

# Paypal

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## Overview:

Customer can place an order with multiple PayPal payment options PayPal and PayPal Credit.

PayPal Direct REST API are used to achieve the functionality.

PayPal API Calls:

1. getAccessToken
2. authorize
3. execute
4. capture

2,3 and 4 API's are implemented in GPIntegration layer using REST template and respective DTO's .

Get Access Token is implemented using basic authentication. This Access Token is used as OAuth in all other calls (2,3 and 4) .

PayPal Authorize call will take all the required parameters from cartModel and form the PayPalAuthorizationRequest and return an EXECUTE URL.

The Execute url opens up a window where user enters the buyer credentials. On validation, this API will return Payer-ID and Token(Nonce) which is further used for Execute the Authorization.

The tokens generated on authorization and execute are saved in newly created PayPalPaymentInfoModel. These tokens are used while capture and refund.

## Impacted Systems

System	Impact
Hybris	Changes to payment api

## Assumptions

1. User Clicks on PayPal button and Authenticate but execute will happen only after place Order.
2. Capture is called at the time of shipping only. No express checkout.
3. Created a new sandbox account for testing, we will receive the actual app details from the merchant.

## Dependencies

System	Description
PayPal	PayPal API and sandbox account . <a href="https://developer.paypal.com/developer/dashboard/sandbox/">https://developer.paypal.com/developer/dashboard/sandbox/</a>

## Technical Details

### Hybris:

Add a method `getPayPalPayerDetails` in `CartsController` to generate redirect url for opening up PayPal window to enter customer details

Add `getPayPalPaymentInfos` method in `PaymentMethodCheckoutStepController` to receive payerId after user enters details in paypal window.

On place order, modify `authorizePayment` method in `GPCheckoutFacademethod` to hold amount in paypal.

### Technical Flow

### Configurations

Name	Value	Descr
gp.paypal.oauth.url	<a href="https://api.sandbox.paypal.com/v1/oauth2/token">https://api.sandbox.paypal.com/v1/oauth2/token</a>	oauth
gp.paypal.merchant.username	AdwTgtHisM36b9BSXCUa6EX5BQhuwDD-iPaGsPUulbytGYZxik0buid7oy2rgc1F3G-0GdqS9B9vybQa	Merct usern encry
gp.paypal.merchant.password	EODUc0rEvH6hKId10niqn9tZDE1hS_bjxqp7oWLy6KPAAbMQUOO3tvbXU-E1CqAbSLrJHfS1jy7EDXpi	Merct passv encry
gp.paypal.payment.url	<a href="https://api.sandbox.paypal.com/v1/payments">https://api.sandbox.paypal.com/v1/payments</a>	autho execu captu
gp.paypal.checkoutjs.env	sandbox	Envirc detail:

### Steps to Create a new merchant account in PayPal:

<https://developer.paypal.com/docs/classic/lifecycle/sb-create-accounts/>

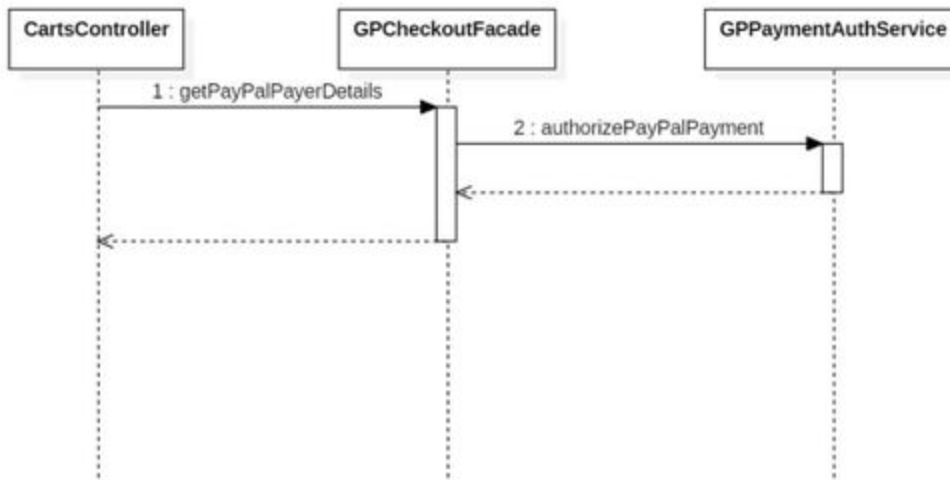
Test user accounts:

