

COPECART IPN DOCUMENTATION

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Executive Summary

IPN stands for “Instant Payment Notification” and allows Vendor to connect his billing system, membership system, email marketing software, or other third-party software with CopeCart.

The vendor's system will be notified through an automated HTTP request about payments, chargebacks, and refunds, in order to give the vendor the possibility to maintain the customer's order data in their own database and keep track of payments, chargebacks, and refunds.

This IPN documentation is meant to be a guideline and reference for developers, system administrators, and everyone who wants to connect a system or software to CopeCart.

Clarification of the used terms

Term	Description
buyer	The buyer is the person who orders the product of a vendor.
vendor	The vendor is the product owner who uses CopeCart to sell the product online
order	If a buyer buys one or more products using one order form, this is one order. Also if the buyer buys some upsell products after the initial sale, these are items of the same order and are called “order items”. An order can consist of one initial sale and up to a few upsells.
order id	There is one order id for each order (e.g. M6B5zL7i). Each order id is unique and is not used for any other order.
product id	Each product has a unique product id (e.g. 2df15941). Each order of the same product has the same product id (e.g. 2df15941).
transaction	A transaction could be a payment (one-time payment, installment payment, or subscription), a refund, or a chargeback. At CopeCart, we process one transaction for each order item. (Buyer buys the initial product and one upsell product. Then there are two payments and two transactions.)
transaction id	There is a transaction id for each transaction.

UTF-8 encoding only

We only support UTF-8 encoding. All data that we provide is in UTF-8. We also only accept data in UTF-8.

IPN Call

The IPN Call is the instant payment notification (IPN) that CopeCart sends to your server. For each transaction, there is one IPN Call. If a buyer buys two products, there will be two IPN calls (one IPN Call for each payment of the two products). The IPN message is delivered by HTTP POST in the request body. The data comes in JSON format.

There are a few headers provided with a request:

The IPN message can be verified using a corresponding secret key which is set in IPN settings in the CopeCart of the vendor.

In order to verify an IPN message you need to use data from the 'X-Copecart-Signature' header and compare it with the result of the HMAC hash of message data and a secret key.

Ruby

```
    'HTTP_X_COPECART_SIGNATURE '
    'sha256'

if
  # IPN message if verified
end
```

PHP (Request format can depend on PHP version)

```
<?php
    'X-Copecart-Signature'
    'sha256'

    TRUE

if
  // IPN message is verified

?>
```

More information for the PHP function you will find here:

<https://www.php.net/manual/en/function.hash-hmac.php>

Here you can download an example script for a demonstration of the basic CopeCart IPN message protocol flow:

<https://drive.google.com/file/d/1n-ouN82fLRD1sp6YhrAF2FW5tCAjli5m/edit>

IPN Events

For each paid, failed, or cancellation payment and other conditions one IPN event is sent. Each IPN sends one of these event notification types:

Event	Description
payment.made	The buyer makes a successful payment.
payment.trial	A payment that is charged from the buyer not when the order is confirmed but when the product trial period ends.
payment.failed	A payment failed. The reason may be, that the payment failed (after some try) because the bank account is not chargeable or the rebilling was canceled by the buyer's
payment.pending	A payment has not yet been processed.
payment.refunded	The vendor or CopeCart has initiated a refund, which has been successfully processed.
payment.charged_back	The credit card company or bank of the buyer processed a chargeback.
payment.recurring.cancelled	The buyer has requested a cancellation of his rebilling purchase (abonnement or payment installments). This event is sent immediately. As soon as the next payment is due, but not completed (because of the cancellation), a payment.failed event is sent.
payment.recurring.upcoming	This event is sent with the second and next payments for recurring payments (payment installments or subscriptions).

IPN Parameters

With each IPN request, we send a set of these parameters:

Parameter	Type	Description	Example
affiliate	String	Affiliate Nickname	maxmustermann
buyer_address	String	Buyer address	Teststraße 3
buyer_city	String	Buyer city	Berlin
buyer_company_name	String	Buyer company name (If the buyer is a company)	Mueller Inc
buyer_country	String	Buyer country	Deutschland
buyer_country_code	String	Buyer country code	DE
buyer_email	String	Buyer email address	maxmueller@gmx.de
buyer_firstname	String	Buyer first name	Max
buyer_id	String	Buyer unique id	b929ca1e498bbd68
buyer_lastname	String	Buyer last name	Mueller
buyer_phone_number	String	Buyer phone number	0176123456
buyer_vat_number	String	Buyer VAT number	DE315024481
buyer_zipcode	String	Buyer postal code	10115
category_name	String	Name of category for the product. For example: <ul style="list-style-type: none">- Size- Color- Location, etc	Location
category_option_name	String	Chosen category value, for example: <ul style="list-style-type: none">- Red- XV- Berlin	Berlin
earned_amount	Decimal	Vendor net income per line item in the order	55.0
first_payment	Decimal	First payment amount	119.0

Parameter	Type	Description	Example
frequency	String	Recurring cycle frequency One of <ul style="list-style-type: none"> - daily - weekly - biweekly - monthly - quarterly - half_yearly - yearly 	monthly
is_cancelled_for	Date iso8601	If given, the order is canceled for this date. The access to the product should be stopped on this day	2023-06-30
is_upsell	Boolean	Indicates whether it is an upsell or normal order.	false
is_addon	Boolean	Type of product in the scope of order One of: <ul style="list-style-type: none"> - true - false True - value will be available in the scope of recurring payments for the add-on product.	false
next_payment_at	Date iso8601	Next payment date (recurring payments only)	2023-05-01
next_payments	Decimal	Next payments amount (recurring payments only)	100.99
order_date	Date iso8601	Order date	2023-02-28
order_id	String	Order unique id	7cIYUvQI
order_time	String	Order time	17:00
order_source_identifier	String	Identifies where the order was made from. One of: <ul style="list-style-type: none"> - null (checkout page) - shopping_cart (shopping cart) - phone_offer (phone offer) 	null

