



Cardinal Centinel® for Merchants

One Connection to FutureProof™ your business

Activation Guide: Consumer Authentication

Test Cases Guide

(August 23, 2016) (Version 1.18.0)

Acknowledgements

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1. Introduction

To assist your integration efforts, the Centinel Testing Facility is available to perform various predefined integration tests based on best practices. Once you have completed integration with your site, testing can begin by sending messages to the testing facility using defined test cases. Each test case will generate a unique response that your integration should be able to account for and handle properly. The recommended actions are also included within the test cases.

NOTE: The Centinel Test Transaction URL is: <https://centineltest.cardinalcommerce.com/maps/txns.asp>

The Centinel Test system requires merchants to use their assigned ProcessorId and MerchantId values for transaction processing.

2. Version History

| Date | Description | Version |
|-------------------|--|---------|
| August 23, 2016 | <ul style="list-style-type: none"> Edits to formatting within document | 1.18.0 |
| August 17, 2016 | <ul style="list-style-type: none"> Edits made to Discover test card numbers | 1.17.0 |
| August 9, 2016 | <ul style="list-style-type: none"> Updated Protect Buy test cases to include Discover test cards | 1.16.0 |
| June 16, 2016 | <ul style="list-style-type: none"> PAN test values updated for AMEX Test Case 13 and Diners Club Test Case 12 Payload field updated to reflect <blank> for Visa Test Case 5 and MasterCard Test Case 6 | 1.15.0 |
| June 1, 2016 | <ul style="list-style-type: none"> MasterCard Test Case 5 merchant action edited to include passing in the Cavv Xid and Cavv field names formatted | 1.14.0 |
| May 10, 2016 | <ul style="list-style-type: none"> Bypass test case updated to reflect <blank> fields for ACSUrl and Payload in expected Lookup results | 1.13.0 |
| April 27, 2016 | <ul style="list-style-type: none"> MasterCard merchant action for Test Case 7 updated to reflect an ECI of 00 and No Liability Shift | 1.12.0 |
| April 26, 2016 | <ul style="list-style-type: none"> Updated MasterCard ECI values | 1.11.0 |
| March 2, 2016 | <ul style="list-style-type: none"> Elo Compra Segura CAVV value for Test Case 3 updated to reflect <blank> Elo Compra Segura CAVV value for Test Case 4 updated to reflect <blank> and Merchant Action | 1.10.0 |
| February 23, 2016 | <ul style="list-style-type: none"> ECI value for Test Case 6 of Diners Club and AMEX updated to reflect 07 ECI value for Test Case 4 of ELO updated to reflect 07 Formatting updated | 1.9.0 |
| August 27, 2015 | <ul style="list-style-type: none"> Added Bypass Test Case | 1.8.0 |
| June 5, 2015 | <ul style="list-style-type: none"> Updated Lookup response value in Test Case 6 | 1.7.0 |
| May 15, 2015 | <ul style="list-style-type: none"> Updated Test Case 4 description for MasterCard SecureCode, JCB J/Secure, American Express SafeKey, Diners Club Protect Buy, and Elo Compra Segura Removed the Bypass scenario test case from all brands | 1.6.0 |
| May 13, 2015 | <ul style="list-style-type: none"> Updated Test Case 4 description for Verified by Visa | 1.5.0 |
| March 9, 2015 | <ul style="list-style-type: none"> Updated the JB Secure test cases to reflect correct response values. Updated the Error Description section to include a note that the Error and Descriptions used in this guide are used specifically for the thin clients used. The actual error codes for test cases are in a different document. | 1.4.0 |
| March 3, 2015 | <ul style="list-style-type: none"> Updated the AMEX ADS and Bypass test cases with the correct values. | 1.3.0 |
| February 24, 2015 | <ul style="list-style-type: none"> Corrected AMEX and Elo Test Cases. | 1.2.0 |
| February 18, 2015 | <ul style="list-style-type: none"> Added Elo Compra Segura Test Cases. | 1.1.0 |

3. Test Case Hierarchy

To support end-to-end certification requirements of eCommerce systems the Centinel Test environment supports the various test case outcomes to be invoked using the following value:

Personal Account Number (PAN)= `CardNumber`

To run any other test cases that are not supported in this guide, please contact your Cardinal Activation Manager.

