NSDL SurePay
Merchant Integration Document

NSDL Confidential
Page 1
Version: 3.08

Table of Contents
1. Merchant Onboarding on NSDL SurePay .............................................................. 3
2. Technical Integration (Between Merchant & SurePay) ............................................. 4
   2.1 Transaction Parameters ..................................................................................... 4
        2.1.1 Transaction Details to be shared by Merchant with NSDL SurePay ................. 4
        2.1.2 Checksum ................................................................................................ 7
        2.1.3 Logic for checksum value generation using CRC32 .................................. 8
        2.1.4 Sample message for checksum value generation ......................................... 9
        2.1.5 Transaction Request URL’s ......................................................................... 9
3. Response Message Shared by NSDL SurePay with Merchant .................................. 9
   3.1.1 Response Message description ....................................................................... 9
   3.1.2 Sample Response Message ........................................................................... 10
   3.1.3 Payment Updation process at Merchant’s end ............................................... 10
   3.1.4 Error Code Listing & Exceptions ................................................................ 10
   3.1.5 Push Response Message shared between NSDL SurePay and Merchant .......... 11
       Sample Response Message .................................................................................. 11
   3.1.6 Double Verification Message / Status Query shared between NSDL SurePay and Merchant ................................................................. 13
       Web Service API call .......................................................................................... 14
   3.1.7 Transaction Cancel Request .......................................................................... 17
1. Merchant Onboarding on NSDL SurePay

Following are the documents that Merchant’s needs to fill and submit to NSDL SurePay team & steps to get onboarded:

1) **Legal Agreement** – This shall be a mutual agreement. Merchants to review this and provide confirmation to SurePay, basis the confirmation received, SurePay team shall print 2 copies, frank, sign / seal and dispatch both the copies to the Merchant. Merchant has to sign / seal both the copies and return one copy back via courier.

2) **Merchant Details Form** – This form shall have Merchant’s basic details like the entity name, why payment gateway is required, payment methods required, business and technical contact details Etc. This document has to be filled up by the merchant and shared in word document via email to SurePay team.

3) **Gateway Registration Form** – This form shall have Merchants organizational details, services provided with service id’s, Nodal officer details, Technical details Etc. This document has to be filled up by the Merchant and printed on merchant’s organizational letterhead, this is to be signed/sealed by the merchant’s authorised signatory and scanned in colour and shared with SurePay team via email.

4) **Bank Letter** – This is format in which the Merchant has to submit its Bank Account details in which the transaction amount collected from the customers shall be credited / deposited. This document has to be filled up by the Merchant and printed on merchant’s organizational letterhead, this is to be signed/sealed by the merchant’s authorised signatory; further this has to be verified by the Bank manager and signed / sealed by Bank manager and scanned in colour and shared with SurePay team via email.

5) **Parameter information Sheet** – This is the parameter information collected from the Merchant which consists of service ids, service descriptions, Live and Test URL’s to be configured / whitelisted by SurePay team.

Following are the steps that need to be followed to integrate with PayGov:

1) **Bank Letter and Parameter sheet** – Please provide these documents on high priority, basis these documents we will issue test id’s for testing purposes.

2) **Merchant Details, Gateway Registration & Agreement** – Please provide these documents as per the details mentioned below

We will follow the process parallely; while merchant is completing the testing, merchant can share other documents with us mentioned in point 2 above and we get approval codes from bank to proceed ahead. Please note it takes around 20 days for us to make your project live from the date all the complete documents are shared with us.

Also below details needs to be updated by Merchant / Department’s on its portal as a part of Visa and MasterCard requirement / policy. These details are compulsory for us to enable credit card option on Merchant / Department’s portal.
2. Technical Integration (Between Merchant & SurePay)

Merchant’s transaction will be processed with the following method, merchant has to capture transaction and pass it to NSDL SurePay as per format detailed in subsequent section in this document.

