API Resources

Discover the many resources used by Circle APIs to enable payouts, payments, and transfers.

Circle APIs are a set of functions and procedures that allow you to use USDC for payments, payouts, and transfers. Circle's APIs are built around several resources that represent payments, payouts, transfers, and their associated objects.

This page contains information on the following resources:

Primary Resources

Payment Object - a payment from a customer. Can be funded from a card or an incoming wire. Payout Object - a payout to a customer, vendor, or supplier. Transfer Object - a transfer of funds from a Circle wallet to a blockchain address, from a blockchain address to a Circle wallet, or between two Circle wallets.

Methods and Instruments

Wire Account Object Wallet Object - balances managed by Circle

Additional Resources

Cancel Object - an attempt at canceling a payment Refund Object - an attempt at refunding a payment

Nested Resources

Source and Destination Objects - indicate where the funds are coming from and where they're going. Money Object - a monetary quantity represented as an amount and a currency Blockchain Addresses Merchants

Primary Resources

Payment Object

A payment object represents a payment from a customer and can be funded from a card or an incoming wire.

Example Payment Object

Payment { "id": "e665ea6e-3a53-4f93-a85e-45178d48d9ea", "type": "payment", "merchantId": "c680d087-7b41-40aa-95a2-68febcdddb22", "merchantWalletId": "1000002853", "amount": { "amount": "1.0", "currency": "USD" }, "source": { "id": "86461e9f-db1a-487f-915b-641138062e7c", "type": "card" }, "description": "description", "status": "pending", "verification": { "avs": "not_requested", "cvv": "not_requested" }, "cancel": { .. }, "refunds": [], "fees": { "amount": "3.0", "currency": "USD" }, "trackingRef": "7453760005200789598437 2", "errorCode": "payment_failed", "metadata": { "email": " ", "phoneNumber": "+14155555555" }, "riskEvaluation": { "decision": "denied", "reason": "3000" }, "createDate": "2020-04-10T02:29:53.888Z", "updateDate": "2020-04-10T02:32:19.421Z" }

Payment Attributes

id string

A UUID for the payment.

type string

The type of payment object. Possible values: payment , refund , cancel .

merchantId string

The UUID of the merchant.

merchantWalletId string

The id of the merchant's wallet.

amount object

A Money object representing the total payment amount that is charged to the source.

source object

A [Source object](#) representing the payment source.

description string

Description of the payment.

status string

Enumerated status of the payment. pending means the payment is waiting to be processed. confirmed means the payment has been approved by the bank and the merchant can treat it as successful, but settlement funds are not yet available to the merchant. paid means settlement funds have been received and are available to the merchant. failed means something went wrong (most commonly that the payment was denied). Terminal states are paid and failed .

verification object

Status of verification checks. Attributes include avs and cvv . For avs , the value represents the raw AVS response, expressed as an upper-case letter. not_requested indicates check was not made, and pending is pending/processing. For cvv , not_requested indicates check was not made. pass indicates value is correct. fail indicates value is incorrect. unavailable indicates card issuer did not do the provided check. pending indicates check is pending/processing.

cancel object

A [Cancel object](#) if one exists.

refunds [object]

An array of [Refund objects](#) if they exist.

fees [object]

A [Money object](#) representing fees associated with this payment.

trackingRef string

Payment tracking reference.

errorCode string

Indicates the failure reason of a payment. Only present for payments in failed state. See [Entity Errors](#) for a full list of possible codes.

metadata object

The email and phoneNumber provided during payment creation.

riskEvaluation object

An object with two attributes, decision and reason .

createDate string

ISO-8601 UTC date/time format.

updateDate string

ISO-8601 UTC date/time format.

Payout Object

A payout object represents a payout to a customer, vendor, or supplier.