NOTE: If you run into any error messages in following table during testing the cause of the error is displayed on the right side of the table. Please note that specific `ErrorNo` and `ErrorDesc` are dependent on the Thin Client used. Please refer to the Error Codes and Descriptions Table in Section 7 for the correct error information.

| Error Messages | Cause of Error |
|--|---|
| Red alert message if TermUrl is not an absolute Url. | TermUrl MUST be an absolute Url. Relative Urls will not work. |
| Red alert message if TermUrl contains PAN. | TermUrl data MUST not contain the PAN. |
| Red alert message if TermUrl contains MessageId. | TermUrl data MUST not contain the Cardinal TransactionId, it may contain the shopping cart sessionId. |
| Red alert message if TermUrl length > 1024. | TermUrl max length is 1024. |
| Red alert message if ACSUrl has been Url Encoded. | ACSUrl was modified, Url Encoding issue. |
| Red alert message if ACSUrl has been Url Decoded. | ACSUrl was modified, Url Decoding issue. |
| Red alert message if MD contains PAN. | MD data MUST not contain the PAN. |
| Red alert message if MD contains MessageId. | "MD data MUST not contain the Cardinal TransactionId, it may contain the shopping cart SessionId. |
| Red alert message if MD length > 1024. | MD max length is 1024. |
| Red alert message if PaReq has been Url Encoded. | PaReq was modified, Url Encoding issue. |
| Red alert message if PaReq has been Url Decoded. | PaReq was modified, Url Decoding issue. |
| Red alert message if PaReq has been modified. | PaReq was modified. |
| Red alert message if unrecognized test case. | Not a recognized test case. Adjust AcqId, MerId, or PAN. |

4. Test Cases

4.1 Verified by Visa

Test Case 1: Full Authentication Verified by Visa

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, successful signature verification |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000002 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = Y EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the CAVV and EciFlag values to the authorization message |
| Liability Shift | Yes |

Test Case 2: Failed Signature**Verified by Visa**

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, unsuccessful signature verification |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000010 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = N EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue authorization, due to the failed signature verification. Merchant should prompt for another form of payment or attempt to authenticate the Consumer. |
| Liability Shift | No |

Test Case 3: Failed Authentication**Verified by Visa**

| | |
|---|---|
| Scenario | Cardholder enrolled, unsuccessful authentication, successful signature verification |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000028 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = N SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue with authorization. Merchant should prompt for another form of payment and is not permitted to submit this transaction for authorization. |
| Liability Shift | No |

Test Case 4: Attempts/Non-Participating

Verified by Visa

| | |
|---|--|
| Scenario | Passive Authentication- cardholder not prompted for authentication credential |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000101 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = A SignatureVerification = Y EciFlag = 06 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the Cavv and the EciFlag to the authorization message |
| Liability Shift | Yes |

Test Case 5: Timeout**Verified by Visa**

| | |
|---|---|
| Scenario | Timeout encountered while processing the <code>cmpi_lookup</code> transaction |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000044 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = <blank> ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case |
| Merchant Action | The <code>cmpi_lookup</code> transaction will simulate a timeout scenario and required 20 seconds to complete the transaction processing with the other 3-D Secure systems. Merchant integration should handle timeout processing after 10-12 seconds and proceed with the authorization message. |
| Liability Shift | No |

Test Case 6: Not Enrolled**Verified by Visa**

| | |
|---|---|
| Scenario | Cardholder not enrolled. Issuing bank not participating |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000051 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = N ACUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 06 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case |
| Merchant Action | Merchant should submit the authorization with an ECI of 06. |
| Liability Shift | Yes |

Test Case 7: Unavailable

Verified by Visa

| | |
|---|---|
| Scenario | Authentication unavailable (Lookup message response) |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000069 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case |
| Merchant Action | Merchant should proceed with the authorization message. |
| Liability Shift | No |

Test Case 8: Merchant Not Active**Verified by Visa**

| | |
|---|---|
| Scenario | Merchant not able to execute transactions. |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000077 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 9: cmpi_lookup error**Verified by Visa**

| | |
|---|---|
| Scenario | Error response to cmpi_lookup message. |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000085 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 10: cmpi_authenticate error

Verified by Visa

| | |
|---|---|
| Scenario | Cardholder enrolled, error response to cmpi_authenticate message. |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000093 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <blank> Cavv = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Merchant Action | Merchants have the option of retaining the liability and submit the transaction as non-authenticated. An alternative action would be to prompt for another form of payment. |
| Liability Shift | No |