NSDL SurePay will receive the Online Payment Order (OPO) securely from the whitelisted URL of the Merchant. NSDL SurePay will facilitate the Customer of the Merchant to choose the preferred / desired payment mode from various payment modes as are enabled for the Merchant. After the Customer chooses the payment mode successfully, he will be taken to Bank / Payment Gateway for completing the transaction by Authentication and Authorisation in a secure manner. Once NSDL SurePay receives transaction status update from the Bank / Payment Gateway, it will share the response with Merchants through Browser to Browser redirection.

NSDL SurePay will also send Server to Server response to the Merchant through below mentioned methods like:

i. Push Response Message
ii. Double Verification / Status Query

Data has to be shared in an encrypted manner to ensure that there is no tampering and transaction is processed in a secured manner.

2.1 Transaction Parameters

In this method, merchant will share with NSDL SurePay following transaction details.

2.1.1 Transaction Details to be shared by Merchant with NSDL SurePay

Transaction details will contain the following information. It will be shared in | [pipe] delimiter format. Following are the request parameters that Merchant has to send to NSDL SurePay.
### Annexure – I

<table>
<thead>
<tr>
<th>Definition</th>
<th>Parameter Name</th>
<th>Sample Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message Type</td>
<td>messageType</td>
<td>0100</td>
<td>This is a static value to be passed by Merchant. 0100 stands for “transaction” Static value “0100” Mandatory Value Fixed Length 5</td>
</tr>
<tr>
<td>Merchant ID / Sub Merchant ID</td>
<td>merchantId</td>
<td>ABCDE</td>
<td>Provided to Merchant by NSDL SurePay after setup is completed. <strong>Test merchant id shall be provided for testing by SurePay</strong> Mandatory Value Minimum Length 5 – Maximum Length 25 Data Type: VarChar</td>
</tr>
<tr>
<td>Service ID</td>
<td>serviceld</td>
<td>Service1</td>
<td>This is the id which merchant bifurcates as per the services provided by them and each service id shall have bank accounts mapped so that the amount can be settled in the respective bank account as mapped against a service id. Mandatory Value Minimum Length 5 – Maximum Length 25 Data Type: VarChar, but no special characters allowed, It must be unique for each Service</td>
</tr>
<tr>
<td>Payment Order Number (Merchant Order No.)</td>
<td>orderId</td>
<td>5630147521</td>
<td>This shall be a unique Payment order number generated by the merchant for a transaction and shared with SurePay for processing. This Unique payment order number shall change on every re-try of transaction, if earlier failed to process. Mandatory Value Minimum Length 6 – Maximum Length 50 Data Type: VarChar</td>
</tr>
<tr>
<td>Customer ID</td>
<td>customerId</td>
<td>123456789012</td>
<td>This shall be the unique id for his customer generated by Merchant Optional Value Minimum Length 6 – Maximum Length 100 Data Type: VarChar</td>
</tr>
<tr>
<td>Transaction Amount</td>
<td>transactionAmount</td>
<td>100.00</td>
<td>Transaction Amount Mandatory Value Maximum Length : 15,2 Data Type: Number</td>
</tr>
<tr>
<td>Currency Code</td>
<td>currencyCode</td>
<td>INR</td>
<td>Static Value (max length 3)</td>
</tr>
<tr>
<td>Date and Time</td>
<td>requestDateTime</td>
<td>dd-MM-yyyy HH:mm:SSS</td>
<td>14 FIELDS, this shall include Date – DD, Month – MM, Year – YYYY, Hours – HH, Minute – MM &amp;</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Success URL</td>
<td>URL to be provided by Merchant as a parameter in each transaction, This is the URL on which the successful response shall be posted by SurePay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fail URL</td>
<td>URL to be provided by Merchant as a parameter in each transaction, This is the URL on which the Fail response shall be posted by SurePay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Field 1</td>
<td>Merchant can pass Mobile No. and Email id of customers using this parameter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Field 2</td>
<td>Merchant can pass ‘Split Payment type’ information using this parameter. This field shall be used when merchant wants a single transaction amount to be split and settled in multiple bank accounts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Field 3</td>
<td>Merchant can pass ‘Split Payment info’ details using this parameter. This field shall be used when merchant wants a single transaction amount to be split and settled in multiple bank accounts.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Additional Field 4**
<table>
<thead>
<tr>
<th>Name</th>
<th>additionalField4</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Additional field 4 for future purpose</td>
<td>Non-Mandatory Value</td>
<td>Minimum Length 6 – Maximum Length 255 Data Type: VarChar with ^ separation if required</td>
</tr>
</tbody>
</table>