Example Payout Object

Payout { "id": "df3b8e5f-9579-4c1f-9fa9-deac7f4be55c", "sourceWalletId": "1000038499", "destination": { "id": "4d260293-d17c-4309-a8da-fa7850f95c10", "type": "wire", }, "amount": { "amount": "10.0", "currency": "USD" }, "fees": { "amount": 3.0, "currency": "USD" }, "status": "complete", "trackingRef": "954766000046382591768456", "errorCode": "insufficient_funds", "riskEvaluation": { "decision": "denied", "reason": "3000" }, "return": { ... }, "createDate": "2020-12-24T11:19:20.561Z", "updateDate": "2020-12-24T12:01:00.523Z",

}

Payout Attributes

id string

A UUID for the payout.

sourceWalletId string

The identifier of the source wallet used to fund a payout.

destination object

The[Destination object](#) the payout is being made to.

amount object

A[Money object](#) representing the total amount that is paid to the destination.

toAmount object

A[Money object](#) representing the amount that is paid to the destination currency. Only included for crypto payouts.

fees object

A[Money object](#) representing fees associated with this payment.

status string

Status of the payout. pending indicates that the payout is in process; complete indicates it finished successfully; failed indicates it failed.

trackingRef string

Payout tracking reference. Only included on fiat payouts.

externalRef string

External network identifier which will be present once provided from the applicable network.

errorCode string

Indicates the failure reason of a payout. Only present for payouts in failed state. Possible values are insufficient_funds , transaction_denied , transaction_failed , and transaction_returned .

riskEvaluation object

An object with two attributes, decision and reason .

return object

A Return object if the payout was returned.

createDate string

ISO-8601 UTC date/time format.

updateDate string

ISO-8601 UTC date/time format.

Transfer Object

A transfer object represents a transfer of funds from a Circle wallet to a blockchain address, from a blockchain address to a Circle wallet, or between two Circle wallets.

Example Transfer Object

Transfer { "id": "0d46b642-3a5f-4071-a747-4053b7df2f99", "source": { "type": "blockchain", "chain": "ETH", "address": "0x8381470ED67C3802402dbbFa0058E8871F017A6F" }, "destination": { "type": "wallet", "id": "12345", }, "amount": { "amount": "3.14", "currency": "USD" }, "transactionHash": "0x4cebf8f90c9243a23c77e4ae20df691469e4b933b295a73376292843968f7a63", "status": "pending", "riskEvaluation" : { "decision": "approved", "reason": "Circle approved credit card" }, "createDate": "2020-04-10T02:29:53.888Z" }

Transfer Attributes

id string

A UUID for the transfer.

source object

A[Source object](#) representing the source of the transfer.

destination object

A[Destination object](#) representing the destination of the transfer.

amount object

A[Money object](#) representing the amount transferred between source and destination.

transactionHash string

A hash that uniquely identifies an on-chain transaction. This is only available when either source or destination are of type blockchain .

status string

Status of the transfer. Status pending indicates that the transfer is in the process of running; complete indicates it finished successfully; failed indicates it failed. createDate string

ISO-8601 UTC date/time format.

Methods and Instruments

Wire Account Object

Bank Account (Wire) { "id": "e5e5109d-5a3c-47cd-93ee-9cfe054691bf", "type": "wire", "status": "complete", "description": "WELLS FARGO BANK, NA ****1111", "trackingRef": "CIR3EDXL6M", "virtualAccountEnabled": false, "fingerprint": "6177934f-0830-45ed-beb7-c67d225327a1", "billingDetails": { "name": "Satoshi Nakamoto", "line1": "100 Money Street", "line2": "Suite 1", "city": "Boston", "postalCode": "01234", "district": "MA", "country": "US" }, "bankAddress": { "bankName": "WELLS FARGO BANK, NA", "city": "SAN FRANCISCO", "district": "CA", "country": "US" }, "createDate": "2021-01-12T10:05:54.815Z", "updateDate": "2021-01-12T10:05:54.815Z" }

Wallet Object

Wallets represent balances managed by Circle. A single wallet is designed to hold multiple balances, but only one balance per currency. As the only supported currency is "USD", all wallets today have a single balance.

Unlike other resources in our APIs, wallet IDs are shorter numerical strings and are not represented as longer UUIDs.

Wallet { "walletId": "434000", "entityId": "fc988ed5-c129-4f70-a064-e5beb7eb8e32", "type": "end_user_wallet", "description": "Treasury Wallet", "balances": [{ "amount": "3.14", "currency": "USD" }] }

Additional Resources

Below is a list of resources that relate to an original payment or payout. They represent subsequent events that happen after the initial creation or settlement of the payment/payout.

