



SHOPIFY API PAYMENT GATEWAY INTEGRATION

To

NTT DATA



Submitted By

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1. EXECUTIVE SUMMARY

SYNERGY TECHNOLOGIES PVT LTD (herein after referred as 'Vendor', 'We', 'Us' or 'STS') are pleased to offer our services to the NTTDATA (herein after referred to as 'You' or 'Client') by developing a payment gateway application and integration of Shopify plugin using client's payment gateway.

NTT DATA is a top 10 global IT services provider and it offers an advanced portfolio of consulting, application, business process, cloud, and services to businesses and governments worldwide.

SCOPE OF PROJECT

Develop a Shopify Plugin Integration Kit using NTTDATA PG (payment gateway)

We will utilize the best in the industry standards & practices and our experience garnered from successfully delivering engagements similar in nature to ensure the solution is delivered in a time and cost-effective manner.

Project Timelines

Implementation Time: 45 days



2. SCOPE OF WORK

2.1. Objectives

Client requires developing a payment gateway application using their payment gateway which integrates with Shopify stores.

2.2. Scope Assumptions

- The Server hosting will be provided by the client side.
- The app will be developed with developing a Shopify plugin integration kit. Any additional development will be taken up as new development with the timelines and commercials updated accordingly

3. PROPOSED SOLUTION

3.1. Solution Approach

Client has to be a Shopify Partner by opening an account. Once the account credentials are received, an application using the charge and refund method in Shopify will be created which will be a high level task to implement a payment gateway for Shopify at the moment.

1. Charge:

- Accept the data from Shopify and return the PG link to Shopify.
- Check the response from PG
- Call Shopify GraphQL mutation for success and failure response.
- Add retry policy if it's not succeed to send response to Shopify GraphQL.
- GraphQL returns the response with a redirect URL.
- Using the redirect URL, redirect the user to the Shopify website.

2. Refund:

- Accept the data from Shopify Admin for refund.
- Call refund method (R transaction type) to PG.
- Check the response from PG
- Call Shopify GraphQL mutation for success and failure refund response.
- Add retry policy if it's not succeed to send response to Shopify GraphQL.
- GraphQL returns the response.
- Redirect Shopify Admin to admin panel.

3. Add a feature to process the Test Transaction.



4. We will implement TECHNICAL requirements listed
 - Idempotency
 - Retry Policy
 - Mutual TLS
 - API Versioning
 - GDPR.
 - Configure our App on Shopify store
5. We will Add logs for the respective transactions
6. Sentry to display an error message and send an email on an error thrown from our code..

3.2. Development and Deployment Process

Sr No	Task	Time (Days)	Remarks	Status
1	Offsite Payment Provider in-app extensions of Shopify Account	-	-	Done
2	Signing the Revenue Share agreement	2	-	Done
3	Request for the required access scopes from Shopify (write_payment_gateways, write_payment_sessions)	0.5	Timeline may fluctuated depends on the shopify support depend	ToDo
4	Development of NTTDATA Shopify Kit	X	-	ToDo
5	Setup development code on STS testing server	1	-	ToDo
6	Testing of the App on STS testing server	2	-	ToDo
7	If everything looks good then proceed with the server hosting at NTTDATA side	2	-	ToDo
8	Submitting the new version of the App which includes changing the App URL of NTTDATA Server (PaymentSessionURL, RefundSessionURL)	2	-	ToDo
9	After the App get approved then installing it on test store & testing	1	-	ToDo

10	If everything looks good then approaching the final approval i.e. App listing process which involves :	-	-	ToDo
	(i) Paying one-time fees of \$99 for the Shopify App store listing	1	NTTDATA Team need to pay \$99 one time fee for listing	ToDo
	(ii) Fill the final listing form which involves (App Name, Tag Line, App Icon, Screenshots, Detailed description, Pricing details, Review notification email, App submission contact email, Sales Email, Privacy policy URL, FAQ URL, App review instructions).	1	Need details of these fields from NTTDATA: App Icon, Detailed description (App description), Review notification email, App submission contact email, Sales Email, Privacy policy URL, and FAQ URL. We will fill in other details.	ToDo
	(iii) Submitting the App for the final screening. Read here to get the proper information on the review process	10-15	Timeline may fluctuate if the app didn't get a serious issue then it will get approved before time and if some major issue arises during the approval process then it will take more than the expected time	ToDo

3.3. Technology Stack

- Java
- GraphQL
- MySQL



4. PROJECT EXECUTION

4.1. Project Plan

Implementation Time: 45 days

WEEKS ->	1	2	3	4	5	6	7	8	9
Design and Development of Payment Gateway app									
Testing									
Setup the app on Shopify									
Hosting the app on the server									

Note: the above mentioned is a high-level timeline based on the current understanding of the requirement.