**Additional Field 5**
<table>
<thead>
<tr>
<th>Name</th>
<th>additionalField5</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Additional field 5 for future purpose</td>
<td>Non-Mandatory Value</td>
<td>Minimum Length 6 – Maximum Length 255 Data Type: VarChar with ^ separation if required</td>
</tr>
</tbody>
</table>

**Checksum**
<table>
<thead>
<tr>
<th>Name</th>
<th>checksum</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 character checksum Generated 2423966717</td>
<td>Key will be provided by SurePay to the Merchant. Merchant to Calculate based on the API/ logic provided in 2.1.2, 2.1.3 &amp; 2.1.4 section below. It is Merchant’s responsibility to keep the secret key safe &amp; protected. Mandatory Value</td>
<td>Data Type: As per calculation logic provided</td>
</tr>
</tbody>
</table>

Note: Encryption does not fully guarantee transaction safety

Above parameters are send through **POST** request (i.e. Form Submission)

E.g.:-
```html
<form id="formData" role="form" action="#" method="POST">
  <input type="hidden" id="checksum" name="checksum" value="2423966717" />
  <input type="text" id="messageType" class="form-control" name="messageType" value="REQ" maxlength="5" />
  <input type="text" id="merchantId" class="form-control" name="merchantId" value="**MERCH_ID**" maxlength="25" />
  <input type="text" id="serviceId" class="form-control" name="serviceId" value="**SREG**" maxlength="25" />
  <input type="text" id="orderId" class="form-control" name="orderId" value="**ORDER_ID**" maxlength="50" />
  <input type="text" id="customerId" class="form-control" name="customerId" value="**CUSTOMER_ID**" maxlength="25" />
  <input type="text" id="transactionAmount" class="form-control" name="transactionAmount" value="**AMOUNT**" maxlength="15" />
  <input type="text" id="currencyCode" class="form-control" name="currencyCode" value="**CURRENCY_CODE**" />
  <input type="text" id="requestDateTime" class="form-control" name="requestDateTime" value="**REQUEST_DATE_TIME**" />
  <input type="text" id="successUrl" class="form-control" name="successUrl" value="**SUCCESS_URL**" />
  <input type="text" id="failUrl" class="form-control" name="failUrl" value="**FAIL_URL**" />
  <input type="text" id="additionalField1" class="form-control" name="additionalField1" value="**ADDITIONAL_FIELD1**" maxlength="500" />
  <input type="text" id="additionalField2" class="form-control" name="additionalField2" value="**ADDITIONAL_FIELD2**" maxlength="500" />
  <input type="text" id="additionalField3" class="form-control" name="additionalField3" value="**ADDITIONAL_FIELD3**" maxlength="500" />
  <input type="text" id="additionalField4" class="form-control" name="additionalField4" value="**ADDITIONAL_FIELD4**" maxlength="500" />
  <input type="text" id="additionalField5" class="form-control" name="additionalField5" value="**ADDITIONAL_FIELD5**" maxlength="500" />
</form>
```

### 2.1.2 Checksum

The checksum is an important part while requesting & receiving messages to & from SurePay for the Merchant. When the merchant receives the response from SurePay, a new checksum is generated at
the merchant site to verify the received one. Any differences in the checksum imply that the messages have been modified or received erroneously.

