



https://verifone.cloud/docs/uk-gateway/threeds_test_cases_checkout_2_1_0

Updated: 29-Oct-2021

Checkout Test Cases 2.1.0

Note: for all test cases please use expiry year longer than 3 years from current year.

Test Case 1: Successful Frictionless Authentication

Scenario	Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).
Test Values	Exp Date: 01/****
Visa PAN	4000000000001000
Mastercard PAN	5200000000001005
American Express PAN	3400000000001007
Expected Results - Lookup	N/A

Scenario **Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).**

```
{  
  
  "amount": value,  
  
  "authentication": {  
  
    "threads_version": "2.1.0",  
  
    "enrolled": "Y",  
  
    "error_no": "0",  
  
    "order_id": "value",  
  
    "eci_flag": "ECI value",  
  
    "signature_verification": "Y",  
  
    "ds_transaction_id": "value",  
  
    "cavv": "value",  
  
    "pares_status": "Y",  
  
    "xid": "value"(AMEX Only),  
  
    "acs_transaction_id": "value"  
  
  },  
  
  "card": "value",  
  
  "currency_code": "value",  
  
  "created_at": "value",  
  
  "organisation": "value",  
  
  "transaction_id": "value",  
  
  "authenticator": "value",  
  
  "_id": "value"  
}
```

Expected Results -
Authentication
Object

Scenario	Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).
Payment Transaction	If "process_transaction": true, the checkout page will initiate the authorization message and return the transaction_id on the return_url
Return_url	{{return_url}}?transaction_id=value&authentication_id=value
Merchant Action	N/A
ECI Value 05	Visa, American Express
ECI Value 02	Mastercard

Test Case 2: Failed Frictionless Authentication

Scenario	Cardholder is enrolled (enrolled=Y), authentication failed (pares_status=N), successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).
Test Values	Exp Date: 01/****
Visa PAN	4000000000001018
Mastercard PAN	5200000000001013
American Express PAN	340000000001015
Expected Results - Lookup	N/A

Scenario	<p>Cardholder is enrolled (enrolled=Y), authentication failed (pares_status=N), successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).</p> <pre> { "amount": value, "authentication": { "threads_version": "2.1.0", "enrolled": "Y", "error_no": "0", "order_id": "value", "eci_flag": "ECI value", "signature_verification": "Y", "ds_transaction_id": "value", "pares_status": "N", "xid": "value"(AMEX Only), "acs_transaction_id": "value", "status_reason": "01" }, "card": "value", "currency_code": "value", "created_at": "value", "organisation": "value", "transaction_id": "value", "authenticator": "value", "_id": "value" }</pre>
Expected Results - Authentication Object	

Scenario	Cardholder is enrolled (enrolled=Y), authentication failed (pares_status=N), successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).
Payment Transaction	If "process_transaction": true, the checkout page will not initiate the authorization message and will return an error in the return_url
Return_url	{return_url}} ?authentication_id=value&error=%27Transaction%20cannot%20be%20initiated%20because%20authentication%20has%20failed.%27
Merchant Action	Merchant should reinitiate the checkout, or prompt for another payment.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 3: Attempts Frictionless Authentication

Scenario	The merchant attempts authentication of the cardholder but the issuer is yet to participate in 3DS or its access control server is unable to respond. The scheme responds on behalf of the Issuer. it is otherwise known as Passive Authentication, and the cardholder is not prompted for authentication credential.
Test Values	Exp Date: 01/****
Visa PAN	4000000000001026
Mastercard PAN	5200000000001021
American Express PAN	3400000000001023
Expected Results - Lookup	N/A

Scenario **The merchant attempts authentication of the cardholder but the issuer is yet to participate in 3DS or its access control server is unable to respond. The scheme responds on behalf of the Issuer. it is otherwise known as Passive Authentication, and the cardholder is not prompted for authentication credential.**

```
{  
  
  "amount": value,  
  
  "authentication": {  
  
    "threeds_version": "2.1.0",  
  
    "enrolled": "Y",  
  
    "error_no": "0",  
  
    "order_id": "value",  
  
    "eci_flag": "ECI value",  
  
    "signature_verification": "Y",  
  
    "ds_transaction_id": "value",  
  
    "cavv": "value",  
  
    "pares_status": "A",  
  
    "xid": "value"(AMEX Only),  
  
    "acs_transaction_id": "value"  
  
  },  
  
  "card": "value",  
  
  "currency_code": "value",  
  
  "created_at": "value",  
  
  "organisation": "value",  
  
  "transaction_id": "value",  
  
  "authenticator": "value",  
  
  "_id": "value"  
}
```