username: vijaydannina-buyer@gmail.com

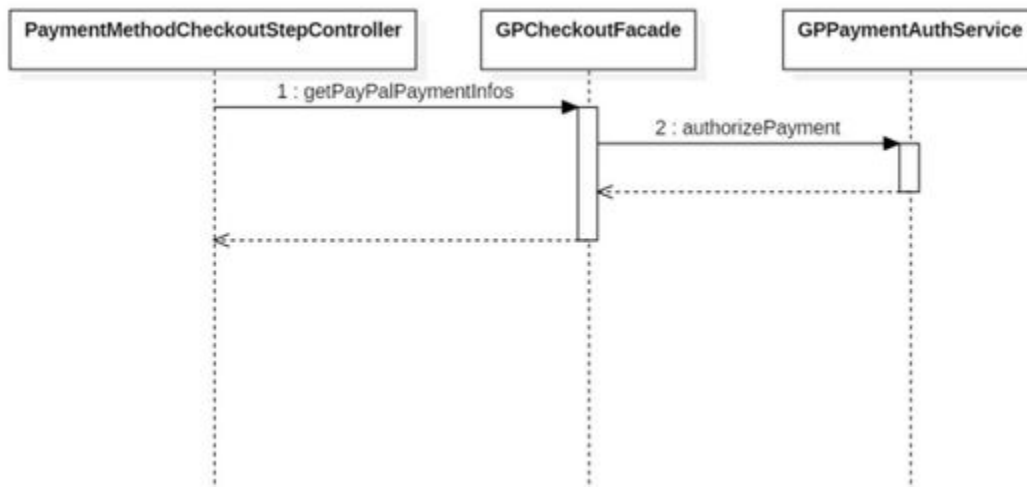
password: Deloitte@123

### Class Diagrams

### Get Payer Details(Authorization)



#### Get Payment Information(Execute)



#### Item Type

Item Type	PayPalPaymentInfo	
Description	This item will save all the PayPal related data.	
New/OOTB	New	
Code	PayPalPaymentInfo	
Extends	PaymentInfo	
Extension	gpcommercecore	
Attribute Name	Data Type	Description
nonce	String	Transaction Token
payerId	String	Payer Id
code	String	Unique Code
transactionId	String	Transaction Id

## REST API

URL: https://{hybrisendpoint}/gpccommercewebservices/v2/{siteId}/users/{userId}/carts/{cartId}/paypalpaymentdetails

Method : POST/getPayPalPayerDetails

Input Attribute Name	Description	Required	Format/Validation
fields	BASIC or FULL	N	

Output Attribute Name	Values
success	redirect url
errors	empty

## Data Objects

N/A

## UI

Name		
Description		
New/OOTB		
Extends		
Validations		
Attribute Name	Validation Type	Description

## Technical Unit Tests

Step #	Test Type	Scenario Title	Steps Performed	Expected Results	Actual Results
1	Positive	After order is placed, order amount is on hold in PayPal	1. Go to Site 2. Add products to the cart 3. Enter personal details 4. Enter Shipping Address 5. Select Shipping method 6. Enter/Select payment method as PayPal and billing address 7. Review and Place Order	PayPal audit entries has transaction details specific to the user	

2	Negative	User has insufficient funds	<ol style="list-style-type: none"> <li>1. Go to Site</li> <li>2. Add products to the cart</li> <li>3. Enter personal details</li> <li>4. Enter Shipping Address</li> <li>5. Select Shipping method</li> <li>6. Enter/Select Paypal as payment method and billing address</li> <li>7. Validation error</li> </ol>	Validation error and user is navigated to Checkout	
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