SurePay will provide a checksum component to the merchant to generate the checksum. The Checksum component will require a message string and security key, i.e. security key (SurePay and the merchant would share a secret key (SurePay will generate and share with Merchant initially /time of integration) to generate the checksum)

2.1.3 Logic for checksum value generation using CRC32

Merchant should implement the following code at its end to generate checksum value using CRC32:

```java
public static String generateCRC32Checksum(String message, String secretKey) {
    String msg = message + "|" + secretKey;
    byte bytes[] = msg.getBytes();
    Checksum checksum = new CRC32();
    // update the current checksum with the specified array of bytes
    checksum.update(bytes, 0, bytes.length);
    // get the current checksum value
    long checksumValue = checksum.getValue();
    // logger.info("CRC32 checksum for input string is: " + checksumValue);
    return String.valueOf(checksumValue);
}
```

Above logic is for checksum generation. Message String should contain pipe separated data.

Following methodology is to be used for CRC32 checksum generation. Merchant can implement the same using their own code.

- Create the message e.g.
  ```
  msg1=<VALUE1>|<VALUE2>|<VALUE3>|<VALUE4>|<VALUE5>|<VALUE6>
  ```
- Towards the end append the KEY supplied
  ```
  msg2=<VALUE1>|<VALUE2>|<VALUE3>|<VALUE4>|<VALUE5>|<VALUE6>|<KEY>
  ```
- Create check sum for this entire string using the update(byte[]) of the java.util.zip.CRC32. say the value generated is <CHECKSUM>= crc32.update(msg2.getBytes()).

To parse the response

- You shall receive a response msg=<msg1>
- msg1, like the request will be delimited by "|
- msgA = complete text of msg1 excluding the last token of checksum
- msgB is the checksum provided in the last token of the msg1
- msg0 = msgA + | + KEY provided
- Create checksum for this entire string using the update (byte[]) of the java.util.zip.CRC32. say the value generated is <CHECKSUM> = crc32.update(msg0.getBytes()).
- Compare msgB and <CHECKSUM>, if same then tokenize msgA and process the response

2.1.4 Sample message for checksum value generation

**e.g:-** String message = 0100|ABCD|Service1|5630147521|123456789012|100.00|INR|DDMMYYYYHHMMSSS|http://www.domain.com/response.jsp

**e.g:-** String message = messageType|merchantId|serviceId|orderId|customerId|transactionAmount|currencyCode|requestDateTime|successUrl|failUrl|additionalFeild1| additionalFeild2| additionalFeild3| additionalFeild4| additionalFeild5

**Note:**
1. Secret-Key would be provided to merchant by SurePay which would be unique for every merchant.
2. It is mandatory for Merchant to have their LIVE / PROD website SSL certified, website should be 'https' without which Go-Live will not happen.

2.1.5 Transaction Request URL’s

**UAT:** http://121.242.223.243/SurePayPayment/sp/processRequest

**PROD:** https://surepay.ndml.in/SurePayPayment/sp/processRequest

3. Response Message Shared by NSDL SurePay with Merchant

Browser to browser response message that will be shared by NSDL SurePay with the Merchant upon processing of a transaction will contain following information. The payment response is sent to the Return URL [RU] specified dynamically by Portal for each transaction.

