payway

Google Pay™ Integration Guide

Table of Contents

Revision History

Date	Initials	Comments
9/20/2019	DN	Initial Revision.
4/20/2020	DN	Added Google required sections
3/11/2021	DRF	Added GooglePay Javascript in section XIII
3/23/2021	DRF	Added Section XI, J GooglePay TEST and Production modes.

Related Documentation

- PaywayWS Credit Card Integration Guide
- PaywayWS ACH Integration Guide
- PaywayWS Redirected Payment Form Integration Guide
- Payway® Admin Guide
- Payway® User Guide
- Payway® ApplePay Integration Guide

Introduction

This document provides a guide to integrating Google Pay™ into your web applications. Google Pay provides a secure, wallet-based payment method for your users. Payway® provides the RESTful web service with which you will interact to implement your Google Pay interface.

The PaywayWS Integration Guide will describe the general integration process including accessing our development, staging, and production servers.

I. Credit Card Data

To use Google Pay, a user must register a credit card account within their Google account. The PaywayWS integration supports web-based payments.

The user can pay for products and services using a Google Pay button you present on your web page. PaywayWS decrypts and manages the encrypted data and the interaction with the payment processors.

II. Recurring Transactions

After a user enters a Google Pay transaction, you will have access to a paywayAccountToken that references the Google Pay account used for the transaction. This token can then be used to enter recurring transactions, just like any other tokenized account.

III. Integration Method

To integrate with Google Pay, you will use the PaywayWS RESTful web service. The acquisition and processing of Google Pay data will be done on the web browser via a JavaScript. We will provide you with a sample JavaScript that can be plugged into your payment page. This script presents the Google Pay button on your page and sends Google Pay data to PaywayWS. We take care of all cryptography and certifications with Google Pay. Details on the JavaScript can be found in Section XI, Code Details.

IV. Managing Payway Transactions

The Payway Google Pay integration uses the PaywayWS RESTFul API to validate Google Pay merchants and perform Google Pay transactions. To manage your transactions, you can use PaywayWS requests. These include reading transactions and updating user accounts where needed. Reports and other payment management functionality is provided by Payway's web

application.

V. Managing Google Pay Data Collection

The included Google Pay JavaScript provides a section that controls the collection of payment data by your application. This controls the payment sheet and required fields that are presented when a user processes a payment with Google Pay. This can be set up to collect a minimum of cardholder name and zip, or full data including phone number. Note that requiring all data may require the user to modify their Google payment account since the Google Pay page will enforce your requirements. All request and reply fields are documented by Google here: https://developers.google.com/pay/api/web/reference/object#PaymentOptions.

VI. Google®, Inc. Policies and Procedures

A. Brand Guidelines

Ensure the first mention of Google Pay on any feature page or developer documentation includes the trademark symbol, ™ , on the first or most prominent time it appears. Google enforces brand guidelines to protect the user experience related to Google Pay. Details of these requirements can be found here:

https://developers.google.com/pay/api/web/guides/brand-guidelines

B. Developer Documentation

The main resource page for Google Pay integrations is here:

https://developers.google.com/pay/api/web/overview

C. Integration Checklist

The checklist below is helpful as a reference to guide your integration. You will be connected to Payway's development server during the development phase. See the PaywayWS Integration guide for information on development and staging servers.

https://developers.google.com/pay/api/web/guides/test-and-deploy/integration-checklist

VII. Acceptable Use Policy

This page outlines the acceptable use policy for Google Pay: https://payments.developers.google.com/terms/aup. You should also reference the acceptable use section of your Payway agreement.

VIII. Terms of Service

You will be directed to agree to the terms of service when you are ready to implement Google Pay in production.

