

ESEWA EPAY

DEVELOPER'S GUIDE

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SECTION I : INTRODUCTION

1. Introduction

1.1 Developer's Guide

This document is intended to be used as a reference in the planning, building, and deploying of applications wishing to integrate **eSewa System** (also referred as eSewa epay). Contained within are specific implementation details concerning general guidelines, transaction flow and validation process which all partner applications should adhere to. This information should help accelerate the integration efforts of eSewa System with merchant application.

1.2 Documentation Limitations

This document does not necessarily define specific ways to implement the guidelines and procedures contained within. Vendor, platform, and architectural considerations may influence the manner in which individual systems comply.

1.3 Scope

The focus of this document is to detail how partner applications establish connectivity to eSewa and outline the transaction process with or without verification process. A full and detailed description of the transactions and associated data elements is included.

1.4 Intended Audience

This document is intended for partner merchants seeking to integrate and transact with the eSewa. It should be used as a reference during the planning, building, and deploying of such systems and applications.

2. Overview

2.1. General Description

The eSewa enables partner merchants to perform transaction initiated by customers having eSewa account in secure environment. The transaction amount is deposited into their eSewa merchant wallet or bank account.

2.2. Transaction Flow

1. When user choses eSewa as on-line payment option from partner merchant application, then user is temporarily redirected to eSewa login page.
2. User will provide valid credentials on login page.
3. By confirming the transaction, user is accepting the transaction details sent by partner merchants.
4. After each successful transaction, the user is redirected back to partner merchant's success page. If transaction fails due to any reason (which includes user canceling transaction), the user is informed by appropriate failure message and redirected back to partner merchant's failure page.
5. For every successful transaction, the merchant account is credited accordingly and notified via email/SMS regarding transaction.
6. Partner merchants with verification process implemented, can verify the transaction occurred in eSewa by invoking a request.

2.3 System Interaction

The interactions required to complete a transaction followed by verification process are shown below:

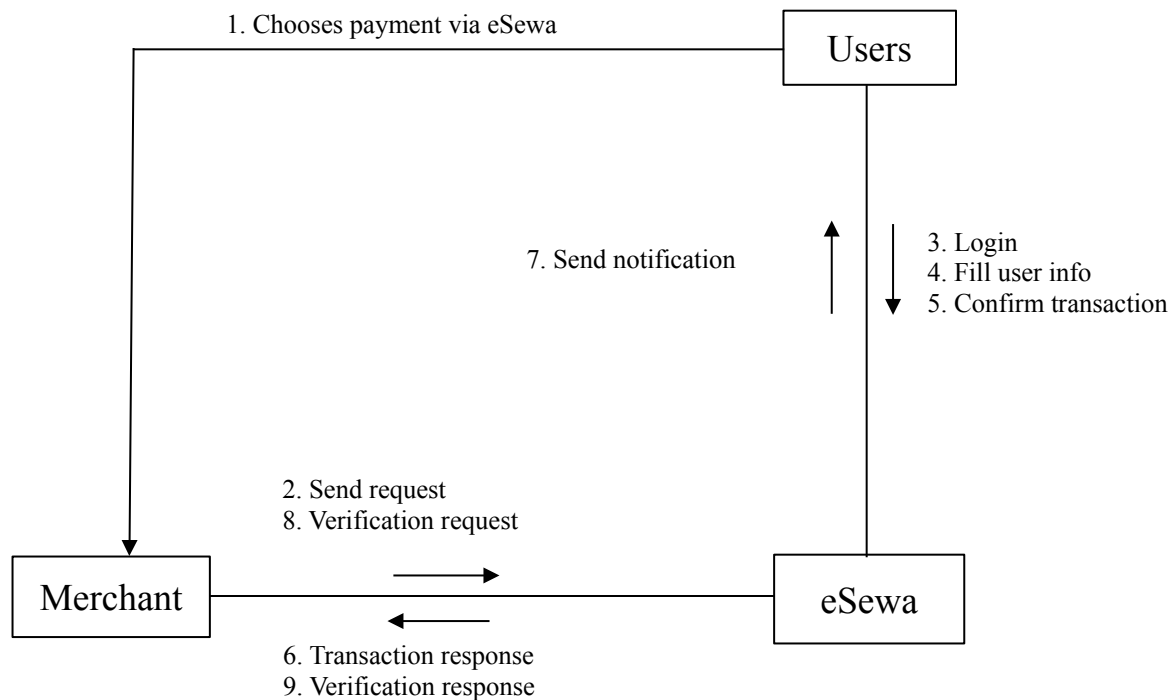


Fig 1: System interaction for payment with verification process

The scenario visualized in above figure shows an overall communication diagram end to end from client to eSewa. In general, client send request to eSewa for transaction, where user login with valid credential and confirm transaction. Upon confirmation, user is redirected back to client success page. The client can send verification request to eSewa after receiving successful transaction. The eSewa system will response back accordingly.

SECTION II : IMPLEMENTATION

3. Implementation

3.1. Overview

eSewa integration on partner merchant's application is the process of implementing eSewa as payment option. The integration process itself is performed in two phases, namely :

1. Staging (Testing) Environment
2. Live (Production) Environment

3.1.1. Staging (Testing) Environment :

This phase is intended to test process flow, transactions and other integration results. A test eSewa Id with password will be provided to the partner merchant to complete the transaction.

Note: Test server may be taken off-line for maintenance or other technical reasons, during that period you might receive “**Service Temporarily Unavailable**” message or any other message. In such case, please try again later or contact eSewa support regarding issue.

The primary objective of this stage are :

- (i). Whether merchant requests are getting acknowledged by eSewa system or not.
- (ii). Whether merchant is getting response of either a successful or failure transaction.
- (iii). Implementation and testing of verification process.

3.1.2. Live (Production) Environment:

After successful testing phase, the partner merchant will be provided with production environment merchant code & credential.

Partner merchant's have to modify the request URL and point toward live server and use live environment merchant credentials. Then, partner merchant will be able to start accepting payments using eSewa ePay payment gateway.

4. Integration

4.1 Pre-requisite

It is required for clients to provide eSewa with two email ids. Those emails will be used for creating merchant and end user in test environment.

During this phase, client will use **test user** credentials to login in eSewa and process the transaction. Adequate balance will be update to test user account.

4.2 Transaction

The client will send transaction request to URI provided by eSewa with various parameters. All parameters are mandatory and must not be empty or *null*.

eSewa will perform validation to check whether request parameters value are correct and format. Validation failure will result to failure response and message, ending transaction process.

Request URI:

Test environment : <http://dev.esewa.com.np/epay/main>
Live environment : <https://esewa.com.np/epay/main>

Request Method: POST

Request Parameters :

| Parameter | Description |
|--------------|---|
| amt | Amount of the product/item. |
| txAmt | Tax amount on the product/item. |
| psc | Service charge on product/item. |
| pdc | Delivery charge on product/item. |
| tAmt | Total amount of the product/item including tax & charges. <i>Eg: $tAmt = amt + txAmt + psc + pdc$ $100 = 90 + 10 + 0 + 0$</i> |
| scd | Merchant/service code provided by esewa. |
| pid | A unique ID representing product/item. |
| su | Success URI: a URI to redirect after successful transaction in eSewa. |
| fu | Failure URI: a URI to redirect after failed transaction in eSewa |

* All parameters are required i.e values should not be **null** or **empty**.

If **txAmt**, **psc** & **pdc** are not used for transaction then their respective values should be zero.