3.1.1 Response Message description

SuccessFlag|MessageType|SurePayMerchantId|Serviceld|OrderId|CustomerId|TransactionAmount|CurrencyCode|PaymentMode|ResponseDateTime|SurePay Txn Id|BankTransactionNo|TransactionStatus|AdditionalInfo1|AdditionalInfo2|AdditionalInfo3|AdditionalInfo4|AdditionalInfo5|ErrorCode|ErrorDescription|CheckSum

FailureFlag|SurePayMerchantId|OrderId|Serviceld|PaymentMode|BankTransactionNo|ErrorCode|ErrorMessage|ErrorDescription|ResponseDateTime|CheckSum
3.1.2 Sample Response Message

SuccessMsg= S|0100|IRDAI|INSPE|15706|C111111111|1234.0|INR|NET BANKING|Tue Jun 18 16:40:00 IST 2019|4675|pay_CjEbtHXUMpFJ1P|A|AddInfo1|AddInfo2|AddInfo3|AddInfo4|AddInfo5| | |4155852907

FailureMsg= F|IRDAI|16120|BRKAN|NET BANKING|pay_CjEbtHXUMpFJ1P|400|Transaction_Declined|Payment_failed|Tue Jun 18 16:20:31 IST 2019|803215664

Please note – MERCHANTID and the CHECKSUM KEY would be provided at the time of integration.

3.1.3 Payment Updation process at Merchant’s end

Merchant Portal will receive the browser response and display an acknowledgement to the customer. Merchant will also receive the server-to-server response and do the system updation at its 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 at the Return URL
(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 display a Payment Rejection message to the customer.
(c) Update the original record in the merchant system based on the ‘TransactionStatus’ field received in the Payment Response. Refer the response string mentioned in the above section for various values that are received in the TransactionStatus field, and the related Transaction Status.

3.1.4 Error Code Listing & Exceptions

Following is the list of error codes / exceptions that will come up while Transaction processing between NSDL SurePay and Merchant. For all AuthStatus that is not a Success, an ErrorDescription would be provided in the Payment Response.

<table>
<thead>
<tr>
<th>Response / Error code</th>
<th>Response / Error Description</th>
<th>Response / Error Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>ok</td>
<td>successful Response</td>
</tr>
<tr>
<td>500</td>
<td>Internal Server Error</td>
<td>Error Due to internal failure</td>
</tr>
<tr>
<td>Status Code</td>
<td>Error Message</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>404</td>
<td>Not Found</td>
<td>No Data Found for given Request</td>
</tr>
<tr>
<td>400</td>
<td>Bad Request</td>
<td>· Incorrect Data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Invalid VPA. Please enter a valid Virtual Payment Address</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment declined by bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment declined by gateway. Most probably due to customer clicking the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cancel button on 3dSecure page</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment failed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment failed because cardholder couldn't be authenticated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment failed because Transaction amount limit has exceeded</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment failed because UPI request timed out.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment processing cancelled by user</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment processing failed because card's withdrawal amount limit has</td>
</tr>
<tr>
<td></td>
<td></td>
<td>exceeded.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment processing failed due to insufficient balance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· Payment was not completed on time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· The bank has declined the payment as this card cannot be used for this</td>
</tr>
<tr>
<td></td>
<td></td>
<td>type of payment. Please use an alternate credit card for the purpose.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>· The gateway request to submit payment information timed out. Please</td>
</tr>
<tr>
<td></td>
<td></td>
<td>submit your details again</td>
</tr>
<tr>
<td>408</td>
<td>Request Timeout</td>
<td>Session Time Out Error if not transaction has been initiated for 15 min.</td>
</tr>
</tbody>
</table>

3.1.5 Push Response Message shared between NSDL SurePay and Merchant
It may so happen that the transaction status response message sent by NSDL SurePay to Merchant via Browser to Browser redirection may not hit the Merchant’s server due to some reason. In such cases Merchant will not get to know the customer’s transaction status. To overcome this, Merchant can opt for Push Response facility. In this case, NSDL SurePay will additionally post Server to Server success or failure response messages to the URLs provided by the Merchant. Merchant’s website has to be http secure i.e. https. Response parameters remain same as mentioned in above sections.