4.2. Project Management Methodology

The Project Management Office would have participation of STS and Client. The team would have a communication plan and escalation mechanism defined to handle any exigency.

Event	Purpose	Responsibility	Frequency	Audience
Project Kick-Off	Formal commencement of project execution	Project Manager	Project Start	All Stakeholders
Project Management Review	Review project achievements, milestones completed	Project Manager	Weekly	Project Team
Senior Management Review	Review project achievements, milestones completed	Senior Management / Project Manager	Bi-Weekly	All stakeholders
Project team communication	Report status and progress of scheduled milestones and activities. Identify and discuss project issues and corrective actions	Project Manager	Continuous	Project Team
Communication to Users (Clients)	Communicate progress of the project and the ongoing events to users	Sponsor/ Steering Committee/ Project Manager	As needed	Users (Client)

4.3. Development/Implementation Methodology

Implementation is one of the most crucial and the critical part of any project. Having a well – planned and a well – organized implementation methodology always helps the implementers to give a pre-eminent level of service to the customers. Drawing upon our industry experience and technical expertise, we have developed a robust implementation methodology. This methodology supports our customers based on their requirements from initiation to stabilization of the project.

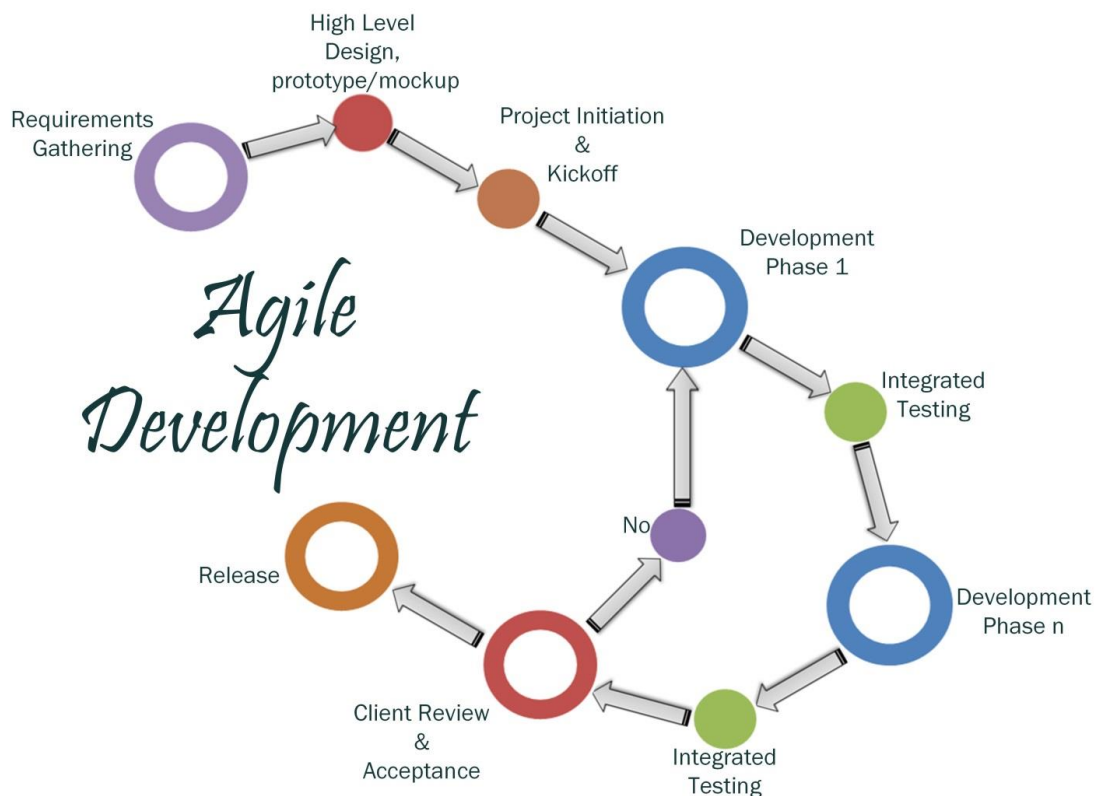
Our consultants and analysts have worked hard to design a meticulous & domain-oriented Implementation methodology.

The basic mode of approach starts with the requirement gathering stage which is done to ascertain that the prototype generation is in line with the client expectations.

The software development team, to clarify requirements may generate mock-ups and prototypes of screens or processes. When a prototype is generated, STS produces the minimum

amount of code necessary to clarify the requirements or design elements under consideration. STS complies with the coding standards when the prototypes or mock-ups are made, and also provide robust error management to integrate with other database tables or modules.

Integrated testing is done along with the development to ensure there is no deviation from the drafted deliverable.



