, the transaction will close and settle during

the next batch close time in order for the funds to move from the merchant account back to the cardholder account being acted upon.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCRA</TRAN_TYPE>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>137</BATCH_ID>
     <TRAN_NBR>120</TRAN_NBR>
     <ORIG_AUTH_GUID>09KGMR71VVEPA5U6PY0</ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>321</ORIG_TRAN_NBR>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCRA&AMOUNT=77.
00&BATCH_ID=137&TRAN_NBR=120&ORIG_AUTH_GUID=09KGMR71VVEPA5U6PY0V&CARD_ENT_METH=Z&I
NDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=321
```

Track Data

In the following example, track 1 data is being used to reference a previous sale or capture in the EPX system. If the return authorization and capture is approved, the transaction will close and settle during the next batch close time in order for the funds to move from the merchant account back to the cardholder account being acted upon.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCRA</TRAN_TYPE>
     <AMOUNT>16.00</AMOUNT>
     <BATCH_ID>1</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <TRACK_DATA>B4111111111111111^CARD/TEST^49121010000000000000</TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>323</ORIG_TRAN_NBR>
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCRA&AMOUNT=16.
00&BATCH_ID=1&TRAN_NBR=1&TRACK_DATA=B4111111111111111^CARD/TEST^491210100000000000
00&CARD_ENT_METH=H&INDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=323&E2EE=0&FIRS
T_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_CO
DE=12345
```

Account Information

In the following example, the ACCOUNT_NBR and EXP_DATE are being used to reference a previous sale or capture in the EPX system. If the return authorization and capture is approved, the transaction will close and settle during the next batch close time in order for the funds to move from the merchant account back to the cardholder account being acted upon.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCRA</TRAN_TYPE>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>137</BATCH_ID>
     <TRAN_NBR>121</TRAN_NBR>
     <ACCOUNT_NBR>4111111111111111</ACCOUNT_NBR>
     <EXP_DATE>4912</EXP_DATE>
     <CARD_ENT_METH>X</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>323</ORIG_TRAN_NBR>
     <CVV2>123</CVV2>
     <FIRST_NAME>Teddy</FIRST_NAME>
     <LAST_NAME>Tester</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
     <USER_DATA_1>Customer ID 773377</USER_DATA_>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCRA&AMOUNT=77.
00&BATCH_ID=137&TRAN_NBR=121&ACCOUNT_NBR=4111111111111111&EXP_DATE=4912&
CARD_ENT_METH=X&INDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=323&CVV2=123&FIRST
_NAME=Teddy&LAST_NAME=Tester&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_
CODE=12345&USER_DATA_1=Customer ID 773377
```

Refund/Return Authorization and Capture Hold (CCRA) with ACI "AH"

The return CCRA transaction that contains an ACI value of "AH" is an authorization and capture hold transaction that will reflect the return AMOUNT of the transaction on a cardholders' account. A subsequent return capture hold release CCRG transaction is required in order for the CCRA return hold to be released for settlement and funding to take place. When a return authorization and capture hold transaction is run against an account number or BRIC, the authorization occurs in real time and will appear on the cardholder account for the dollar amount in the transaction. Once the return capture hold release (CCRG) is processed and is approved it will close and settle during the next batch close time in order for the funds move from the merchant account back to the cardholder account being acted upon.

IMPORTANT!

- The ACI tag with a value of "AH" must be included with the transaction request in order for it to process as a return authorization and capture "hold", otherwise the CCRA transaction will process as a standard return authorization and capture.
- The CCRA return authorization and capture is supported by card brands Visa, MasterCard, and Discover. American Express does not support this transaction type.
- Not all Visa and MasterCard issuers support the CCRA return authorization only.
- An AUTH_RESP code of "00" or "85" can be returned by the issuer and should be interpreted as an approval. Any other response code should be handled as a decline.

EPX recommends that the client application implements logic to support the submission of the ORIG_BATCH_ID and ORIG_TRAN_NBR fields in the transaction request for the refund/return authorization and capture CCRA transaction.

To help reduce the scope of potential refund abuse, and based on Underwriting/Risk rules, in some circumstances merchant accounts may require these tags to be present in all return/refund request messages. The Card Networks may eventually make this a mandate as well. To accommodate this possibility, EPX recommends that these fields are dynamically supported by the client application.

The ORIG_BATCH_ID and ORIG_TRAN_NBR fields will need to contain the original values that were sent in the BATCH_ID and TRAN_NBR fields within the original transaction request message of the following types:

- Sale Authorization and Capture (CCR1)
- Authorization Only (CCR2)
- Capture Only (CCR4)

These values must be populated in the respective ORIG_BATCH_ID and ORIG_TRAN_NBR fields and included with the refund/return authorization only (CCRA) request message.

NOTE: Some merchants' business models may require the support of "saleless" refunds/returns. For these cases, the aforementioned logic for ORIG_BATCH_ID and ORIG_TRAN_NBR can be overridden by parameters within the merchant Profile. This will need to be accessed and approved by Risk/Underwriting.

GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference the previous sale or capture BRIC in the EPX system. Since the EPX BRIC is a unique reference value, there is no need to send additional information such as the account number or customer information. When the return authorization and capture hold transaction is run against the account number from the BRIC, the authorization occurs for the AMOUNT in the transaction. When performing a GUID/BRIC authorization transaction, it is also optional to send the EXP_DATE field with the transaction. The GUID/BRIC in the response can then be used to process new GUID/BRIC transactions using the previous account information and updated expiration date.

Note: The return authorization and capture hold BRIC must be released (CCRG) in order for settlement and funding to take place.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCRA</TRAN_TYPE>
     <ACI>AH</ACI>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>137</BATCH_ID>
     <TRAN_NBR>120</TRAN_NBR>
     <ORIG_AUTH_GUID>09KGMR71VVEPA5U6PY0</ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>321</ORIG_TRAN_NBR>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCRA&ACI=AH&AMO
UNT=77.00&BATCH_ID=137&TRAN_NBR=120&ORIG_AUTH_GUID=09KGMR71VVEPA5U6PY0V&CARD_ENT_M
ETH=Z&INDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=321
```

