BillDesk Payment Gateway

-- API Specifications

BillDesk Checkout v1.0

BillDesk
All your payments. Single location.

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1. Background

o BillDesk is a leading provider of electronic payment collections services to merchants in India and has implemented a robust technology platform that is integrated with networks, card issuers, banks, wallet providers and other payment partners.

o The BillDesk platform is implemented as a secure PCI DSS 3.2 and ISO 27001 compliant infrastructure and is hosted in India data centers.

o This note briefly describes the mode/manner of technical integration between the merchant and BillDesk Payment Gateway for enabling online transactions.

2. Process Flow

This section briefly details the overall transaction flow, and the related reconciliation and reporting processes.

Transaction Process
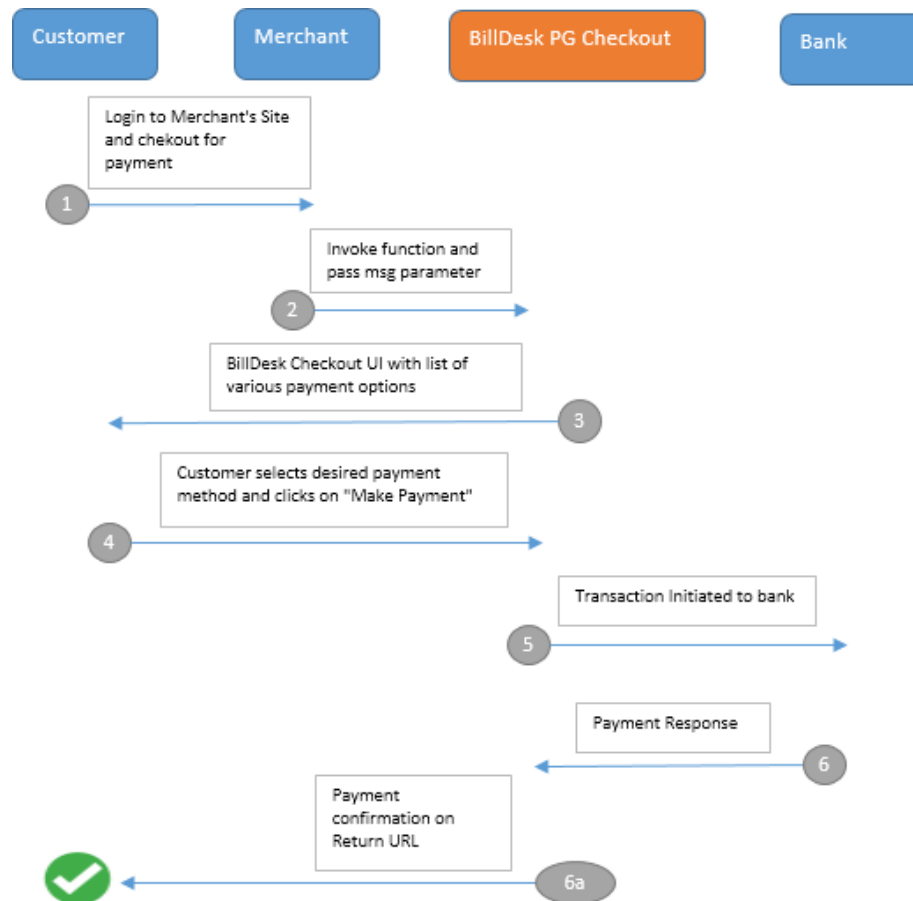
o   BillDesk will generate a net settlement report – that will include the Order Number; and the Transaction ID generated by BillDesk, in addition to other details such as transaction date, transaction amount, "Additional Info" fields (if any sent by merchant in the online transaction request), charges etc.

o   This report will contain the successful transactions; and any refund/ chargeback adjustments.

3.   Technical Integration with BillDesk

Key aspects of the integration between the Merchant website and BillDesk is as described below.

a.   Payment Request

A.   SETUP

Merchant should include the below code in their checkout page as part of the BillDesk payment gateway integration.

```
<script src="https://pgi.billdesk.com/payments-checkout-widget/src/app.bundle.js"></script>
```

B.   PREPARE

When customer clicks on the 'Pay Now' button on the merchant's checkout page, Merchant should prepare the 'msg', 'callbackUrl' & other parameters as per the BillDesk specifications (details below).

For security reasons, the value of the "msg" parameter should be created on the merchant's server as it involves computing a unique checksum hash that requires a secret checksum key.

C.   INITIATE

Once the request parameters have been prepared (as per the previous step), Merchant invokes the *bdPayment.initialize* function and passes to it the required parameters – at the minimum, required ones being 'msg' and 'callbackUrl'. The other parameters are optional.

