Etisalat Payment Gateway Integration Guide

Ecommerce Payment

REST

Version: 1.3
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Revision History

Date	Version	Description	Author
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April 2018	1.1	Recurrence Payments	Mohamed Akram
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Feb 2019	1.3	Payment Page Additional Customization	Mohamed Akram
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1. Introduction

The document provides the interface information to Integrate with Etisalat Payment Gateway to perform Ecommerce payment using REST (JSON).

2. Transaction Flow

Please find the below transaction flow for implementing **3D secure eCommerce** transactions.

1. The **Registration** API call should be triggered to payment gateway in which the ReturnPath property with Transaction details like amount, currency, OrderID etc. should be mentioned.
2. **Redirect to Payment Portal URL**, returned in Register call with TransactionID as hidden field.
   ```
   <form action=<Payment Portal URL> method="post">
   <input type='Hidden' name='TransactionID' value=<TransactionID value>/>
   <input type="submit" value="Submit">
   ```
3. Payer will proceed with 3D Secure Authentication process.
4. After 3D Authentication, control will returned back to Merchant's ReturnPath property URL received in registration call.
5. Merchant sends **Finalization** API call to complete transaction.

3. Registration

3.1.   Registration Call Properties

Required to provide the below properties while calling Registration.

Property	Usage	Comments
Request Properties		
Customer	Customer ID. Please refer to Appendix A for Customer details.	**MANDATORY**
Store	Store. Please refer to Appendix A for Store details.	OPTIONAL
Terminal	Terminal. Please refer to Appendix A for Terminal details.	OPTIONAL
Channel	Payment Channel. Please refer to Appendix A for Channel details.	**MANDATORY**
Amount	Total amount to be charged.	**MANDATORY**
Currency	Currency in which above mentioned amount is to be charged.	**MANDATORY**
OrderID	Merchant can use this property to map id for this transaction w.r.t. his system (can also be auto generated, please refer to Appendix A for format).	**MANDATORY**
OrderName	Short description for order.	**MANDATORY**
OrderInfo	Details of order.	OPTIONAL
TransactionHint	It is used to specify which payment instruments should be available to the buyer. Merchant can specify which features should be supported by payment instrument i.e. Auto Capture/Reversal or Manual Capture/Reversal. By default it is set Auto Capture. Kindly refer Appendix A for more details about transactionHint.	**MANDATORY**
ReturnPath	Buyer will be redirected back to this URL once the authentication of card is completed.	**MANDATORY**
UserName	To be used in case of username/password authentication.	OPTIONAL
Password	To be used in case of username/password authentication.	OPTIONAL
Response Properties		
Due to Continuous enhancements, EPG may include additional parameters in the response of API in future. Transaction processing at client side must not fail because of this.		

TransactionID	EPG TransactionID	
PaymentPortal	EPG Payment Page in which Payer will enter the CreditCard	
ResponseCode	This field returns the exact response code. **Success is always indicated with 0**	
ResponseDescription	User-friendly description of the error in ResponseCode. *Note: This field can only be used to display the error description and should not be used to check if transaction was successful, to check if transaction was successful please use ResponseCode field.*	
UniqueID	Unique reference ID for this call	

3.2.   Sample Request

URL: Refer Appendix B.

Headers:

Content-Type:application/json

Accept:application/json

Request Body:

```
{
 "Registration": {
  "Currency": "AED",
  "ReturnPath": "https://partner.ctdev.comtrust.ae/banktestnbad/Authorization.aspx?capture=true",
  "TransactionHint": "CPT:Y;VCC:Y;",
  "OrderID": "7210055701315195",
  "Store": "Mobile",
  "Terminal": "Recharge",
  "Channel": "Web",
  "Amount": "2.00",
  "Customer": "Demo Merchant",
  "OrderName": "Paybill",
  "UserName":"Demo_fY9c",
  "Password":"Comtrust@20182018"
  }
}
```

3.3. Sample Response

```
{
  "Transaction":{
    "PaymentPortal":"https://demo-
ipg.comtrust.ae/PaymentEx/Paymentpartner/Payment?lang=en&layout=C0STCBVLEI",
    "PaymentPage":"https://demo-
ipg.comtrust.ae/PaymentEx/Paymentpartner/Payment?lang=en&layout=C0STCBVLEI",
    "ResponseCode":"0",
    "ResponseClass":"0",
    "ResponseDescription":"Request Processed Successfully",
    "ResponseClassDescription":"Success",
    "TransactionID":"847718745846",
    "Balance":{
      "Value":"0"
    },
    "Amount":{
      "Value":"0"
    },
    "Fees":{
      "Value":"0"
    },
    "Payer":null,
    "UniqueID":"a25ea7da-a212-406a-967b-94953191aad7"
  }
}
```

4. Finalization

4.1. Finalization Call Properties

Required to provide the below properties while calling Finalization to complete payment.