STS, then sends the deliverable to the client for review and approval, who then checks the veracity of the deliverable. If there are any issues raised by the client, STS will check the inputs and re-route the deliverable again for development and testing. After the final approval from the client, STS releases the deliverable for the client. However, at the discretion of the client and STS, certain issues may be reserved for resolution in the later stages

4.4. Escalation Mechanism

The following table outlines a sample escalation mechanism. This shall be discussed with Clients team and decided in the initial phase of the project.

Nature of Issue	Escalation Level	Roles	Timeframe for Issue Resolution
Operational Level	1	Business Analyst/ Consultants	1 Business Day
	2	Project Manager	2 Business Days
Engagement Level	1	Steering Committee	5 Business Days
	2	Advisory Board	10 Business Days

4.5. Training Methodology

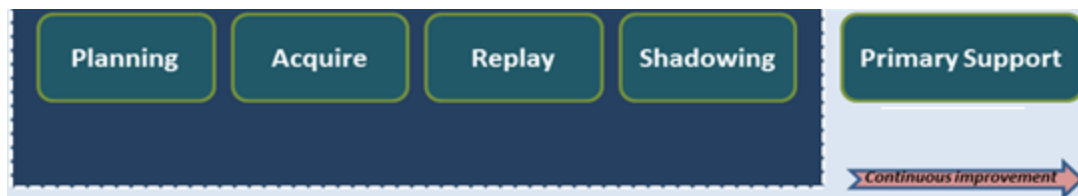
User Training and Admin Training will be provided using the Train the Trainer Method. STS to nominate key resources for the training, who at a later stage may train other users of the system. This training will be classroom based training and will be conducted on the Client office premises.

- Admin Training will be for a period of 1 (One) Days, 6 (Six) hours in a day, with the maximum number of participants not exceeding 5 (Five).

4.6. Knowledge Transfer

We have envisaged for proper knowledge transfer for team for a day or period ranging between 1 week based on the project complexity and size for this engagement.

The entire Knowledge transition process comprises of the following stages:



4.7. Change Management

STS manages change requests through its Change Management Process that has been used effectively to manage large and complex systems with scope ranging from feature development and product support.

In the event where STS ensures that the changes are controlled and monitored by Senior Management. STS sees the need for a Change Request based on a change of scope at any stage of the project from previously agreed baselines, or Client wishes to make changes to the STS will assess the impact of such change on the schedule and cost of the project. A Change Control Board (CCB) is proposed, consisting of the Project Manager, Quality Leader and Senior representatives of Client and STS. The CCB is formed after commencement of the project. Any change to the contract will be made after discussions and approval from Client. This process is broken down into the following activities:

Description	Status	Responsibilities
Change Identification & Categorization	-	Client
Raise and Record CR log	Logged	STS
Validate CR	Dropped/ Validated	STS
CCB perform impact analysis (Scope, effort and Cost)	Analysed	STS CCB
Change Review (Assess effort and cost, take a decision)	Dropped/ Deferred/ Batched & Logged	STS PL & Client
Schedule CR else drop or defer the CR on approval of Client	Scheduled/ Dropped/ Deferred	STS PL
Incorporate CR and release to the Customer	Fixed	STS
Accept CR	Closed	Client
Close CR	-	STS



- All change requests (CR) are logged in CR Log and reviewed by the Change Control Board (CCB) for feasibility and impact.
- For high impact CR, effort estimation and plan is approved by customer before implementation.
- Version control of impacted entities is managed by quality leader.
- The primary task of the CCB is to analyze the Change Requests for feasibility and impact. Based on the analysis, the Change Request is either accepted or rejected
- Scope change control mechanism will be governed by detailed step wise process for members involved from STS as well as from CLIENT team.

4.8. Project Deliverables

The output expected will be clearly benchmarked and agreed upon by CLIENT and STS

4.8.1. Letter of Acceptance

- As the first step of the assignment, CLIENT shall provide STS with a Letter of Acceptance along with the signed copy of this proposal and initial payments as mentioned in the payment terms.
- CLIENT will carry out acceptance of deliverables within **three (3) days** from the date of submission. Defects, if any, observed by CLIENT will be communicated to STS. STS will correct the defects that have deviation from the immediate previous baseline or acceptance, whichever is later. Items reported as defects that are not deviations from the immediate previous baseline or acceptance will be reported through the Scope Change Management Procedure. Upon Acceptance, the deliverable cannot be rejected or returned.
- Acceptance shall be based on the specific criteria as established and mutually agreed upon for each phase and deliverable.
- All Deliverables will be deemed accepted by Client on successful closure of all review comments, whereupon Client shall provide the sign-off letter to STS. However, the Deliverables shall be considered accepted if: (a) STS does not receive any notice of acceptance or rejection within the time limit specified herein above; or (b) Client starts using the Deliverables (other than as part of agreed review and acceptance testing procedure).