Track Data

In the following example, track 1 data is being used to reference a previous sale or capture in the EPX system. When the return authorization and capture hold transaction is run against the account number, the authorization occurs for the AMOUNT in the transaction.

Note: The return authorization and capture hold BRIC must be released (CCRG) in order for settlement and funding to take place.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCRA</TRAN_TYPE>
     <ACI>AH</ACI>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>210722</BATCH_ID>
     <TRAN_NBR>193</TRAN_NBR>
     <TRACK_DATA>B4111111111111111^CARD/TEST^49121010000000000000</TRACK_DATA>
     <CARD_ENT_METH>H</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>323</ORIG_TRAN_NBR>
     <E2EE>0</E2EE>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCRA&ACI=AH&AMO
UNT=77.00&BATCH_ID=210722&TRAN_NBR=193&TRACK_DATA=B4111111111111111^CARD/TEST^4912
1010000000000000&CARD_ENT_METH=H&INDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=3
23&E2EE=0&FIRST_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&S
TATE=DE&ZIP_CODE=12345
```

Account Information

In the following example, the ACCOUNT_NBR and EXP_DATE are being used to reference a previous sale or capture in the EPX system. When the return authorization and capture hold transaction is run against the account number, the authorization occurs for the AMOUNT in the transaction.

Note: The return authorization and capture hold BRIC must be released (CCRG) in order for settlement and funding to take place.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCRA</TRAN_TYPE>
     <ACI>AH</ACI>
     <AMOUNT>77.00</AMOUNT>
     <BATCH_ID>137</BATCH_ID>
     <TRAN_NBR>121</TRAN_NBR>
     <ACCOUNT_NBR>4111111111111111</ACCOUNT_NBR>
     <EXP_DATE>4912</EXP_DATE>
     <CARD_ENT_METH>X</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
     <ORIG_BATCH_ID>777</ORIG_BATCH_ID>
     <ORIG_TRAN_NBR>323</ORIG_TRAN_NBR>
     <CVV2>123</CVV2>
     <FIRST_NAME>Test</FIRST_NAME>
     <LAST_NAME>Card</LAST_NAME>
     <ADDRESS>123 Main St</ADDRESS>
     <CITY>Wilmington</CITY>
     <STATE>DE</STATE>
     <ZIP_CODE>12345</ZIP_CODE>
     <USER_DATA_1>Customer ID 773377</USER_DATA_>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCRA&ACI=AH&AMO
UNT=77.00&BATCH_ID=137&TRAN_NBR=121&ACCOUNT_NBR=4111111111111111&EXP_DATE=4912&
CARD_ENT_METH=X&INDUSTRY_TYPE=P&ORIG_BATCH_ID=777&ORIG_TRAN_NBR=323&CVV2=123&FIRST
_NAME=Test&LAST_NAME=Card&ADDRESS=123+Main+Street&CITY=Wilmington&STATE=DE&ZIP_COD
E=12345&USER_DATA_1=Customer ID 773377
```

Return/Refund Authorization Capture Hold Release (CCRG)

The return authorization and capture hold release transaction is used to release the hold on an open return authorization and capture hold (CCRA with ACI value of “AH”) to allow settlement to occur. If the AMOUNT is included in the return hold release request, it must match the AMOUNT from the return authorization and capture hold (CCRA) transaction or it will decline. If the AMOUNT is not included with the return hold release request the amount from the return authorization and capture hold (CCRA) transaction will be used. If the return hold release is approved, the transaction will close and settle during the next batch close time in order for funding to take place.