Property	Usage	Comments
Request Properties		
Customer	Customer ID. Please refer to Appendix A for Customer details.	**MANDATORY**
TransactionID	TransactionID returned in Registration response.	**MANDATORY**
UserName	To be used in case of username/password authentication.	OPTIONAL
Password	To be used in case of username/password authentication.	OPTIONAL
Response Properties		
Due to Continuous enhancements, EPG may include additional parameters in the response of API in future. Transaction processing at client side must not fail because of this.		
ResponseCode	This field returns the exact response code. **Success is always indicated with 0**	
ResponseDescription	User-friendly description of the error in ResponseCode. *Note: This field can only be used to display the error description and should not be used to check if transaction was successful, to check if transaction was successful please use ResponseCode field.*	
UniqueID	Unique reference ID for this call	
OrderID	It's returned only in case of successful transaction and if it had been set during Registration call for same	
ApprovalCode	ApprovalCode, as sent by the issuer bank. Merchant should save this code for future reference and communication with issuer bank related to a particular transaction.	
Amount	Amount charged for the transaction	
Balance	Balance amount for the transaction that has not yet been captured	

CardNumber	Masked credit card number in following format: xxxxxx*********xxxx It will return first 6 and last 4 digits of credit card used for payment.	
CardToken	Tokenized value for the card used, it's not original credit card number but will always be same for any particular credit card number	
Account	Name of account in payment gateway configurations that transaction happened with (**to avoid any confusions, use this field for any references or logging only if advised by Merchant Integration Support**)	

4.2. Sample Request

URL: Refer Appendix B.

Headers:

Content-Type:application/json

Accept:application/json

Request Body:
```
{
 "Finalization": {
   "TransactionID": "755580466468",
   "Customer": "Demo Merchant",
   "UserName":"Demo_fY9c",
   "Password":"Comtrust@20182018"
 }
}
```

4.3. Sample Response

```
{
  "Transaction":{
    "ResponseCode":"0",
    "ResponseClass":"0",
    "ResponseDescription":"Request processed successfully",
    "ResponseClassDescription":"Success",
```

```
  "Language":"en",
  "ApprovalCode":"421218",
  "Account":"NBAD mCommerce",
  "Balance":{
    "Value":"0"
  },
  "OrderID":"123456789",
  "Amount":{
    "Value":"1.120"
  },
  "Fees":{
    "Value":"0"
  },
  "CardNumber":"411111******1111",
  "Payer":{
    "Information":"411111******1111"
  },
  "CardToken":"4111110042761111",
  "CardBrand":"Visa",
  "UniqueID":"798ddc2f-f8e4-41e1-a5e3-b065448d75e3"
  }
}
```

5. Authorization

In this model, merchant collects all credit related information from the customer and complete the payment in single call, if the Auto Capture is set. Otherwise either Capture or Reversal call has to be performed similar to redirection model. **This API to be used only in case of processing non-3D secure payments (MOTO transactions).**

5.1.   Authorization call properties

Property	Usage	Comments
Request Properties		
Customer	Customer ID. Please refer to Appendix A for Business Channel details	**MANDATORY**
Store	Store. Please refer to Appendix A for Business Channel details	OPTIONAL
Terminal	Terminal. Please refer to Appendix A for Business Channel details	OPTIONAL
Language	en or ar	OPTIONAL
Channel	Payment Channel. Please refer to Appendix A	**MANDATORY**
Amount	Amount to be captured. This Amount should be less than or equal to outstanding balance amount.	**MANDATORY** for Partial Capture
Currency	Currency in which above mentioned amount is to be charged. This Currency should be same as that of mentioned in SPI Registration or Authorization call.	**MANDATORY** for Partial Capture
TransactionHint	Only allowed value is RVS:Y or RVS:N which indicates whether remaining part of balance should be reversed automatically or not.	**MANDATORY**
OrderID	Merchant can use this property to map id for this transaction w.r.t. his system	**MANDATORY**
OrderName	Short description for order	**MANDATORY**
CardNumber	Card number	**MANDATORY***
ExpiryMonth	Expiry Month of Card	**MANDATORY***
ExpiryYear	Expiry Year of Card	**MANDATORY***
CardTrack2	Card Track Data (read from card magnetic tape or chip like in case of kiosk devices)	**MANDATORY****
VerifyCode	Credit Card Verification Code	OPTIONAL
UserName	To be used in case of username/password authentication.	OPTIONAL

Password	To be used in case of username/password authentication.	OPTIONAL
Response Properties **Due to Continuous enhancements, EPG may include additional parameters in the response of API in future. Transaction processing at client side must not fail because of this.**		
ResponseCode	This field returns the exact response code. **Success is always indicated with 0**	
ResponseDescription	User-friendly description of the error in ResponseCode. *Note: This field can only be used to display the error description and should not be used to check if transaction was successful, to check if Transaction was successful please use ResponseCode field.*	
ApprovalCode	ApprovalCode, as sent by the issuer bank.	
TransactionID	Reference number for ongoing transaction	
OrderID	It's returned if it's set to be auto generated	
Amount	Amount charged for the transaction	
Balance	Balance amount for the transaction that has not yet been captured	
CardNumber	Masked card number	
CardToken	Tokenized value for the card/Account used	
CardBrand	Provides the details about which brand been used for the payment.	

*- For non-card present payments.

**- For Card present payments like kiosk, Mobile POS etc.

Below is the sample CardTrack2 data – ";4111111111111111=18112011000089600000?"

5.2.   Sample Request

URL: Refer Appendix B.