Parameter	Type	Description	Example
payment_method	String	Payment method selected for this order by buyer One of: <ul style="list-style-type: none"> - credit_card - sepa - sofort - paypal - invoice - test (for the vendor only) 	credit_card
payment_plan	String	Type of payment plan. One of: <ul style="list-style-type: none"> - one_time_payment - breakdown_payment (installment) - abonnement (subscription) 	one_time_payment
payment_status	String	Payment status One of: <ul style="list-style-type: none"> - paid - pending - trial - failed - upcoming - successed_refunded - failed_refunded - chargeback_succeeded - chargeback_failed - failed_as_chargeback - test_paid - test_trial - test_successed_refunded 	paid
product_id	String	Uniq id of the product	2df15941
product_name	String	Name of the product	Product 1
product_type	String	Type of the product. One of: <ul style="list-style-type: none"> - digital - electronic_book - event - physical - printed_book - services 	digital

Parameter	Type	Description	Example
quantity	Integer	Quantity of ordered products	3
rate_number	Integer	For single payments this value is 1. For payment installments and subscriptions only: Number of payments (e.g. 1 for the first payment, 2 for the second, etc).	1
shipping_price	Decimal	Shipping cost	9.99
tags	Array[String]	Array of product tags	["tag_1", "tag_2", "tag_3"]
test_payment	Boolean	Type of payment One of: - true - false	false
total_number_of_payments	Integer	Total number of payments including first payment	3
transaction_amount	Decimal	Transaction gross amount	300.25
transaction_earned_amount	Decimal	Transaction earned net amount	255.25
transaction_currency	String	Transaction currency code	EUR
transaction_date	DateTime iso8601	Date of the transaction (e.g. of the payment). Is often the same as order_date, but may be different (e.g. for payment installments)	2023-03-17T20:40:07+01:00
transaction_id	String	Unique id of the transaction	53703f91bb7ab490
transaction_processed_at	DateTime iso8601	Date and time when the transaction was processed	2023-03-17T20:40:07+01:00
transaction_type	String	Type of transaction One of: - sale - refund - chargeback	sale

Parameter	Type	Description	Example
buyer_subscribed_for_newsletter	Boolean	Shows whether a customer has subscribed for the newsletter, or not. One of: - true - false	true
line_item_amount	Decimal	Total amount paid for all the purchased items of one product type.	148.75
line_item_vat_amount	Decimal	Total VAT amount calculated for all the purchased items of one product type.	48.75
event_type	String	IPN event type One of: - payment.made - payment.trial - payment.failed - payment.pending - payment.refunded - payment.charged_back - payment.recurring.cancelled - payment.recurring.upcoming	payment.made
transaction_amount_per_product	Array[Objects]	Transaction amount breakdown per product	[{ amount: 10.0, vat_amount: 2.0, slug: '1qw8qq', is_addon: true, name: 'product 1', internal_name: 'internal' }]
transaction_vat_amount	Decimal	Transaction vat amount	19.0
product_internal_name	String	Product internal name	Product internal 1
subscription_state	String	Subscription state	in_progress
cancelation_reason	String	Reason of cancelled subscription	vendor_cancelation
cash_flow_at	DateTime iso8601	Timestamp when CopeCart receive money from payment providers	2023-03-17T20:40:07+01:00
metadata	String	The vendor-provided data	Produkt_ID

Parameters based on IPN Event

Included in..

Each IPN request

Parameter

order_id
order_date
order_time
order_source_identifier
category_name
category_option_name
earned_amount
quantity
total_number_of_payments
payment_plan
payment_status
payment_method
is_cancelled_for
is_upsell
is_addon
product_id
product_name
product_type
buyer_id
buyer_firstname
buyer_lastname
buyer_email
buyer_phone_number
buyer_country

Included in..**Parameter**

buyer_country_code
buyer_address
buyer_city
buyer_company_name
buyer_zipcode
buyer_vat_number
affiliate
shipping_price
event_type
cash_flow_at
first_payment
next_payments
next_payment_at
frequency
transaction_date
transaction_id
transaction_amount
transaction_currency
transaction_type
rate_number
test_payment
subscription_state
cancelation_reason

recurring payment events only**regular payment events only****payment.recurring.cancelled**

Privacy settings - Data for fulfilling the contract

On product creation data privacy settings are available. In these settings, a vendor can choose which data he requires for fulfilling the contract and these are sent via IPN. The chosen fields become required on the checkout page for the selected product.

E-Mail-Marketing integrations:

Upon creation of IPN integration for E-Mail-Marketing software vendor will have two options to choose: "Contract fulfillment" and "Newsletter"

If "Contract fulfillment" is chosen - all data selected as required on the product page will be sent to the corresponding IPN.

If "Newsletter" is chosen and the buyer during checkout will check the newsletter checkbox - all data selected as required on the product page will be sent to the corresponding IPN.

If "Newsletter" is chosen and the buyer during checkout will **not** check the newsletter checkbox - no data will be sent to the corresponding IPN.

IPN failures

IPN call is considered a success if the CopeCart receives a response status "OK" (upper case, without quotes) from the server it sends IPN to.

If an IPN call fails, the CopeCart will retry to send 10 times over the next 3 hours.

Further information & Help

If you have questions about the integration of your system via the Instant Payment Notification or if you need further information or help, don't hesitate to contact us at: support@copecart.com