Test Case 11: Authentication Unavailable

Verified by Visa

| | |
|---|--|
| Scenario | Cardholder enrolled |
| Test Values | EXP Date: 01/2020 PAN: 4000000000000036 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = U SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant can retry authentication or process authorization as merchant liability. |
| Liability Shift | No |

Test Case 12: Bypassed Authentication**Verified by Visa**

| | |
|---|---|
| Scenario | Bypass used to simulate a scenario where merchant has elected to bypass the consumer authentication flow via Cardinal Rules Engine configuration. |
| Test Values | EXP Date: 01/2020 PAN: 4000990000000004 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = B ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should proceed with authorization message. |
| Liability Shift | No |

4.2 MasterCard SecureCode

Test Case 1: Full Authentication

MasterCard SecureCode

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, successful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000007 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = Y EciFlag = 02 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the Cavv and EciFlag values to the authorization message. |
| Liability Shift | Yes |

Test Case 2: Failed Signature**MasterCard SecureCode**

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, unsuccessful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000015 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = N EciFlag = 02 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue authorization, due to the failed signature verification. Merchant should prompt for another form of payment or attempt to authenticate the Consumer. |
| Liability Shift | No |

Test Case 3: Failed Authentication**MasterCard SecureCode**

| | |
|---|--|
| Scenario | Cardholder enrolled, unsuccessful authentication, successful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000023 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = N SignatureVerification = Y EciFlag = 00 Xid = <Xid Value> Cavv = <blank > ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should not continue with authorization. Merchant should prompt for another form of payment and is not permitted to submit this transaction for authorization. |
| Liability Shift | No |

Test Case 4: Attempts/Non-Participating**MasterCard SecureCode**

| | |
|---|--|
| Scenario | Passive Authentication- cardholder not prompted for authentication credential. |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000908 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = A SignatureVerification = Y EciFlag = 01 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the Cavv and the EciFlag to the Authorization Message. |
| Liability Shift | Yes |

Test Case 5: Activation During Shopping**MasterCard SecureCode**

| | |
|---|---|
| Scenario | |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000106 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAREsStatus = A SignatureVerification = Y EciFlag = 01 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append EciFlag and Cavv value to the Authorization Message. |
| Liability Shift | Yes |

Test Case 6: Timeout**MasterCard SecureCode**

| | |
|---|---|
| Scenario | Timeout encountered while processing the <code>cmpi_lookup</code> transaction |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000049 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = <blank> ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate does not apply in this case. |
| Merchant Action | The <code>cmpi_lookup</code> transaction will simulate a timeout scenario and required 20 seconds to complete the transaction processing with the other 3-D Secure systems. Merchant integration should handle timeout processing after 10-12 seconds and proceed with the authorization message. |
| Liability Shift | No |

Test Case 7: Not Enrolled**MasterCard SecureCode**

| | |
|---|---|
| Scenario | Cardholder not enrolled – Issuing bank not participating |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000056 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = N ACUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 00 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchants should submit the authorization with an ECI of 00 |
| Liability Shift | No |

Test Case 8: Unavailable**MasterCard SecureCode**

| | |
|---|--|
| Scenario | Authentication Unavailable (Lookup message response) |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000064 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 00 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should proceed with the authorization message. |
| Liability Shift | No |

Test Case 9: Merchant Not Active**MasterCard SecureCode**

| | |
|---|--|
| Scenario | Merchant not active |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000072 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 00 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 10: cmpi_lookup error**MasterCard SecureCode**

| | |
|---|---|
| Scenario | Error response to cmpi_lookup message |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000080 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = < blank > ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 00 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 11: cmpi_authenticate error**MasterCard SecureCode**

| | |
|---|--|
| Scenario | Cardholder enrolled, error response to cmpi_authenticate message. |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000098 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = <blank> SignatureVerification = <blank> EciFlag = 00 Xid = <blank> Cavv = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Merchant Action | Merchants have the option of retaining the liability and submit the transaction as non-authenticated. An alternate option would be to prompt for another form of payment. |
| Liability Shift | No |

Test Case 12: Authentication Unavailable**MasterCard SecureCode**

| | |
|---|--|
| Scenario | Cardholder enrolled |
| Test Values | EXP Date: 01/2020 PAN: 5200000000000031 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = U SignatureVerification = Y EciFlag = 00 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant can retry authentication, or process authorization as merchant liability. |
| Liability Shift | No |