**Sample Response Message**

SuccessMsg= S|0100|IRDAI|INSPE|15706|C111111111|1234.0|INR|NET BANKING|Tue Jun 18 16:40:00 IST 2019|4675|pay_CjEbtHXUMpFJ1P|A|AddInfo1|AddInfo2|AddInfo3|AddInfo4|AddInfo5|||4155852907

FailureMsg= F|IRDAI|16120|BRKAN|NET BANKING|pay_CjEbtHXUMpFJ1P|400|Transaction_Declined|Payment_failed|Tue Jun 18 16:20:31 IST 2019|803215664

- NSDL SurePay shall send the Push Response via S2S (Server to Server) to Merchant. In case the merchant server is down and unable to accept the response, SurePay server will try thrice in a Day to send the Push Response and maintain an Audit trail / log of hits done to Merchant server at various intervals.
- NSDL SurePay will push the transaction status response for transactions with “Success & Failed” status only once, while for ‘Pending’ status it will be pushed only till next 48 hours from the data/time of transaction only in case of any change in the status received from Banks / PG.
- Once the transaction status is pushed by NSDL SurePay it will expect an acknowledgment from the Merchant / Department. Once acknowledgement received and updated at NSDL SurePay, it will not push any transaction response further.
- In the Meanwhile or in case the Merchant does a Query API to SurePay database, appropriate transaction response shall be sent to Merchant.

**Acknowledgement from Merchant to NSDL SurePay for Push Response**

Merchant shall provide the below acknowledgment back to NSDL SurePay informing that either it has successfully consumed the Push Response or any errors faced / reported

<table>
<thead>
<tr>
<th>Category</th>
<th>Response From Merchant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>200</td>
</tr>
<tr>
<td>Failed</td>
<td>400</td>
</tr>
</tbody>
</table>

**Failed Reason List**

<table>
<thead>
<tr>
<th>Failed Reason</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invalid Order id</td>
<td>Order id received in PG response is not matching with the order id in merchant request.</td>
</tr>
<tr>
<td>Invalid Check Sum</td>
<td>Checksum received in PG response is incorrect.</td>
</tr>
<tr>
<td>Authentication Failure</td>
<td>User Name and password provided by PG is not correct.</td>
</tr>
</tbody>
</table>
System Exception

Any system related exception occurred in Merchant site while consuming PG response.

Sample Code for acknowledgment to be shared by Merchant

```java
public class SurepayPushResponseSample extends HttpServlet {
    
    @Override
    protected void doPost(HttpServletRequest req, HttpServletResponse resp)
    throws ServletException, IOException {
        String response="";
        String auth = req.getHeader("Authorization");
        String surepayResponse=(String) req.getParameter("msg");
        /*
         * Provide all the processing logic on surepayResponse
         * as per your application requirement.
         */

        response="200|Y|SUCCESSFUL"; // For success given from merchant application to sure pay
        resp.getWriter().println(nsrResponse);

        response="400|N|FAILED"; // For failed given from merchant application to sure pay
        resp.getWriter().println(nsrResponse);
    }
}
```

3.1.6 Double Verification Message / Status Query shared between NSDL SurePay and Merchant

Due to connectivity issue between Merchant and NSDL SurePay, actual transaction status may not get updated at Merchant’s end either through Browser to Browser redirection by NSDL SurePay or Server to Server Push Response initiated by NSDL SurePay. Transaction status remains “Pending” at Merchant’s end. Status may have to be updated as “Success” or ‘Failure” upon reconciliation on the next day. To overcome this, NSDL SurePay will provide Double Verification facility to the Merchants to obtain automated response on an on-demand basis i.e. Merchant has to query for the exact transaction status. This can be implemented in following ways:
Note: Merchant needs to have TLS 1.2 security mechanism to have Query API integrated with PayGov / SurePay, without which Query API shall not work.

