bonushub

ECR API SCPECIFICATION

HDFC-BonusHub Payment POS Device

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Version 1.4

BonusHub Digital Solutions Pvt Ltd

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Document Control

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Version Modification History

Version No	Change Date	Authors	Descriptions	Reviewed By
V1.0	02-Aug-2021	Pramod Kumar	Initial version	Palash Mishra
V1.1	15-Sept-2021	Pramod Kumar	Add new API Cancel Sale Transaction	Palash Mishra
V1.2	10-June-2022	Pramod Kumar	1. Add two new field -txnRRN & txnAuthCode in Payment details, 2. Reserve field 1 – put UPI Handle. If customer want to pay through UPI Collect	Palash Mishra
V1.3	10-Dec-2022	Pramod Kumar	Add two new field in Sale Transaction Status API response: 1. maskedCardNo 2. issuerRefNo	Palash Mishra
V1.4	25-Aug-2023	Pramod Kumar	1. Make Field2, Field3, Field4, Field5 is reserve for Custom field for merchant, same field is available in transaction status api and cancel transaction api response. 2. Add two new field tipAmount and txnType in payment details response, this field will contain tip amount of transaction.	Palash Mishra

1. Introduction

BonusHub platform is payment acceptance solution for HDFC merchants, it allows variety of transaction done on Payment POS device. This document describes the integration of a partner billing system with BonusHub transaction platform.

2. Project Scope & Objective

The purpose of this document is to provide both parties a clear understanding and API specifications that is needed for successful project implementation. The project scope is based on the discussion with Partner and Bonus Hub and agreed on mentioned transaction flow.

BonusHub shall facilitate Payment transaction including Sale/BankEMI/Brand EMI transactions on HDFC POS terminal which integrated with partner billing system via BonusHub backend API.

3. API Integration Details

Parameter	Description
1. Sale Transaction API Endpoint URL	{baseurl}/api/ecr/v1/saletxn
2. Sale Transaction Status API Endpoint URL	{baseurl}/api/ecr/v1/txnstatus
3. Cancel Sale Transaction	{baseurl}/api/ecr/v1/canceltxn

3.1 Below details will be shared separately for testing & production.

1. Base URL
2. Client API key
3. Client API SecretKey

3.2 Request HTTP Method, Content Type

Method = "POST"
ContentType = "application/json"

3.3 Headers Parameter Details

Http Header Parameter	Type	Required/Optional	Description
Client_apikey	String	Required	Need to send in http Header parameter, BonusHub will share separately

4. API Status Code/Message & Transaction Status/Message

API Request Status code/Message

Status Code	Status Message Description
100	Success
101	Invalid Request
102	Decryption Failed
103	Invalid tid or tid is not active
104	Failed
105	Transaction Not found

Transaction Status & Transaction message

Transaction Status	Transaction Status Message
InProgress	Sale InProgress or Transaction processing
Success	Transaction Success
Canceled	Transaction Cancelled by ECR
Failed	Payment Failed

5. Sale Transaction API

5.1 Sale Transaction API Details

Partner Billing/Backend applications need to use this api for send Sale transaction details to BonusHub. While initiating this api call, partner needs to send the shared client API Key as a http parameter in API request. Unique Sale Transaction Id needs to be sent during this request from the partner's side so that it helps in tracking the Sale transaction history. BonusHub send the unique transaction id for sale transaction in response and along with the request & transaction status.

5.2 Sale Transaction Request

Parameter	Type	Required/Optional	Description
payLoadData	String	Required	Encrypted payload data as below mentioned Sale Transaction request payload Refer – 5.3 Request Format. This payload should be encrypted with shared Client API Secret Key
tid	String	Required	Terminal identifier (TID) on which transaction need to be completed