Expected Results
- Authentication
Object

Scenario	The merchant attempts authentication of the cardholder but the issuer is yet to participate in 3DS or its access control server is unable to respond. The scheme responds on behalf of the Issuer. it is otherwise known as Passive Authentication, and the cardholder is not prompted for authentication credential.
Payment Transaction	If "process_transaction": true, the checkout page will initiate the authorization message and return the transaction_id on the return_url
Return_url	{{return_url}}?transaction_id=value&authentication_id=value
Merchant Action	N/A
ECI Value 06	Visa, American Express
ECI Value 01	Mastercard

Test Case 4: Unavailable Frictionless Authentication from the Issuer

Scenario	Cardholder is enrolled (enrolled=Y), Authentication was unavailable (pares_status=U), any of the components involved in 3DS flow was not available. successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).
Test Values	Exp Date: 01/****
Visa PAN	40000000000001034
Mastercard PAN	52000000000001039
American Express PAN	34000000000001031
Expected Results - Lookup	N/A

Scenario	<p>Cardholder is enrolled (enrolled=Y), Authentication was unavailable (pares_status=U), any of the components involved in 3DS flow was not available. successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).</p>
Expected Results - Authentication Object	<pre> { "amount": value, "authentication": { "threeds_version": "2.1.0", "enrolled": "Y", "error_no": "0", "order_id": "value", "eci_flag": "ECI value", "signature_verification": "Y", "ds_transaction_id": "-value", "pares_status": "U", "xid": "value"(AMEX Only), "acs_transaction_id": "value", "status_reason": "01" }, "card": "value", "currency_code": "value", "created_at": "value", "organisation": "value", "transaction_id": "value", "authenticator": "value", "_id": "value" } </pre>

Scenario	Cardholder is enrolled (enrolled=Y), Authentication was unavailable (pares_status=U), any of the components involved in 3DS flow was not available. successful signature verification (signature_verification=Y), authentication takes place without a challenge (step-up).
Payment Transaction	If "process_transaction": true, the checkout page will initiate the authorization message and return the transaction_id on the return_url
Return_url	{{return_url}}?transaction_id=value&authentication_id=value
Merchant Action	Merchant should reinitiate the checkout with 3DS, if the Authorization is declined by the issuer.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 5: Rejected Frictionless Authentication by the Issuer

Scenario	Authentication has been rejected by the issuer due to the card being blocked or the account not valid (enrolled=Y, pares_status=R)
Test Values	Exp Date: 01/****
Visa PAN	4000000000001042
Mastercard PAN	5200000000001047
American Express PAN	3400000000001049
Expected Results - Lookup	N/A

Scenario	Authentication has been rejected by the issuer due to the card being blocked or the account not valid (enrolled=Y, pares_status=R)
Expected Results - Authentication Object	<pre> { "amount": value, "authentication": { "threads_version": "2.1.0", "enrolled": "Y", "error_no": "0", "order_id": "value", "eci_flag": "ECI value", "signature_verification": "Y", "ds_transaction_id": "value", "pares_status": "R", "xid": "value"(AMEX Only), "acs_transaction_id": "value", "status_reason": "01" }, "card": "value", "currency_code": "value", "created_at": "value", "organisation": "value", "transaction_id": "value", "authenticator": "value", "_id": "value" } </pre>

Scenario	Authentication has been rejected by the issuer due to the card being blocked or the account not valid (enrolled=Y, pares_status=R)
Payment Transaction	If "process_transaction": true, the checkout page will not initiate the authorization message and will return an error in the return_url.
Return_url	{{return_url}}? authentication_id=value& error= %27Transaction%20cannot%20be%20initiated%20because%20issuer%20rejected%20the%20authentication.%27
Merchant Action	Merchant should reinitiate checkout with 3DS or prompt for another payment.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 6: Authentication Not Available on Lookup