Headers:

Content-Type:application/json

Accept:application/json

Request Body:

```
{
  "Authorization": {
        "Customer": "Demo Merchant",
        "Language": "en",
        "Currency": "AED",
        "OrderName": "Pinger-NBAD",
        "OrderID": "990000227113719",
        "Channel": "W",
        "Amount": "100",
        "TransactionHint": "CPT:Y;",
        "CardNumber": "4111111111111111",
        "ExpiryMonth": "11",
         "ExpiryYear": "2020",
        "VerifyCode": "123",
        "UserName":"Demo_fY9c",
        "Password":"Comtrust@20182018"
 }
}
```

5.3.   Sample Response

```
{
  "Transaction": {
    "ResponseCode": "0",
    "ResponseClass": "0",
    "ResponseDescription": "Request Processed Successfully",
    "ResponseClassDescription": "Success",
    "Language": "en",
    "TransactionID": "202414738801",
    "ApprovalCode": "861586",
    "Account": "NBAD",
    "Balance": {
      "Value": "0",
      "Printable": "Dhs.0.00"
    },
    "OrderID": "990000227113719",
    "Amount": {
      "Value": "100",
      "Printable": "Dhs. 100.00"
    },
```

```
    "Fees": {
       "Value": "0",
       "Printable": "Dhs.0.00"
    },
    "CardNumber": "411111******1111",
    "Payer": {
       "Information": "411111******1111"
    },
    "CardToken": "4111116104351111",
    "CardBrand": "Visa",
    "CardType": "Unknown",
    "UniqueID": "861be72d-2e7a-49f7-9d58-cb5e3e88d8e5"
  }
}
```

6. Capture

When the payment is not set with Auto-Capture, then the payment has to be captured by a separate call. Partial and Full capture ca be performed on a payment transaction. In Full capture, the total outstanding amount will be captured and in partial capture, only a portion of outstanding amount will be captured.

6.1. Capture call Properties

Property	Usage	Comments
Request Properties		
Customer	Customer ID. Please refer to Appendix A for Business Channel details	**MANDATORY**
Store	Store. Please refer to Appendix A for Business Channel details	OPTIONAL
Terminal	Terminal. Please refer to Appendix A for Business Channel details	OPTIONAL
TransactionID	TransactionID returned in Registration response.	**MANDATORY**
Amount	Amount to be captured. This Amount should be less than or equal to outstanding balance amount.	**MANDATORY** for Partial Capture
Currency	Currency in which above mentioned amount is to be charged. This Currency should be same as that of mentioned in SPI Registration or Authorization call.	**MANDATORY** for Partial Capture

TransactionHint	Only allowed value is RVS:Y or RVS:N which indicates whether remaining part of balance should be reversed automatically or not.	OPTIONAL
UserName	To be used in case of username/password authentication.	OPTIONAL
Password	To be used in case of username/password authentication.	OPTIONAL
Response Properties **Due to Continuous enhancements, EPG may include additional parameters in the response of API in future. Transaction processing at client side must not fail because of this.**		
ResponseCode	This field returns the exact response code. **Success is always indicated with 0**	
ResponseDescription	User-friendly description of the error in ResponseCode. *Note: This field can only be used to display the error description and* *should not be used to check if transaction was successful, to check if* *Transaction was successful please use ResponseCode field.*	
UniqueID	Unique reference ID for this call	
TransactionID	Reference for ongoing transaction	
Balance	Outstanding balance after current transaction.	

6.2. Sample Request

URL: Refer Appendix B.

Headers:

Content-Type:application/json

Accept:application/json

Request Body:
```
{
 "Capture": {
  "Amount": "1",
  "Currency": "AED",
  "TransactionID": "816483840525",
  "Customer": "Demo Merchant",
  "UserName":"Demo_fY9c",
  "Password":"Comtrust@20182018"
```

6.3. Sample Response

```
}
}




{
  "Transaction": {
    "ResponseCode": "0",
    "ResponseClass": "0",
    "ResponseDescription": "Request Processed Successfully",
    "ResponseClassDescription": "Success",
    "Balance": {
      "Value": "18.000",
      "Printable": "Dhs. 18.00"
    },
    "Amount": {
      "Value": "0"
    },
    "Fees": {
      "Value": "0"
    },
    "Payer": null,
    "UniqueID": "94ca48ec-e046-4453-a121-9bd8996aeb8a"
  }
}
```

7. Reversal

When the payment is set with Manual-Capture, and to release the money to payer's card Reversal call has to be made. Full Reversal or Partial Reversal can be performed on a payment transaction. Full Reversal will release entire outstanding amount to the payer's card and Partial Reversal will release portion of outstanding amount

7.1. Reversal call Properties

Property	Usage	Comments
Request Properties		
Customer	Customer ID. Please refer to Appendix A for Business Channel details	**MANDATORY**
Store	Store. Please refer to Appendix A for Business Channel details	OPTIONAL
Terminal	Terminal. Please refer to Appendix A for Business Channel details	OPTIONAL
TransactionID	TransactionID returned in Registration response.	**MANDATORY**
Amount	Amount to be Reversed. This Amount should be less than or equal to outstanding balance amount.	**MANDATORY** for Partial Reversal
Currency	Currency in which above mentioned amount is to be charged. This Currency should be same as that of mentioned in SPI Registration or Authorization call.	**MANDATORY** for Partial Reversal
UserName	To be used in case of username/password authentication.	OPTIONAL
Password	To be used in case of username/password authentication.	OPTIONAL
Response Properties **Due to Continuous enhancements, EPG may include additional parameters in the response of API in future. Transaction processing at client side must not fail because of this.**		
ResponseCode	This field returns the exact response code. **Success is always indicated with 0**	
ResponseDescription	User-friendly description of the error in ResponseCode.	
UniqueID	Unique reference ID for this call	
TransactionID	Reference for ongoing transaction	
Balance	Outstanding balance after current transaction.	

7.2. Sample Request

URL: Refer Appendix B.

