



用 Kurtosis 搭建本地开发环境

near.org

Agenda

2022 - Q4 - Oct 24

1. Create Local Environment
2. Interact with localnet
3. Build on localnet

Why localnet?

1. Build in an isolated environment
2. In case testnet or RPC is down somehow 😄
3. When you need to test with a huge amount of \$NEAR (e.g. 1M)

● Mainnet

● Testnet

● Guildnet

Localnet



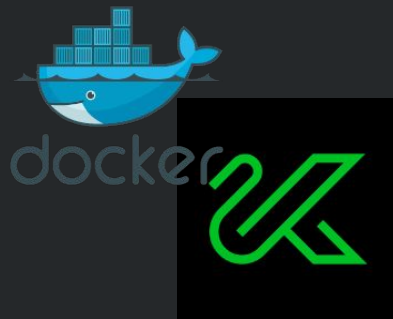
<https://docs.kurtosistech.com/>

A platform for orchestrating distributed system environments, allowing easy creation and manipulation of stage-appropriate deployments across the early stages of the development cycle (prototyping, testing).

Use cases:

- Enable individual developers to prototype on personal development environments without bothering with environment setup and configuration
- Enable development teams to run automated end-to-end tests for distributed systems, including fault tolerance tests in servers and networks, load testing, performance testing, etc.
- Enable developers to easily debug failing distributed systems during development

Create Local Environment



1. Deployment guideline:
<https://docs.near.org/develop/testing/kurtosis-localnet>
2. Submit issues:
<https://github.com/kurtosis-tech/near-kurtosis-module/issues>
3. Ask for help:
<https://discord.com/channels/490367152054992913/912467453479616542>



| kurtosis

Manage NEAR Modules



View Modules

- `kurtosis enclave ls`
- `kurtosis enclave inspect near`

Stop Modules

- `kurtosis enclave stop near`

Clean Modules

- `kurtosis clean`
- `kurtosis clean -a`

Using the localnet

NEAR Validator / RPC

NEAR Explorer

NEAR Wallet

NEAR CLI

```
- local_near state test.near
```

Test-only Wallet (143.198.164.130:8333)

Wallet Staking Account Help Donate to Ukraine

Account Details

Wallet ID	satoshi.test.near
Wallet balance	8.88819 NEAR ≈ \$26.13 USD
Reserved for storage ⓘ	0.00417 NEAR ≈ \$0.01 USD
Reserved for transactions ⓘ	0.05 NEAR ≈ \$0.15 USD

Transaction: 7p345K5...DSzS

SIGNED BY nft.test.near		RECEIVER nft.test.near	STATUS Succeeded
TRANSACTION FEE 0.00662 N	DEPOSIT VALUE 0.1 N	GAS USED 7 Tgas	ATTACHED GAS 30 Tgas
CREATED October 24, 2022 at 3:56:28pm		HASH 7p345K56tDAzLNbJ8r9hGiK5YwPDQDCpQdmkwEtNDSzS	
BLOCK HASH ApLt9yw1qAmVq3UNxXSngSrgfjpbHM4Hpk5fGZwyZ4pr			

NEAR CLI for localnet

Login CLI with NEAR Wallet

- `local_near login`

Create Account

- `local_near create-account nft.test.near --masterAccount test.near --initialBalance 10`

Deploy and Init Contract

- `local_near deploy --wasmFile nft.wasm --accountId nft.test.near`
- `local_near call nft.test.near new_default_meta '{"owner_id": "'$ACCOUNT_ID'"}' --accountId $ACCOUNT_ID`

Call Functions

- `local_near call nft.test.near nft_mint '{"token_id": "team_token", "metadata": {"title": "Go Team!", "description": "Go Team!", "media": "https://bafybeiftdczwrtyr3k7a2k4vutd3amkwsmagyhrrdzlhvpt33dyjivufqusq.ipfs.dweb.link/go-team-gif.gif", "copies": 1}, "receiver_id": "satoshi.test.near"}' --accountId nft.test.near --amount 0.1`

Build with localnet

Add localnet configuration:

```
case 'local':  
  return {  
    networkId: process.env.NEAR_CLI_LOCALNET_NETWORK_ID || 'localnet',  
    nodeUrl: process.env.NEAR_NODE_URL || 'http://localhost:3030',  
    keyPath: process.env.NEAR_CLI_LOCALNET_KEY_PATH || `${process.env.HOME}/.near/validator_key.json`,  
    walletUrl: process.env.NEAR_WALLET_URL || 'http://localhost:4000/wallet',  
    contractName: CONTRACT_NAME,  
  };  
};
```

Guest Book



Guest Book

Sign in with NEAR and add a message to the guest book!

`assemblyscript` `react` `boilerplate`

<https://github.com/near-examples/guest-book>

NEAR Guest Book

Log out

Sign the guest book, `rando.testnet!`

Message: |

Donation (optional): 1 Ⓝ

Sign

Messages

rando.testnet:

Hello, world!

rando.testnet:

And here's a donation for ya

Thank you!