Test Case 13: Bypassed Authentication**MasterCard SecureCode**

| | |
|---|---|
| Scenario | Bypass used to simulate a scenario where merchant has elected to bypass the consumer authentication flow via Cardinal Rules Engine configuration. |
| Test Values | EXP Date: 01/2020 PAN: 5200990000000009 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = B ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should proceed with authorization message. |
| Liability Shift | No |

4.3 JCB J/Secure Test Cases

Test Case 1: Full Authentication

JCB J/Secure

| | |
|---|---|
| Scenario | Cardholder enrolled, successful authentication, successful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 3520000000000922 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = Y SignatureVerification = Y EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the Cavv and EciFlag values to the authorization message. |
| Liability Shift | Yes |

Test Case 2: Failed Signature**JCB J/Secure**

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, unsuccessful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 3520000000002811 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = N EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should not continue authorization, due to the failed signature verification. Merchant should prompt for another form of payment or attempt to re-authenticate the consumer. |
| Liability Shift | No |

Test Case 3: Failed Authentication**JCB J/Secure**

| | |
|---|---|
| Scenario | Cardholder enrolled, unsuccessful authentication, successful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 3520000000009931 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = N SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue with authorization. Merchant should prompt for another form of payment and is not permitted to submit this transaction for authorization. (See Visa Test Case #3) |
| Liability Shift | No |

Test Case 4: Attempts/Non-Participating**JCB J/Secure**

| | |
|---|--|
| Scenario | Passive Authentication- cardholder not prompted for authentication credential. |
| Test Values | EXP Date: 01/2020 PAN: 3520000000004767 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = A SignatureVerification = Y EciFlag = 06 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the CAVV and ECI values to the authorization message. |
| Liability Shift | No |

Test Case 5: Timeout**JCB J/Secure**

| | |
|---|--|
| Scenario | Timeout encountered while processing cmpi_lookup transaction. |
| Test Values | EXP Date: 01/2020 PAN: 3520000000001284 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = <blank> ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | The cmpi_lookup transaction will simulate a timeout scenario and required 20 seconds to complete the transaction processing with the other 3-D Secure systems. Merchant's integration should handle timeout processing after 10-12 seconds and proceed with the authorization message. |
| Liability Shift | No |

Test Case 6: Not Enrolled**JCB J/Secure**

| | |
|---|---|
| Scenario | Cardholder not enrolled – Issuing bank not participating |
| Test Values | EXP Date: 01/2020 PAN: 3520000000006903 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = N ACUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 06 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should submit the authentication with ECI of 06. |
| Liability Shift | No |

Test Case 7: Unavailable**JCB J/Secure**

| | |
|---|---|
| Scenario | Authentication Unavailable (Lookup message response) |
| Test Values | EXP Date: 01/2020 PAN: 3520000000002423 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should proceed with the authorization message. |
| Liability Shift | No |

Test Case 8: Merchant Not Active**JCB J/Secure**

| | |
|---|---|
| Scenario | Merchant not available to execute transactions |
| Test Values | EXP Date: 01/2020 PAN: 3520000000006549 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 9: cmpi_lookup error**JCB J/Secure**

| | |
|---|---|
| Scenario | Error response to cmpi_lookup message |
| Test Values | EXP Date: 01/2020 PAN: 3520000000002175 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 10: cmpi_authenticate error**JCB J/Secure**

| | |
|---|---|
| Scenario | Cardholder enrolled, error response to cmpi_authenticate message. |
| Test Values | EXP Date: 01/2020 PAN: 3520000000006861 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <blank> Cavv = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Merchant Action | Merchants have the option of retaining the liability and submit the transaction as non-authenticated. An alternative action would be to prompt for another method of payment. |
| Liability Shift | No |

Test Case 11: Authentication Unavailable**JCB J/Secure**

| | |
|---|--|
| Scenario | Cardholder enrolled |
| Test Values | EXP Date: 01/2020 PAN: 3520000000005780 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = U SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant can retry authentication or process authorization as merchant liability. |
| Liability Shift | No |

Test Case 12: Bypassed Authentication**JCB J/Secure**

| | |
|---|---|
| Scenario | Bypass used to simulate a scenario where merchant has elected to bypass the consumer authentication flow via Cardinal Rules Engine configuration. |
| Test Values | EXP Date: 01/2020 PAN: 3500990000000001 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = B ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should proceed with authorization message. |
| Liability Shift | No |

