

Sonali Bank PLC

Sonali Payment Gateway (SPG)

(Payment Collection)



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Confidential

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Disclaimer

This document is intended for Software Engineers and Professional Programmers. It is best understood by those familiar with REST APIs and web portal redirects utilizing GET requests. All content is copyright protected and may not be reproduced in any form without the express written consent of Sonali Bank PLC.

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1. Introduction

This document provides the specifications for the Connector that links the Sonali Payment Gateway (SPG) and the Service Portal. Its purpose is to assist the Service Portal in preparing its infrastructure for integration with the Sonali Payment Gateway (SPG) to perform real-time transaction verification against relevant services.

Test Credentials:

"Authorization": "Basic
ZHVVc2VyMjAxNDE6ZHVVc2VyUGF5bWVudDIwMTQ=" (Header)

Rest API url: <https://spg.sblesheba.com:6314/>

The API base URL will be changed in the live environment.

Authorization details and the API base URL will be provided in the live environment. Separate these two values from the codebase and update them in the production environment.

Test account: (Sonali Account Transfer Mode (A02))

A/C#: 1234567891011

Name: Test

Cell #: 1111111111

OTP: 123456

2. Integration Procedure (Operational)

- **Step 1:** The applicant accesses the Service Portal (e.g., client sites like <https://sbl.com.bd:7070/> or your site) and provides information such as their name, contact number, amount, etc
- **Step 2:** Call SPG 3.1: [CreatePaymentRequest \(API-I\)](#) to obtain a **Token**. You will successfully receive a **Token** if the Status is "200". **The Token is important, so make sure to store this value in your database.**
- **Step 3:** If you receive a **Token**, you will also get a **RedirectToGateway** value. Redirect the user to the specified URL.
- **Step 4:** If the payment process is done, the response should use the GET method to return to the specified URL (in [3.1: CreatePaymentRequest \(API-I\)](#)) of your Service Portal.
- **Step 5:** Your portal receives this response and then calls [3.5: Transaction Verification \(API-II\)](#) to confirm the transaction before making the service available to the customer. A status of "200" indicates a successful transaction response.

3. Sample of All Data Format

3.1: CreatePaymentRequest (API -I)

POST / api/v3/spgservice/CreatePaymentRequest

Host: https://spg.sblesheba.com:6314

Content-Type: application/json

Authorization: Mentioned on the Introduction page 4.

Request	Response
<pre>{ "InvoiceNo": "INV123456", "InvoiceDate": "2024-09-02", "RequestTotalAmount": 1500.00, "CustomerName": "Customer Name", "CustomerContactNo": "01711448444", "Email": "a@b.com", "ResponseUrl": "https://yourdomain.com/response", "AllowDuplicateInvoiceNoDate": "Y", "CreditInformations": [{ "SerialNo": 1, "CrAccountOrChallanNo": "0002601020864", "CrAmount": 500.00, "TranMode": "TRN", "Onbehalf": "John's Company" }, { "SerialNo": 2, "CrAccountOrChallanNo": "0002601020871", "CrAmount": 1000.00, "TranMode": "TRN", "Onbehalf": "John's Company" }] }</pre>	<pre>{ "Status": "200", "Token": "25fa2b6d108c5f40d640a68da29c37f8ad81b ebe764", "RedirectToGateway": "https://spg.sblesheba.com:6313/SpgLan ding/SpgLanding/25fa2b6d108c5f40d640a6 8da29c37f8ad81bebe764", "PaidDuplicateTokenList": [], "Message": "success" }</pre>

Note: "TranMode": "TRN" is for account Credit

"TranMode": "CHL" is used for challan creation, in this case you will get challan no/scroll no, you will not get money in your account.

"TranMode": "ACHL" is used for challan creation, in this case you will get challan no/scroll no, you will not get money in your account.