3.1.6.1 Web Service API call – Single Request

Such requests are raised by Merchant. Request parameters to be passed in encrypted format by the Merchant to NSDL SurePay under this option are:

<table>
<thead>
<tr>
<th>S No</th>
<th>Parameters</th>
<th>Description</th>
<th>Data Type</th>
<th>Size</th>
<th>M/O</th>
<th>Sample</th>
<th>Remarks/Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bank Reference No.</td>
<td>Reference no of the transaction generated by Bank / Aggregator</td>
<td>Varchar</td>
<td>Min 1</td>
<td>O</td>
<td>123456</td>
<td>This no has to exist in NSDL SurePay database for the Merchant.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e.g. pay_BtOYXayifVcud4</td>
<td></td>
<td>Max 25</td>
<td></td>
<td></td>
<td>In case of mismatch error message will be displayed.</td>
</tr>
<tr>
<td>2</td>
<td>Merchant Id</td>
<td>Merchant Id generated by NSDL SurePay</td>
<td>Varchar</td>
<td>20</td>
<td>M</td>
<td>1000003</td>
<td>This has to match with Merchant Id in Merchant Master of SurePay</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In case of mismatch error message will be displayed.</td>
</tr>
<tr>
<td>3</td>
<td>Merchant Order No</td>
<td>Order Number generated by Merchant</td>
<td>Varchar</td>
<td>100</td>
<td>M</td>
<td>0001</td>
<td>This no has to exist in NSDL SurePay database for the Merchant.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In case of mismatch error message will be displayed.</td>
</tr>
</tbody>
</table>

URL for Query of Transaction:

UAT: [http://121.242.223.243/SurePayPayment/queryPaymentStatus](http://121.242.223.243/SurePayPayment/queryPaymentStatus)

PROD: [https://surepay.ndml.in/SurePayPayment/queryPaymentStatus](https://surepay.ndml.in/SurePayPayment/queryPaymentStatus)

Sample request parameter to be sent by Merchant to NSDL SurePay:

With Bank Reference ID
String `requestMsg` = `pay_CjEbtHXUMpFJ1P|IRDAI|15706`
String `requestMsg` = `BankReferenceNumber|MerchantId|MerchantOrderNo`.

(This needs to be passed as a request parameter which needs to be posted on NSDL SurePay URL using basic authentication for which user name and password has been provided below)

**Without Bank Reference ID**

String `requestMsg` = `|IRDAI|16120`
String `requestMsg` = `|MerchantId|MerchantOrderNo`.

(This needs to be passed as a request parameter which needs to be posted on NSDL SurePay URL using basic authentication for which user name and password will be provided separately in an email)

Response parameter to be posted by NSDL SurePay on in encrypted format as specified below:

**a. Success Response:**

SuccessFlag | MessageType | SurePayMerchantId | ServiceId | OrderId | CustomerId | TransactionAmount | CurrencyCode | PaymentMode | ResponseDateTime | SurePay TxnId | BankTransactionNo | TransactionStatus | AdditionalInfo1 | AdditionalInfo2 | AdditionalInfo3 | AdditionalInfo4 | AdditionalInfo5 | ErrorCode | ErrorDescription | CheckSum
S | 0100 | IRDAI | INSPE | 15706 | C111111111 | 1234.0 | INR | NET BANKING | Tue Jun 18 16:40:00 IST | 4675 | pay_CjEbtHXUMpFJ1P | A | AddInfo1 | AddInfo2 | AddInfo3 | AddInfo4 | AddInfo5 | \| | \| | 4155852907

**b. Failure Response:**

FailureFlag | SurePayMerchantId | OrderId | ServiceId | PaymentMode | BankTransactionNo | ErrorCode | ErrorMessage | ErrorDescription | ResponseDateTime | CheckSum
---|---|---|---|---|---|---|---|---|---|---
F | IRDAI | 16120 | BRKAN | NET BANKING | pay_CjEbtHXUMpFJ1P | 400 | Transaction_Declined | Payment_failed | Tue Jun 18 16:20:31 IST | 803215664

