



# EMV®

## 3-D Secure

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### Bridging Message Extension

Version 1.0

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# Introduction

This document describes how existing EMV® 3-D Secure (3DS) v2.1 and v2.2 components can provide or consume additional data related to the *EMV® 3-D Secure Protocol and Core Functions Specification v2.3.1.0*, and is designed to evolve to include additional v2.3 features. The *EMV® 3-D Secure Protocol and Core Functions Specification v2.1.0*, v2.2.0 and v2.3.1.0 is hereinafter referred to as the *Core Specification v2.1*, *v2.2* and *v2.3*, respectively.

This version of the Bridging Message Extension carries the Recurring Transaction data, Additional data and File URL data that are not present or contain new values in the AReq/ARes or RReq messages for v2.1 and 2.2. The Challenge Data is only provided in CReq/CRes messages when the Message Version Number is 2.2.0 (not 2.1.0).

The *EMV® 3-D Secure Bridging Message Extension* should be used in conjunction with the Core Specification v2.3 and the *EMV® 3-D Secure Specifications Frequently Asked Questions*, available on the EMVCo website.

# Bridging Message Extension Support and Implementation

The 3DS v2.3 data elements present in the message extension may duplicate existing data elements from the 3DS v2.1 and v2.2 messages, but contain new or different values. According to the *Core Specification v2.3*, the data element values are set in the message extension, while, according to the *Core Specification v2.1* and *v2.2*, they are set in the core part of the 3DS messages. In such cases, the data element value in the message extension overrides the data element value in the core part of the 3DS message. In addition, the 3DS Server builds the v2.1 or v2.2 AReq message assuming that the ACS does not support the Bridging Message Extension. Then it provides the additional information in the Bridging Message Extension.

If the Bridging Message Extension is supported, then the 3DS component shall fully support at least one of the data objects (Recurring data, Challenge data, Additional data or File URL data) of the message extension and implement the related requirements of the *Core Specification v2.3*, as shown below in Table 1.

**Table 1: Bridging Message Extension Data Objects Supported or Processed Per 3DS Component**

DATA	3DS SDK	3DS Server	DS	ACS
Recurring data		x	x	x
Challenge data	x			x
Additional data		x	x	x
File URL data		x	x	

Some data objects have Optional or Conditional presence in the Bridging Message Extension messages. The data elements inside these objects may also have presence conditions (Required/Optional/Conditional).

The presence condition of the data elements in an object applies only when the object is present in the message.

## Challenge Flow with OOB Authentication Requirements

These requirements refer to Section 3.2 of the *Core Specification v2.3*.

The message extension support of OOB challenge-related data is limited to ACS UI Type = 04 (OOB). ACS UI Type = 06 (HTML OOB) is NOT supported in the 3DS Bridging Message Extension.

For the ACS and 3DS SDK that support the OOB App URL:

- the ACS shall implement Req 401, limited to ACS UI Type = 04
- the 3DS SDK shall implement Req 399, Req 400, Req 403, Req 404, Req 406, Req 407, Req 408 and Req 409 limited to ACS UI Type = 04, and the Challenge Data Entry Masking (Figure 44 and 45, Table A.26).

## Challenge Cancelation Indicator Requirements

The ACS shall implement Req 45 and the updates to Section 5.9.5 (ACS CReq Message Error Handling—01-APP) of the *Core Specification*.

