

3DSV2 - Direct Interface - JSON container format

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Request fields updates

The column CB2A describe how the field will be used in authorization.

Payline Field Name	Format	Mandatory	3DS Field Origin	Comment
containerVersion	2 chars	Mandatory	N/A	Field used to identify the version of the JSON container. Version 2 will be available the 29th january 2020.
eci	2 chars	Conditional	eci in ARes message if Frictionless eci in RReq message if Challenge	Required if present in 3DS message.
authenticationValue	28 chars	Conditional	authenticationValue in ARes message if Frictionless authenticationValue in RReq message if Challenge	Required if present in 3DS message.
avAlgorithm	1 char	Conditional	CB-AVALG0 in ARes message if Frictionless CB-AVALG0 in RReq message if Challenge	Required if present in 3DS message.
effectiveAuthType	2 chars	Conditional	Type of authentication done.	Required if present in 3DS message. Values could be : • FR : When frictionless • CH : When challenge
acsOperatorID	32 chars	Conditional	acsoperatorID in ARes message for Frictionless and Challenge	Required if present in 3DS. If frictionless and acsOperatorID = "CB-DS" message, the field 59-419 must be set to "FD"
threeDSRequestorChallengeInd	2 chars	Conditional	This data is set by Cardinal in the field AReq.threeDSRequestorChallengeInd The same value must be send to payline	Specific using. It indicates to the scheme and the issuer the merchant preference. Required if present in 3DSmessage. Values could be : • 01 = No preference • 02 = No challenge requested • 03 = Challenge requested : 3DS Requestor Preference • 04 = Challenge requested: Mandate

transStatus	1 char	Conditional	transStatus in ARes message if Frictionless transStatus in RReq message if Challenge	Required if present in 3DS message. Values could be : • Y = Authentication/ Account Verification Successful • N = Not Authenticated /Account Not Verified; Transaction denied • U = Authentication/ Account Verification Could Not Be Performed; Technical or other problem, as indicated in ARes or RReq • A = Attempts Processing Performed; Not Authenticated /Verified, but a proof of attempted authentication /verification is provided • C = Challenge Required; Additional authentication is required using the CReq/CRes • R = Authentication/ Account Verification Rejected; Issuer is rejecting authentication/verification and request that authorisation not be attempted.
transStatusReason	2 chars	Conditional	transStatusReason in ARes message if Frictionless transStatusReason in RReq message if Challenge	Required if present in 3DS message. Values could be : • 01 = Card authentication failed • 02 = Unknown Device • 03 = Unsupported Device • 04 = Exceeds authentication frequency limit • 05 = Expired card • 06 = Invalid card number • 07 = Invalid transaction • 08 = No Card record • 09 = Security failure • 10 = Stolen card • 11 = Suspected fraud • 12 = Transaction not permitted to cardholder • 13 = Cardholder not enrolled in service • 14 = Transaction timed out at the ACS • 15 = Low confidence • 16 = Medium confidence • 17 = High confidence • 18 = Very High confidence • 19 = Exceeds ACS maximum challenges • 20 = Non-Payment transaction not supported • 21 = 3RI transaction not supported
challengeCancelInd	2 chars	Conditional	challengeCancel in CReq if the buyer cancel in APP-BASED challengeCancel in RReq if the buyer cancel in BROWSER-BASED	Required if present in 3DS message. Values could be • 01 = Cardholder selected "Cancel" • 02 = 3DS Requestor cancelled Authentication. • 03 = Transaction Abandoned • 04 = Transaction Timed Out at ACS—other timeouts • 05 = Transaction Timed Out at ACS—First CReq not received by ACS • 06 = Transaction Error • 07 = Unknown
networkScore	2 chars	Conditional	CB-Score in ARes	This field is CB Brand specific. Required if present in 3DS message.
dsTransID	36 chars	Conditional	dsTransID in ARes message if frictionless dsTransID in RReq message if challenge dsTransID in Erro in case of error	Required if present in 3DS message.
acsTransID	36 chars	Conditional	acsTransID in ARes message if frictionless acsTransID in RReq message if challenge acsTransID in Erro in case of error	Required if present in 3DS message.

