

Triggers

Triggers are payment application initiated and are of two types.

- **Notification**, which is one way, means fired by the payment application.
Example: Payment Application sends notification.
CP_SYSTEM_NOTIFIES_<TRANSACTION_STARTED>
- **Request**, which is two-way, means payment application sends a request message, and expects to receive response.
Example: Payment Application sends request, and expects to response back.
CP_SYSTEM_REQUESTS_<BASKET_ADJUSTMENT>
CP_SYSTEM_RECEIVES_<BASKET_ADJUSTMENT>

Examples of CP Application Request and Response format.

CP_APP_REQUESTS_<ENCRYPTED_CARD>
CP_APP_RECEIVES_<ENCRYPTED_CARD>

The following table describes the list of Triggers and it invoke points in SCA application.

Trigger	Description	Invoke I
CP_SYSTEM_NOTIFIES_TRANSACTION_STARTED	This is to indicate the start of a transaction.	This trigger is invoked up from POS.

Trigger	Description	Invoke I
CP_SYSTEM_REQUESTS_BASKET_ADJUSTMENT	<p>The pre-adjusted basket may be responded to by the Commerce Application by explicit offer format against the basket line details. This will be the case when the Commerce Application is basket aware and can quickly adjudicate the basket.</p> <p>This trigger is invoked on from POS and if the basket offer details in response to POS (On POS IP and POS to the LINE_ITEM_END</p>	
CP_SYSTEM_NOTIFIES_BASKET_FINALIZED	<p>Notifies the line items of finalized basket.</p> <p>This trigger occurs when the Commerce Application wants to provide and use Loyalty for the current transaction.</p> <p>This trigger is invoked on items are present in current receiving LINE_ITEM_END basket state is basket adjudicated.</p> <p>This request trigger is invoked on receiving the payment. The transaction is halted in application and those details are sent in start session response. NOTE: POS needs to apply the loyalty details.</p>	
CP_SYSTEM_REQUESTS_LOYALTY		

Trigger	Description	Invoke I
CP_SYSTEM_REQUESTS_AMOUNT_ADJUSTMENT	<p>This is for Commerce Application to adjust the final amount. As part of the payment transaction invoked after prompting for the amount etc. If there is any adjustment then payment application continues with the response, adjusted amount either by an amount or by a percentage.</p> <p>Allows Commerce Application to know intermediate and finalized amount of the transaction.</p>	
CP_SYSTEM_REQUESTS_ALT_PAYMENT	<p>Provides alternate payment methods to the users. During payment transaction when one of the alternate payment methods has been selected by cardholder, the APM values like ALIPAY are returned.</p>	
CP_SYSTEM_NOTIFIES_CARD_PRESENTED	<p>Access to the card data on-demand and action based on card info by the commerce application. During payment transaction after the card is presented, the card data is returned.</p>	

Trigger	Description	Invoke I
CP_SYSTEM_NOTIFIES_CARD_BIN_RECEIVED	Access to the card data on-demand and action based on card bin by the commerce application.	During payment transaction after the CARD_PRESENT trigger is invoked.
CP_SYSTEM_REQUESTS_CARD_PAYMENT_AMOUNT_ADJUSTMENT	Amount Adjustment for certain types of cards or currency conversion.	During payment transaction details and validating the amount and surcharge amount to that CP_SYSTEM_REQUESTS_CARD_PAYMENT_AMOUNT_ADJUSTMENT trigger is invoked.
CP_SYSTEM_NOTIFIES_AUTHORIZATION_COMPLETED	Notifies Commerce Application about the completion of authorization and its status.	During payment transaction after receiving and processing from processor/host.
CP_SYSTEM_NOTIFIES_PAYMENT_COMPLETED	Notifies for next actions after the Payment is completed, with information on payment.	During payment transaction after framing receipt data from POS.
CP_SYSTEM_NOTIFIES_TRANSACTION_ENDED	Notifies when transaction is ended.	This trigger is invoked up from POS. In case of APM step of payment transaction after POS and after PAYMENT_COMPLETED.

Trigger	Description	Invoke I
CP_SYSTEM_NOTIFIES_IDLE_ENTERED	This allows the Commerce Applications to control the screen and devices in between transactions when payment application reaches the idle screen when application first starts up and each time after a transaction completes. Initiates a transaction from MAC screen.	This trigger is invoked when waiting for configured cpi after processing the command CLOSED and DEVICE C
CP_SYSTEM_NOTIFIES_MANUAL_LAUNCH_SELECTED		This trigger is invoked when or when CPLAUNCH me