Cancel Object

A cancel object represents an attempt at canceling a payment. Cancellations apply only to card payments, and its presence doesn't necessarily mean that the cancellation was successful. A successful cancellation has a status of paid .

Cancel { "id": "b783ad5e-1ace-4b41-8c0d-5bce31ae971b", "type": "cancel", "merchantId": "b3528f9f-e381-46d0-9405-31d709f95360", "merchantWalletId": "1000038499", "source": { "id": "619c7e7a-f406-427f-bd38-e885895f280a", "type": "card" }, "description": "Cancel Payment", "amount": { "amount": "250.00", "currency": "USD" }, "fees": { "amount": "0.00", "currency": "USD" }, "status": "paid", "originalPayment": { "id": "765fb559-394b-4d21-972c-0423e937b0d3", "type": "payment", "status": "paid", "createDate": "2020-12-17T15:29:33.701Z", "updateDate": "2020-12-17T16:13:11.043Z" }, "reason": "requested_by_customer", "createDate": "2020-12-22T19:58:20.722Z", "updateDate": "2020-12-22T20:02:15.382Z" }

Refund Object

A refund object represents an attempt at refunding a payment. Its presence doesn't mean that the refund was successful. A successful refund has a status of paid .

Refund { "id": "b937c833-b7f3-48fc-bc6f-09d492eb4a47", "type": "refund", "merchantId": "aef0d056-6119-4fc1-a13a-c7ecd8682999", "merchantWalletId": "1000038499", "source": { "id": "94705f9a-0ae4-4fb1-b77f-6e6042150ce1", "type": "card" }, "description": "Refund Payment", "amount": { "amount": "1.00", "currency": "USD" }, "fees": { "amount": "0.00", "currency": "USD" }, "status": "paid", "originalPayment": { "id": "5adf260a-c54b-4a4d-a548-4a51ce2280b7", "type": "payment", "status": "paid", "description": "Merchant Payment", "amount": { "amount": "1.00", "currency": "USD" }, "fees": { "amount": "0.04", "currency": "USD" }, "createDate": "2020-12-17T15:27:17.300Z", "updateDate": "2020-12-17T15:40:10.455Z", "merchantId": "aef0d056-6119-4fc1-a13a-c7ecd8682999", "merchantWalletId": "1000038499", "source": { "id": "94705f9a-0ae4-4fb1-b77f-6e6042150ce1", "type": "card" }, "trackingRef": "11300134136681725782464" }, "reason": "requested_by_customer", "createDate": "2021-01-05T10:34:25.797Z", "updateDate": "2021-01-05T10:38:16.676Z" }

Nested Resources

Below is a list of resources that are commonly used in other objects.

Source and Destination Objects

Payments, payouts, and transfers reference source and destination objects, which as the names suggest, tell you where the funds are coming from and where they're going.

Sources and destinations can have the following types:

- card
- for card payments
- wire
- for wire payments and payouts
- blockchain
- for transfers to/from blockchain addresses
- wallet
- for transfers to/from a Circle
- wallet

Source and Destination // "card", "wire" // The "id" represents the UUID of the Card or Wire object. { "type": "card", "id": "4d260293-d17c-4309-a8da-fa7850f95c10" }

// "blockchain" // A "chain" and "address" together represent the blockchain location. { "type": "blockchain", "address": "0x8381470ED67C3802402dbbFa0058E8871F017A6F", "chain": "ETH" }

// "wallet" // The "id" is the id of the Circle wallet. { "type": "wallet", "id": "12345" }

Money Object

Monetary amounts across our APIs are represented as Money objects, which consist of an amount and a currency . The only supported currency at the moment is USD , and the amount is denominated in dollars as a string with fractional cents. In the example below, the amount being represented is 3.14.

Money { "amount": "3.14", "currency": "USD" }

Blockchain Addresses

Blockchain Address { "address":"0x8381470ED67C3802402dbbFa0058E8871F017A6F", "currency":"USD", "chain":"ETH" }

Merchants

Merchant { "marketplaceId": "1e38dcef-a947-493a-a674-f623e4418ace", "merchantId": "fc988ed5-c129-4f70-a064-e5beb7eb8e32", "merchantWalletId": "212000", "name": "Merchant Inc", "createDate": "2020-04-10T02:13:30.000Z" }