5.3 Sale Transaction Request Parameter

Parameter Name	Type	Required/Optional	Description
saleTxnId	String	Required	Unique `saleTxnId` generated from the partners application for tracking purpose
saleAmount	String	Required	Send the amount in rupees format with up to 2 digits after decimal for ex- "1.00"
skuIds	String	Conditional	Required only for Brand EMI case only, other than Brand EMI transaction skuIds is not required. skuIds needs to be mapped with Brand EMI Product SKU master.
mobileNo	String	Required	Customer mobile no
email	String	Optional	Customer email
customerName	String	Optional	Customer Name
description	String	Optional	Description or comments of sale txn.
field1	String	Optional	Reserve for future use – put UPI Handle. If customer want to pay through UPI Collect
Field2	String	Optional	Reserve for custom field use
Field3	String	Optional	Reserve for custom field use
Field4	String	Optional	Reserve for custom field use
Field5	String	Optional	Reserve for custom field use

5.4 Plain Sale Transaction Request Parameter JSON

```
{
  "saleTxnId": "637635161297869671",
  "saleAmount": "5000.00",
  "mobileNo": "9555274574",
  "email": "pks247@gmail.com",
  "customerName": "Pramod",
  "description": "payment request",
  "skuIds": "ASD212121 ",
  "field1": "pks@okhddfc",
  "field2": abcd,
  "field3": null,
  "field4": null,
  "field5": null
}
```

5.5 Encrypted Sale Transaction Request JSON

```
{
  "payLoadData":
"9BE1334949DD3049BF1DC5C9B71D35F08FB1583C7B1B6A412113E87CAFF19308A5FC5AD
```

06AF1AEF700B3A564C8F0C30FF1314140E7B9A942EF146941EDD62D31B67569C05C1CDEED
F0100CEE3A51CF78DEE0733BEA145FAA88C64874E7054CD012275592A5765584BD0E2EA5E
C9CC7A3B5E9A28ACA6942DFE6B076213CFA345F8709755FD98713BAD49A993FB6056F633
B8CBFE16059685FCA09C312CF26F4BFACB692A94201CD8B7D8AE7D661E215E31ADFB4338
3ED1A61C0F2AA1A87EC400E8047FDF70AE3D430194B4797CFA7F64177BBDC34DA715037C
0221DA553586A5143AB4D5E2EC1F286F204C6B746D16D5AE4DB26EA82595BB2D8B9FB4BA
7DB6DA8860880DC765834C5670E62C1A75FF6B59581412D94EB19D43CA142F8FF101756D
63C368114ECD8E1C9CB2AC314E9949B",
  "tid": "12345678"
}

5.6 Sale Transaction Response

Parameter	Type	Required/Optional	Description
payLoadData	String	Required	Encrypted payload response data with below mentioned Sale Transaction response parameter. Refer – 5.7 Response Parameter
tid	String	Required	Terminal identifier (TID) on which transaction need to be completed

5.7 Sale Transaction Response Parameter

Parameter	Type	Required/Optional	Description
statusCode	String	Required	Status code for the api request and not for the transaction Status, for transaction status there is separate field TxnStatus
StatusMessage	String	Required	Status description for the request and not for the transaction
saleTxnId	String	Required	Partner generated unique transaction ID for the requested sale transaction
saleAmount	String	Required	Transaction amount for the requested sale transaction
bhTxnId	String	Required	BonusHub Unique transaction id generated requested sale transaction
saleDateTime	String	Optional	Sale transaction request date time
txnStatus	String	Required	Status for the requested sale transaction
txnMessage	String	Required	Status message for the requested sale transaction

5.8 Encrypted Sale Transaction Response JSON

{

  "payLoadData":
"A1AA8D6BB3A988C2D9D34F033AA392B5FC5BC566648F7D36AF55406362CCB0A5D0A985E
70F4C17BBD7E22858774FF7B3D7CC0BBCD100D84DDF248B69E96B44C1B1E6C783F86D85A
2204CFF7CD1DD6497ADB7E1EDFBFD0A2B899FD0F1902469ADD3FF1405C1C5BBF3E9ABF20
0AAD30990F1F3DDEF837D17ED6D0D4D64620672E9769380BC60F85F4979112808D670A52
D0F58395B78D72267F0D3A0F7CFF8CD553E73539ADBC0CD6594B30E8C6EEFEAF2FBF8EEBE
FDE9549AC207E99731B56D9C0A4C57D006329812A72CFA02B92564E79949F6EEC77183AF7
277175F5BE9F08496ABF5CEB8A728A2ADF2A669FED8D8916D75C016119F2EBFAFF71E7657
9F19C0",

  "tid": "12345678"