Scenario	Authentication not available during the authentication request (lookup), any of the components involved in 3DS flow was not available. (enrolled=U)
Test Values	Exp Date: 01/****
Visa PAN	4000000000001059
Mastercard PAN	5200000000001054
American Express PAN	3400000000001056
Expected Results - Lookup	N/A

Scenario	<p>Authentication not available during the authentication request (lookup), any of the components involved in 3DS flow was not available. (enrolled=U)</p> <pre>{ "amount": value, "authentication": { "threads_version": "2.1.0", "enrolled": "U", "error_no": "0", "order_id": "value", "eci_flag": "ECI value", "reason_code": "101", "reason_desc": "Invalid Formatted Message Invalid Formatted Message", }, "card": "value", "currency_code": "value", "created_at": "value", "organisation": "value", "transaction_id": "value", "authenticator": "value", "_id": "value" }</pre>
Expected Results - Authentication Object	
Payment Transaction	If "process_transaction": true, the checkout page will not initiate the authorization message and will return an error in the return_url.
Return_url	{{return_url}}?transaction_id=value&authentication_id=value
Merchant Action	Merchant should reinitiate checkout with 3DS or prompt for another payment.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 7: Error on Lookup

Scenario	An error took place during the 3DS flow. The authentication response (lookup) will contain an error.
Test Values	Exp Date: 01/****
Visa PAN	40000000000001067
Mastercard PAN	52000000000001062
American Express PAN	34000000000001064
Expected Results - Lookup	N/A

Scenario	An error took place during the 3DS flow. The authentication response (lookup) will contain an error.	
Expected Results - Authentication Object	<pre> { "amount": value, "authentication": { "threeds_version": "2.1.0", "enrolled": "U", "error_desc": "Error Processing Message Request", "error_no": "1001", "order_id": "value", Xid = "Xid value> (Amex Only)", "eci_flag": "ECI value", "reason_code": "1001", "reason_desc": "Error Processing Message Request" }, "card": "value", "currency_code": "value", "created_at": "value", "organisation": "value", "transaction_id": "value", "authenticator": "value", "_id": "value" } </pre>	
Payment Transaction	If "process_transaction" : true, the checkout page will not initiate the authorization message and will return an error in the return_url.	
Return_url	<pre> {{return_url}}? authentication_id=value&error=%27An%20error%20took place%20during%20the%20authentication.%20Please%20refer%20to%20the%20Reason%20Code%20or%20contact%20your%20Administrator.%27 </pre>	

Scenario	An error took place during the 3DS flow. The authentication response (lookup) will contain an error.
Merchant Action	Merchant should reinitiate the checkout, or prompt for another payment.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 8: Timeout on lookup Transaction

Scenario	Any of the involved components delayed to response and a timeout was triggered while waiting the authentication (lookup) response.
Test Values	Exp Date: 01/****
Visa PAN	40000000000001075
Mastercard PAN	52000000000001070
American Express PAN	34000000000001072
Expected Results - Lookup	N/A

Scenario	Any of the involved components delayed to response and a timeout was triggered while waiting the authentication (lookup) response.
Expected Results - Authentication Object	<pre> { "amount": value, "authentication": { "threads_version": "2.1.0", "enrolled": "U", "error_no": "value", "error_desc": "value" "order_id": "value", "eci_flag": "ECI value", "reason_code": "101", "reason_desc": "Message Received Invalid Invalid Formatted Message" }, "card": "value", "currency_code": "value", "created_at": "value", "organisation": "value", "transaction_id": "value", "authenticator": "value", "_id": "value" } </pre>
Payment Transaction	If "process_transaction": true, the checkout page will not initiate the authorization message and will return an error in the return_url.
Return_url	{{return_url}}? authentication_id=value&error=%27An%20error%20took place%20during%20the%20authentication. %20 Please%20refer%20to%20the%20Reason%20Code%20or%20contact%20your%20Administrator.%27
Merchant Action	Merchant should reinitiate the checkout, or prompt for another payment.