Request Parameter Table:

Parameter	Mandatory	Format	Description	Sample Value
InvoiceNo	Yes	String (50)	Any English character and number.	“INV123456”. INV word is not mandatory.
InvoiceDate	Yes	YYYY-MM-DD	Which date you generate this InvoiceNo.	“2024-09-02”
RequestTotalAmount	Yes	decimal (20,2)	A two-decimal value is mandatory.	1500.00
CustomerName	Yes	String (120)	The customer's English name must be provided.	“Nazrul Islam”
CustomerContactNo	Yes	String (15)	For Bangladeshi numbers, an 11-digit format must be used. For international numbers, a maximum of 15 digits is allowed. The customer may get sms.	“01711448855”
Email	No	String (50)	For the receipt, the customer's email address should be provided, though it is an optional field. The customer may get mail.	“a@b.com”
ResponseUrl	Yes	String (200)	After payment or cancellation, redirect to this location. No “?” mark is allowed in the URL.	“https://example.com/return”
AllowDuplicateInvoiceNoDate	Yes	String (1)	The default value is "Y". If set to "N", the system will check for duplicate transactions based on InvoiceNo and InvoiceDate. If a successful transaction is found, it will prevent further processing.	“Y”
CreditInformations	Yes	Array Block		
SerialNo	Yes	Integer	Numerical increments start from 1.	1
CrAccountOrChallanNo	Yes	String (26)	The Account No and eChallan must be 13 digits. The Achallan Code must have more than 13 digits.	0002601020864
TranMode	Yes	String (4)	If tranMode is "TRN", CrAccountOrChallanNo functions as Account Transfer. If tranMode is "CHL", CrAccountOrChallanNo functions as e-ChallanCode.	“TRN”

			If tranMode is "ACHL", CrAccountOrChallanNo functions as a-ChallanCode.	
CrAmount	Yes	decimal (20,2)	A two-decimal value is mandatory.	500.00
Onbehalf	No	String (120)	If tranMode is "CHL" or "ACHAL", this value will be used as the challan on behalf value. Otherwise send CustomerName here.	"Org Name"

Response Parameter Table:

Parameter	Mandatory	Format	Description	Sample Value
Status	Yes	String (4)	Proceed to the next step if the status is "200".	"200" => success "417" => parameter missing "400" => CrAccountOrChallanNo is not allowed. "201" => exception "987" => already paid when AllowDuplicateInvoiceNoDate = "N" In Message details will be mentioned.
Token	Yes	String (50)	This value is important for both redirect and transaction verification. Store it in the database.	"25fa2b6d108c5f40d640a68da29c37f8ad81bebe764"
Message	Yes	String (60)	Status Narration.	"success"
PaidDuplicateTokenList	Yes	String (50)	A list of success tokens will be provided here if AllowDuplicateInvoiceNoDate is set to "N" and the condition is met.	"PaidDuplicateTokenList": [{ "Token": "ff6652180830c6421f61d1f32d2bb9a33c57687c991" }]
RedirectToGateway	Yes	String(150)	If the status is "200", a URL will be provided here.	"https://spg.sblesheba.com:6313/SpgLanding/SpgLanding/d2fa8e89a2a1240df998fb0751a94da681bf25ac700"

3.2 Redirect Operation TO SPG (GET & Redirect) – NOT AN API

If all criteria are met and the status is "200", you need to redirect to the specified URL.

Note: RedirectToGateway is valid for 9 minutes for redirections. After this period, the RedirectToGateway will no longer be functional. However, you can verify the transaction using the token for up to 6 months.

3.3: Redirect Response from SPG (GET & Redirect)

After redirection, you may not know the outcome in the gateway. You will receive the following URL:

{ResponseUrl}?Token={Token}&Mode={Mode}

Above mention example, redirect link will be:

<https://yourdomain.com/response?Token=25fa2b6d108c5f40d640a68da29c37f8ad81bebe764&Mode=success>

Note:

ResponseUrl: is api 3.1 your request value.

Token: is api 3.1 response value which you stored in your Database.

Mode: value will be **success/fail/counter**

You must call the [3.4: TransactionVerificationWithToken \(API-II\)](#) for transaction verification in the redirect response for Mode "success" and "counter". Verification is not necessary for Mode "fail". For the counter value (**PayMode= 'A01'**), which indicates a voucher mode, you need to generate a voucher for the customer. The customer will pay later at the bank counter within 7 days from the voucher generation. Since this is a GET redirection, you need to ensure that the transaction remains in "under processing" mode to prevent any alteration of a successful transaction to a failed one.