## Bridging Message Extension Data Elements

Table 2: Bridging Message Extension Data Elements

Data Element/Field Name	Description	Source	Length/Format/Values	Message Inclusion
Assigned Extension Group Identifier  Field Name: <code>id</code>	A unique identifier for the extension.	3DS Server  ACS  3DS SDK	Length: 14 characters  JSON Data Type: String  Value accepted: <ul style="list-style-type: none"><li>• A000000802-004</li></ul>	AReq = R  ARes = R  RReq = R  CReq = R  CRes = R  PReq = R  PRes = R
Criticality Indicator  Field Name: <code>criticalityIndicator</code>	A Boolean value indicating whether the recipient must understand the contents of the extension to interpret the entire message.	3DS Server  ACS  3DS SDK	JSON Data Type: Boolean  Value accepted: <ul style="list-style-type: none"><li>• false</li></ul>	AReq = R  ARes = R  RReq = R  CReq = R  CRes = R  PReq = R  PRes = R

Data Element/Field Name	Description	Source	Length/Format/Values	Message Inclusion
Data Field Name: data	The data carried in the extension.	3DS Server ACS 3DS SDK	Length: Variable, maximum 8059 characters  JSON Data Type: Object  Values accepted: <ul style="list-style-type: none"><li>• Refer to Table 3 for data elements</li></ul>	AReq = R ARes = R RReq = R CReq = R CRes = R PReq = R PRes = R
Extension Name Field Name: name	The name of the extension data set as defined by the extension owner.	3DS Server ACS 3DS SDK	Length: 15 characters  JSON Data Type: String  Value accepted: <ul style="list-style-type: none"><li>• Bridging</li></ul>	AReq = R ARes = R RReq = R CReq = R CRes = R PReq = R PRes = R

## Data

**Table 3: Data**

Data Element/Field Name	Description	Source	Length/Format/Values	Message Inclusion
Additional Data Field Name: addData	Specific data from the <i>Core Specification v2.3.</i>	3DS Server ACS	Length: Variable JSON Data Type: Object Values accepted: <ul style="list-style-type: none"><li>• Refer to Table 6 for data elements</li></ul>	AReq = O ARes = O RReq = O
Challenge Data Field Name: challengeData	The data specific to the Challenge.  Present if Message Version Number = 2.2.0; absent if Message Version Number = 2.1.0.	ACS 3DS SDK	Length: Variable JSON Data Type: Object  Values accepted: <ul style="list-style-type: none"><li>• Refer to Table 5 for data elements</li></ul>	CReq = O CRes = O  AND  Message Version Number = 2.2.0
Extension Version Number Field Name: version	Version number of the message extension.	3DS Server ACS 3DS SDK	Length: 3 characters JSON Data Type: String  Value accepted: <ul style="list-style-type: none"><li>• 1.0</li></ul>	AReq = R ARes = R RReq = R CReq = R CRes = R PReq = R PRes = R

Data Element/Field Name	Description	Source	Length/Format/Values	Message Inclusion
File URL Data  Field Name: fileURLData	Card range data provided in a file.	3DS Server DS	Length: Variable  JSON Data Type: Object  Values accepted: <ul style="list-style-type: none"><li>• Refer to Table 7 for data elements</li></ul>	PReq = O  PRes = O
Recurring Data  Field Name: recurringData	The data specific to a recurring transaction.	3DS Server	Length: Variable  JSON Data Type: Object  Values accepted: <ul style="list-style-type: none"><li>• Refer to Table 4 for data elements</li></ul>	AReq = O

## Recurring Data

**Table 4: Recurring Data**

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Recurring Amount  Field Name: recurringAmount	Recurring amount in minor units of currency with all punctuation removed.	3DS Server	<p>Length: Variable, maximum 48 characters</p> <p>JSON Data Type: String</p> <p>Example:</p> <p>Purchase amount is USD 123.45</p> <p>Example values accepted:</p> <ul style="list-style-type: none"> <li>• 12345</li> <li>• 012345</li> <li>• 0012345</li> </ul>	<p>AReq = C</p> <p>Required if:</p> <ul style="list-style-type: none"> <li>• [ 3DS Requestor Authentication Indicator = 02 or 03;</li> <li>OR</li> <li>3RI Indicator = 01 or 02 ]</li> <li>AND</li> <li>• Recurring Indicator/Amount Indicator = 01</li> </ul>
Recurring Currency  Field Name: recurringCurrency	Currency in which the Recurring Amount is expressed.	3DS Server	<p>Length: 3 characters; numeric</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• ISO 4217 three-digit currency codes, other than those listed in Table A.5 in the <i>Core Specification</i>.</li> </ul>	<p>AReq = C</p> <p>Required if the Recurring Amount is present</p>

