DP - 3DSecure user in direct mode V1

Content

Introduction

What is 3DSecure ?

The 3DSecure process adds a security layer to an online purchase: the buyer will usually validate his payment by entering a one-time passcode provided by their bank via text messsage. Other methods also exist. When a transaction is authenticated with 3DSecure, the liability in case of a subsequent chargeback is borne by the issuing bank. This is refered to as the principle of liability shift.

Payline holds Visa and Masterdard International (MCI) 3DSecure certifications.

Subscription

The merchant gets a 3DSecure Distance Selling contract with their bank and sends the details to Payline.
Payline registers the 3DSecure contrat with Visa and MCI then activates the contracts. Allow up to ten working days for activation.

Prerequisites for using Payline payment solution

The 3DSecure solution in Direct interface mode ensures the secure transfer of sensitive data and processes authentication and authorization requests.

Integration points :

- verifyEnrollment is required to provide authentication and doAuthorization to perform the authorization;
- get the result of the transaction with getTransactionDetails.

You must check the service access key and configure the SOAP UI.

3D-Secure in Direct Interface mode with a payment

The following steps present verifyEnrollment and doAuthorization web services for realizing 3DSecure transactions using the Direct interface.

Step 1 - verifyEnrollment

This first call is to verify the eligibility of the card to a 3DSecure authentication, and therefore to know if the cardholder is registered with a VISA or Mastercard Directory Server. This is done with the verifyEnrollment web service.

Example of a request and response for the verifyEnrollment web service :

verifyEnrollmentRequest (VEReq)	**verifyEnrollmentResponse (VERes)**

<impl:verifyEnrollmentRequest> <impl:card> <obj:number>**4970100000325734**</obj:number> <obj:type>**CB**</obj:type> <obj:expirationDate>**0912**</obj:expirationDate> <obj:cvx>**123**</obj:cvx> </impl:card> <impl:payment> <obj:amount>**4050**</obj:amount> <obj:currency>**978**</obj:currency> <obj:action>**100**</obj:action> <obj:mode>**CPT**</obj:mode> <obj:contractNumber>**CB3DS**</obj:contractNumber> </impl:payment> <impl:orderRef>**REF0923847**</impl:orderRef> </impl:verifyEnrollmentRequest>	<verifyEnrollmentResponse> <result> <code>**03000**</code> <shortMessage>**ACCEPTED**</shortMessage> <longMessage>**Operation Successfull**</longMessage> </result> <actionUrl>**https://acs.modirum.com/mdpayacs/pareq**</actionUrl> <actionMethod>**POST**</actionMethod> <pareqFieldName>**PaReq**</pareqFieldName> <pareqFieldValue> **eJxVkdtuwjAMhl+l4gGaA21ZkcnEOGhlYzAYQ9rNFFoPKq** **ClScvh7ZeUMrbcxJ9jx/ZveN8oxP4co1KhgDFqLdfoJHGnw** **XgrpM2QNQRMuzPMBRxR6SRLBXOpy4Hc0GSpaCPTQoCM** **8qfRq2C86fkBkBphj2rUF+x6gFwRUrlH0e1NnRiPQCqCKCv** **TQl0E9ymQG0CpdmJTFlc2lafTyV1n2XqH7rciGqUp/Zh3TM** **TXKiuLJC9RA7EJQO59TUtraVPgnMRivPgMJkt/uNoO5Xzrl** **5OBz5eDj5fZ8K0DxEZALAsUnJp2KQ8cGrY5a3tmosoPcm8** **7E4PFzPGoa1utPXCwhbpX8Kh9+esBo7LCNLqIsPVg5rsR4** **PmQpWgijKy/NsSolzNGfd1n6D1bpaPCiNiklIdBJXXF9qfES** **MY4DauvLACxGaTelqmXbKx/y/8Ba4usNQ==** </pareqFieldValue> <termUrlName>**TermUrl**</termUrlName> <termUrlValue> **https://acs.modirum.com/mdpayacs.php** </termUrlValue> <mdFieldName>**MD**</mdFieldName> <mdFieldValue>**1Fz9nEnAZJNn8NvXEKDT**</mdFieldValue> </verifyEnrollmentResponse>

Once enrolment has been confirmed, an authentication call to the ACS server can be initiated. Information received from the verifyEnrollmentResponse must be sent to the authentication server.