}

5.9 Plain Sale Transaction Response Parameter JSON

{
  "statusCode": "100",
  "statusMessage": "Success",
  "saleTxnId": "637635161297869671",
  "saleAmount": "5000.00",
  "saleDateTime": "2021-Aug-02 19:49:35",
  "txnStatus": "InProgress",
  "txnMessage": "Sale InProgress",
  "bhTxnId": "C361A8F2D7A84E1BBEDE866244F90BF9"
}

6. Sale Transaction Status API

6.1 Sale Transaction Status API Details

Partner applications need to use this api to check Sale transaction status with BonusHub. While initiating this api call, the partner needs to send the corresponding client API Key as a http parameter for which the request needs to be initiated. Unique BonusHub Sale Transaction Id (Received in sale transaction response) needs to be sent during this request from the partner's side so that it helps in tracking the Sale transaction history. BonusHub send transaction details with transaction status.

6.2 Sale Transaction Status Request Parameter

Parameter	Type	Required/Optional	Description
payLoadData	String	Required	Encrypted payload data with below mentioned Sale Transaction Status request parameter Refer – 6.3 Request Parameter

Tid	String	Required	Terminal identifier (TID) on which transaction need to be completed

6.3 Transaction Status Request Parameter

Parameter Name	Type	Required/Optional	Description
bhTxnId	String	Required	BonusHub Unique transaction id received during sale transaction response
saleTxnId	String	Optional	Partner Unique saleTxnId generated from the partners application for tracking purpose

6.4 Plain Sale Transaction Status Request Parameter JSON

```
{
  "bhTxnId": "C361A8F2D7A84E1BBEDE866244F90BF9",
  "saleTxnId": null
}
```

6.5 Encrypted Sale Transaction Status Request JSON

```
{
  "payLoadData":
"B6F769D542B2F6A65AA5BAA15C792CD0DE5E377B384B24A0991DC5C161402208E7C0B9
FC90FDE7270386390419E7DB8A4CDABE32644295B7FB94F0AB0B36BAC7",
  "tid": "12345678"
}
```

6.6 Sale Transaction Status Response

Parameter	Type	Required/Optional	Description
payLoadData	String	Required	Encrypted transaction status response data with below mentioned Sale Transaction status response. Refer – 6.7 Response Parameter
tid	String	Required	Terminal identifier (TID) on which transaction need to be completed

6.7 Sale Transaction Status Response Parameter

Parameter	Type	Required/Optional	Description
statusCode	String	Required	Status code for the api request and not for the transaction Status, for

			transaction status there is separate field TxnStatus
StatusMessage	String	Required	Status description for the request and not for the transaction
saleTxnId	String	Required	Partner generated unique transaction ID for the requested sale transaction
saleAmount	String	Required	Transaction amount for the requested sale transaction
bhTxnId	String	Required	BonusHub Unique transaction id generated requested sale transaction
saleDateTime	String	Optional	Sale transaction request date time
txnStatus	String	Required	Status for the requested sale transaction
txnMessage	String	Required	Status message for the requested sale transaction
PaymentMode	String	Optional	Transaction completion mode for the requested sale transaction. This can be null if the transaction is not completed
txnTID	String	Optional	Transaction TID. This can be null if the transaction is not completed
batchNo	String	Optional	Transaction Batch No. This can be null if the transaction is not completed
invoiceNo	String	Optional	Transaction Invoice. This can be null if the transaction is not completed
stan	String	Optional	Transaction Stan. This can be null if the transaction is not completed
TxnAmount	String	Optional	Transaction Amount. This can be null if the transaction is not completed
txnDateTime	String	Optional	Transaction Date Time. This can be null if the transaction is not completed
mTxnid	String	Optional	mTxnid (case of UPI, BHART QR or SMS pay). This can be null if the transaction is not completed
pgwTxnid	String	Optional	pgwTxnid (case of UPI, BHART QR or SMS pay). This can be null if the transaction is not completed
txnRRN	String	Optional	Transaction RRN. This can be null if the transaction is not completed
txnAuthCode	String	Optional	Transaction Auth Code. This can be null if the transaction is not completed
maskedCardNo	String	Optional	Transaction maskedCardNo (last 4 digit of card) Case of card transaction
issuerRefNo	String	Optional	Transaction issuerRefNo/RRN

tipAmount	String	Optional	TIP amount of the Transaction. This can be null if the transaction is not completed with tip, this field contains value if completed using tip amount
txnType	String	Optional	txnType is a type of transaction for example- Sale, Bank EMI, BrandEMI. This can be null if the transaction is not completed.
Field2	String	Optional	Reserve for custom field use
Field3	String	Optional	Reserve for custom field use
Field4	String	Optional	Reserve for custom field use
Field5	String	Optional	Reserve for custom field use