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Recurring Currency Exponent  Field Name: recurringExponent	<p>Minor units of currency as specified in the ISO 4217 currency exponent.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• USD = 2</li> <li>• JPY = 0</li> </ul>	3DS Server	<p>Length: 1 character; numeric</p> <p>JSON Data Type: String</p>	<p>AReq = C</p> <p>Required if the Recurring Amount is present.</p>
Recurring Date  Field Name: recurringDate	<p>Effective date of the new authorised amount following the first/promotional payment in a recurring or instalment transaction.</p>	3DS Server	<p>Length: 8 characters</p> <p>JSON Data Type: String</p> <p>Date format accepted:</p> <ul style="list-style-type: none"> <li>• YYYYMMDD</li> </ul>	<p>AReq = C</p> <p>Required if Recurring Indicator/ Frequency Indicator = 01</p>
Recurring Frequency  Field Name: recurringFrequency	<p>Indicates the minimum number of days between authorisations for a recurring or instalment transaction.</p>	3DS Server	<p>Length: Variable, maximum 4 characters</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• Numeric values between 1 and 9999</li> </ul> <p>Example values accepted:</p> <ul style="list-style-type: none"> <li>• 31</li> <li>• 031</li> <li>• 0031</li> </ul>	<p>AReq = C</p> <p>Required if Recurring Indicator/ Frequency Indicator = 01</p>

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Recurring Indicator  Field Name: recurringInd	<p>Indicates whether the recurring or instalment payment has a fixed or variable amount and frequency.</p> <p>The Recurring Indicator object contains:</p> <ul style="list-style-type: none"> <li>• the Amount Indicator</li> <li>• the Frequency Indicator</li> </ul> <p>Example:</p> <pre>{"recurringInd":{     "amountInd":"01",     "frequencyInd":"02"}}</pre>	3DS Server	<p>JSON Data Type: Object</p> <p><b>Amount Indicator</b></p> <p>Field Name: amountInd</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• 01 = Fixed Purchase Amount</li> <li>• 02 = Variable Purchase Amount</li> <li>• 03–79 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for DS use</li> </ul> <p><b>Frequency Indicator</b></p> <p>Field Name: frequencyInd</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• 01 = Fixed Frequency</li> <li>• 02 = Variable or Unknown Frequency</li> <li>• 03–79 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for DS use</li> </ul>	<p>AReq = C</p> <p>Required if:</p> <ul style="list-style-type: none"> <li>• 3DS Requestor Authentication Indicator = 02 or 03; OR</li> <li>• 3RI Indicator = 01 or 02</li> </ul>

## Challenge Data

**Table 5: Challenge Data**

**Note: Challenge Data is only provided if the Message Version Number of the CReq/CRes message is 2.2.0.**

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Challenge Data Entry Masking  Field Name: challengeDataEntryMasking	Indicates that the 3DS SDK shall mask the data entered by the Cardholder.	ACS	Length: 1 character  JSON Data Type: String  Values accepted: <ul style="list-style-type: none"><li>• Y = Mask the data entered by the Cardholder</li><li>• N = Do not mask the data entered by the Cardholder.</li></ul>	CRes = C  Required if ACS UI Type = 01
OOB App Label  Field Name: oobAppLabel	Label to be displayed for the link to the OOB App URL.  Example: "oobAppLabel": "Open Your Bank App"	ACS	Length: Variable, maximum 45 characters  JSON Data Type: String	CRes = C  Required if: <ul style="list-style-type: none"><li>• the OOB App URL is available and ACS UI Type = 04; AND</li><li>• OOB App URL Indicator = 01 in the CReq message</li></ul>