Sending information

To send this information :

- in POST : create an HTML form,
- in GET : create a link.

POST : The data information will be sent to the authentication server via the form below.
The field names and values are dynamically retrieved from the verifyEnrollmentResponse :

- Payment session:
  - mdFieldName = **MD**
  - mdFieldValue = **1Fz9nEnAZJNn8NvXEKDT**
- Authentication request:
  - pareqFieldName = **PaReq**
  - pareqFieldValue = **eJxVkdtuwjAMhl+l4gGaA...**
- Authentication adress server. This address must retrieve a form sent in POST.
  - termUrlName = **TermUrl**
    termUrlValue = **https://acs.modirum.com/mdpayacs.php**

Sample HTML form to perform a test on your server:

HTML form

```
<form name="downloadForm" action="https://acs.modirum.com/mdpayacs/pareq" method="POST">

<input type="hidden" name="TermUrl" value="http://127.0.0.1/3DSecure/receive_form.php">
PAREQ : <input type="text" name="PaReq">
<br />
MD : <input type="text" name="MD">
<br />
<input type="submit" name="submit" value="Submit">
</form>
```

Receipt of information returned during authentication

The authentication server sends its message to the URL entered in the TermURL parameter (sent in the previous form). In the response form, two fields must be retrieved to continue the transaction in 3DSecure mode:

- The MD field: always the same field allowing the follow-up of the session
- the Payer Authentication Response (PaRes) field: an encrypted string containing the response of the authentication server. The value of the PaRes field will validate or not the transaction as a 3DSecure transaction.

`These two fields are retrieved and allow to complete the doAuthorizationRequest in 3DSecure mode.`

`Sample script (here written in PHP) to retrieve the response to authentication :`

Script PHP : receive_form.php

```
<?php
$pares = $_POST['PaRes'];
$md = $_POST['MD'];

echo "MD : ".$md."<br />PARES :
".$pares;
?>
```

Note: This script must be placed on a started web server and in a folder corresponding to the address sent via the TermURL field.

Example: if the server is local it is quite possible to put as value:

TermURL = *http://127.0.0.1/3DSecure/receive_form.php*

Step 2 : doAuthorizathion with3D Secure settings

The doAuthorization service allows you to perform the transaction with the 3DSecure parameters.
The parameters provided : md / pares permit to check user authentication and thus the user identity before carrying out the transaction.

If the parameters are correct, the transaction is carried out as authorization request.

doAuthorizationRequest	doAuthorizationResponse

<impl:doAuthorizationRequest>
<impl:payment>
<obj:amount>**4150**</obj:amount>
<obj:currency>**978**</obj:currency>
<obj:action>**100**</obj:action>
<obj:mode>**CPT**</obj:mode>
<obj:contractNumber>**CB3DS**</obj:contractNumber>
</impl:payment>
<impl:card>
<obj:number>**4970105512345674**</obj:number>
<obj:type>**CB**</obj:type>
<obj:expirationDate>**0912**</obj:expirationDate>
<obj:cvx>**123**</obj:cvx>
</impl:card>
<impl:order>
<obj:ref>**REF023493**</obj:ref>
<obj:country>**FR**</obj:country>
<obj:taxes>**100**</obj:taxes>
<obj:amount>**1400**</obj:amount>
<obj:currency>**978**</obj:currency>
<obj:date>**28/01/2009 09:32**</obj:date>
</impl:order>
<impl:buyer>
<obj:lastName>**Dupond**</obj:lastName>
<obj:firstName>**Wilfried**</obj:firstName>
<obj:email>**wilfried.dupond@yahoo.fr**</obj:email>
</impl:buyer>
<impl:authentication3DSecure>
<obj:md>**xRtMifcy975D2EB3Zs8e**</obj:md>
<obj:pares>
eJzFV2mTokoW/Ssd/T4a3ewKHZQq8LT8uWh9v0X8C9X
9dnSvZpwiZxtkQnR4/vcxQo0vM1a4/ll9R/BFjkEQryXL4
NU12Tb4MZVE1L1+PbVv/QJC+77/3xPfzNUWmgFEEZZ
k6R9fX0cle6U6nJcsH1bnKovDlruH7bTYMGmP5/2X9wl
2H14xxBT5b5PbbzFGVt8eCEo8aYT83umHcP/OLJ8Dvzb
YYYo8JPjlasmZySB7LnHxxTOXl6x8fSC1kadK0/86Mb7N
Dmzw2LW7JsXdOgDbKqGt0MWzXUzHgfeTiJHYyXt3Gvli