Sample Response

Following is an example of **LINE_ITEM_END Response**.

```
<OFFER_LIST>
<OFFER>
  <OFFER_ID>7836938109</OFFER_ID>
  <PROGRAM_ID>MCD-1601</PROGRAM_ID>
  <OFFER_TYPE>OTHER_COUPON</OFFER_TYPE>
  <OFFER_DESCRIPTION>Get 20% off your Purchase</OFFER_DESCRIPTION>
  <OFFER_REFUNDABLE>FALSE</OFFER_REFUNDABLE>
  <OFFER_COMBINABLE>TRUE</OFFER_COMBINABLE>
  <MERCHANT_OFFER_CODE>931343</MERCHANT_OFFER_CODE>
  <OFFER_PERCENT_DISCOUNT>0.20</OFFER_PERCENT_DISCOUNT>
  <OFFER_DOLLAR_DISCOUNT />
  <PRODUCT_CODE>ZM9475L</PRODUCT_CODE>
  <ASSOCIATED_PRODUCT_CODE>null</ASSOCIATED_PRODUCT_CODE>
  <SPECIAL_PRODUCT_OFFER>null</SPECIAL_PRODUCT_OFFER>
  <PUBLISHER>Valid0</PUBLISHER>
  <PUBLISHER_ID>Valid0-560090096095</PUBLISHER_ID>
  <BARCODE_CONTENT />
```

```
<BARCODE_TYPE />
<BARCODE_X_DIMENSION>-453.92</BARCODE_X_DIMENSION>
<BARCODE_ROWS>43448</BARCODE_ROWS>
<BARCODE_COLUMNS>64747</BARCODE_COLUMNS>
<BARCODE_ERROR_CORRECTION_LEVEL />
</OFFER>
  </OFFER_LIST>
```

DONATION_LIST field which can contain multiple DONATION.

```
<DONATION_LIST>
<DONATION>
  <DONATION_AMOUNT>1.00</DONATION_AMOUNT>
  <DONATION_DESCRIPTION>March Of Dimes</DONATION_DESCRIPTION>
  <PUBLISHER>Valid0</PUBLISHER>
  <PUBLISHER_ID>Valid0-560090096095</PUBLISHER_ID>
</DONATION>
</DONATION_LIST>
```

Following is an example of **Payment Response – LOYALTY**.

LOYALTY_IDENTIFIERS_LIST which contains list of LOYALTY_IDENTIFIER fields.

```
  <LOYALTY_IDENTIFIERS_LIST>
<LOYALTY_IDENTIFIER>
  <PUBLISHER>vwallet</PUBLISHER>
  <PUBLISHER_ID>878343322</PUBLISHER_ID>
  <PROGRAM_ID>JK223123</PROGRAM_ID>
  <CUSTOMER_PHONE_NUMBER>678-555-1212</CUSTOMER_PHONE_NUMBER>
  <CUSTOMER_NAME>John Doe</CUSTOMER_NAME>
  <CUSTOMER_EMAIL>jd@redmail.com</CUSTOMER_EMAIL>
  <CUSTOMER_LOYALTY_IDS />
  <LOYALTY_POINTS_BALANCE>30000</LOYALTY_POINTS_BALANCE>
  <LOYALTY_PAYLOAD>null</LOYALTY_PAYLOAD>
  <CONSUMER_ID>IP6304034</CONSUMER_ID>
</LOYALTY_IDENTIFIER>
  </LOYALTY_IDENTIFIERS_LIST>
```

OFFER_LIST which can contains list of OFFER fields

```
  <OFFER_LIST>
<OFFER>
  <OFFER_ID>7836938109</OFFER_ID>
  <PROGRAM_ID>MCD-1601</PROGRAM_ID>
  <OFFER_TYPE>OTHER_COUPON</OFFER_TYPE>
  <OFFER_DESCRIPTION>Get 20% off your Purchase</OFFER_DESCRIPTION>
  <OFFER_REFUNDABLE>FALSE</OFFER_REFUNDABLE>
  <OFFER_COMBINABLE>TRUE</OFFER_COMBINABLE>
  <MERCHANT_OFFER_CODE>931343</MERCHANT_OFFER_CODE>
  <OFFER_PERCENT_DISCOUNT>0.20</OFFER_PERCENT_DISCOUNT>
  <OFFER_DOLLAR_DISCOUNT />
  <PRODUCT_CODE>ZM9475L</PRODUCT_CODE>
  <ASSOCIATED_PRODUCT_CODE>null</ASSOCIATED_PRODUCT_CODE>
```

```
<SPECIAL_PRODUCT_OFFER>null</SPECIAL_PRODUCT_OFFER>
<PUBLISHER>vwallet</PUBLISHER>
<PUBLISHER_ID>878343322</PUBLISHER_ID>
<BARCODE_CONTENT />
<BARCODE_TYPE />
<BARCODE_X_DIMENSION>-453.92</BARCODE_X_DIMENSION>
<BARCODE_ROWS>43448</BARCODE_ROWS>
<BARCODE_COLUMNS>64747</BARCODE_COLUMNS>
<BARCODE_ERROR_CORRECTION_LEVEL />
</OFFER>
  </OFFER_LIST>
```

Following is an example of **Unsolicited Response**.

```
<RESPONSE>
  <PUBLISHER_ID>Valid0-560090096095</PUBLISHER_ID>
  <ADJUSTMENT_LIST>
    <ADJUSTMENT>
      <ADJUSTMENT_AMOUNT>0.81</ADJUSTMENT_AMOUNT>
      <ADJUSTMENT_DESCRIPTION />
      <PUBLISHER>Valid0</PUBLISHER>
      <PUBLISHER_ID>Valid0-560090096095</PUBLISHER_ID>
    </ADJUSTMENT>
  </ADJUSTMENT_LIST>
</RESPONSE>
```

In the payment response, following fields are included:

```
<ADJUSTED_AMOUNT>1.62</ADJUSTED_AMOUNT>
<INITIAL_AMOUNT>15.00</INITIAL_AMOUNT>
```

The ADJUSTED_AMOUNT field indicates the amount to adjust the original transaction amount. String amount formatting is applied, this can be positive or negative. If it is negative then this field contains minus(-) sign.