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
OOB App Status  Field Name: oobAppStatus	Status code indicating the problem type encountered when using the OOB App URL.	3DS SDK	<p>Length: Variable, maximum 2 characters</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• 01 = Open OOB App URL failed</li> <li>• 02–99 = Reserved for future EMVCo use (values invalid until defined by EMVCo)</li> </ul>	<p>CReq = C</p> <p>Required if the Cardholder encountered an error when selecting the OOB App URL for ACS UI Type = 04</p>
OOB App URL  Field Name: oobAppURL	<p>Universal App Link to an authentication app used in the OOB authentication. The OOB App URL will open the appropriate location within the OOB Authentication App.</p> <p>Refer to Table 1.3 in the <i>Core Specification v2.3</i> for the Universal App Link definition.</p>	ACS	<p>Length: Variable, maximum 2048 characters</p> <p>JSON Data Type: String</p> <p>Value accepted:</p> <ul style="list-style-type: none"> <li>• Universal App Link</li> </ul>	<p>CRes = C</p> <p>Required for ACS UI Type = 04 if:</p> <ul style="list-style-type: none"> <li>• OOB App URL Indicator = 01 in the CReq message; AND</li> <li>• the ACS utilises the OOB Authentication App automatic switching feature</li> </ul>

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
OOB App URL Indicator  Field Name: oobAppURLInd	Indicates if the 3DS SDK supports the OOB App URL.	3DS SDK	<p>Length: Variable, maximum 48 characters</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• 01 = Supported</li> <li>• 02 = Not supported by the device</li> <li>• 03 = Not supported by the 3DS Requestor</li> <li>• 04–79 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for DS use</li> </ul>	CReq = R
OOB Continuation Indicator  Field Name: oobContinue	Indicator notifying the ACS that the Cardholder has selected the OOB Continuation button in an OOB authentication method, or that the 3DS SDK automatically completes without any Cardholder interaction.	3DS SDK	<p>Length: 2 characters</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• 01 = Cardholder clicks the button</li> <li>• 02 = Automatic complete</li> <li>• 03–99 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> </ul>	<p>CReq = C</p> <p>Required if:</p> <ul style="list-style-type: none"> <li>• ACS UI Type = 04; OR</li> <li>• the 3DS SDK sends a CReq message unless Challenge Additional Code = Y.</li> </ul>

## Additional Data

**Table 6: Additional Data**

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
3DS Requestor App URL Indicator  Field Name: threeDSRequestorAppURLInd	Indicates whether the OOB Authentication App used by the ACS during a challenge supports the 3DS Requestor App URL.	ACS	Length: 1 character  JSON Data Type: String  Values accepted: <ul style="list-style-type: none"><li>• Y = 3DS Requestor App URL is supported by the OOB Authentication App</li><li>• N = 3DS Requestor App URL is NOT supported by the OOB Authentication App</li></ul>	ARes = R  AND  Message Version Number = 2.2.0
3DS Requestor Authentication Indicator  Field Name: threeDSRequestorAuthenticationInd	Indicates the type of Authentication Request.  This data element provides additional information to the ACS to determine the best approach for handling an Authentication Request.	3DS Server	Length: 2 characters  JSON Data Type: String  Values accepted: <ul style="list-style-type: none"><li>• 01 = Payment transaction</li><li>• 02 = Recurring transaction</li><li>• 03 = Instalment transaction</li><li>• 04 = Add card</li><li>• 05 = Maintain card</li><li>• 06 = Cardholder verification as part of EMV token ID&amp;V</li><li>• 07 = Billing Agreement</li><li>• 08 = Split shipment</li><li>• 09 = Delayed shipment</li><li>• 10 = Split payment</li></ul>	AReq = C  Required if 3DS Requestor Authentication Indicator = 08 or 09

