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Check eligibility DC EMI POS API

Technical Document

Version 1.0

DOCUMENT CONTROL

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VERSION HISTORY

Version Number	Date	Author(s)	Brief Description of Change	Reviewed by
1.0	29/08/2019	Dimple Kasturi	Initial Version	Chaitanya Kasibhatla

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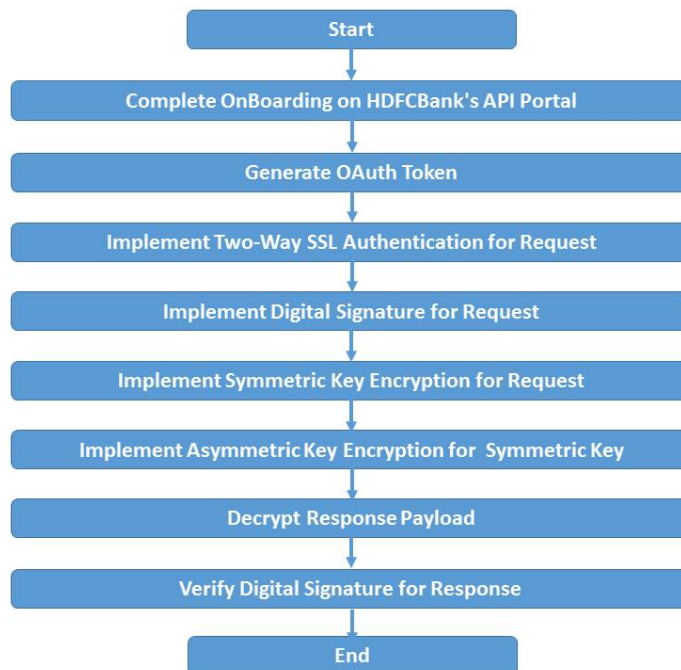
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1. Purpose

This document provides external partners of HDFC Bank with technical details on how to invoke an API to perform Validate Partner & Customer. And check eligible loan amount.

The API follows a REST JSON format.

2. API Client Development Process Workflow



3. How to consume the service

Logic for Request & Response Processing:

3.1 Request:

3.1.1 Original Request Sample:

{

```

"Request":{
  "UserID":"DCEMI",
  "Password":"cgSSeMxLm733B8pGz7+tUA==",
  "MerchantReferenceNumber":"ABCyqedqedy78y",
  "TerminalID":"46543435435",
  "LoanAmount":"50000",
  "ChannelName":"Channel_name",
  "DebitCardHashValue":"#gffdg",
  "MerchantID":"45435435",
  "MerchantName":"ABCD",
  "Filler1":"Filler1",
  "Filler2":"Filler2",
  "Filler3":"Filler3",
  "Filler4":"Filler4",
  "Filler5":"Filler5",
  "Filler6":"",
  "Filler7":"",
  "Filler8":"",
  "Filler9":"",
  "Filler10":"",
  "Filler11":"",
  "Filler12":"",
  "Filler13":"",
  "Filler14":"",
  "Filler15":""
}
}

```

3.1.2 Field Details:Input parameters:

Field Name	Description	Type	Length	Mandatory	Sample Value
UserID	Partner/Merchant User ID created and shared while onboarding partner/merchant by adding it in merchant master table	varchar	50	Y	This value will shared during UAT onboarding by Bank
Password	Partner/Merchant password created and shared while onboarding partner/merchant by adding it in merchant	varchar	255	Y	

	master table				
MerchantReferenceNo	Partner/Merchant unique reference number generated at partner/merchant end	varchar	50	Y	
TerminalID	POS machine id	Varchar	50	Y	
LoanAmount	Invoice Amount (Decimal upto 2 digit)	Numeric	(18,2)	Y	
DebitCardHasValue	Has Value of Debit Card swiped on POS	Varchar	255	Y	
ChannelName	DCEMI_POS (DefaultValue)	Varchar	20	Y	
MerchantID	ID of the merchant	varchar	50	Y	
MerchantName	Name of the partner/merchant same as added in master	varchar	255	Y	This value will shared during UAT onboarding by Bank
Filler1		varchar	100	O	Filler1
Filler2		varchar	100	O	Filler2
Filler3		varchar	100	O	Filler3
Filler4		varchar	100	O	Filler4
Filler5		varchar	100	O	Filler5
Filler6		varchar	100	O	Filler6
Filler7		varchar	100	O	Filler7
Filler8		varchar	100	O	Filler8
Filler9		varchar	100	O	Filler9
Filler10		varchar	100	O	Filler10
Filler11		varchar	100	O	Filler11
Filler12		varchar	100	O	Filler12
Filler13		varchar	100	O	Filler13
Filler14		varchar	100	O	Filler14
Filler15		varchar	100	O	Filler15

