



Mastering Remote Account Control with Neutron's ICTX Module

While we are waiting for the others, please spend some time installing Docker and Golang v1.20

What is Neutron once again?

- **Permissionless smart contracts platform**
- **IBC + ICQ + ICA**
Smart contracts can query, transact and manage accounts in remote zones directly from Neutron
- **Interchain Security**
Neutron is secured by the most secure blockchain in Cosmos

What we are gonna do

1. Deploy a smart contract that utilizes Interchain Transactions Module;
2. Register Interchain Account on a remote chain, execute a transaction on a remote chain and recover an ICA after channel closing.

Prerequisites

- **golang** 1.20 installed
- **Rust** 1.68 installed
- **git** installed
- **jq** installed (optional, for better CLI UX)
- **DOCKER**
- allocated workspace folder, e.g.
`mkdir -p ~/projects/hackmos&& cd ~/projects/hackmos`

Prerequisites

```
$ git clone -b v1.0.4 https://github.com/neutron-org/neutron.git
```

```
$ git clone https://github.com/neutron-org/neutron-integration-tests.git
```

```
$ git clone https://github.com/neutron-org/neutron-query-relayer.git
```

```
$ git clone -b v9.0.3 https://github.com/cosmos/gaia.git
```

```
$ git clone https://github.com/neutron-org/neutron-sdk.git
```

Prepare Cosmopark

```
$ cd neutron && make install
```

```
$ cd gaia && make install
```

```
$ cd neutron-integration-tests
```

```
$ npx @neutron-org/get-artifacts neutron-dao -b main -d contracts
```

```
$ make build-all
```

Build contracts

```
$ cd neutron-sdk && make build
```

Smart contracts structure

- **instantiate** — deploy an instance of a smart contract
- **execute** — perform state modifying actions (may be permissioned)
- **query** — perform read-only actions over state of contract and chain
- **sudo** — privileged access to a contract from a module
- **reply** — handle submessage results
- **migrate** — upgrade contract to another version (change behaviour, state, etc.)

Useful links

- Neutron Documentation: <https://docs.neutron.org/>
- Neutron CosmWasm SDK: <https://github.com/neutron-org/neutron-sdk>
- Neutron SDK Modules: <https://github.com/neutron-org/neutron/tree/main/x>
- IBC Documentation: <https://ibc.cosmos.network/>