LP+N9W4D2XV0MrIQkUn+/iOLJrhOdX5t6je0MVLvrO6/
+UWyynOS9H7sYGAZ5U3lbmDcT3ZMMEcjDfJb20VXhTw

bWgWEOt2Ix04i1tmBAuFHx2aEgzgEtcaJzH8TLbsXbpj4r

……..
</obj:pares>
<obj:xid/>
<obj:eci/>
<obj:cavv/>
<obj:cavvAlgorithm/>
<obj:vadsResult/>
</impl:authentication3DSecure>
</impl:doAuthorizationRequest>

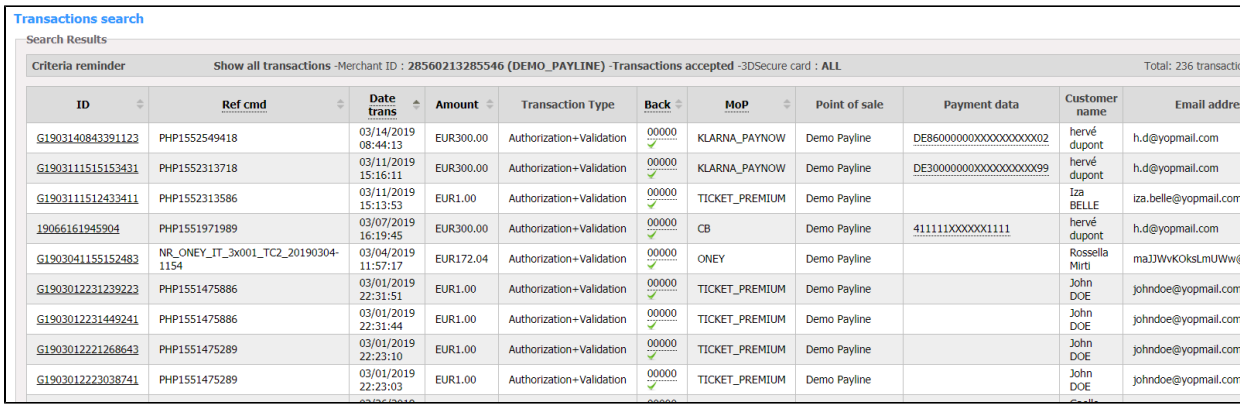
<doAuthorizationResponse>
<result>
<code>**00000**</code>
<shortMessage>**ACCEPTED**</shortMessage>
<longMessage>**Transaction approved**<
/longMessage>
</result>
<transaction>
<id>**90217095220928**</id>
<date>**17/02/09 09:52**</date>
<isDuplicated>**0**</isDuplicated>
<isPossibleFraud>**0**</isPossibleFraud>
<fraudResult/>
<explanation/>
<threeDSecure>**Y**</threeDSecure>
<score/>
</transaction>
<authorization>
<number>**A55A**</number>
<date>**17/02/09 09:52**</date>
</authorization>
</doAuthorizationResponse>

Back Office

Menu 'Technical follow-up of webservice calls' to find the call of the web service verifyEnrollment allows to see the details of the verifyEnrollment.

The result of the 3DSecure transaction is then visible in the Payline Administration Center: on the results of a search and in the detail of the transaction 3DSecure tab.