**c. Response for Transaction Declined by SurePay:** (Happens for the txn whose status is ‘Initiated’ and customer remains idle for more than 15 min on NSDL SurePay payment page, in such case transaction would be canceled by SurePay and will update the status with PAYMENT_DECLINED_S)

FailureFlag | SurePayMerchantId | OrderId | ServiceId | PaymentMode | BankTransactionNo | ErrorCode | ErrorMessage | ErrorDescription | ResponseDateTime | CheckSum
---|---|---|---|---|---|---|---|---|---|---
D | IRDAI | 16120 | BRKAN | NET BANKING | pay_CjEbtHXUMpFJ1P | 400 | Transaction_Declined | Payment_failed | Tue Jun 18 16:20:31 IST | 803215664
d. Response for Transaction Cancelled by Customer on NSDL SurePay payment page: (Happens only when customer visits NSDL SurePay payment page and then clicks on “Cancel” button w/o proceeding with the payment)

<table>
<thead>
<tr>
<th>FailureFlag</th>
<th>SurePayMerchantId</th>
<th>OrderId</th>
<th>ServiceId</th>
<th>PaymentMode</th>
<th>BankTransactionNo</th>
<th>ErrorC</th>
<th>ErrorMessage</th>
<th>ErrorDescription</th>
<th>ResponseDateTime</th>
<th>CheckSum</th>
</tr>
</thead>
</table>


e. Response for Transaction Initiated: (Happens only when customer visits NSDL SurePay payment page and then abandons the transaction by closing the browser on the cross button on the top of the window w/o proceeding with the payment)

<table>
<thead>
<tr>
<th>InitiatedFlag</th>
<th>SurePayMerchantId</th>
<th>OrderId</th>
<th>ServiceId</th>
<th>PaymentMode</th>
<th>ErrorDescription</th>
<th>ResponseDateTime</th>
<th>CheckSum</th>
</tr>
</thead>
<tbody>
<tr>
<td>InitiatedMsg=</td>
<td>I</td>
<td>NDML_NSR</td>
<td>19400</td>
<td>NSRREG</td>
<td>ORDER_INITIATED</td>
<td>2019-04-01 12:26:00.813</td>
<td>243921040</td>
</tr>
</tbody>
</table>

- Merchant can call an Query API to NSDL SurePay for transaction with any status
- Merchant can fire a Query for any transaction until next 15 days from the date of transaction.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Success</td>
<td>It denotes that the transaction has been successfully completed and the Merchant / Department can provide the services to the customers</td>
</tr>
<tr>
<td>2</td>
<td>Failure</td>
<td>It denotes that the transaction has been Failed by the Customers bank due to various reason and the Merchant / Department cannot provide the services to the customers</td>
</tr>
<tr>
<td>3</td>
<td>Initiated</td>
<td>It denotes that the transaction has been Initiated however it is not sent to PG for processing as user might have closed the browser without selecting any payment options</td>
</tr>
</tbody>
</table>

3.1.6.2 Web Service API call – Multiple Request (Bulk Query API)

Request parameters (JSON String):-

```json
{
    "queryApiRequest": [
        {
            "requestMsg": "|NDML_NSR|15230"
        },
        {
            "requestMsg": "|NDML_NSR|19726"
        }
    ]
}
```
3.1.7 Transaction Cancel Request

When SurePay web page loads, Payment page would be displayed. On that page Merchant can either process the transaction or cancel the transaction by clicking on Cancel Button and return to merchant specific page. After clicking on cancel NSDL Surepay will redirect to merchant page with pipe separated response message.

FailureFlag|SurePayMerchantId|OrderId|ServiceId|PaymentMode|BankTransactionNo|ErrorCode|ErrorMessage|ErrorDescription|ResponseDateTime|SurePayTxnNo|CheckSum

F|IRDAI|19917|BRKLI|||400|Transaction Cancelled|Transaction Cancelled by User|18-06-2019 5:21:01|4676|3322786322

---------x---------