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
			<ul style="list-style-type: none"> <li>• 11–79 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for DS use</li> </ul>	
3RI Indicator  Field Name: threeRIInd	<p>Indicates the type of 3RI request.</p> <p>This data element provides additional information to the ACS to determine the best approach for handling a 3RI request.</p>	3DS Server	<p>Length: 2 characters JSON Data Type: String Values accepted:</p> <ul style="list-style-type: none"> <li>• 01 = Recurring transaction</li> <li>• 02 = Instalment transaction</li> <li>• 03 = Add card</li> <li>• 04 = Maintain card information</li> <li>• 05 = Account verification</li> <li>• 06 = Split shipment</li> <li>• 07 = Top-up</li> <li>• 08 = Mail Order</li> <li>• 09 = Telephone Order</li> <li>• 10 = Trust List status check</li> <li>• 11 = Other payment</li> <li>• 12 = Billing Agreement</li> <li>• 13 = Device Binding status check</li> <li>• 14 = Card Security Code status check</li> <li>• 15 = Delayed shipment</li> <li>• 16 = Split payment</li> </ul>	<p>ARes = R AND Message Version Number = 2.2.0</p>

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
			<ul style="list-style-type: none"> <li>• 17–79 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for DS use</li> </ul>	
Acquirer Country Code  Field Name: acquirerCountryCode	The code of the country where the acquiring institution is located (in accordance with ISO 3166-1).  The DS may edit the value provided by the 3DS Server.	3DS Server DS	Length: 3 characters JSON Data Type: String Values accepted: <ul style="list-style-type: none"> <li>• ISO 3166-1 numeric three-digit country codes</li> </ul>	AReq = R
Acquirer Country Code Source  Field Name: acquirerCountryCodeSource	This data element is populated by the system setting the Acquirer Country Code.  The DS may edit the value provided by the 3DS Server.	3DS Server DS	Length: 2 characters JSON Data Type: String Values accepted: <ul style="list-style-type: none"> <li>• 01 = 3DS Server</li> <li>• 02 = DS</li> <li>• 03–79 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for DS use</li> </ul>	AReq = R

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Authentication Method  Field Name: authenticationMethod	<p>Indicates the list of authentication types the Issuer will use to challenge the Cardholder, when in the ARes message, or what was used by the ACS, when in the RReq message.</p> <p>Note: For 03-3RI, only present for Decoupled Authentication.</p>	ACS	<p>Size: Variable, 1–99 elements JSON Data Type: Array of String String: 2 characters Values accepted:</p> <ul style="list-style-type: none"> <li>• 01 = Static Passcode</li> <li>• 02 = SMS OTP</li> <li>• 03 = Key fob or EMV card reader OTP</li> <li>• 04 = App OTP</li> <li>• 05 = OTP Other</li> <li>• 06 = KBA</li> <li>• 07 = OOB Biometrics</li> <li>• 08 = OOB Login</li> <li>• 09 = OOB Other</li> <li>• 10 = Other</li> <li>• 11 = Push Confirmation</li> <li>• 12 = Decoupled</li> <li>• 13 = WebAuthn</li> <li>• 14 = SPC</li> <li>• 15 = Behavioural biometrics</li> <li>• 16–79 = Reserved for future EMVCo use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for DS use</li> </ul>	<p>ARes = C RReq = C</p> <ul style="list-style-type: none"> <li>• Required in the ARes message if Transaction Status = C or D</li> <li>• Required in the RReq message if Transaction Status = Y or N</li> </ul>