3.2 Response:

3.2.1 Output Field Details:

```
{
  "Response": {
    "Token": "12346",
    "Status": "0000",
    "Data": {
      "ErrorCode": "0000",
      "ErrorMessage": "",
      "BankReferenceNo": "070333",
      "MerchantReferenceNo": "21245687988",
      "EligibilityStatus": "Yes",
      "Filler1": "Filler1",
      "Filler2": "Filler2",
      "Filler3": "Filler3",
      "Filler4": "Filler4",
      "Filler5": "Filler5",
      "Filler6": "",
      "Filler7": "",
      "Filler8": "",
      "Filler9": "",
      "Filler10": "",
      "Filler11": "",
      "Filler12": "",
      "Filler13": "",
      "Filler14": "",
      "Filler15": ""
    }
  }
}
```

API Response:-

Field Name	Description	Type	Length	Mandatory	Sample Value
Status	"Success" or "Failed"	varchar	10	Y	
Token	Session Token	varchar	100	Y	
ErrorCode	"0000" for success	varchar	5	Y	ErrorCode
ErrorMessage	Blank if "Success"	varchar	500	C	ErrorMessage
BankRefernceNo	Reference no generated by Bank	varchar	50	Y	
MerchantReferenceNo	MerchantReferenceNo Received in request	varchar	50	Y	

EligibilityStatus	Yes or No	varchar	10	Y	
Filler1		varchar	100	O	
Filler2		varchar	100	O	
Filler3		varchar	100	O	
Filler4		varchar	100	O	
Filler5		varchar	100	O	
Filler6		varchar	100	O	
Filler7		varchar	100	O	
Filler8		varchar	100	O	
Filler9		varchar	100	O	
Filler10		varchar	100	O	
Filler11		varchar	100	O	
Filler12		varchar	100	O	
Filler13		varchar	100	O	
Filler14		varchar	100	O	
Filler15		varchar	100	O	

4. Error/Status Codes Details

➤ Service Error codes are as attached below:-

SR NO	Error code	Error description
01	A001	Invalid credentials
02	A002	Merchant Username cannot be blank
03	A003	Merchant Password cannot be blank
04	A004	Merchant Username should not be greater than 30 characters.
05	A005	Merchant Password should not be greater than 50 characters.
06	A006	Mobile number cannot be blank
07	A007	Mobile no length cannot be greater than 10
08	A008	Cumulative Loan amount cannot be blank
09	A009	Cumulative Loan amount should be numeric
10	A010	Identifier Type cannot be blank
11	A011	Identifier Value cannot be blank

12	A012	Channel Type cannot be blank
13	A013	Channel Name should not be blank
14	A014	Store ID cannot be blank
15	A015	Invalid Store name
16	A016	Filler1 length should be less than 50
17	A017	Filler2 length should be less than 50
18	A018	Filler3 length should be less than 50
19	A019	Filler4 length should be less than 50
20	A020	Filler5 length should be less than 50
21	A021	Filler6 length should be less than 50
22	A022	Filler7 length should be less than 50
23	A023	Filler8 length should be less than 50
24	A024	Filler9 length should be less than 50
25	A025	Filler10 length should be less than 50
26	A026	Filler11 length should be less than 50
27	A027	Filler12 length should be less than 50
28	A028	Filler13 length should be less than 50
29	A029	Filler14 length should be less than 50
30	A030	Filler15 length should be less than 50
31	A031	Invalid MCC Code
32	A032	Merchant not available
33	A033	Customer not available
34	A034	Customer is not eligible
35	A035	Bank reference number cannot be blank
36	A036	Bank reference number not available
37	A037	Merchant Reference number cannot be blank
38	A038	Merchant Reference number not available
39	A039	OTP should not be blank
40	A040	OTP is not same as sent to user
41	A041	Invoice Amount should not be blank
42	A042	Loan Amount is not valid as eligibility check
43	A043	User is not eligible for Loan Amount
44	A044	Mobile number not available
45	A045	Product Reference Number should not be blank
46	A046	Product Invoice Amount should not be blank
47	A047	Product Invoice Amount should be numeric
48	A048	Quantity should not be blank
49	A049	Invalid Quantity
50	A050	Invalid Transaction
51	A051	Invalid loan amount and Product Invoice Amount
52	A052	Order Confirmation should not be blank