Headers:

Content-Type:application/json

Accept:application/json

Request Body:
```
{
 "Reversal": {
   "Amount": "1",
   "Currency": "AED",
   "TransactionID": "816483840525",
   "Customer": "Demo Merchant",
   "UserName":"Demo_fY9c",
   "Password":"Comtrust@20182018"

 }
}
```

7.3. Sample Response

```
{
  "Transaction": {
    "ResponseCode": "0",
    "ResponseClass": "0",
    "ResponseDescription": "Request Processed Successfully",
    "ResponseClassDescription": "Success",
    "Balance": {
      "Value": "17.000",
      "Printable": "Dhs. 17.00"
    },
    "Amount": {
      "Value": "0"
    },
    "Fees": {
      "Value": "0"
    },
    "Payer": null,
    "UniqueID": "41819851-04a9-4d71-97eb-59e0a9c6a5b9"
  }
}
```

8. Refund

Refund is used to refund the amount which is settled to merchant account. This will debit money from the merchant account and credit to user's card. **Bank approval is required to enable Refund.**

8.1. Refund call Properties

Property	Usage	Comments
Request Properties		
Customer	Customer ID. Please refer to Appendix A for Business Channel details	**MANDATORY**
Store	Store. Please refer to Appendix A for Business Channel details	OPTIONAL
Terminal	Terminal. Please refer to Appendix A for Business Channel details	OPTIONAL
TransactionID	TransactionID returned in Registration response.	**MANDATORY**
Amount	Amount to be Refund. This Amount should be same as the transaction amount.	OPTIONAL
Currency	Currency used in Registration or Authorization call.	OPTIONAL
UserName	To be used in case of username/password authentication.	OPTIONAL
Password	To be used in case of username/password authentication.	OPTIONAL
Response Properties		
Due to Continuous enhancements, EPG may include additional parameters in the response of API in future. Transaction processing at client side must not fail because of this.		
ResponseCode	This field returns the exact response code. **Success is always indicated with 0**	**MANDATORY**
ResponseDescription	User-friendly description of the error in ResponseCode. *Note: This field can only be used to display the error description and should not be used to check if transaction was successful, to check if Transaction was successful please use ResponseCode field.*	**MANDATORY**
ApprovalCode	ApprovalCode, as sent by the issuer bank if response code is 0.	Conditional Mandatory
TransactionID	Reference number for ongoing transaction	

8.2. Sample Request

URL: Refer Appendix B.

Headers:

Content-Type:application/json

Accept:application/json

Request Body:
```
{
 "Refund": {
   "Amount": "1",
   "Currency": "AED",
   "TransactionID": "816483840525",
   "Customer": "Demo Merchant",
   "UserName":"Demo_fY9c",
   "Password":"Comtrust@20182018"
 }
}
```

8.3. Sample Response

```
{
   "Transaction": {
      "ResponseCode": "0",
      "ResponseClass": "0",
      "ResponseDescription": "Request Processed Successfully",
      "ResponseClassDescription": "Success",
      "Language": "en",
      "ApprovalCode": "730274",
      "Balance": {
         "Value": "0"
      },
      "Amount": {
         "Value": "0"
      },
      "Fees": {
         "Value": "0"
      },
```

    "Payer": null,

    "UniqueID": "1fd1a6f2-3ec4-46de-8465-a28b14e46503"

  }

}

9. Recurrence Payments

Recurring Payments is a solution where a Merchant wants to save Credit Card information (sensitive data) and payer gives him permission to make future transactions on his behalf or may be on just one click by payer (payer does not need to provide same Credit Card information again and again) for his future transactions.

As per PCI standards, only PCI compliant companies are allowed to store any Credit Card sensitive data like card number. Every merchant who wants to implement Recurring Payments kind of functionality cannot afford to be PCI compliance.

So EPG is providing "Recurring Payments" feature where merchants will redirect the payers to EPG where they'll provide their Credit Card details, EPG will authenticate provided data and return a reference for saved Card details for future Recurring Payment call from same Merchant for that specific Credit Card.

9.1.   Registration for Recurrence Payments

In this model, when the customer makes payment for the first time, he/she will be redirected to payment page where he will provide his credit card number and complete the payment. When this payment is marked as recurrence payment, EPG will store this credit number against the TransactionID of this payment. This transaction is called Master Transaction and all the subsequent transactions must use this master transaction id to indicate EPG to use the stored credit card number.

To register for recurrence transaction, the below parameter to be added in the Registration call and EPG will consider as a recurrence payment and will store the credit card number.

Sample Registration request to register for recurrence:

```
{
  "Registration": {
    "Customer": "Demo Merchant",
    "Language": "en",
    "OrderName": "PaymentDesc",
    "OrderID": "TEST",
    "Amount": "75.00",
    "Currency": "AED",
    "Recurrence": { "Type": "M" },
    "OrderInfo": "Telephone Bills",
    "TransactionHint": "CPT:Y;VCC:Y",
    "ReturnPath": "https://demo-ipg.comtrust.ae/MerchantDemo/Authorization.aspx"
  }
}
```

And in the response of registration call will have TransactionID as like normal payment call. This ID is recurrence id and to be stored and used in all subsequent transaction. Other than this minor change, everything else (Redirection, Finalization call) is similar to the normal payment.

Subsequent recurrence transaction can be initiated in 2 ways.

1) Payer Present Scenario: In this case payer will initiate payment, once redirecting to payment gateway credit card will be auto populated so payer need to enter only CVV value followed by 3D authentication.
2) Payer not Present Scenario: In this method Merchant can initiate payment through batch process without the intervention of Payer.

9.1.1. User Present Scenario (Tokenization)

When merchant initiate the subsequent payment transaction, the master transaction id to be used in the registration call. Below is the extra parameter to be added in the Registration call request.