** Redirect URI (**su** & **fu**) must start with http or https

Sample Request Code :

```
<form action="http://dev.esewa.com.np/epay/main" method="POST">
  <input value="100" name="tAmt" type="hidden">
  <input value="90" name="amt" type="hidden">
  <input value="5" name="txAmt" type="hidden">
  <input value="2" name="psc" type="hidden">
  <input value="3" name="pdc" type="hidden">
  <input value="testmerchant" name="scd" type="hidden">
  <input value="XYZ-1234" name="pid" type="hidden">
  <input value="http://abc.com/success.html?q=su" type="hidden" name="su">
  <input value="http://abc.com/failure.html?q=fu" type="hidden" name="fu">
  <input value="Submit" type="submit">
</form>
```

For every successful transaction, eSewa will redirect user to success URI provided by partner merchant. The redirected URI will contain response query string.

Response Parameters:

| Parameter | Description |
|-----------|-------------------------------------|
| oid | Order or Product Id |
| amt | Transaction total amount |
| refId | Unique reference Code from by eSewa |

Sample Response URI:

<http://yoursite.com/success?q=su&oid=XYZ1234&amt=100&refId=000AE01>

4.3 Transaction Verification

The partner merchant can send verification request for each successful transactions with various parameters. All parameters are required. The partner merchant will receive either “**Success**” or “**failure**” message on response.

The “**Success**” response message means transaction with given parameters is valid in eSewa while “**failure**” means it is void/invalid.

Request URI:

Test environment : <http://dev.esewa.com.np/epay/transrec>
 Live environment : <https://esewa.com.np/epay/transrec>

Request Method: POST/GET

Request Parameters:

| Parameter | Description |
|------------|--|
| amt | Total amount |
| pid | A unique product ID used during transaction. |
| rid | Unique reference Code from eSewa for successful transaction. |
| scd | Merchant/service code provided by esewa. |

Sample Request Code:

```
<form action="http://dev.esewa.com.np/epay/transrec" method="GET">
  <input value="100" name="amt" type="hidden">
  <input value="testmerchant" name="scd" type="hidden">
  <input value="XYZ-1234" name="pid" type="hidden">
  <input value="000AE01" name="rid" type="hidden">
  <input value="Submit" type="submit">
</form>
```

Success Response:

```
<response>
<response_code>
Success
</response_code>
</response>
```

Failure Response:

```
<response>
<response_code>
failure
</response_code>
</response>
```

4.4 Transaction Details

The partner merchant can send verification request for each transactions with various parameters. All parameters are required. The partner merchant will receive the transaction detail.

Request URI:

Test environment : <http://dev.esewa.com.np/epay/transdetails>
Live environment : <https://esewa.com.np/epay/transdetails>

Request Method: POST/GET

Request Parameters:

| Parameter | Description | Required |
|------------|--|----------|
| amt | Total amount | True |
| pid | A unique product ID used during transaction. | True |
| scd | Merchant/service code provided by eSewa. | True |

****all parameters are required**

Sample Request Code:

```
<form action="http://dev.esewa.com.np/epay/transdetails" method="GET">
  <input value="100" name="amt" type="hidden">
  <input value="testmerchant" name="scd" type="hidden">
  <input value="XYZ-1234" name="pid" type="hidden">
  <input value="Submit" type="submit">
</form>
```

Response Message Code

| Parameter | Description |
|-----------|--|
| 00 | Success |
| 01 | Data not available (invalid service code or inactive, tr) |
| 02 | Data validation error message |
| 04 | Invalid parameters |
| 99 | Timeout |

Response parameters

| Code | Description |
|------------------|--|
| code | Response Code (ex: 00, 01, 02, 99) |
| msg | Response Message |
| txnDetail | |
| txnCode | Transaction Code |
| pid | Product Id |
| amt | Transaction Amount |
| date | Transaction Date |
| txAmt | Tax Amount |
| psc | Product Service Charge |
| pdcc | Product Delivery Charge |
| payerId | Payer Esewa Id |
| status | Transaction Status (PENDING, COMPLETE, CANCELED , TIMEOUT) |