https://payments.developers.google.com/terms/sellertos

IX. Web Site Review

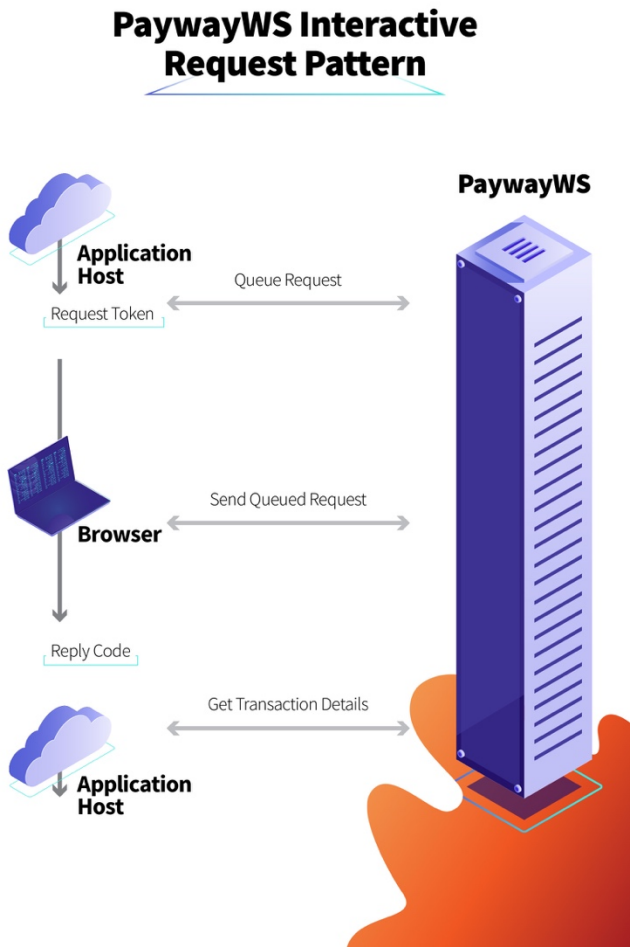
Google will conduct a review of your web site and provide a merchant account when you are ready to go into production. This merchant account id must be entered into your JavaScript to execute live transactions. See below for details on the JavaScript.

X. Integration Steps

Processing a Google Pay payment is done in three steps. The first step and the final step are executed from your server. Step two is handled in the JavaScript that we provide, and you modify according to your needs. During a Google Pay transaction, only the paywayRequestToken, resultCode, and paywayMessage are available to the browser. See the PaywayWS Integration Guide for details on data fields.

Below is a diagram of the steps for a PaywayWS enabled Google Pay transaction.

DO NOT EXECUTE STEPS 1 OR 3 FROM A JAVASCRIPT. THESE INVOLVE DATA THAT SHOULD NOT BE PASSING THROUGH THE CLIENT BROWSER.



A. Step 1: Queue Transaction

Before presenting the page with the Google Pay button, you will send PaywayWS a queueSale or queueAuthorize request. This request will return a paywayRequestToken that will be used to complete the request.

The purpose of this request is to avoid sending transaction information to the browser that can be manipulated by the user. The queued payment includes the payment amount, source id, and payment type. Once this step is completed, the Google Pay button can be displayed on your page. Note you should not send a paywaySessionToken to the web site, this can be accessed by the user and used for unauthorized transactions.

B. Step 2: Send Queued Transaction

When you load the payment page and present the Google Pay button, you will send to the page the paywayRequestToken that was returned in step 1. No other data should be sent to the page. When the user clicks the Google Pay button, an interaction with the Google Pay payment sheet happens. When the user approves the payment, a sendQueuedTransaction request is sent by the JavaScript to Payway and the transaction is processed. Only the resultCode and paywayMessage are returned to the web page.

C. Step 3: Hosted Payment Results

Using the paywayRequestToken from the previous steps, you may call hostedPaymentResults to get details on the completed transaction. The account information entered by the user on the Google Pay sheet will be returned, with the credit card number masked.

At this point you can store and/or present any of this information to the user for receipt purposes or other processing. This interaction is between your server and PaywayWS so none of this information is available to the browser during the transaction.

When this call is complete, the paywayRequestToken is invalidated on Payway. This call is optional. If you skip it, the paywayRequestToken will expire without further action.

XI. Code Details

A. Queue Transaction

See the PaywayWS Integration Guide for details and samples of the queueSale and queueAuthorize transactions.

B. GooglePay.js JavaScript

To integrate with Payway's Google Pay offering, start with the sample JavaScript called GooglePay.js. This contains all features you need to integrate the web client with Google Pay.