The sample request message will look like below:

```
{
  "Registration": {
    "-version": "1.0",
    "Customer": "Demo Merchant",
    "Language": "en",
    "OrderName": "PaymentDesc",
    "OrderID": "TEST",
    "Amount": "75.00",
    "Currency": "AED",
    "ReturnPath": "https://demo-ipg.comtrust.ae/MerchantDemo/Authorization.aspx",
    "OrderInfo": "Telephone Bills",
    "TransactionHint": "CPT:Y;VCC:Y",
    "ExtraData": { "RecurrenceID": "806382547836" }
  }
}
```

In the response to the subsequent registration calls, the unique TransactionID will be generated and sent by EPG as this will be unique identifier for current payment and the same to be used for redirection and finalization calls.

Master transaction id should not be used anywhere except in the "RecurrenceID" to indicate EPG to use the stored credit card number. Each and every transaction will have unique transaction id and this unique id to be used for redirection and finalization/capture/reversal/refund calls.

9.1.2. Payer Not Present Scenario

In this process merchant can initiate payment without the intervention of payer. In this way transaction will not be 3D Secure. RecurrenceID saved while registering recurrence transaction should be send as TransactionID in below Authorization request.

The sample request message will look like below:

Sample request:
```
{
"Authorization" : {
"Currency": "AED",
"TransactionHint": "CPT:Y;VCC:Y;",
"OrderID": "3333333344444",
"Channel": "R",
"Amount": "2.00",
"Customer": "Demo Merchant",
"TransactionID" :"806382547836",
"OrderName": "Paybill"
}
}
```

Sample response:
```
{
   "Transaction": {
      "ResponseCode": "0",
      "ResponseClass": "0",
      "ResponseDescription": "Request Processed Successfully",
      "ResponseClassDescription": "Success",
      "Language": "en",
      "TransactionID": "805087587162",
      "ApprovalCode": "789038",
      "Account": "NBAD",
      "Balance": {
         "Value": "0",
```

```json
      "Printable": "Dhs.0.00"
    },
    "OrderID": "3333333344444",
    "Amount": {
      "Value": "2.00",
      "Printable": "Dhs. 2.00"
    },
    "Fees": {
      "Value": "0",
      "Printable": "Dhs.0.00"
    },
    "CardNumber": "411111******1111",
    "Payer": {
      "Information": "411111******1111"
    },
    "CardToken": "4111118733841111",
    "CardBrand": "Visa",
    "CardType": "Unknown",
    "UniqueID": "99ddc603-c57b-4f57-8f85-c9e35c985113"
  }
}
```

10. Central Bank Payments

Central Bank Online payment has no difference with the normal payment flow. But In case of offline payments, there are few more action required by Merchants and the same is explained below.

Payment Flow:

1. Portal/Web Site initiates Registration call to EPG.
2. On successful response from EPG, Portal redirects to EPG Payment Portal.
3. Once the payment is done, EPG returns the control to ReturnPath URL set in Registration call.
4. Portal will initiate Finalization call to EPG. This call will have following types of responses.

Response Code	Status	Comments
0	Success	Its online payment. No further action required.
210	Pending	Its Offline payment and the required actions are described below.
Any other codes	Failed	Payment Failed

Central Bank Offline Payments:

When the finalization call response code is 201 then the payment is pending status and it is consider to be offline scenario. The payment status update for this type of payment happens in below two methods. Both the below implementations are mandatory.

1. **PUSH Method**

   When the central bank updates EPG with payment status, EPG will send notification to merchant via HTTPS POST method. Merchant need to provide HTTPS URL to receive this notification. This notification will contains below 3 information.

   a) TransactionID
   b) ResponseCode
   c) ResponseMessage

If the Response Code is 0 or 200 then Merchant need to initiate Finalization and update the status of payment based on Finalization response otherwise consider the transaction as failed and remove the transaction from QueryTransaction scheduler job.

2. **PULL Method**

   Once the payment is marked as offline payment then portal need to add those transactions in a job to check the status of transaction each and every hour till X number of hours which should be configurable. Portal to initiate QueryTransaction call to EPG to check the status of offline payment. Kindly parse detail array of QueryTransaction response which consist value as "3DS

Verify" in parameter Detail/Type/Name as "3DS Verify" and check its corresponding Response/Code then decide action based on below table.