4.4 American Express SafeKey

Test Case 1: Full Authentication

American Express SafeKey

| | |
|---|---|
| Scenario | Cardholder enrolled, successful authentication, successful signature verification |
| Test Values | EXP Date: 01/2020 PAN: 340000000003961 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = Y SignatureVerification = Y EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the CAVV and ECI values to the authorization message |
| Liability Shift | Yes |

Test Case 2: Failed Signature**American Express SafeKey**

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, unsuccessful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 340000000006022 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = N EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue authorization, due to the failed signature verification. Merchant should prompt for another form of payment or attempt to authenticate the Consumer. |
| Liability Shift | No |

Test Case 3: Failed Authentication**American Express SafeKey**

| | |
|---|---|
| Scenario | Cardholder enrolled, unsuccessful authentication, successful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 3400000000000033 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = N SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue with authorization. Merchant should prompt for another form of payment and is not permitted to submit this transaction for authorization. (Refer to Visa Test Case 3) |
| Liability Shift | No |

Test Case 4: Attempts/Not-Participating**American Express SafeKey**

| | |
|---|---|
| Scenario | Passive Authentication- cardholder not prompted for authentication credential. |
| Test Values | EXP Date: 01/2020 PAN: 340000000003391 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = A SignatureVerification = Y EciFlag = 06 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the CAVV and the EciFlag to the authorization message. |
| Liability Shift | Yes |

Test Case 5: Timeout American Express SafeKey

| | |
|---|--|
| Scenario | Timeout encountered while processing cmpi_lookup transaction. |
| Test Values | EXP Date: 01/2020 PAN: 340000000008309 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = <blank> ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | The cmpi_lookup transaction will simulate a timeout scenario and required 20 seconds to complete the transaction processing with the other 3-D Secure systems. Merchant integration should handle timeout processing after 10-12 seconds and proceed with the authorization message. |
| Liability Shift | No |

Test Case 6: Not Enrolled American Express SafeKey

| | |
|---------------------------------------|--|
| Scenario | Cardholder enrolled – Issuing bank not participating |
| Test Values | EXP Date: 01/2020 PAN: 340000000008135 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = N ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 07 |
| Expected Results- Authenticate | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should submit the authentication with ECI of 07. |
| Liability Shift | No |

Test Case 7: Unavailable**American Express SafeKey**

| | |
|---|--|
| Scenario | Authentication Unavailable (Lookup message response) |
| Test Values | EXP Date: 01/2020 PAN: 340000000007780 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should proceed with the authorization message. |
| Liability Shift | No |

Test Case 8: Merchant Not Active**American Express SafeKey**

| | |
|---|--|
| Scenario | Merchant not able to execute transactions. |
| Test Values | EXP Date: 01/2020 PAN: 340000000008416 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 9: cmpi_lookup error**American Express SafeKey**

| | |
|---|---|
| Scenario | Error response to cmpi_lookup message |
| Test Values | EXP Date: 01/2020 PAN: 340000000006337 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 10: cmpi_authenticate error**American Express SafeKey**

| | |
|---|---|
| Scenario | Cardholder enrolled – error response to cmpi_authenticate message. |
| Test Values | EXP Date: 01/2020 PAN: 340000000009299 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <blank> Cavv = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Merchant Action | Merchant have the option of retaining the liability and submit the transaction as non-authenticated. An alternative action would be to prompt for another method of payment. |
| Liability Shift | No |

Test Case 11: Authentication Unavailable**American Express SafeKey**

| | |
|---|--|
| Scenario | Cardholder enrolled – Authentication unavailable |
| Test Values | EXP Date: 01/2020 PAN: 340000000002302 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = U SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant can retry authentication or process authorization as merchant liability. |
| Liability Shift | No |

Test Case 12: Activation During Shopping**American Express SafeKey**

| | |
|---|---|
| Scenario | Activation during shopping |
| Test Values | EXP Date: 01/2020 PAN: 340000000004415 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = A SignatureVerification = Y EciFlag = 06 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the CAVV and the EciFlag to the authorization message. |
| Liability Shift | Yes |

Test Case 13: Bypassed Authentication**American Express SafeKey**

| | |
|---|---|
| Scenario | Bypass used to simulate a scenario where merchant has elected to bypass the consumer authentication flow via Cardinal Rules Engine configuration. |
| Test Values | EXP Date: 01/2020 PAN: 340099000000001 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = B ACUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should proceed with authorization. |
| Liability Shift | No |