C. Card Networks and Authorization Methods

The configuration in GooglePay.js has the supported card networks and authorization methods. Change the supported card networks if you would like to remove one or more of the entries.

```
const allowedCardNetworks = ["AMEX", "DISCOVER", "JCB", "MASTERCARD", "VISA"];
const allowedCardAuthMethods = ["PAN_ONLY", "CRYPTOGRAM_3DS"];
```

D. Required Billing Data

This section sets up the required billing data for presentation of the Google Pay payment sheet. Do not require less than 'MIN' billing address parameters. For card not present transactions the zip code must be presented to avoid extremely high charges to the merchant.

```
billingAddressRequired: true,
billingAddressParameters:
 // MUST BE AT LEAST 'MIN' but 'FULL' recommended
 {
        format : 'MIN',    // 'FULL' for complete address info
       phoneNumberRequired : true
  }
```

E. Additional Cardholder Data

Some account data accepted by Payway will not appear on the Google Pay billing sheet. For example, email address can be added to your payment page and sent in along with the Google Pay encrypted data.

F. Adding the Google Pay Button

On your payment page simply add this html:

```
<div id="googleButton"></div>
```

G. Loading Google Pay

The Payway JavaScript and the Google Pay JavaScript must be loaded on your payment page:

```
<script src="js/GooglePay.js" type="text/javascript"></script>
<script src="https://pay.google.com/gp/p/js/pay.js" ></script>
```

When the page loads call onGooglePayLoaded:

```
<body onload="onGooglePayLoaded()">
```

H. OnGooglePayLoaded()

This method creates a payments client, checks if Google Pay is ready, and sets up the payment gateway parameters.

In the tokenizationSpecification, use ‘exampleGatewayMerchantId’ until you go into production with your merchant id.

```
tokenizationSpecification = {
 type: 'PAYMENT_GATEWAY',
 parameters: {
  'gateway': 'payway',
  'gatewayMerchantId': 'exampleGatewayMerchantId'
 }
```

I. onGooglePaymentButtonClicked()

The payment data request is set up, and the payment is processed. Note that in processPayment, the PaywayWS request is created and sent to Payway.

The googlePayToken field is set to the encrypted Google Pay paymentData, and the paywayRequestToken is taken from the page. Other PaywayWS fields can be sent in this request, such as email.

PaywayWS JSON request:

```
{
        accountInputMode : "googlePayToken",
        paywayRequestToken :
document.getElementById('paywayRequestToken').value,
        request : "sendQueuedTransaction",
        googlePayToken : paymentData ,

        cardAccount :
        {
          accountNotes1: "notes1",
          accountNotes2: "notes2",
          accountNotes3: "notes3"
        }

  }
```

J. Test and Production Modes

For testing, the Javascript in Section XII defaults to test mode. The directive: paymentsClient = new google.payments.api.PaymentsClient({environment: 'TEST'} is set to TEST mode which indicates to GOOGLE that you are in test mode allowing for the development and testing of your application.

Once the application has been approved by GOOGLE and a merchantId, merchantName has been assigned, update new paymentsClient = new google.payments.api.PaymentsClient({environment: 'PRODUCTION'}. This will indicate this is a production environment to Google.

XII. Hosted Payment Results

See the PaywayWS Integration Guide for details on hostedPaymentResults. This is the method for acquiring details on the completed transaction.

XIII. Appendix A GooglePay Javascript

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
/**
 * Define the version of the Google Pay API referenced when creating your
 * configuration
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#PaymentDataRequest|api
Version in PaymentDataRequest}
 */
const baseRequest = {
  apiVersion: 2,
  apiVersionMinor: 0
};

/**
 * Card networks supported by your site and your gateway
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#CardParameters|CardPara
meters}
 * @todo confirm card networks supported by your site and gateway
 */
const allowedCardNetworks = ["AMEX", "DISCOVER", "JCB", "MASTERCARD", "VISA"];
```

```
/**
 * Card authentication methods supported by your site and your gateway
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#CardParameters|CardPara
meters}
 * @todo confirm your processor supports Android device tokens for your
 * supported card networks
 */
const allowedCardAuthMethods = ["PAN_ONLY", "CRYPTOGRAM_3DS"];

/**
 * Identify your gateway and your site's gateway merchant identifier
 *
 * The Google Pay API response will return an encrypted payment method capable
 * of being charged by a supported gateway after payer authorization
 *
 * @todo check with your gateway on the parameters to pass
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#Gateway|PaymentMethod
TokenizationSpecification}
 */
const tokenizationSpecification = {
  type: 'PAYMENT_GATEWAY',
  parameters: {
    'gateway': 'payway',
   'gatewayMerchantId' : 'BCR2DN6T7OL6ZBJG'
  //'gatewayMerchantId' : '123123123'
  }
};