Note: Please check the below interface document for Query Transaction API call.
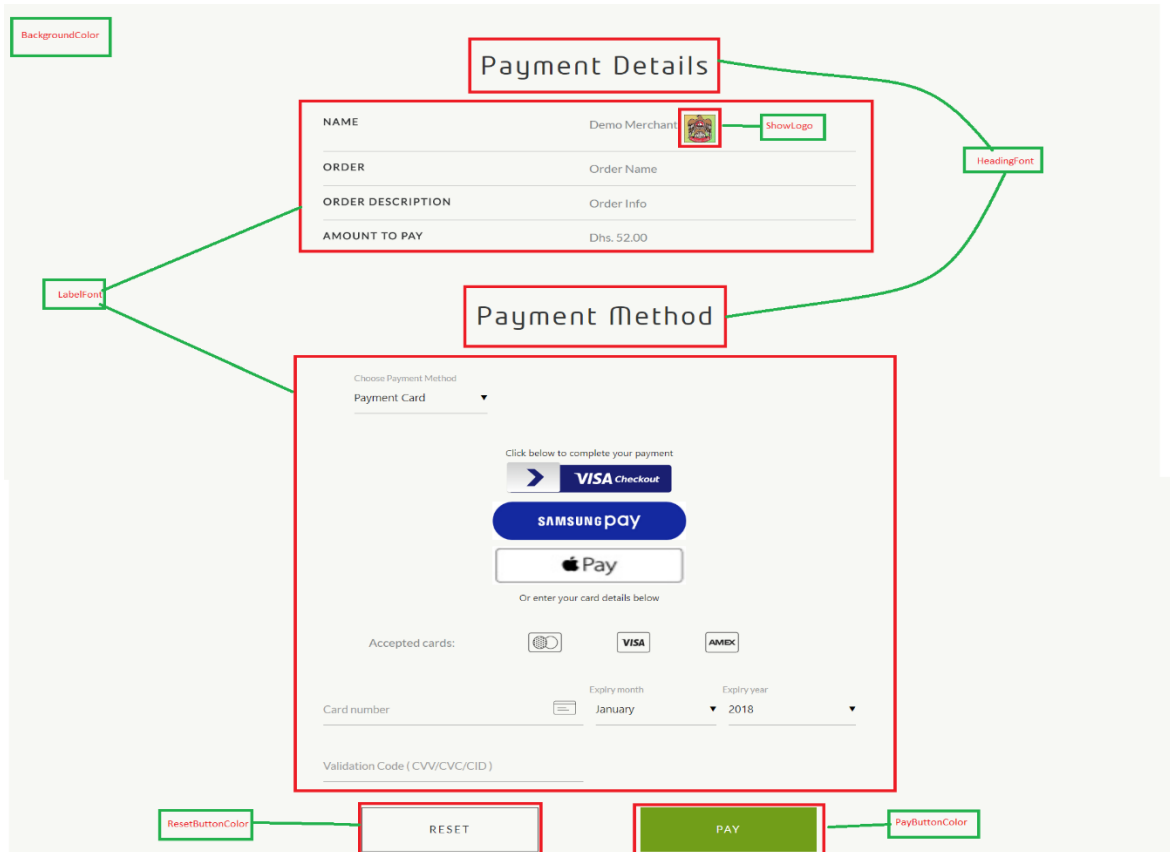
Response Code	Response Code Description	Action to be taken
000 OR 200	Transaction processed successfully.	Proceed with Finalization call to EPG and update the payment status based on finalization response. Remove the Transaction from scheduler calling QueryTransaction.
001	Limit exceeded	Mark the transaction as failed
002	Account not found	Mark the transaction as failed
003	Account inactive	Mark the transaction as failed
004	Low balance	Mark the transaction as failed
058	Transaction timed out	Consider transaction still in pending state and Merchant can perform query transaction to get the status.
059	Transaction rejected by host	Mark the transaction as failed
062	Host offline	Consider transaction still in pending state and Merchant can perform query transaction to get the status.
063	Destination not found	
066	No transactions allowed	Mark the transaction as failed
067	Invalid account status	
095	Transaction rejected	Mark the transaction as failed
101	Invalid merchant credentials	Mark the transaction as failed
102	Card blocked	Mark the transaction as failed
103	Customer blocked	Mark the transaction as failed
104	BIN not allowed for use on merchant	Mark the transaction as failed
105	Transaction exceeds merchant per transaction limit	Mark the transaction as failed

106	Transaction exceeds per transaction limit for card	Mark the transaction as failed
107	Transaction exceeds cycle limit for card	Mark the transaction as failed
108	Authorization of customer registration required	Mark the transaction as failed
111	Transaction not allowed on Merchant/Bank	Mark the transaction as failed
112	Transaction Cancelled by User	Mark the transaction as failed
113	Transaction settlement period lapsed	Mark the transaction as failed
114	Transaction cancelled due to security breach	Mark the transaction as failed
116	Transaction Expired	Mark the transaction as failed
117	Transaction not allowed on Sub Merchant	Mark the transaction as failed
118	Transaction not allowed due to maintenance	Consider transaction still in pending state and Merchant can perform query transaction to get the status.
121	Transaction has been marked confirmed by Merchant	Consider Transaction as successful.
122	Reversed	Mark the transaction as reversed.
199	System error	Consider transaction still in pending state and Merchant can perform query transaction to get the status.
200	Transaction approved – Post authorization	Proceed with Finalization
210	Authorization pending	Transaction still in pending state.
999	Transaction failed. This response code will be sent when the transaction fails due to some technical issue at PG or Bank's end.	Consider transaction still in pending state and Merchant can perform query transaction to get the status.

11. Payment Page Customization

Etisalat Payment Gateway allows merchant to have a customized payment page to match the theme of their website. Below are the property which can be used for customization. All these properties are optional and merchant can set any of the below property as required. These property has to be sent as hidden field similar to Transaction ID while re-directing to payment page after registration call.