4.5 Protect Buy

Test Case 1: Full Authentication Protect Buy (Diners Club / Discover)

| | |
|---|--|
| Scenario | Cardholder enrolled – successful authentication, successful signature verification. |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000006246 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000004 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = Y EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the CAVV and ECI values to the authorization message. |
| Liability Shift | Yes |

**Test Case 2: Failed Signature
Protect Buy (Diners Club / Discover)**

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, unsuccessful signature verification. |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000004373 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 601100000000012 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = N EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue authorization, due to the failed signature verification. Merchant should prompt for another form of payment or attempt to authenticate the Consumer. |
| Liability Shift | No |

Test Case 3: Failed Authentication**Protect Buy (Diners Club / Discover)**

| | |
|---|---|
| Scenario | Cardholder enrolled, unsuccessful authentication, successful signature verification. |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000005925 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 601100000000020 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = N SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue with authorization. Merchant should prompt for another form of payment and is not permitted to submit this transaction for authorization. |
| Liability Shift | No |

Test Case 4: Attempts/Non-Participating**Protect Buy (Diners Club / Discover)**

| | |
|---|--|
| Scenario | Passive Authentication- cardholder not prompted for authentication credential. |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000005271 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000038 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = A SignatureVerification = Y EciFlag = 06 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the Cavv and ECI values to the authorization message. |
| Liability Shift | No |

Test Case 5: Timeout**Protect Buy (Diners Club / Discover)**

| | |
|---|---|
| Scenario | Timeout encountered while processing the <code>cmpi_lookup</code> transaction. |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000001890 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000046 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = <blank> ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Expected Results- Authentication | cmpi_authenticate response <code>cmpi_authenticate</code> message does not apply in this case. |
| Merchant Action | The <code>cmpi_lookup</code> transaction will simulate a timeout scenario and required 20 seconds to complete the transaction processing with the other 3-D Secure systems. Merchant integration should handle timeout processing after 10-12 seconds and proceed with the authorization message. |
| Liability Shift | No |

Test Case 6: Not Enrolled**Protect Buy (Diners Club / Discover)**

| | |
|---|--|
| Scenario | Cardholder not enrolled – Issuing bank not participating |
| Test Values- Diner Club | EXP Date: 01/2020 PAN: 3005000000001890 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000053 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = N ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should submit the authorization with an ECI of 07. |
| Liability Shift | No |

Test Case 7: Unavailable**Protect Buy (Diners Club / Discover)**

| | |
|---|---|
| Scenario | Authentication unavailable (Lookup message response) |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000006030 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 601100000000061 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should proceed with the authorization message. |
| Liability Shift | No |

**Test Case 8: Merchant Not Active
Protect Buy (Diners Club / Discover)**

| | |
|---|--|
| Scenario | Merchant not able to execute transactions. |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000004837 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000079 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 9: cmpi_lookup error
Protect Buy (Diners Club / Discover)

| | |
|---|---|
| Scenario | Error response to cmpi_lookup message |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000009877 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000087 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 07 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 10: cmpi_authenticate error**Protect Buy (Diners Club / Discover)**

| | |
|---|---|
| Scenario | Cardholder enrolled - error response to cmpi_authenticate message |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000005602 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000095 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <blank> Cavv = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Merchant Action | Merchants have the option of retaining liability and submit the transaction as non-authenticated. An alternative action would be to prompt for another form of payment |
| Liability Shift | No |

Test Case 11: Authentication Unavailable**Protect Buy (Diners Club / Discover)**

| | |
|---|---|
| Scenario | Cardholder enrolled – Authentication unavailable |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3005000000007376 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 601100000000103 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = U SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant can retry authentication or process authorization as merchant liability. |
| Liability Shift | No |

Test Case 12: Bypassed Authentication**Protect Buy (Diners Club / Discover)**

| | |
|---|---|
| Scenario | Bypass used to simulate a scenario where merchant has elected to bypass the consumer authentication flow via Cardinal Rules Engine configuration. |
| Test Values- Diners Club | EXP Date: 01/2020 PAN: 3000990000000006 |
| Test Values- Discover | EXP Date: 01/2020 PAN: 6011000000000111 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = B ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should proceed with authorization. |
| Liability Shift | No |

4.6 Elo Compra Segura

Test Case 1: Full Authentication Elo Compra Segura

| | |
|---|---|
| Scenario | Cardholder enrolled, successful authentication, successful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 5066990000001778 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAResStatus = Y SignatureVerification = Y EciFlag = 05 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the Cavv and EciFlag values to the authorization message. |
| Liability Shift | Yes |

