

# Bitcoin Transactions Using bitcoin-cli

In this guide, we will walk through the process of creating Bitcoin transactions using the bitcoin-cli command line tool.

This tutorial assumes that you have Bitcoin Core installed and are running it in regtest mode.

Prerequisites:

1. Bitcoin Core installed on your machine.
2. Running Bitcoin Core in regtest mode.

Step-by-Step Guide:

## 1. Start Bitcoin Core in Regtest Mode

To start, open a terminal and launch Bitcoin Core in regtest mode. Regtest mode is a local test network where you can generate your own blocks and test transactions.

*Command:*

```
bitcoind -regtest -daemon
```

## 2. Creating a New Bitcoin Address

A Bitcoin address is where you send and receive Bitcoin. Let's create a new address to receive Bitcoin.

*Command:*

```
bitcoin-cli -regtest getnewaddress
```

### 3. Generating Funds by Mining Blocks

Since we are using regtest, there are no existing bitcoins in your wallet. You can generate funds by mining blocks.

*Command:*

```
bitcoin-cli -regtest generatetoaddress 101 "$(bitcoin-cli -regtest  
getnewaddress)"
```

### 4. Sending Bitcoin

Now that you have some bitcoin, you can send it to another address. First, generate another address, and then send bitcoin to it.

*Command:*

```
bitcoin-cli -regtest getnewaddress
```

```
bitcoin-cli -regtest sendtoaddress "<recipient_address>" <amount_in_btc>
```

### 5. Listing Transactions

To view all transactions in your wallet, you can list them using:

*Command:*

```
bitcoin-cli -regtest listtransactions
```

### 6. Getting Transaction Details

For detailed information about a specific transaction, use its transaction ID (TXID).

*Command:*

```
bitcoin-cli -regtest gettransaction "<txid>"
```

## **7. Checking the Mempool**

To check for unconfirmed transactions, view the mempool.

*Command:*

```
bitcoin-cli -regtest getrawmempool
```

## **8. Checking Block Information**

To view block details, first get the block hash, then view the block information.

*Command:*

```
bitcoin-cli -regtest getblockhash <block_height>
```

```
bitcoin-cli -regtest getblock "<block_hash>"
```

## **9. Shutting Down Bitcoin Core**

Once you're done, shut down Bitcoin Core.

*Command:*

```
bitcoin-cli -regtest stop
```