Screen searches for transactions:



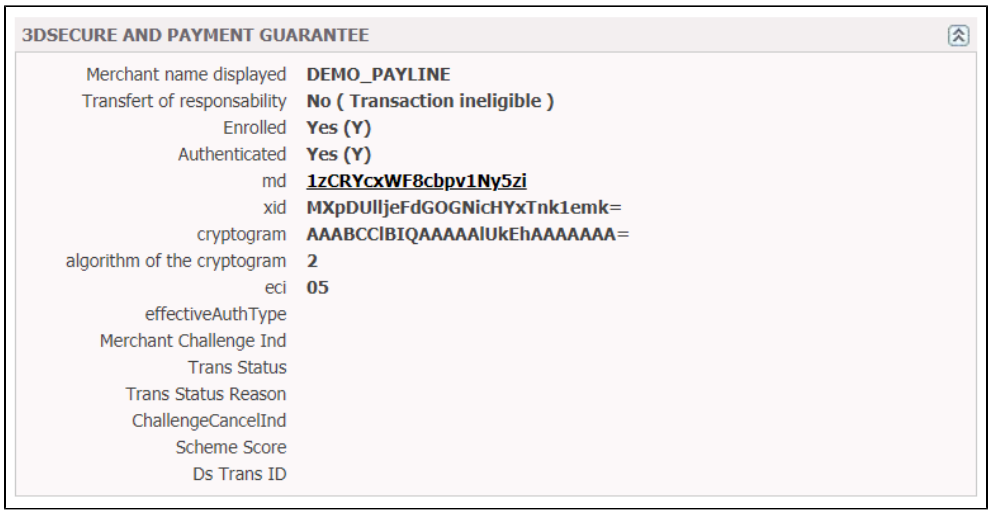
Transactions search

Search Results

Criteria reminder | Show all transactions -Merchant ID : 28560213285546 (DEMO_PAYLINE) -Transactions accepted -3DSecure card : ALL | Total: 236 transacti

ID	Ref cmd	Date trans	Amount	Transaction Type	Back	MoP	Point of sale	Payment data	Customer name	Email addre
G1903140843391123	PHP1552549418	03/14/2019 08:44:13	EUR300.00	Authorization+Validation	00000	KLARNA_PAYNOW	Demo Payline	DE86000000XXXXXXXXXX02	hervé dupont	h.d@yopmail.com
G1903111515153431	PHP1552313718	03/11/2019 15:16:11	EUR300.00	Authorization+Validation	00000	KLARNA_PAYNOW	Demo Payline	DE30000000XXXXXXXXXX99	hervé dupont	h.d@yopmail.com
G1903111512433411	PHP1552313586	03/11/2019 15:13:53	EUR1.00	Authorization+Validation	00000	TICKET_PREMIUM	Demo Payline		Iza BELLE	iza.belle@yopmail.com
19066161945904	PHP1551971989	03/07/2019 16:19:45	EUR300.00	Authorization+Validation	00000	CB	Demo Payline	411111XXXXXX1111	hervé dupont	h.d@yopmail.com
G1903041155152483	NR_ONEY_IT_3x001_TC2_20190304-1154	03/04/2019 11:57:17	EUR172.04	Authorization+Validation	00000	ONEY	Demo Payline		Rossella Mirti	maJJWvKOksLmUWw
G1903012231239223	PHP1551475886	03/01/2019 22:31:51	EUR1.00	Authorization+Validation	00000	TICKET_PREMIUM	Demo Payline		John DOE	johndoe@yopmail.com
G1903012231449241	PHP1551475886	03/01/2019 22:31:44	EUR1.00	Authorization+Validation	00000	TICKET_PREMIUM	Demo Payline		John DOE	johndoe@yopmail.com
G1903012221268643	PHP1551475289	03/01/2019 22:23:10	EUR1.00	Authorization+Validation	00000	TICKET_PREMIUM	Demo Payline		John DOE	johndoe@yopmail.com
G1903012223038741	PHP1551475289	03/01/2019 22:23:03	EUR1.00	Authorization+Validation	00000	TICKET_PREMIUM	Demo Payline		John DOE	johndoe@yopmail.com

3DSecure transaction Details:

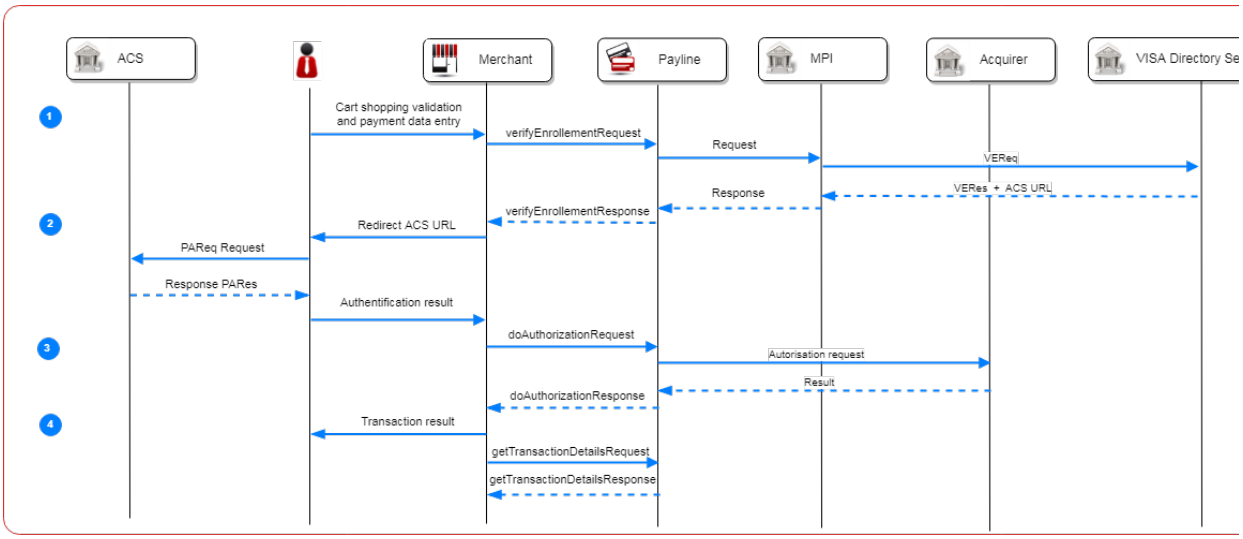


3DSECURE AND PAYMENT GUARANTEE

Merchant name displayed	**DEMO_PAYLINE**
Transfert of responsability	**No (Transaction ineligible)**
Enrolled	**Yes (Y)**
Authenticated	**Yes (Y)**
md	**1zCRYcxWF8cbpv1Ny5zi**
xid	**MXpDUlljeFdGOGNicHYxTnk1emk=**
cryptogram	**AAABCClBIQAAAAAlUkEhAAAAAAA=**
algorithm of the cryptogram	**2**
eci	**05**
effectiveAuthType	
Merchant Challenge Ind	
Trans Status	
Trans Status Reason	
ChallengeCancelInd	
Scheme Score	
Ds Trans ID	

3D Secure payment scheme

1. The consumer validates his cart shopping then the merchant prepares web page to where will be filled the payment data.
   A VEReq (Verification Enrollment Request) message allows access to Directory Server to verify cart registration in the directory containing cards declared "enlisted" 3-D Secure and provide ACS URL.
   Verification enrollment response containing authentication result, that will be returned to Merchand Plug-in (MPI) to manage the dialogue with Directory and ACS to allow the buyer to authenticate.
2. The merchant redirects the consumer to ACS URL for authentication.
   The request "PAReq" (Payer authentication request) allows access to bank ACS to trigger the authentication phase.
   The response "PARes" (Pay authentication response), containing the authentication result of cardholder will be transmitted to the merchant.
3. The merchant can trigger a request for authorization and payment validation by calling service doAuthorizationRequest.
4. The merchant retrieves details transaction by calling service getTransactionDetails.


ACS
Merchant
Payline
MPI
Acquirer
VISA Directory Se
1
Cart shopping validation and payment data entry
verifyEnrollementRequest
Request
VEReq
VERes + ACS URL
Response
verifyEnrollementResponse
2
Redirect ACS URL
PAReq Request
Response PARes
Authentification result
3
doAuthorizationRequest
Autorisation request
Result
doAuthorizationResponse
4
Transaction result
getTransactionDetailsRequest
getTransactionDetailsResponse