Scenario	Any of the involved components delayed to response and a timeout was triggered while waiting the authentication (lookup) response.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 9: Successful Step Up Authentication

Scenario	Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication).
Test Values	Exp Date: 01/****
Visa PAN	4000000000001091
Mastercard PAN	5200000000001096
American Express PAN	340000000001098
Expected Results - Lookup	N/A

Scenario **Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication).**

```
{  
  "amount": value,  
  "authentication": {  
    "cavv": "value",  
    "challenge_required": "N",  
    "acs_transaction_id": "value",  
    "payload": "value",  
    "pares_status": "Y",  
    "acs_url": "value",  
    "ds_transaction_id": "value",  
    "signature_verification": "Y",  
    "eci_flag": "ECI value",
```

Expected Results - Authentication Object

```
  "order_id": "value",  
  "xid": "value"(AMEX Only),  
  "error_no": "0",  
  "enrolled": "Y",  
  "threads_version": "2.1.0"  
  },  
  "card": "value",  
  "currency_code": "value",  
  "created_at": "value",  
  "organisation": "value",  
  "transaction_id": "value",  
  "authenticator": "value",  
  "_id": "value"
```

Scenario	Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication).
Payment Transaction	If "process_transaction": true, the checkout page will initiate the authorization message and return the transaction_id on the return_url
Return_url	{{return_url}}?transaction_id=value&authentication_id=value
Merchant Action	N/A
ECI Value 05	Visa, American Express
ECI Value 02	Mastercard

Test Case 10: Failed Step Up Authentication

Scenario	Cardholder is enrolled (enrolled=Y), authentication is unsuccessful (pares_status=N), successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication).
Test Values	Exp Date: 01/****
Visa PAN	4000000000001109
Mastercard PAN	5200000000001104
American Express PAN	340000000001106
Expected Results - Lookup	N/A

Scenario **Cardholder is enrolled (enrolled=Y), authentication is unsuccessful (pares_status=N),successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication).**

```
{  
  
  "amount": value,  
  
  "authentication": {  
  
    "challenge_required": "N",  
  
    "acs_transaction_id": "value",  
  
    "payload": "value",  
  
    "pares_status": "N",  
  
    "acs_url": "value",  
  
    "ds_transaction_id": "value",  
  
    "signature_verification": "Y",  
  
    "eci_flag": "ECI value",  
  
    "order_id": "value",  
  
    "error_no": "0",  
  
    "enrolled": "Y",  
  
    "xid": "value"(AMEX Only),  
  
    "threads_version": "2.1.0"  
  
  },  
  
  "card": "value",  
  
  "currency_code": "value",  
  
  "created_at": "value",  
  
  "organisation": "value",  
  
  "transaction_id": "value",  
  
  "authenticator": "value",  
  
  "_id": "value"  
  
}
```

Expected
Results -
Authentication
Object

Scenario	Cardholder is enrolled (enrolled=Y), authentication is unsuccessful (pares_status=N),successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication).
Payment Transaction	If "process_transaction": true, the checkout page will not initiate the authorization message and will return an error in the return_url.
Return_url	{{return_url}}? authentication_id=value&error=%27Transaction%20cannot%20be%20initiated%20because%20authentication%20has%20failed.%27
Merchant Action	Merchant should reinitiate the checkout, or prompt for another payment.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 11: Step Up Authentication is Unavailable

Scenario	Cardholder is enrolled (enrolled=Y), authentication request (lookup) has succeeded, but during challenge and results request (JWT) a 3DS component was unavailable, resulting the transaction to fail (pares_status=U).
Test Values	Exp Date: 01/****
Visa PAN	4000000000001117
Mastercard PAN	5200000000001112
American Express PAN	3400000000001114
Expected Results - Lookup	N/A

Scenario

Cardholder is enrolled (enrolled=Y), authentication request (lookup) has succeeded, but during challenge and results request (JWT) a 3DS component was unavailable, resulting the transaction to fail (pares_status=U).