6.8 Encrypted Sale Transaction Status Response JSON

```
{
  "payLoadData":
"A1AA8D6BB3A988C2D9D34F033AA392B5FC5BC566648F7D36AF55406362CCB0A5D0A985E
70F4C17BBD7E22858774FF7B3D05558353BA11D367F6F020885666E35ADB7E1EDFBFD0A2B
899FD0F1902469AD66B750471842F6ED914D07545A02DBC214CB72A6F8BAADC53E0F1E71
FCB1731E508058D4906CEEB3E8B04258EA56E2028B0E8D1470C8EB345883384DC922E4D79
F11ADD1F4658834270D4FB60DD277B5FA465E8461F58E6E0AC38A3A08151E40D8635A59C
79744570BF81B2D09B67B131E74003F3621C574863300B9E7B3DE77EB0A5D7F1E34558128
09BC952F3B6257F202A5E89FE6A07BB976DBCE639BD0B20EDA47F32E91B96919A5A2E6203
8B72A8DF691F19FDEC124F94637C4CCD8549E67D857A292B04C56F9855178BB5AFADAA5F
A7AF2BF635E54029A0E4F3E3EE121A450F2018633ACF34BEF078D55D494E5F38B975C8AF6
77E2DAB1BA8A3560FE1B9634749B83CFEB0B9BCBF72FE913D9A86369A03F44B7D589568A
D2560EEFE32F22A47C05E3927ED5DDC1AC1D0F0B8494D346AFA68B49BBDBB3BB5F112EBC
0181F149D8B4DD0A30231F8BE3C0C8130D485164754DE254A5F3DBBF61370E6A36042961
95B7880059D1D1EC273E535FDCDDCA988D9FA3F2862B16A755A158FC2BCC",
  "tid": "12345678"
}
```

6.9 Plain Sale Transaction Status Response Parameter JSON

Case 1 - InProgress Transaction Status JSON

```
{
  "statusCode": "100",
  "statusMessage": "Success",
  "saleTxnId": null,
  "saleAmount": "5000.00",
  "bhTxnId": "C361A8F2D7A84E1BBEDE866244F90BF9",
  "saleDateTime": "2021-Aug-02 19:56:43",
  "txnStatus": "InProgress",
  "txnMessage": "In progress",
  "Field2": "abcd",
  "Field3": null,
```

```
    "Field4": null,
    "Field5": null,
    "PaymentDetails": null
}
```

Case 2 - Success Transaction Status JSON

```
{
  "statusCode": "100",
  "statusMessage": "Success",
  "saleTxnId": null,
  "saleAmount": "5000.00",
  "bhTxnId": "C361A8F2D7A84E1BBEDE866244F90BF9",
  "saleDateTime": "2021-Aug-02 20:07:06",
  "txnStatus": "Success",
  "txnMessage": "Sale approved",
  "Field2": "abcd",
  "Field3": null,
  "Field4": null,
  "Field5": null,
  "PaymentDetails": {
    "paymentMode": "Card Payment",
    "txnType": "Sale",
    "txnTID": "12345678",
    "batchNo": "0012345",
    "invoiceNo": "000234",
    "stan": "000234",
    "txnAmount": "5000.00",
    "txnDateTime": "2021-Aug-02 20:07:06",
    "mTxnid": "6661212123434434",
    "pgwTxnid": "34985327849638964",
    "txnRRN ": "000000000234",
    "txnAuthCode ": "123456",
    "maskedCardNo":"********7049",
    "issuerRefNo":"",
    "tipAmount":""
  }
}
```