Property Name	Usage
PayButtonColor	Color of the PAY button
PayButtonTextColor	Font color of PAY button
ResetButtonColor	Color of the RESET button
ResetButtonTextColor	Font color of RESET button
BackgroundColor	Specifying overall background color of Payment Page
HeadingFont	Font name for 2 heading on Payment Page ('Payment Details' & 'Payment Method')
HeadingColor	Specifying the color of Heading font
LabelFont	Font name for almost all other text shown on Payment Page
LabelColor	Specifying the color of Label font
ErrorMessageFont	Specifying the font of error message
ErrorMessageColor	Specifying the color of Error Message font
ShowLogo	Show merchant logo beside his name under Payment Detail section. Logo to be shared separately with Etisalat for configuration.
HeadingBackgroundColor	to change background color of all headings
DropdownBackgroundColor	to change background color of all dropdowns
ActiveFieldFocusColor	to change active field default color which is green as of now

Sample Code:

```
<input type="hidden" name='TransactionID' value='275778845637' />

<input type="hidden" name='PayButtonColor' value='#FF7F27' />
<input type="hidden" name='ResetButtonColor' value='#B97A57' />
<input type="hidden" name='BackgroundColor' value='#C8BFE7' />
<input type="hidden" name='HeadingFont' value='Algerian' />
<input type="hidden" name='LabelFont' value='Chiller' />
<input type="hidden" name='ShowLogo' value='True' />
```

12. Appendix A

12.1. Point of Sale Properties

Property	Description
Customer	This property maps to Customer ID as mentioned in Work Order, for testing on staging **Demo Merchant** should be used as Customer ID.
Channel	Payment Channel to be used for the transaction <u>Acceptable Values:</u> • Web **(default)** • Terminal • POS • Recurring • Phone • Mail • USSD • MEC
Store	The name of the store (this property is optional unless the merchant requested support for more than one store or the default store has not been provisioned in Payment Gateway, *Merchant Integration Support team advises the merchant on its usage upon request*)
Terminal	The name of the terminal (this property is optional unless the merchant requested support for more than one terminal or the default terminal has not been provisioned in Payment Gateway, *Merchant Integration Support team advises the merchant on its usage upon request*)

12.2. Transaction Properties

Property	Description

Language	This property can be used with any request and it specifies which language is used for error message descriptions. In order to display messages correctly, the proper language code page has to be installed on the server. Currently defined languages: - **EN** – English - **AR** – Arabic - **QQ** – Technical descriptions (detailed description suited for troubleshooting and testing, but not recommended to be used as an end user messages)
Amount	It represents the transaction amount (in standard format with dot as a separator e.g. 12.34)
Currency	Transaction's currency as ISO currency code (e.g. 840 for US Dollar, 874 for UAE Dirham) or ISO currency name (e.g. USD for US Dollar, AED for UAE Dirham). Please refer to following link for complete list: http://www.currency-iso.org/iso_index/iso_tables/iso_tables_a1.htm
TransactionHint	This property is used to specify which payment instruments should be available to the buyer. Merchant can specify which features should be supported by payment instrument i.e. later reversal, capture, partial reversal, partial capture etc. Additionally a merchant can request the final step to perform either authorization and capture or authorization alone e.g. **CPT:N** –only authorization (Manual Capture) **CPT:Y** –authorization and capture (Auto Capture) (**Default behavior**) Merchant can also use this property to select one of scenarios which has been configured on Payment Gateway – SCN:<scenario letter> e.g. **SCN:X** – 'X' is the Scenario ID as configured and communicated by EPG team for a particular type of transaction scenario For controlling whenever and for which brands Payment Portal should require payer to enter Verification Code (i.e. CVV2, CVC2, CID). VCC tag will control verification codes for all brands, while CVV, CVC, CID will control it for specific brand only e.g. **VCC:Y** –ask verification code for all brands (**Default behavior**) **VCC:N** – don't ask verification code for any brand

	CVV:Y–ask verification code for *Visa* **CVV:N**– don't ask verification code for *Visa* **CVC:Y**–ask verification code for *MasterCard* **CVC:N**– don't ask verification code for *MasterCard* **CID:Y**–ask verification code for *Discover/AMEX* **CID:N**– don't ask verification code for *Discover/AMEX* Card Tokenization, whether to apply or not can be defined in the configuration **CTK:!**–Use CustomerID as seed **CTK:X**– 'X' will representa custom seed (Char) for card tokenization **CTK:E** –Tokenization seed for Etisalat Multiple hints within TransactionHint have to be separated by semicolon e.g. **pay.SetProperty("TransactionHint", "CPT:N;VCC:Y;SCN:A");** Hints specified by merchant as part of transaction take precedence over those set in merchant profile on payment gateway.
OrderID	This can serve two different purposes; you can either specify an order ID here or ask system to generate one. It can consist of text and special sequences, the total length once the sequences are expanded cannot exceed 16 characters. Special sequences: **o Date/Time sequences** _ **{Y}** – year (yyyy format) _ **{y}** – year (yy format) _ **{m}** – month (mm format) _ **{b}** – month (3 letters long abbreviation) e.g. Jun, Feb etc. _ **{d}** – day (dd format) _ **{a}** – day of the week (3 letters long abbreviation) e.g. Sun, Mon _ **{H}** – hour (24 hour system) _ **{I}** – hour (12 hour system) _ **{p}** – AM/PM indicator _ **{m}** – minutes _ **{S}** – seconds _ **{L}** – number of milliseconds _ **{j}** – Julian day (the day number starting from 1st of January)

	o GMT / Local time By default all dates and sequences are using GMT (UTC) time, in order to use local time instead, the suffix "g" can be added to any command, this suffix should be placed before the number in the sequence (or before closing "}" if a sequence does not contain any numbers). Examples (assuming it's 1st of December 2004, 14:12pm): *{Y}{m}{d}{Od5} – generates: 2004120100001, 2004120100002, 2004120100003 etc. and then in the next day 2004120200001, 2004120200002, 2004120100003 etc.* *{Yg}{mg}{dg}{Od5g} – same as above but operating on local UAE time ·* *Box{b}{H}{Oy7}–generates: BoxDec140000001, BoxDec140000002 etc., at 15pm it resets to BoxDec150000001, BoxDec150000002 etc.*
OrderName	Short description of the order. The OrderName has to be shorter than 25 characters. It can contain only printable Unicode characters and it cannot neither start nor end nor have to adjacent white characters.
OrderInfo	Long description of the goods which are being purchased (this will be displayed on Common Payment Page as a tooltip). The OrderInfo has to be shorter than 256 characters. It can contain only printable and end of line Unicode characters and it cannot neither start nor end nor have to adjacent white characters.
TransactionID	Transaction reference number. This is returned by EPG itself in response of WEB SERVICE Registration call
RecurrenceID	Transaction reference number for registered credit card to initiate recurrence transaction.
MerchantAccount	Name of account in payment gateway configurations that transaction happened with (**to avoid any confusions, use this field for any references or logging only if advised by Merchant Integration Support**)