Test Case 2: Failed Signature**Elo Compra Segura**

| | |
|---|--|
| Scenario | Cardholder enrolled, successful authentication, unsuccessful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 5066990000001083 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = Y SignatureVerification = N EciFlag = 07 Xid = <Xid Value> Cavv = <Cavv Value> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue authorization, due to the failed signature verification. Merchant should prompt for another form of payment or attempt to authenticate the Consumer. |
| Liability Shift | No |

Test Case 3: Failed Authentication**Elo Compra Segura**

| | |
|---|---|
| Scenario | Cardholder enrolled, successful authentication, successful signature verification. |
| Test Values | EXP Date: 01/2020 PAN: 5090000000009241 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACSUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = N SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should NOT continue with authorization. Merchant should prompt for another form of payment and is not permitted to submit this transaction for authorization. |
| Liability Shift | No |

Test Case 4: Attempts/Non-Participating**Elo Compra Segura**

| | |
|---|---|
| Scenario | Passive Authentication- cardholder not prompted for authentication credential. |
| Test Values | EXP Date: 01/2020 PAN: 5066990000009748 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = A SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should append the EciFlag values to the authorization message. |
| Liability Shift | No |

Test Case 5: Timeout**Elo Compra Segura**

| | |
|---|--|
| Scenario | Timeout Encountered while processing the cmpi_lookup transaction. |
| Test Values | EXP Date: 01/2020 PAN: 5066990000004459 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = <blank> ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3Ds Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | The cmpi_lookup transaction will simulate a timeout scenario and required 20 seconds to complete the transaction processing with the other 3-D Secure systems. Merchant integration should handle timeout processing after 10-12 seconds and proceed with the authorization message. |
| Liability Shift | No |

Test Case 6: Not Enrolled**Elo Compra Segura**

| | |
|---|--|
| Scenario | Cardholder not enrolled - Issuing bank not participating |
| Test Values | EXP Date: 01/2020 PAN: 5090000000004333 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = N ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 06 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchants should submit the authorization with an ECI of 06 |
| Liability Shift | Yes (credit only) |

Test Case 7: Unavailable**Elo Compra Segura**

| | |
|---|--|
| Scenario | Authentication unavailable (Lookup message response) |
| Test Values | EXP Date: 01/2020 PAN: 5066990000002164 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> EciFlag = 06 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should proceed with the authorization message. |
| Liability Shift | No |

Test Case 8: Merchant Not Active**Elo Compra Segura**

| | |
|---|--|
| Scenario | Merchant not able to execute transactions. |
| Test Values | EXP Date: 01/2020 PAN: 5066990000004913 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 06 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | No |

Test Case 9: cmpi_lookup error**Elo Compra Segura**

| | |
|---|--|
| Scenario | Error response to cmpi_lookup message. |
| Test Values | EXP Date: 01/2020 PAN: 5066990000000762 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = U ACSUrl = <blank> Payload = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide EciFlag = 06 |
| Expected Results- Authentication | cmpi_authenticate response cmpi_authenticate message does not apply in this case. |
| Merchant Action | Merchant should continue with the authorization and contact technical support to investigate and resolve the issue. |
| Liability Shift | Yes |

Test Case 10: cmpi_authenticate error**Elo Compra Segura**

| | |
|---|--|
| Scenario | Cardholder enrolled, error response to cmpi_authenticate message. |
| Test Values | EXP Date: 01/2020 PAN: 5066990000006686 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PAREsStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <blank> Cavv = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Merchant Action | Merchants have the option of retaining the liability and submit the transaction as non-authenticated. An alternative action would be to prompt for another form of payment. |
| Liability Shift | No |

Test Case 11: Authentication Unavailable**Elo Compra Segura**

| | |
|---|---|
| Scenario | Cardholder enrolled |
| Test Values | EXP Date: 01/2020 PAN: 5090000000003988 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = Y ACUrl = <Url> Payload = <value> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = U SignatureVerification = Y EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = Refer to the 3DS Error Codes and Descriptions Guide ErrorDesc = Refer to the 3DS Error Codes and Descriptions Guide |
| Merchant Action | Merchant can retry authentication or process authorization as merchant liability. |
| Liability Shift | No |