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Browser Screen Color Depth  Field Name: browserColorDepth	<p>Value representing the bit depth of the colour palette for displaying images, in bits per pixel.</p> <p>Obtained from the Cardholder browser using the screen.colorDepth property.</p> <p>Refer to Section A.6 in the <i>Core Specification v2.3</i> for more details.</p>	3DS Server	<p>Length: 1–2 characters; numeric</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• 1–99</li> </ul> <p>For a list of possible values, refer to <a href="https://www.w3schools.com/jsref/pro_p_screen_colordepth.asp">https://www.w3schools.com/jsref/pro_p_screen_colordepth.asp</a></p> <p>Note: If an ACS does not support the value provided, then the ACS can use the closest supported value. For example, if the value provided = 30 and the ACS does not support that value, then the ACS could use the value = 24.</p>	<p>AReq = C</p> <p>Required when Browser JavaScript Enabled = true; otherwise, Optional</p>
Card Security Code  Field Name: cardSecurityCode	Three- or four-digit security code printed on the card.	3DS Server	<p>Length: Variable, 3–4 characters, numeric.</p> <p>Action defined by Payment System rules.</p> <p>JSON Data Type: String</p>	<p>AReq = C</p> <p>Conditional based on DS rules</p>
Card Security Code Status  Field Name: cardSecurityCodeStatus	Enables the communication of Card Security Code Status between the ACS, the DS and the 3DS Requestor.	ACS DS	<p>Length: 1 character</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"> <li>• Y = Validated</li> <li>• N = Failed validation</li> <li>• U = Status unknown, unavailable, or does not apply</li> </ul>	<p>AReq = C</p> <p>ARes = C</p> <p>Conditional based on DS rules</p>

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Card Security Code Status Source  Field Name: cardSecurityCodeStatusSource	This data element will be populated by the system setting the Card Security Code Status.	ACS DS	Length: 2 characters  JSON Data Type: String  Values accepted: <ul style="list-style-type: none"><li>• 01 = DS</li><li>• 02 = ACS</li><li>• 03–79 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li><li>• 80–99 = Reserved for DS use</li></ul>	AReq = C  ARes = C  Required if the Card Security Code Status is present
Challenge Cancelation Indicator  Field Name: challengeCancel	Indicator informing the ACS and the DS that the authentication has been cancelled.	3DS SDK ACS	Length: 2 characters  JSON Data Type: String  Values accepted: <ul style="list-style-type: none"><li>• 01 = Cardholder selected “Cancel”</li><li>• 02 = Reserved for future EMVCo use (values invalid until defined by EMVCo).</li><li>• 03 = Transaction Timed Out—Decoupled Authentication</li><li>• 04 = Transaction Timed Out at ACS—other timeouts</li><li>• 05 = Transaction Timed Out at ACS—First CReq not received by ACS</li><li>• 06 = Transaction Error</li><li>• 07 = Unknown</li><li>• 08 = Transaction Timed Out at 3DS SDK</li></ul>	CReq = C  RReq = C  • Required in CReq for 01-APP if the authentication transaction was cancelled by user interaction with the cancellation button in the UI or for other reasons as indicated

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
			<ul style="list-style-type: none"> <li>• 09 = Error message in response to the CRes message sent by the ACS</li> <li>• 10 = Error message in response to the CReq message received by the ACS</li> <li>• 11–79 = Reserved for future EMVCo use (values invalid until defined by EMVCo)</li> <li>• 80–99 = Reserved for future DS use</li> </ul>	<ul style="list-style-type: none"> <li>• Required in RReq if the ACS identifies that the authentication transaction was cancelled for reasons as indicated</li> </ul> <p>Value of 04 or 05 is required when Transaction Status Reason = 14</p>
Challenge Error Reporting  Field Name: challengeErrorReporting	Copy of the Error Message sent or received by the ACS in case of error in the CReq/CRes messages.	ACS	<p>Length: Variable JSON Data Type: Object Values accepted:</p> <ul style="list-style-type: none"> <li>• Refer to Table B.12 in the <i>Core Specification v2.3</i> for data elements</li> </ul>	RReq = C  Required when Challenge Cancelation Indicator = 09 or 10
Device Information Recognised Version  Field Name: deviceInfoRecognisedVersion	Indicates the highest Data Version of the Device Information supported by the ACS.	ACS	<p>Length: Variable, minimum 3 characters JSON Data Type: String Values accepted:</p> <ul style="list-style-type: none"> <li>• Any active Device Information Data Version is considered a valid value.</li> </ul> <p>Refer to <i>EMV® Specification Bulletin 255</i> for values</p>	ARes = R