7. Cancel Sale Transaction API

7.1 Cancel Transaction Request Parameter

Parameter Name	Type	Required/Optional	Description

bhTxnId	String	Required	BonusHub Unique transaction id received during sale transaction response
saleTxnId	String	Optional	Partner Unique saleTxnId generated from the partners application for tracking purpose

7.2 Plain Cancel Sale Transaction Request Parameter JSON

```
{
  "bhTxnId": "C361A8F2D7A84E1BBEDE866244F90BF9",
  "saleTxnId": null
}
```

7.3 Encrypted Cancel Sale Transaction Request JSON

```
{
  "payLoadData":
"B6F769D542B2F6A65AA5BAA15C792CD0DE5E377B384B24A0991DC5C161402208E7C0B9
FC90FDE7270386390419E7DB8A4CDABE32644295B7FB94F0AB0B36BAC7",
  "tid": "12345678"
}
```

7.4 Cancel Sale Transaction Response

Parameter	Type	Required/Optional	Description
payLoadData	String	Required	Encrypted transaction status response data with below mentioned Sale Transaction status response. Refer – 7.5 Response Parameter
tid	String	Required	Terminal identifier (TID) on which transaction need to be completed

7.5 Cancel Sale Transaction Response Parameter

Parameter	Type	Required/Optional	Description
statusCode	String	Required	Status code for the api request and not for the transaction Status, for transaction status there is separate field TxnStatus
StatusMessage	String	Required	Status description for the request and not for the transaction
saleTxnId	String	Required	Partner generated unique transaction ID for the requested sale transaction
bhTxnId	String	Required	BonusHub Unique transaction id generated requested sale transaction

txnStatus	String	Required	Status for the requested sale transaction
txnMessage	String	Required	Status message for the requested sale transaction
Field2	String	Optional	Reserve for custom field use
Field3	String	Optional	Reserve for custom field use
Field4	String	Optional	Reserve for custom field use
Field5	String	Optional	Reserve for custom field use

7.6 Encrypted Cancel Sale Transaction Response JSON

{
  "payLoadData":
"A1AA8D6BB3A988C2D9D34F033AA392B5FC5BC566648F7D36AF55406362CCB0A5D0A985E
70F4C17BBD7E22858774FF7B3D05558353BA11D367F6F020885666E35ADB7E1EDFBFD0A2B
899FD0F1902469AD66B750471842F6ED914D07545A02DBC214CB72A6F8BAADC53E0F1E71
FCB1731E508058D4906CEEB3E8B04258EA56E2028B0E8D1470C8EB345883384DC922E4D79
F11ADD1F4658834270D4FB60DD277B5FA465E8461F58E6E0AC38A3A08151E40D8635A59C
79744570BF81B2D09B67B131E74003F3621C574863300B9E7B3DE77EB0A5D7F1E34558128
",
  "tid": "12345678"
}

7.7 Plain Cancel Sale Transaction Response Parameter JSON

{
    "statusCode": "100",
    "statusMessage": "Success",
    "saleTxnId": null,
    "bhTxnId": "C361A8F2D7A84E1BBEDE866244F90BF9",
    "txnStatus": "Canceled",
    "txnMessage": " Transaction canceled successfully",
    "Field2": "abcd",
    "Field3": null,
    "Field4": null,
    "Field5": null,

}

8. Payload Encryption Steps

Step 1: convert the crypto key to hex value.
Step 2: initialize the AES/ECB/PKCS5Padding
Step 3: Encrypt payload using UTF8 with the above encryption method, output will be byte array using UTF8.
Step 4: encrypted byte array value will be converted using hex to string method.

Step 5: URL encoding of the encrypted string.
Step 6: pass the value in the "payLoadData" parameter.

8.1 Encryption Parameter

Advanced Encryption Standard (AES)
Mode = CipherMode.ECB
Padding = PaddingMode.PKCS7

Example:

String reqMsg = security.encrypt(payLoad.toString(), Client_API_SecretKey);
//payLoad.toString() is request parameter in JSON format
String reqMsg1 =ENCRYPT (reqMsg using UTG 8 encoding);
JSONObject jsonObject = new JSONObject();
jsonObject.put("payLoadData", reqMsg1);
jsonObject.put("tid","xxxxxxx");