Quickstart: Withdraw via Blockchain Wallet

Learn the basics of sending funds from your Circle account to an external blockchain wallet Suggest Edits

Sending funds from your Circle Account to external blockchain wallets is one of the most basic primitives (building blocks) enabled by the APIs. This quickstart walks through sending USDC USD externally. You can follow the same steps when sending EUROC EUR as well.

1. Get an API key

Circle's APIs use API keys as the mechanism to authenticate client requests. The API key must be set in the Authorization header of the request sent from your backend server. The format of the header is Bearer secret-key-value. To obtain an API key for the sandbox environment, simply create an account and generate a new key in settings - it only takes a few seconds.

Once you have generated your API key, record it in a secure place.

2. Fund Your Account

If you haven't done so already, make sure you fund your account for testing. You can do this one of two ways: by using the Circle Payments API to accept a payment, or by receiving an external USDC transfer from a faucet or other source.

3. Add Recipient Address

To send account funds externally, you will need to whitelist a blockchain address to send to (destination). The sandbox environment is connected to the Ethereum Sepolia testing network, so the destination blockchain address has to be a valid Sepolia address. Note

Note

USDC is connected to testing networks on other blockchains as well. This guide focuses on Ethereum but works similarly for other blockchains. For information on other testing networks see Test-USDC.

For Production

In Production, Circle Mint customers must contact to verify new addresses added via the Core API.

For Singapore customers

Circle Mint Singapore customers must verify all transfer recipients using the UI in the Circle Console, as transfers from unverified addresses will be held in pending status. Please see this Help Centerarticle for details. REQUEST

cURL JavaScript curl --request POST \ --url https://api-sandbox.circle.com/v1/businessAccount/wallets/addresses/recipient \ --header 'accept: application/json' \ --header 'authorization: Bearer {YOUR_API_KEY}' \ --header 'content-type: application/json' \ --data ' { "chain": "ETH", "idempotencyKey": "2a308497-e66e-4c42-ac1e-7bedab86d958", "address": "0x493A9869E3B5f846f72267ab19B76e9bf99d51b1", "currency": "USD", "description": "https://usdcfaucet.com/" } ' const options = { method: 'POST', headers: { accept: 'application/json', 'content-type': 'application/json', authorization: 'Bearer {YOUR_API_KEY}' }, body: JSON.stringify({ chain: 'ETH', idempotencyKey: '2a308497-e66e-4c42-ac1e-7bedab86d958', address: '0x493A9869E3B5f846f72267ab19B76e9bf99d51b1', currency: 'USD', description: 'https://usdcfaucet.com/' }) };

fetch('https://api-sandbox.circle.com/v1/businessAccount/wallets/addresses/recipient', options) . then(response => response.json()) . then(response => console.log(response)) . catch(err => console.error(err)); RESPONSE

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4. Send Funds

To keep things simple, we'll transfer funds to the deposit address of the USDC faucet service on Sepolia. That address is

Balance Requirement

You can transfer any amount you want, provided your account has sufficient balance to cover the transfer. To send funds externally, you will use the create account transfer endpoint.

Specify your blockchain

Because Circle's APIs are designed for multiple future chains and currencies, you must specify the currency and chain you want to utilize. You can create a transfer by using the command below. REQUEST

cURL JavaScript curl --request POST \ --url https://api-sandbox.circle.com/v1/businessAccount/transfers \ --header 'accept: application/json' \ --header 'authorization: Bearer {YOUR_API_KEY}' \ --header 'content-type: application/json' \ --data ' { "destination": { "type": "verified_blockchain", "addressId": "cfa01bb0-d166-5506-a48a-56f2beab559f" }, "amount": { "currency": "USD", "amount": "3.14" }, "idempotencyKey": "6ec3827d-15bb-442e-9d4c-32e73e61cbf4" } ' const options = { method: 'POST', headers: { accept: 'application/json', 'content-type': 'application/json', authorization: 'Bearer {YOUR_API_KEY}' }, body: JSON.stringify({ destination: {type: 'verified_blockchain', addressId: 'cfa01bb0-d166-5506-a48a-56f2beab559f'}, amount: {currency: 'USD', amount: '3.14'}, idempotencyKey: '6ec3827d-15bb-442e-9d4c-32e73e61cbf4' }) };

fetch('https://api-sandbox.circle.com/v1/businessAccount/transfers', options) .then(response => response.json()) .then(response => console.log(response)) .catch(err => console.error(err)); RESPONSE

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JSON { "data": { "id": "21fd4ec4-bad1-4eb2-9fc5-60320dedc7ea", "source": { "type": "wallet", "id": "1016875042" }, "destination": { "type": "blockchain", "address": "0x493a9869e3b5f846f72267ab19b76e9bf99d51b1", "chain": "ETH" }, "amount": { "amount": "3.14", "currency": "USD" }, "status": "pending", "createDate": "2023-11-15T16:41:12.395Z" } }
```

5. Check the Status of the Transfer

You can use the get transfer endpoint to retrieve details about the status of the transaction. You can use it as in the command below. REQUEST

cURL JavaScript curl --request GET \ --url https://api-sandbox.circle.com/v1/businessAccount/transfers/21fd4ec4-bad1-4eb2-9fc5-60320dedc7ea \ --header 'accept: application/json' \ --header 'authorization: Bearer {YOUR_API_KEY}' Javascript Request const options = { method: 'GET', headers: { accept: 'application/json', authorization: 'Bearer {YOUR_API_KEY}' } }; fetch('https://api-sandbox.circle.com/v1/businessAccount/transfers/21fd4ec4-bad1-4eb2-9fc5-60320dedc7ea', options) .then(response => response.json()) .then(response => console.log(response)) .catch(err => console.error(err)); RESPONSE

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JSON { "data": { "id": "21fd4ec4-bad1-4eb2-9fc5-60320dedc7ea", "source": { "type": "wallet", "id": "1016875042" }, "destination": { "type": "blockchain", "address": "0x493a9869e3b5f846f72267ab19b76e9bf99d51b1", "chain": "ETH" }, "amount": { "amount": "3.14", "currency": "USD" }, "transactionHash": "0x0654eee4f609f9c35e376cef9455dd9fc1546c482c5c32c8f8d434ead14fcf97", "status": "complete", "createDate": "2023-11-15T16:41:12.395Z" } }
```

Notes about the process

The very first state transition for a transfer sets the status to created and the transactionHash to null . At this point Circle has just started processing the on-chain send.

When Circle broadcasts the transfer a few seconds later, its status will change to running. It will also display a transactionHash you can use to track the transfer on chain, which you can look up on Etherscan's tracker on Sepolia. Though not yet settled, you can consider the transaction complete because it has been successfully broadcasted to the network. Circle's systems will continue to track the transfer for 30 confirmations, at which point its status will change to complete.

Except for certain cases, you do not have to worry about waiting for the complete state, which is most important when receiving external transfers. You can read more about block confirmations here.

Congratulations. You have successfully sent cryptocurrency using Circle's APIs.

6. Ready for the next step?

After experimenting with our APIs, you'll want to start building test integrations in sandbox prior to moving into production. Start by applying for a Circle Mint account. We'll be happy to walk you through the next steps. Updatedabout 20 hours ago * Table of Contents * *1. Get an API key * *2. Fund Your Account * *3. Add Recipient Address * *4. Send Funds * *5. Check the Status of the Transfer * *6. Ready for the next step?