/**
 * Describe your site's support for the CARD payment method and its required
 * fieldsfau
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#CardParameters|CardPara
meters}
```

```
 */
const baseCardPaymentMethod = {
 type: 'CARD',
 parameters: {
  allowedAuthMethods: allowedCardAuthMethods,
  allowedCardNetworks: allowedCardNetworks,
  billingAddressRequired: true,
  billingAddressParameters:
      {
        format : 'MIN',    // 'FULL' for complete address info
        phoneNumberRequired : false
      }
 }
};

/**
 * Describe your site's support for the CARD payment method including optional
 * fields
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#CardParameters|CardPara
meters}
 */
const cardPaymentMethod = Object.assign(
 {},
 baseCardPaymentMethod,
 {
  tokenizationSpecification: tokenizationSpecification
 }
);

/**
 * An initialized google.payments.api.PaymentsClient object or null if not yet set
 *
 * @see {@link getGooglePaymentsClient}
 */
let paymentsClient = null;
```

```
/**
 * Configure your site's support for payment methods supported by the Google Pay
 * API.
 *
 * Each member of allowedPaymentMethods should contain only the required fields,
 * allowing reuse of this base request when determining a viewer's ability
 * to pay and later requesting a supported payment method
 *
 * @returns {object} Google Pay API version, payment methods supported by the site
 */
function getGoogleIsReadyToPayRequest() {
  return Object.assign(
      {},
      baseRequest,
      {
        allowedPaymentMethods: [baseCardPaymentMethod]
      }
  );
}

/**
 * Configure support for the Google Pay API
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#PaymentDataRequest|Pay
mentDataRequest}
 * @returns {object} PaymentDataRequest fields
 */
function getGooglePaymentDataRequest() {
  const paymentDataRequest = Object.assign({}, baseRequest);
  paymentDataRequest.allowedPaymentMethods = [cardPaymentMethod];
  paymentDataRequest.transactionInfo = getGoogleTransactionInfo();
  paymentDataRequest.merchantInfo = {
    // @todo a merchant ID is available for a production environment after approval by
Google
    // See {@link https://developers.google.com/pay/api/web/guides/test-and-
deploy/integration-checklist|Integration checklist}
    merchantId: '<YOUR MERCHANT ID FROM GOOGLE>',
```

```
    merchantName: '<YOUR MERCHANT NAME>'


  };
  return paymentDataRequest;
}

/**
 * Return an active PaymentsClient or initialize
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/client#PaymentsClient|Payments
Client constructor}
 * @returns {google.payments.api.PaymentsClient} Google Pay API client **/
function getGooglePaymentsClient() {
  if ( paymentsClient === null ) {
    console.log ( "getGooglePaymentsClient: create new client" ) ;
    paymentsClient = new google.payments.api.PaymentsClient({environment: 'TEST'});
  }

  console.log ( "getGooglePaymentsClient: google pay client returned" ) ;

  return paymentsClient;
}

/**
 * Initialize Google PaymentsClient after Google-hosted JavaScript has loaded
 *
 * Display a Google Pay payment button after confirmation of the viewer's
 * ability to pay.
 */
function onGooglePayLoaded() {

  console.log ( "load google pay client" ) ;

  try
  {
    const paymentsClient = getGooglePaymentsClient();
```

```
 }
 catch ( err )
 {
    console.log ( err ) ;
    return ;
 }

 console.log ( "Check if ready for google pay" ) ;

 paymentsClient.isReadyToPay(getGoogleIsReadyToPayRequest())
    .then(function(response) {
     if (response.result) {
       addGooglePayButton();
       // @todo prefetch payment data to improve performance after confirming site
functionality
       // prefetchGooglePaymentData();
     }
    })
    .catch(function(err) {
     // show error in developer console for debugging
     console.log("onGooglePayLoaded" ) ;
     alert ( err ) ;

    });
}

/**
 * Add a Google Pay purchase button alongside an existing checkout button
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#ButtonOptions|Button
options}
 * @see {@link https://developers.google.com/pay/api/web/guides/brand-
guidelines|Google Pay brand guidelines}
 */
function addGooglePayButton() {

 if ( document.getElementById('googleButton') === null )
```

```
 {
    console.log ( "No googleButton on page, skip add google pay button" ) ;
    return ;
 }

 const paymentsClient = getGooglePaymentsClient();
 const button =
    paymentsClient.createButton({onClick: onGooglePaymentButtonClicked, buttonColor:
"white"   } );
 document.getElementById('googleButton').appendChild(button);
}