GUID/BRIC

In the following example, the ORIG_AUTH_GUID is being used to reference the previous return authorization and capture hold BRIC in the EPX system. Since the EPX BRIC is a unique

reference value, there is no need to send additional information such as the account number or customer information. If the return authorization and capture hold release is approved, the transaction will close and settle during the next batch close time for funding to take place.

Note: If a void is performed on an open CCRA return authorization and capture (regardless of "hold" status) that has not been closed or settled, a new return authorization and capture CCRA will need to be processed in order for the cardholder to receive credit.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
<TRAN_TYPE>CCRG</TRAN_TYPE>
<BATCH_ID>20161013</BATCH_ID>
<TRAN_NBR>117</TRAN_NBR>
<ORIG_AUTH_GUID>09KEIHJYFNGW11GYE4V</ORIG_AUTH_GUID>
<CARD_ENT_METH>Z</CARD_ENT_METH>
<INDUSTRY_TYPE>P</INDUSTRY_TYPE>
<AMOUNT>77.00</AMOUNT>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=117&TRAN_TYPE=CCE4&BATCH_ID
=20161013&TRAN_NBR=117&ORIG_AUTH_GUID=09KEIHJYFNGW11GYE4V&CARD_ENT_METH=Z&INDUSTRY
_TYPE=P&AMOUNT=77.00
```

Reversal (CCR7)

The reversal transaction is used to remove the authorization hold on a credit card and void the transaction within the same request. This will release the funds that are being held at the issuing bank. The EPX GUID/BRIC sent during this transaction is one from an open / unsettled sale (CCR1) or open / uncaptured authorization (CCR2) transaction. It is important to note that a small percentage of issuing banks do not honor the reversal and will decline the transaction. In scenarios where the initial reversal (CCR7) transaction attempt is declined by the issuer, a void (CCRX) transaction should be sent to ensure that the transaction is voided so it does not settle and funding does not take place.

- EPX supports partial reversals.
  - For additional information on partial reversals, reference the Partial Reversal section in the Data Dictionary.

NOTE: The reversal (CCR7) transaction type cannot be used on capture only (CCR4) or return capture (CCR9) transactions.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCR7</TRAN_TYPE>
     <ORIG_AUTH_GUID>09KE3FW552Q1054X5FT</ ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
     <INDUSTRY_TYPE>P</INDUSTRY_TYPE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCR7&ORIG_AUTH_
GUID=09KE3FW552Q1054X5FT&CARD_ENT_METH=Z&INDUSTRY_TYPE=P
```

Timeout Reversal (CCR7)

The timeout reversal transaction is used when the connection is disrupted during a transaction (timeout) and no response is received from the Host. This transaction provides evidence that the initial transaction was not successful, and/or prevents the possibility of duplicate transaction authorizations. An EPX BRIC will not be present since the client application or device did not receive a response from the Host.

To perform a timeout reversal, you must include the exact BATCH_ID and TRAN_NBR that was used for the initial transaction. This reversal request must be sent within 2 minutes of the original transaction as there are time limitations

NOTE: If the initial transaction did not process successfully or load to the EPX database, the response will contain an AUTH_RESP value of "25" (unable to locate).

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <BATCH_ID>20160511</BATCH_ID>
     <TRAN_NBR>1</TRAN_NBR>
     <TRAN_TYPE>CCR7</TRAN_TYPE>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&BATCH_ID=20160511&TRAN_NB
R=1&TRAN_TYPE=CCR7
```

Void (CCRX)

The void transaction is used to stop a sale, capture, or refund transaction prior to settlement. If the transaction BRIC referenced by the ORIG_AUTH_GUID has already been closed or settled, this function will not be available. This is often used in the restaurant industry to void a capture (CCR4) which will reopen a previously captured authorization only (CCR2) BRIC to modify / correct the tip amount and AMOUNT from user keying errors or check adjustments during the tip adjust process.

NOTE: If the authorization only remains uncaptured, any funds that are held during the authorization portion of the sale are not affected by the void, and will not be available until the issuing bank releases them which is typically within 3-10 days.

XML

```
<DETAIL cust_nbr="1234" merch_nbr="1234567" dba_nbr="1" terminal_nbr="1">
     <TRAN_TYPE>CCRX</TRAN_TYPE>
     <ORIG_AUTH_GUID>09KE3FWAFRQLZ8NL5H3</ ORIG_AUTH_GUID>
     <CARD_ENT_METH>Z</CARD_ENT_METH>
</DETAIL>
```

HTTPS

```
CUST_NBR=1234&MERCH_NBR=1234567&DBA_NBR=1&TERMINAL_NBR=1&TRAN_TYPE=CCRX&ORIG_AUTH_
GUID=09KE3FWAFRQLZ8NL5H3&CARD_ENT_METH=Z
```