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Transaction Challenge Exemption  Field Name: transChallengeExemption	<p>Exemption applied by the ACS to authenticate the transaction without requesting a challenge.</p> <p>Note: The accepted values match the values of the 3DS Requestor Challenge Indicator.</p>	ACS	<p>Length: 2 characters</p> <p>JSON Data Type: String</p> <p>Values accepted:</p> <ul style="list-style-type: none"><li>• 05 = Transaction Risk Analysis exemption</li><li>• 08 = Trust List exemption</li><li>• 10 = Low Value exemption</li><li>• 11 = Secure Corporate Payments exemption</li><li>• 79 = No exemption applied</li><li>• 01–04, 06, 07, 09 and 12–78 = Reserved for EMVCo future use (values invalid until defined by EMVCo)</li><li>• 80–99 = Reserved for DS use</li></ul>	ARes = O

## File URL Data

**Table 7: File URL Data**

Data Element/ Field Name	Description	Source	Length/Format/Values	Message Inclusion
Card Range Data Download Indicator  Field Name: cardRangeDataDownloadInd	Indicates if the 3DS Server supports Card Range Data from a file.  Note: If present, this field contains the value Y.	3DS Server	Length: 1 character  JSON Data Type: String  Value accepted: <ul style="list-style-type: none"><li>• Y = Download supported</li></ul>	PReq = C  Present if the 3DS Server supports the Card Range Data File download
Card Range Data File URL  Field Name: cardRangeDataFileURL	Fully Qualified URL of the DS File containing the Card Range Data for download.  Note: When the Card Range Data File URL is present, the file contains the entire Card Range Data, and the 3DS Server ignores any Card Range Data and Serial Number present in the PRes message.	DS	Length: Variable, maximum 2048 characters  JSON Data Type: String  Value accepted: <ul style="list-style-type: none"><li>• Fully Qualified URL</li></ul> Example: <ul style="list-style-type: none"><li>• <a href="https://server.dsdomainname.com/cardfile.json">https://server.dsdomainname.com/cardfile.json</a></li></ul>	PRes = C  Present if Card Range Data Download Indicator = Y in the PReq message and the DS supports the Card Range Data File download

# Message Format

**Table 8: Message Extension Data Elements**

Data Element	Field Name
Assigned Extension Group Identifier	id
Criticality Indicator	criticalityIndicator
Extension Name	name
Extension Version Number	version
Data	data
Recurring Data	recurringData
Recurring Amount	recurringAmount
Recurring Currency	recurringCurrency
Recurring Currency Exponent	recurringExponent
Recurring Date	recurringDate
Recurring Frequency	recurringFrequency
Recurring Indicator	recurringInd
Challenge Data	challengeData
Challenge Data Entry Masking	challengeDataEntryMasking
OOB App Label	oobAppLabel
OOB App Status	oobAppStatus
OOB App URL	oobAppURL
OOB App URL Indicator	oobAppURLInd
OOB Continuation Indicator	oobContinue
Additional Data	addData
3DS Requestor App URL Indicator	threeDSRequestorAppURLInd

Data Element	Field Name
3DS Requestor Authentication Indicator	threeDSRequestorAuthenticationInd
Acquirer Country Code	acquirerCountryCode
Acquirer Country Code Source	acquirerCountryCodeSource
Authentication Method	authenticationMethod
Browser Screen Color Depth	browserColorDepth
Card Security Code	cardSecurityCode
Card Security Code Status	cardSecurityCodeStatus
Card Security Code Status Source	cardSecurityCodeStatusSource
Challenge Cancelation Indicator	challengeCancel
Challenge Error Reporting	challengeErrorReporting
Device Information Recognised Version	deviceInfoRecognisedVersion
Transaction Challenge Exemption	transChallengeExemption
File URL Data	fileURLData
Card Range Data Download Indicator	cardRangeDataDownloadInd
Card Range Data File URL	cardRangeDataFileURL

# Bridging Message Extension Samples

The following are samples of the Bridging Message Extension that may be included in the AReq, ARes, RReq, CReq, CRes, PReq or PRes messages by the 3DS Server, 3DS SDK or ACS.