/**
 * Provide Google Pay API with a payment amount, currency, and amount status
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#TransactionInfo|Transacti
onInfo}
 * @returns {object} transaction info, suitable for use as transactionInfo property of
PaymentDataRequest
 */
function getGoogleTransactionInfo() {
 return {
  currencyCode: 'USD',
  totalPriceStatus: 'FINAL',
  // set to cart total
  totalPrice: '1.00'
 };
}

/**
 * Prefetch payment data to improve performance
 *
 * @see {@link
https://developers.google.com/pay/api/web/reference/client#prefetchPaymentData|pref
etchPaymentData()}
 */
function prefetchGooglePaymentData() {
```

```
  console.log ( "get google payment data request" ) ;

  const paymentDataRequest = getGooglePaymentDataRequest();
  // transactionInfo must be set but does not affect cache
  paymentDataRequest.transactionInfo = {
    totalPriceStatus: 'NOT_CURRENTLY_KNOWN',
    currencyCode: 'USD'
  };
  const paymentsClient = getGooglePaymentsClient();

  console.log ( "pre fetch payment data" ) ;
  paymentsClient.prefetchPaymentData(paymentDataRequest);
}

/**
 * Show Google Pay payment sheet when Google Pay payment button is clicked
 */
function onGooglePaymentButtonClicked() {

  console.log ( "OnGooglePaymentButtonClicked: get google payment data request" ) ;

  const paymentDataRequest = getGooglePaymentDataRequest();

  paymentDataRequest.transactionInfo = getGoogleTransactionInfo();

  console.log ( "OnGooglePaymentButtonClicked: " + JSON.stringify
( paymentDataRequest )  ) ;

  const paymentsClient = getGooglePaymentsClient();
  paymentsClient.loadPaymentData(paymentDataRequest)
      .then(function(paymentData) {
        // handle the response
        processPayment(paymentData);
      })
      .catch(function(err) {
        // show error in developer console for debugging
        console.error(err);
```

```
    });
}

/**
 * Process payment data returned by the Google Pay API
 *
 * @param {object} paymentData response from Google Pay API after user approves
payment
 * @see {@link
https://developers.google.com/pay/api/web/reference/object#PaymentData|PaymentDa
ta object reference}
 */
function processPayment(paymentData) {

  console.log( paymentData ) ;
  paymentToken = paymentData.paymentMethodData.tokenizationData.token;

  console.log( paymentToken.toString() ) ;

  var request = new XMLHttpRequest() ;

  request.onload = function()
  {

    try
    {
      JSON.parse ( request.responseText ) ;
    }
    catch ( err )
    {
      console.log ( "Payment error" ) ;
      console.error ( err ) ;
    }

    if (request.status === 200 )
    {
      console.log ( "Google payment request completed.")
    }
```

```
    else
    {
      console.log ( request.statusText ) ;
    }

    try
    {
        console.log ( request.responseText ) ;
        // set the response in the current document and submit to sample confirmation
page
        document.getElementById('results').value = request.responseText ;
        document.getElementById("ResultsTransaction").submit() ;
    }
    catch ( err )
    {
      console.log ( "Page error: " + err ) ;
    }

  } ;

  request.onerror = function()
  {
    console.log ("Payment error: " + request.statusText ) ;
  } ;

  try
  {


    // Set up the json request
    var requestjson =
    {
      accountInputMode : "googlePay",
      paywayRequestToken :  document.getElementById('paywayRequestToken').value,
      request : "sendQueuedTransaction",
      googlePayToken : paymentData ,

      cardAccount :
```

```
        {
          accountNotes1: "notes1",
          accountNotes2: "notes2",
          accountNotes3: "notes3"
        }

      };

      var resource = document.getElementById('serviceLocation').value  +
'/PaywayWS/Payment/CreditCard' ;
      console.log ( 'send request to: ' +  resource ) ;

      request.open('POST', resource, true ) ;
      request.setRequestHeader("Content-type", "application/json");

      console.log ( 'request: ' + JSON.stringify ( requestjson ) ) ;
      request.send( JSON.stringify ( requestjson ) ) ;

    }
    catch ( err )
    {
      console.log ( "sendQueuedTransaction error: " + err.message ) ;
    }

}
```