messageVersion	8 chars	Mandatory	messageVersion in ARes message if Frictionless messageVersion in RReq message if Challenge	
useCase	2 chars	Conditional	CB-USECASE in AReq message	
purchaseInstalData	2 chars	Conditional	purchaseInstalData in AReq message	
exemptions	4 chars	Conditional	CB-EXEMPTIONS in ARes message	
merchantName	40 chars	Conditional	merchantName in AReq message	
purchaseDate	14 chars	Conditional	purchaseDate in AReq message	
purchaseAmount	48 chars	Conditional	purchaseAmount in AReq message	
recurringExpiry	8 chars	Conditional	recurringExpiry in AReq message	YYYYMMDD
cardBrand	20 chars	Mandatory	card type chosen by the merchant or the buyer (usefull in case of co-branded card)	added in containerVersion=2 Values could be : • CB • VISA • MASTERCARD • AMEX • ...
browserIP	ans...45	Mandatory	browserIP in AReq message	added in containerVersion=2
merchantCountryCode	n3	Mandatory	merchantCountryCode in AReq message	added in containerVersion=2
acquirerBin	n11	Conditional	acquirerBIN (lg max 11) in AReq message	added in containerVersion=2
acquirerMerchantID	35 chars	Conditional	acquirerMerchantID in AReq message	added in containerVersion=2
threeDSRequestorName	40 chars	Conditional	threeDSRequestorName in AReq message	added in containerVersion=2
threeDSRequestorID	35 chars	Conditional	threeDSRequestorID in AReq message	added in containerVersion=2

Packaging

3DS V2 fields are packed in an JSON container by Cardinal. The proposed structure is : **JSON Container**

```
{
  "cavvAlgorithm": "1",
  "effectiveAuthType": "FR",
  "acsOperatorID": "CB-DS",
  "merchantChallengeInd": "02",
  "transStatus": "Y",
  "transStatusReason": "",
  "challengeCancelInd": "",
  "schemeScore": "50",
  "dsTransID": "96e4be73-1d59-429a-b4c1-439e5d9ad632",
  "acsTransID": "d746c39c-17bc-4b4d-be56-fd9c0ad0877f",
  "3DSVersion": "2.1.0"
}
```

Null fields must be absent of the JSON structure

Then the field is encoded in base64 (the charset is UTF-8) : **B64 encode**

```

@Test
public void shouldGenerateBase64FromGson() {
    String json =
        "{\n" +
        "  \"cavvAlgorithm\": \"1\", \n" +
        "  \"effectiveAuthType\": \"FR\", \n" +
        "  \"acsOperatorID\": \"CB-DS\", \n" +
        "  \"merchantChallengeInd\": \"02\", \n" +
        "  \"transStatus\": \"Y\", \n" +
        "  \"transStatusReason\": \"\", \n" +
        "  \"challengeCancelInd\": \"\", \n" +
        "  \"schemeScore\": \"50\", \n" +
        "  \"dsTransID\": \"96e4be73-1d59-429a-b4c1-439e5d9ad632\", \n" +
        "  \"acsTransID\": \"d746c39c-17bc-4b4d-be56-fd9c0ad0877f\", \n" +
        "  \"3DSversion\": \"2.1.0\" \n" +
        "}";

    String jsonBase64 = Base64.encode(json.getBytes(StandardCharsets.UTF_8));
    LOGGER.info("json : {}", jsonBase64);

    String jsonExpected = "ewoiY2F2dkFsZ29yaXRobSI6IjEiLAoiZWZmZWNoaXZlQXV0aFR5cGUiOiJGUiIsCiJhY3NPcGVyYX  

    RvcklEiJoiQ0ItRFMiLAoibWVyY2hhbnRDaGFsbGVuZ2VJbmQiOiIwMiIsCiJ0cmFuc1N0YXR1cyI6IlkiLAoidHJhbnNTdGF0dXNSZWZb24  

    iOiIiLAoiY2hhbGxlbmdlQ2FuY2VsSw5kIjoiIiwKIiNjaGVtZVNjb3JlIjoiTNTAiLAoiZHNUcmFuc0lEiJoiOTZlNGJlNzMtMWQ1OS00MjIh  

    LWI0YzEtNDM5ZTVkOWFkNjMyIiwKIiFjc1RyYW5zSUQiOiJkNzQ2YzY5Y0xN2JlLTRiNGQtYmU1Ni1mZDlmgfKMDg3N2YiLAoiM0RTdmVyc  

    2lubiI6IjIuMS4wIgp9";
    Assert.assertEquals(jsonExpected, jsonBase64);
}

```

JSON Container is designed for 3DS.