Parameter details:

Parameter	Required/ Optional	Sample Value	Description
msg	Required	Refer below section	Refer below section
enableChildWindowPosting	Optional	true	If you intend passing this parameter it is recommended to set it to 'true', should you choose to set it to 'false' the bank site will open in the parent window itself instead of a childwindow.
enablePaymentRetry	Optional	true	Set this to 'true' if you would like the User to get a chance to try again, if the initial payment transaction failed.
retry_attempt_count	Conditional	2	If enablePaymentRetry is set to true then use this parameter as well. Set the count here to the number of times you would like the user to retry.
txtPayCategory	Optional	NETBANKING	In case you have a specific requirement wherein you would like the user be shown only a certain set of payment categories, send the appropriate value for this field. Refer Annexure for details.
callbackUrl	Required	https://www.merchant-domain.com/payment_response.jsp	Merchant's Return URL where the customer will be redirected back on the browser, with the payment response.

Sample Code:

```
bdPayment.initialize ({
"msg":"
ABCD|123456|NA|100.00|XYZ|NA|NA|INR|DIRECT|R|abcd|NA|NA|F|john@doe1.com|9820
 198201|NA|NA|NA|NA|NA|NA|AB6VN3245B66FE9511DB2A854AAA32ADC563E789CF213CA1
9E274F18F330G547",
      "options": {
            "enableChildWindowPosting": true,
            "enablePaymentRetry": true,
            "retry_attempt_count": 2,
            "txtPayCategory": "NETBANKING"
       },
       "callbackUrl": "https://www.merchant-domain.com/payment_response.jsp"
    });
```

Details of the 'msg' parameter:

Parameter	Sample Value	Description
MerchantID	ABCD	Will be provided by BillDesk as part of the integration process
CustomerID	123456789	Merchant's Unique Txn ID
Filler1	NA	Fixed Value 'NA'
TxnAmount	100.00	Transaction Amount (Rs.Ps format)
BankID	NA	Fixed Value 'NA'
Filler2	NA	Fixed Value 'NA'
Filler3	NA	Fixed Value 'NA'
CurrencyType	INR	Fixed Value 'INR' (max length 3)
ItemCode	NA	Fixed Value 'NA'
TypeField1	R	Fixed Value (max length 1)
SecurityID	abcd	As provided by BillDesk during integration
Filler4	NA	Fixed Value 'NA'
Filler5	NA	Fixed Value 'NA'
TypeField2	F	Fixed Value (max length 1)
AdditionalInfo1	john@doe1.com	Customer's Email ID
AdditionalInfo2	9820198201	Customer's Mobile Number
AdditionalInfo3	NA	Additional Information, if required
AdditionalInfo4	NA	Additional Information, if required
AdditionalInfo5	NA	Additional Information, if required
AdditionalInfo6	NA	Additional Information, if required

AdditionalInfo7	NA	Additional Information, if required
TypeField3	NA	Fixed Value 'NA'
Checksum	AB6VN3245B66FE9511DB2A854AAA32ADC563E789CF213CA19E274F18F330G547	Checksum hash computed by the merchant

How to compute checksum

1. ARRANGE the values in a pipe delimited format in the exact sequence below:

MerchantID**|**CustomerID|NA|TxnAmount|NA|NA|NA|CurrencyType|NA**|**TypeField1|SecurityID|NA|NA|TypeField2|AdditionalInfo1**|**AdditionalInfo2**|**AdditionalInfo3**|**AdditionalInfo4**|**AdditionalInfo5**|**AdditionalInfo6**|**AdditionalInfo7**|**TypeField3

2. COMPUTE the checksum by passing the string and the key to the checksum function

Sample string for computing the checksum

ABCD**|**123456789|NA**|**100.00|NA|NA|NA**|**INR|NA|R**|**abcd|NA|NA**|**F|john@doe1.com**|**98201 98201|NA|NA|NA|NA**|**NA**|**NA

Assume the checksum value generated was:

AB6VN3245B66FE9511DB2A854AAA32ADC563E789CF213CA19E274F18F330G547

You final 'msg' parameter value would look like this:

ABCD**|**123456789|NA**|**100.00|NA|NA|NA**|**INR|NA|R|abcd|NA|NA**|**F|john@doe1.com**|**98201 98201|NA|NA|NA|NA**|**NA**|**NA**|**AB6VN3245B66FE9511DB2A854AAA32ADC563E789CF213CA19 E274F18F330G547

b. Payment Response

The payment response is provided to the Merchant's callbackUrl specified by Merchant when the transaction was initiated.