53	A053	Order Cancel cannot be blank
54	A054	Refund ID cannot be blank
55	A055	Cancellation Reason cannot be blank
56	A056	Quantity cannot be blank in partial cancellation
57	A057	Product Unique Reference Number cannot be blank in partial cancellation
58	A058	Terminal ID cannot be blank
59	A059	Loan Tenure cannot be blank
60	A060	Addition of all product invoice amount is not valid.
61	A061	Invalid OTP
62	A062	Invalid Request

➤ **HDFC Bank's Public API Gateway Error Codes:-**

Error Codes	Error Message	Http Status Code
TH99401	SSL Required For API Access	401 Unauthorized
TH99401	Attempted login from unauthorized IP	401 Unauthorized
TH99405	Request Method Not Allowed For API Access	405 Method Not Allowed
TH99413	Message Size Exceeded Limit	413 Payload Too Large
TH99429	DDOS Attack Detected from Requester	429 Too Many Requests
TH99410	Cross Site Forgery Detected in API Request Message Payload	410 Gone
TH99400	Code Injection Detected in API Request Message Payload	400 Bad Request
TH99421	Document Structure Threat in API Request Message Payload	421 Misdirected Request
TH99422	SQL Injection Detected in API Request Message Payload	422 Unprocessable Entity (WebDAV)
TH99411	Invalid Content Type in API Request Message Payload	411 Length Required
TH99503	API Back-end Service Not Available or Timed-Out	503 Service Unavailable
TH99429	API Access Quota Exceeded	429 Too Many Requests
TH99423	XML Entity Expansion Attack Detected from Requester	423 Locked (WebDAV)
TH99500	Backend Service Provided Unexpected Response	500 Internal Server Error
TH99409	Message Payload Validation failed	409 Conflict
TH99412	Oauth Token Validation failed	412 Precondition Failed
TH99412	You Are Not Authorized To Access This Functionality	412 Precondition Failed
TH99401	Invalid Client Certificate	401 Unauthorized
TH99401	Scope Validation Failed	401 Unauthorized
TH99401	Signature verification Failed	401 Unauthorized
TH99401	Invalid API Key	401 Unauthorized
TH99400	Decryption Failed	400 Bad Request
TH99400	Bad Request	400 Bad Request
TH99509	Account Plan limit exceeded	509 Bandwidth Limit Exceeded

In case the transaction fails at the HDFC Bank's Public API Gateway, the error structure will be as follows:

HTTP status code is returned with error payload in JSON format as below-

```
{
  "ResponseEncryptedValue": "",
  "GWSymmetricKeyEncryptedValue": "",
  "Source": "XYZ",
  "TransactionId": "2019-04-30T18:42:20.867+05:30",
  "Status": "TH99401: FAILED Invalid Client Certificate !!"
}
```

5. **FOR ENCRYPTION/DECRYPTION/Digital Signing of payload please refer to HDFCBank_API Integration_Encryption_Decryption_Document shared**

6. Appendix

➤ Service Endpoint URL:-

https://openapiuat.hdfcbank.com:9443/API/DCEMI_POSCheckEligibility

➤ Other Prerequisites required from External partner:

- a) SSL Certificate of the external partner, Two Way SSL needs to be configured
- b) List of IPs of the external entity for IP white-listing
- c) HTTPS requests to HDFC Bank should TLS 1.2
- d) Signed Legal Agreements required in HDFC bank's template
- e) Sign-up at <https://openbankinguat.hdfcbank.com>, by Representative of external partner. Following acceptance of Sign-up by HDFC Bank, external partner needs to click on link Activation mail, and complete a form on the Bank's API Portal.
- f) As per best industry standards ,special characters are blocked at API Gateway
 - Characters that trigger SQL Injection error are ' # --
 - Characters that trigger Code Injection error are *()<>^`&; *()<>^`&;`";|&>\
- g) Our recommendations is that partners don't send special characters in any field, in case of special characters being encountered partners need to replace the special characters with a space, this recommendation is line with global best practices to avoid threats due to SQL injections and code injections in banking industry