Clarification requests shall have adequate staffing by CLIENT to ensure an expeditious resolution. The reply to specific technical and functional queries from the support team shall be addressed expeditiously.

4.8.2. Deliverables from STS

STS shall provide CLIENT with source codes, test/use cases and application developed. At each stage of the development, STS will ensure that CLIENT is apprised regarding the phase of development and each milestone is clearly benchmarked after CLIENT review and acceptance before being pursued further.

The details of the steps are as under:

➤ **Diagnostic phase:**

The Diagnostic phase includes Requirement gathering and high-level design understanding. It starts during the sales process and ends with an accepted proposal and contract for the next part of the implementation project. The goal of the Diagnostic phase is to gather enough information in order to define the high-level project scope and make a confident proposal for the remaining phases of the implementation.

Deliverables:

Deliverables are as under:

- Project Contract Signed
- Project Scope Defined

➤ **Project Initiation/ kick-off:**

This represents the official start of the implementation project. The team agrees on the scope and understands the business requirements which include data migration requirements as well as integration requirements.

Deliverables:

Deliverables are as under:

- Business Requirement Document –BRD
- ER-Diagram

➤ **Development and Testing:**



The goal of the Development phase is to develop the customizations, integrations and data migration processes that are defined and approved in the design specifications

Deliverables:

Deliverables are as under:

- Test Cases/ Scenarios and Plan

➤ **Integration Testing:**

Integration Tests are aimed at verifying the system design as defined in design specifications while System Tests are conducted to verify that the final system, in its entirety, has been developed according to customer's functional requirements.

➤ **User Acceptance Testing:**

The objective of User Acceptance is to involve the users (Customer) perform tests on the final system for verification and is primarily the responsibility of the Customer.

Deliverables:

The deliverables are as under:

- System ready for testing
- Developed Objects, reports etc.

➤ **Release and Implementation:**

The tested and approved system is finally scheduled to be put into production at Customer site, followed by user training and knowledge sharing sessions to facilitate the hand-over process of the system to the customer support team.

The actual cutover to new production environment takes place in this stage.

Deliverables:

The deliverables are as under:

- Deployment Document
- Functioning Live (Production) System
- General Instructions



➤ **Go-Live & Post Go Live Support**

The goal of the operation phase is to transition the customer from the implementation project into on-going support following a successful go-live. The deliverables for this phase include final project and software related documentation, project review documentation, and on-going support contracts. At the end of this phase, the project will be transitioned to the customer and on-going support.

Deliverables:

The deliverables are as under:

- System Acceptance Sign-off

Free support and maintenance period for the project post deployment will be for a defined period as mentioned in Commercials section



5. COMMERCIALS

5.1. Project Cost

Our professional fee of the proposed services is for the sum of **Four Lakh Fifty Thousand Indian Rupees only**. It covers all the services mentioned in the proposal as one package. Change

Duration of the project is estimated to be – **45 days Implementation Time**

Description	Amount(QAR)
Development of the NTTDATA payment gateway integration kit on Shopify	4,50,000/-
Change of Request	1200/hr-

5.2. Terms and Conditions

- UAT timeline shall be 1 week, any further delay shall be charged at INR 1200/hr or post 1-week UAT shall be considered **Signed-off/Approved**.
- STS will provide free support for **1 week post hosting**.
- All the quoted price excludes any taxed and levies
- External modules/plugins (if, any) procured for the project will be billed at actuals
- For outstanding payments, without prejudice to any other remedies that it may have in this regard, STS shall charge interest @ 1.5% per month for the amount due.
- Payment Terms:

Milestones	Percentage
Award/Initial of Project	50%
Scope Development and testing- Alpha Delivery	25%
Final Delivery	25%

- The expected project duration is 45 days. Note that an indicative project plan will be submitted at the start of the project
- A Work Order (WO) should be issued by the CLIENT for the commencement of work.
- All invoices will be due within 15 days of submission



- Acceptance of deliverables: Any delivery notes/documents issued to sign-off any of the project deliverables are expected to be reviewed for acceptance by the assigned customer representative in a period not exceeding 72 Working Hours. Documents will be deemed accepted if no response is received beyond these 72 Working Hours. Delivery notes will include the deliverable name, delivery date and expected signoff date
- Force Majeure: This proposal is subject to the Force Majeure clause wherein the Consultants are obligated to meet the proposal commitments except for any untoward incidents created through incidents beyond the control of the Consultants and the client including Natural causes, riots, war and other such incidents which would make it impossible for the Consultants to execute their obligation for the assignment at the client site