Test Case 12: Bypasses Authentication**Elo Compra Segura**

| | |
|---|---|
| Scenario | Bypass used to simulate a scenario where merchant has elected to bypass the consumer authentication flow via Cardinal Rules Engine configuration. |
| Test Values | EXP Date: 01/2020 PAN: 5090990000000002 |
| Expected Results- Lookup | cmpi_lookup response Enrolled = B ACSUrl = <blank> Payload = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Expected Results- Authentication | cmpi_authenticate response PResStatus = <blank> SignatureVerification = <blank> EciFlag = 07 Xid = <Xid Value> Cavv = <blank> ErrorNo = 0 ErrorDesc = <blank> |
| Merchant Action | Merchant should proceed with authorization. |
| Liability Shift | No |

5. Thin Client Specific Error Codes and Descriptions

The following table provides error codes and descriptions for the Thin Client. Please note the Error Codes and Error Description fields for each test case are not referencing the Errors and Descriptions in the following tables they are referencing the 3DS Error Codes and Descriptions Guide.

| Thin Client | Error Numbers and Error Descriptions |
|--------------------|--|
| ASP | 5000- Error communicating with the Centinel MAPS Server 5010- The server name or address could not be resolved 5020- The URL does not use a recognized protocol 5030- No data received from Centinel MAPS Server 5040- Unable to send data to Centinel MAPS Server 5050- Communication with MAPS Server exceeded timeout limit 5060- An invalid parameter has been specified 5070- An invalid proxy username has been specified 5080- An invalid proxy password has been specified |
| Cold Fusion | 10000- Unable to Communicate with MAPS Server 10010- Error Parsing XML Response |
| .Net | 9000- Unable to Communicate with MAPS Server |

| | |
|------|--|
| | <p>9010- Error Parsing XML Response</p> <p>9020- The server name or address could not be resolved</p> <p>9030- The URL does not use a recognized protocol</p> <p>9040- HTTP(S) Request Timed Out or Invalid Timeout Specified</p> |
| Java | <p>7000- Error Processing Response Message</p> <p>7010- Error Connection to MPI Server</p> <p>7020- Unknown Host</p> <p>7030- Error Parsing XML Object</p> <p>7040- Error Communicating with MPI Server</p> <p>7050- Error Malformed URL</p> <p>7060- Error Establishing HTTP(s) Connection with MAPS Server</p> <p>7061- Error Establishing HTTP(s) Connection Configuration</p> <p>7062- Read Timeout Encountered While Expecting A Response From MAPS Server</p> <p>7063- Connect Timeout Encountered While Expecting A Response From MAPS Server</p> <p>7070- Error Loading Thin Client Configuration File</p> <p>7080- Error Processing HTTPS Interaction with MAPS Server</p> <p>7090- Error Processing Socket Interaction with MAPS Server</p> <p>7100- Error Processing Thin Client Configuration File</p> <p>7110- Protocol Not Recognized, must be http:// or https://</p> |
| Perl | <p>6000- General Error Communicating with MAPS Server</p> <p>6010- Failed to connect () to server via socket connection</p> <p>6020- Failed Parse of Response XML Message Returned From The MPI Server- Socket Communication</p> <p>6030- Failed Parse of Response XML Message Returned From the MPI Server- HTTPS Communication</p> <p>6040- Failed Parse of Response XML Message Returned From the MPI Server- HTTPS Communication</p> <p>6050- Failed to initialize socket connection</p> <p>6060- Error Communicating with MAPS Server, No Response Message Received- Socket Communication</p> <p>6070- The URL to the MAPS Server does not use a recognized protocol (HTTPS required)</p> <p>6080- Error Communicating with MAPS Server, Error Response- HTTP Communication</p> <p>6090- Error Communicating with MAPS Server, Error Response- HTTPS Communication</p> <p>6100- Unable to Verify Trusted Server</p> <p>6110- Unable to Establish a SSL Context</p> <p>6120- Unable to Establish a SSL Context</p> <p>6130- Error extract the underlying file descriptor</p> <p>6140- Error establishing Network Connection</p> <p>6150- Error during SSL Read of Response Data</p> <p>6160- Unable to Establish a Socket Connection for SSL connectivity</p> <p>6170- Unable to capture a Socket for SSL connectivity</p> |
| PHP | <p>8000- Protocol Not Recognized, must be http:// or https://</p> <p>8010- Unable to Communicate with MAPS Server</p> <p>8020- Error Parsing XML Response</p> <p>8030- Communication Timeout Encountered</p> |