Voucher must contain Your Company/organization Name/Logo, Applicant Name, Amount, With Charges amount and Mobile no.

A printed invoice used as a counter receipt allows the customer to pay at the bank counter within 7 days. The customer also has the option to choose online payment for immediate settlement afterward. The API ([3.5: Instant Payment Notification {IPN}](#)) will be triggered if the voucher is paid at the bank counter.

3.5: Transaction Verification (API-II)

POST /api/v3/spgservice/TransactionVerificationWithToken
Host: https://spg.sblesheba.com:6314
Content-Type: application/json
Authorization: Mentioned on the Introduction page 4.

Request	Response
<pre>{ "Token": "ff6652180830c6421f61d1f32d2bb9a33c57687c991" }</pre>	<pre>{ "TransactionId": "2409024000143377", "TransactionDate": "2024-09-08 11:44:37", "Token": "ff6652180830c6421f61d1f32d2bb9a33c57687c991", "Message": "This is a successful transaction.", "InvoiceNo": "INV1234", "InvoiceDate": "2024-09-02", "Status": "200", "Branch": "00018", "RequestTotalAmount": 1500.0, "CustomerPaidAmount": 1505.75, "ExtraCharges": 5.75, "SettlementDone": "N", "SettlementDate": "1970-01-01", "CustomerName": "John Doe", "PayMode": "A02", "PartyName": "ABC Company", "ScrollNo": "N", "SonaliVoucherLink": "https://voucher.sblesheba.com:8877/Receipt/2409024000143377", "ChallanLink": "" }</pre>

Note:
if Status == "200"
 Success
else if Status == "5017"
 Counter payment (future payment in counter, generate receipt, unpaid.)
else if Status == "401"
 Marked as cancel transaction. Never processed.
else
 do nothing (In the future (typically within 2-3 days), these types of transactions may be updated from failed to successful. When this happens, the IPN (Instant Payment Notification)

will be triggered to confirm the transaction's success, and you will need to update the transaction status accordingly.)

Request Parameter Table:

Parameter	Mandatory	Format	Description	Sample Value
Token	Yes	String (50)	This value is important and has already been mentioned in earlier documents.	“ff6652180830c6421f61d1f32d2bb9a33c57687c991”

Response Parameter Table:

Parameter	Mandatory	Format	Description	Sample Value
Status	Yes	String (4)	Code narration is mentioned below.	“200”
Message	Yes	String (180)	Status narration.	“This is a successful transaction.”
Token	Yes	String (50)	As Mentioned earlier.	
InvoiceNo	Yes	String (50)	Your request value.	
InvoiceDate	Yes	yyyy-MM-dd	Your request value.	
TransactionId	Yes	String (16)	This is a unique transaction ID. You need to store it for reconciliation purposes.	
TransactionDate	Yes	DateTime	“yyyy-MM-dd 24HH:mm:ss”	"2024-09-08 11:44:37"
RequestTotalAmount	Yes	decimal (20,2)	The amount for which the customer receives the service. Your request value.	100.00
CustomerPaidAmount	Yes	decimal (20,2)	The amount the customer needs to pay or has already paid.	105.00
ExtraCharges	Yes		CustomerPaidAmount Minus RequestTotalAmount	5.00
Branch	Yes		For online payment default value is 00018, for counter payment that counter value will be updated.	“00018”
PartyName	Yes	String (60)	Your Org Name	
SettlementDone	Yes	String (1)	If the settlement is done, the value will be "Y";	“N”

			otherwise, it will be "N".	
SettlementDate	Yes	Yyyy-MM-dd	If SettlementDone is "Y", the SettlementDate is important. This is the date when the amount will be credited to your bank account. Default value will be "1971-12-16"	"2024-10-02"
CustomerName	Yes		Your request value	
PayMode	Yes	String (3)	Payment Short Code, details below.	A01, A02, M04
ScrollNo	Yes	String (50)	For eChallan, you will receive a list of challans separated by "-". For aChallan sample value is 2425-025545. The default value is 'N'.	"P12121212-P4545454"
SonaliVoucherLink	Yes	String (50)	For successful transactions, a voucher link will be provided.	
ChallanLink	Yes	String (50)	For successful transactions in challan mode, a voucher link will be provided.	