12.3. Buyer Properties

Property	Description
AccountNumber	Credit or Debit Card number
ExpiryDate	Specify ExpiryDate as *yyyy-mm* (given format is recommended, but *yy-mm mm/yyyy, mm/yy*are also accepted)**;**

VerifyCode	This property refers to CVV2/CVC/etc. The format of the value has to match format used by given card brand (3 digits for Visa/MC/JCB and Diners and 4 digits for AMEX and Simulator). Some brands accept to additional symbols: 'N/A' to indicate that VerifyCode is unavailable and 'ILG' which specifies that the value printed on the card is illegible.
CardTrackData	This property is used in case of card present scenario where payer swaps the card into a machine like KIOSK. KIOSK reads the Card Track Data and sends it to EPG in CardTrackData field. *Note: In case CardTrackData is being sent to EPG then there is no need to send any other property from **Buyer Related Properties**.*

12.4.   Response Properties

These response properties can be retrieved in response to a particular call. For code sample/syntax refer to Section 5.3.8.2 Late Bound Properties.

Property	Description
ResponseCode	This field returns the exact response code. **Success is always indicated with 0**, and any code using WEB SERVICE component should verify this status. *Note: The exact meaning of this value may be different depend on the buyer's card issuer, merchant's account bank or the step at which authentication failed, which means that we are unable to provide a list of all possible descriptions, in order to receive user- friendly description of the event please use ResponseDescription field.* Please refer to FAQ Document for Troubleshooting guide on EPG errors.
ResponseDescription	User-friendly description of the error in ResponseCode. *Note: This field can only be used to display the error description and should not be used to check if transaction was successful, to check if transaction was successful please use ResponseCode field.*

ResponseClass	This field serves a similar purpose as ResponseCode, but instead of giving a very detailed error it specifies at which stage or part of the system request failed (for example it may point out that issuer declined request or acquire did not accept it or Payment Gateway rejected it, without going into detail)
ResponseClassDescription	This is a user-friendly description of ResponseClass
TransactionID	Unique ID for in progress transaction (**Returned in response for every call**)
RecurrenceID	Recurrence ID used for subsequent recurrence transaction.
PaymentPortal	Link to Common Payment Page where payer will be asked to input Credit Card information for secure transaction (**Returned only in response for *Registration* call**)
ApprovalCode	This is the response coming from respective bank for Authorization (**Returned only in response for*Authorization & Finalization*calls**)
OrderID	OrderID as provided by Customer or if Customer chose automated OrderID generation in Registration or Authorization call then the generated value (**Returned only in response for*Authorization & Finalization* calls**)
Balance	This is the response coming from respective bank for Authorization (**Returned only in response for *Capture & Reversal* calls**)
AccountExpiry	Expiry date of Credit Card. This value will be send only while registering a Credit Card for Recurring Payments. It will be send in DateTime format
Details/Type	Below are the list of Operation name. **Name** **Value** Registration V PaymentPage Query V Payment Data Update V Authentication Update V CC Fraud F CC Authorization A CC Reversal R CC Capture S CB Authorization A CB Capture S CB Reversal R
Details/Status	Below are the list of Status which can be associated for any operation mentioned above.

	Name **Value** Pending p Accepted A Not Accepted F Reverting r Reverted R Rejected U Waiting w Canceled C Timeout T Invalid I
Payer/CardBrand or AccountBrand	Below are the list of Card Brand and its symbols Name Symbol Visa V MasterCard M AMEX A CentralBank UNB Account ADCB Account

13. Appendix B

13.1. Server Configuration.

Server	URL	Port
Production	https://ipg.comtrust.ae	2443
Sandbox	https://demo-ipg.ctdev.comtrust.ae	2443

Connectivity with EPG should be done using TLSv1.2, Also note that Store and Terminal must be configurable for all above call, based on production set up We may or may not provide store and terminal values.

Please contact Merchant Integration Support Merchant-Integration@etisalat.ae to provision and share below configuration.

   a) Customer
   b) Store
   c) Terminal

13.2. Test Credit Cards for Sandbox environment

Visa Card	Master Card	Error Code	Error Description
4111111111111111	5555555555554444	0	Success
4012888888881881		51	Not Sufficient Fund
	5105105105105100	5	Do not honor
Other Valid Visa Cards	Other Valid Master Cards	91	Issuer Switch inoperative

Expiry: Any future month & year
CVV: 123

13.3. User Name and Password Authentication

Merchants can use the below user name and password for authentication. Below is the test user credentials for Demo Merchant account. In the input JSON request, merchant need to send the below two parameters.

UserName	Demo_fY9c
Password	Comtrust@20182018

13.4. Client Certificate Authentication

In case, merchant do not want to use user name and password for authentication, rather wish to use digital certificate for authentication, please contact integration support team for test certificate. When moving live, merchant need to purchase a new client certificate.