**Expected Results -
Authentication
Object**

```
{  
  
  "amount": value,  
  
  "authentication": {  
  
    "challenge_required": "N",  
  
    "acs_transaction_id": "value",  
  
    "payload": "value",  
  
    "pares_status": "U",  
  
    "acs_url": "value",  
  
    "ds_transaction_id": "value",  
  
    "signature_verification": "Y",  
  
    "eci_flag": "ECI value",  
  
    "order_id": "value",  
  
    "error_no": "0",  
  
    "enrolled": "Y",  
  
    "xid": "value"(AMEX Only),  
  
    "threeds_version": "2.1.0"  
  
  },  
  
  "card": "value",  
  
  "currency_code": "value",  
  
  "created_at": "value",  
  
  "organisation": "value",  
  
  "transaction_id": "value",  
  
  "authenticator": "value",  
  
  "_id": "value"  
  
}
```

Scenario	Cardholder is enrolled (enrolled=Y), authentication request (lookup) has succeeded, but during challenge and results request (JWT) a 3DS component was unavailable, resulting the transaction to fail (pares_status=U).
Payment Transaction	If "process_transaction": true, the checkout page will initiate the authorization message and return the transaction_id on the return_url
Return_url	{{return_url}}? transaction_id=value&authentication_id=value
Merchant Action	Merchant should reinitiate the checkout with 3DS, if the Authorization is declined by the issuer.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 12: Error on Authentication

Scenario	An error took place during the result request or challenge flow (JWT), and the final result of the authentication will contain an error. The status of the transaction is not eligible for authorisation.
Test Values	Exp Date: 01/****
Visa PAN	4000000000001125
Mastercard PAN	5200000000001120
American Express PAN	3400000000001122
Expected Results - Lookup	N/A

Scenario **An error took place during the result request or challenge flow (JWT), and the final result of the authentication will contain an error. The status of the transaction is not eligible for authorisation.**

{

"amount": value,

"authentication": {

"challenge_required": "N",

"acs_transaction_id": "value",

"payload": "value",

"pares_status": "C",

"acs_url": "value",

"ds_transaction_id": "value",

"signature_verification": "Y",

"xid": "value"(AMEX Only),

"eci_flag": "ECI value",

Expected

Results -

Authentication

Object

"order_id": "value",

"error_no": "value",

"error_desc": "value",

"enrolled": "Y",

"threads_version": "2.1.0"

},

"card": "value",

"currency_code": "value",

"created_at": "value",

"organisation": "value",

"transaction_id": "value",

"authenticator": "value",

"_id": "value"

}

Scenario	An error took place during the result request or challenge flow (JWT), and the final result of the authentication will contain an error. The status of the transaction is not eligible for authorisation.
Payment Transaction	If "process_transaction": true, the checkout page will not initiate the authorization message and will return an error in the return_url.
Return_url	{{return_url}}?authentication_id=value&error=%27Transaction%20cannot%20be%20initiated%20because%20an%20error%20occured%20while%20presenting%20the%20challenge.%27
Merchant Action	Merchant should retry the checkout with 3DS or prompt to another payment.
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard

Test Case 13: Require MethodURL

Scenario	Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication) and using the 3DS MethodURL.
Test Values	Exp Date: 01/*****
Visa PAN	4000000000001141
Mastercard PAN	5200000000001146
American Express PAN	3400000000001148

Scenario	<p>Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication) and using the 3DS MethodURL.</p>
	<pre>{ "amount": value, "authentication": { "threeds_version": "2.1.0", "enrolled": "Y", "error_no": "0", "order_id": "value", "eci_flag": "ECI value", "signature_verification": "Y", "ds_transaction_id": "value", "xid": "value"(AMEX Only), "cavv": "value", "pares_status": "Y", "acs_transaction_id": "value" }, "card": "value", "currency_code": "value", "created_at": "value", "organisation": "value", "transaction_id": "value", "authenticator": "value", "_id": "value" }</pre>
Expected Results -Authentication	
Object	
Payment Transaction	<p>If "process_transaction" : true, the checkout page will initiate the authorization message and return the transaction_id on the return_url</p>

Scenario	Cardholder is enrolled (enrolled=Y), authentication is successful (pares_status=Y), successful signature verification (signature_verification=Y). Authentication took place through a challenge (step up authentication) and using the 3DS MethodURL.
Return_url	{{return_url}}?transaction_id=value&authentication_id=value
Merchant Action	N/A
ECI Value 07	Visa, American Express
ECI Value 00	Mastercard