## Sample AReq Bridging Message Extension

```
"messageExtension": [ {  
    "name": "Bridging",  
    "id": "A000000802-004",  
    "criticalityIndicator": false,  
    "version": "1.0",  
    "data": {  
        "recurringData": {  
            "recurringAmount": "1234",  
            "recurringCurrency": "826",  
            "recurringExponent": "2",  
            "recurringDate": "20220405",  
            "recurringInd": {"amountInd": "01", "frequencyInd": "01"}  
        },  
        "addData": {  
            "acquirerCountryCode": "250",  
            "acquirerCountryCodeSource": "01",  
            "browserColorDepth": "24",  
            "cardSecurityCode": "123",  
            "cardSecurityCodeStatus": "Y",  
            "cardSecurityCodeStatusSource": "01",  
            "threeDSRequestorAuthenticationInd": "08"  
        }  
    }  
} ]
```

## Sample ARes Bridging Message Extension

```
"messageExtension": [ {  
    "name": "Bridging",  
    "id": "A000000802-004",  
    "criticalityIndicator": false,  
    "version": "1.0",  
    "data": {  
        "addData": {  
            "authenticationMethod": ["07", "08"],  
            "cardSecurityCodeStatus": "Y",  
            "cardSecurityCodeStatusSource": "02",  
            "deviceInfoRecognisedVersion": "1.5",  
            "transChallengeExemption": "08",  
            "threeDSRequestorAppURLInd": "Y"  
        }  
    }  
} ]
```

## Sample RReq Bridging Message Extension

```
"messageExtension": [ {  
    "name": "Bridging",  
    "id": "A000000802-004",  
    "criticalityIndicator": false,  
    "version": "1.0",  
    "data": {  
        "addData": {  
            "authenticationMethod": ["07", "08"],  
            "challengeCancel": "09",  
            "challengeErrorReporting": {  
                "threeDSServerTransID":  
                    "8a880dc0-d2d2-4067-bcb1-b08d1690b26e",  
                "errorCode": "203", ...  
            }  
        }  
    }  
} ]
```

## Sample CReq Bridging Message Extension

```
"messageExtension": [ {  
    "name": "Bridging",  
    "id": "A000000802-004",  
    "criticalityIndicator": false,  
    "version": "1.0",  
    "data": {  
        "challengeData": {  
            "oobAppStatus": "01",  
            "oobAppURLInd": "01",  
            "oobContinue": "02"  
        },  
        "addData": {  
            "challengeCancel": "09"  
        }  
    }  
} ]
```

## Sample CRes Bridging Message Extension

```
"messageExtension": [ {  
    "name": "Bridging",  
    "id": "A000000802-004",  
    "criticalityIndicator": false,  
    "version": "1.0",  
    "data": {  
        "challengeData": {  
            "oobAppLabel": "OOB APP",  
            "oobAppURL": "https://oobapp.com/here",  
            "challengeDataEntryMasking": "N"  
        }  
    }  
} ]
```

## Sample PReq Bridging Message Extension

```
"messageExtension": [ {  
    "name": "Bridging",  
    "id": "A000000802-004",  
    "criticalityIndicator": false,  
    "version": "1.0",  
    "data": {  
        "fileURLData": {  
            "cardRangeDataDownloadInd": "Y"  
        }  
    }  
} ]
```

## Sample PRes Bridging Message Extension

```
"messageExtension": [ {  
    "name": "Bridging",  
    "id": "A000000802-004",  
    "criticalityIndicator": false,  
    "version": "1.0",  
    "data": {  
        "fileURLData": {  
            "cardRangeDataFileURL":  
                "https://server.dsdomainname.com/cardfile.json"  
        }  
    }  
} ]
```