Status Codes

Code	Message	Interpretation
200	success	Success Transaction
400	Failed	Failed Transaction.
500	under process	Still in transaction active mode.
600	refunded	Refund transaction.
700	Unknown error	Technical error
201	unpaid	Transaction Unpaid/Error
401	Cancel	Customer did not select pay mode and cancel transaction.
5017	Counter Select, Unpaid	Counter Payment Selection/Waiting for Payment
5555	Error data not Process	System Error/ Cancel Payment

Requirements From You:

1. IPN (3.5)
2. A public URL for your invoice to check if the transaction was successful or not. Like this:
<https://dhakaeducationboard.gov.bd/index.php/sonali/find/>
 If we provide valid data (241321433063730808), it will show some details.

3.5: Instant Payment Notification {IPN} (API-III) this API provide by Service Institute: (Important)

For each successful transaction, your system needs to call the payment verification API. If you miss verifying any successful transaction, our IPN will notify your system and acknowledge it. You must accept this request and respond properly upon receiving the request body from us. The request body and response should follow the format outlined in the documents. Please note that the URL may change.

Method: POST

url: { **Your Service portal url** }/api/DataUpdate (or any url)

Content-Type: application-json

Request	Response
<pre>{ "Username": "A", "Password": "A", "Token": "A", "InvoiceNo": "A", "InvoiceDate": "A", "TransactionId": "A" }</pre>	<pre>{ "Message": "Success", "Status": "200" }</pre>

Send the above request to <https://spg.sblesheba.com:6314/api/v3/spgservice/IPNCheck> to verify your input and output. Ensure that variable names remain the same. All variables are strings.

For testing purposes (IPN), we need 3 transactions based on the following scenarios:

1. Success transaction (Token)
2. Failed transaction (Token) (Go to Gateway and press the Exit button)
3. Go to the SPG Redirect Page and close the browser (Token)

We will mark the three transactions as successful on our end and call your IPN API. Your API should accept the request and compare the provided data. If the data is already updated, respond with a success message as outlined above. If the data is not present in your system, call the Transaction Verification API (API-II) to fetch and update the data, and then respond with a success message.

In short: If the IPN indicates a successful transaction, the customer will receive the service. Therefore, you need to provide the service to the customer.

4. Paymode List

PayMode Code	Mode Name
ANY	If a transaction is canceled without selecting any payment mode, it will never be reprocessed.
A01	Counter Payment
A02	Sonali Bank Account Transfer
A05	e-Wallet Payment
M03	Rocket (DBBL)
M04	bKash
M08	Nagad
M09	Upay
M10	Tap
M11	Ok-wallet
M12	Cellfin
M13	Meghna Pay
M14	Islamic Wallet (AIBL)
M15	Telecash
M16	Bkash (Tokenized) use later
M17	Pocket (Basundhara)
M18	First Cash (FSIB banking)
C07	DBBL Nexus Card
C08	Visa (Govt. Merchant)
C09	Master (Govt. Merchant)
C10	Amex (Govt. Merchant)
C11	Visa (Education Merchant)
C12	Master (Education Merchant)
C13	Amex (Education Merchant)
C14	Visa (Utility Merchant)
C15	Master (Utility Merchant)
C16	Amex (Utility Merchant)
C21	Visa (USD request, USD Settlement)
C22	Master (USD request, USD Settlement)
C23	Amex (USD request, USD Settlement)
C24	Visa (Local PAN off, BDT settlement)
C25	Master (Local PAN off, BDT settlement)
C26	Amex (Local PAN off, BDT settlement)
C27	Takapay (Govt merchant)
C28	Challan Service Special Rate (Visa)
C29	Challan Service Special Rate (Master)
C30	Challan Service Special Rate (Amex)
I01	MTB Internet Banking
I02	South East Internet Banking
I03	Meghna Bank Internet Banking
I04	City Touch Internet Banking
I06	Prime Bank iBanking
I07	First Security Islami Bank
Any New Mode May Come to Anytime	

THANKS