This response is a <u>browser</u> response and is provided as a parameter "msg"

Tokens	Sample Value	Description
MerchantID	ABCD	As per setup
CustomerID	123456789	Merchant's Unique Order / Txn Reference Number
TxnReferenceNo	MXYZ0412001668	BillDesk PG Txn Ref Number
BankReferenceNo	8576304	Reference number provided by bank
TxnAmount	100.00	Transaction Amount
BankID	XYZ	Internal Value for processor; merchant can ignore
Filler1	A1232124	Internal Value for processor; merchant can ignore
TxnType	NA	Internal Value for processor; merchant can ignore
CurrencyType	INR	Internal Value for processor; merchant can ignore
ItemCode	DIRECT	Internal Value for processor; merchant can ignore
Filler2	NA	Internal Value for processor; merchant can ignore
Filler3	NA	Internal Value for processor; merchant can ignore
Filler4	NA	Internal Value for processor; merchant can ignore
TxnDate	22-12-2019 11:07:56	Transaction date time as per BillDesk platform. Merchant must store this transaction date/time, as it is required for supplementary processes such as Refund API.
AuthStatus	0300	Refer table below for possible AuthStatus values
Filler5	NA	Internal Value for processor; merchant can ignore
AdditionalInfo1	john@doe1.com	Value that was passed in the payment request is returned.
AdditionalInfo2	9820198201	Value that was passed in the payment request is returned.

AdditionalInfo3	NA	Value that was passed in the payment request is returned.
AdditionalInfo4	NA	Value that was passed in the payment request is returned.
AdditionalInfo5	NA	Value that was passed in the payment request is returned.
AdditionalInfo6	NA	Value that was passed in the payment request is returned.
AdditionalInfo7	NA	Value that was passed in the payment request is returned.
ErrorStatus	NA	Error Status provided here
ErrorDescription	NA	Error/ transaction failure description provided here – this failure reason can be displayed to customer.
Checksum	HG4VN3245B66FE9511DB2A854DFG32ADC563E789CF213MH19E274F18F330G934	Computed checksum by BillDesk *Merchant must always validate this checksum before updating the payment status in its platform.*

Response "msg" parameter:

MerchantID|CustomerID|TxnReferenceNo|BankReferenceNo|TxnAmount|BankID|BankMerchantID|TxnType|CurrencyName|ItemCode|SecurityType|SecurityID|SecurityPassword|TxnDate|AuthStatus|SettlementType|AdditionalInfo1|AdditionalInfo2|AdditionalInfo3|AdditionalInfo4|AdditionalInfo5|AdditionalInfo6|AdditionalInfo7|ErrorStatus|ErrorDescription|CheckSum

Sample Response Message

ABCD|123456789|MXYZ0412001668|8576304|O0000100.0O|XYZ|NA|NA|INR|NA|NA|NA|NA|22-12-2019 11:07:56|0300|NA|john@doe1.com|9820198201|NA|NA|NA|NA|NA|NA|NA|HG4VN3245B66FE9511DB2A854DFG32ADC563E789CF213MH19E274F18F330G934

Payment Updation process at Merchant's end

The following process should be followed at Merchant's end for receiving and processing the payment response:

(a) Receive and Read the Payment Response message "msg"

(b) Generate the 'checksum value' for the Payment Response and validate it with the 'checksum value' received in the Payment Response. If they match; proceed to step (c) below; else log it as a FAILURE.

(c) Update the status of original record in the Merchant system based on the 'AuthStatus' field received in the Payment Response.

Refer the table below for various values that are received in the AuthStatus field, and the related Transaction Status. The updation to the original record must be done as follows:

Successful transaction
Update <record> set STATUS = 'SUCCESS' where ORIGINALSTATUS='PENDING' and ORDERNUMBER='123456789' and TRANSACTIONAMOUNT='100.00'

Failure transaction
Update <record> set STATUS = 'FAILURE' where ORIGINALSTATUS='PENDING' and ORDERNUMBER='123456789' and TRANSACTIONAMOUNT='100.00'

(d) The above updation process ensures the following:

❑ Only the original record is updated [through the Unique Order Number]
❑ The record is updated only once [for original status=PENDING]
❑ The record is updated for the same 'Transaction Amount' that was initiated by the Merchant.

Authorization status

AuthStatus	Description
0300	Success
0399	Failure
NA	Error Condition [E.g. Txn not found/ Invalid checksum etc.]
0002	Pending/Abandoned
0001	Technical Error