

How to Setup a Conflux - Chainlink

Polaris - Brian

Indices

[Setup Chainlink Node](#)

References

<https://www.youtube.com/watch?v=yhLEYwdO9jw>

<https://github.com/Conflux-Network-Global/demo-cfx-chainlink>

Setup Chainlink Node

<https://docs.chain.link/docs/running-a-chainlink-node>

Install Docker on Debian

```
curl -sSL https://get.docker.com/ | sh
sudo usermod -aG docker $USER
exit
# log in again
```

Create a Directory for Chainlink Data

```
mkdir ~/.chainlink
```

Create ENV file for ChainLink

```

echo "ROOT=/chainlink
LOG_LEVEL=debug
ETH_CHAIN_ID=3
MIN_OUTGOING_CONFIRMATIONS=2
LINK_CONTRACT_ADDRESS=0x20fe562d797a42dcb3399062ae9546cd06f63280
CHAINLINK_TLS_PORT=0
SECURE_COOKIES=false
ALLOW_ORIGINS=*
DATABASE_TIMEOUT=0
ETH_DISABLED=true
FEATURE_EXTERNAL_INITIATORS=true
ENABLE_EXPERIMENTAL_ADAPTERS=true
CHAINLINK_DEV=true" > ~/.chainlink/.env

```

Setup Remote Postgres Database

We will be using heroku postgres database, Here is the link of the [How to Setup Heroku Remote Postgres Database](#).

After the tutorial, you should get the URI of your postgresql. You need to replace the `postgresql....` with your postgresql URI

```

# Writing the DATABASE_URL to chainlink env setup file.
echo "DATABASE_URL=postgresql://$USERNAME:$PASSWORD@$SERVER:$PORT/$DATABASE"
>> ~/.chainlink/.env

echo
"DATABASE_URL=postgres://cbsqtfvjrxyeh:b6f26f17d40f8cb38ec29fb843cbcdf1e307b1
d94eaa6e09552c6f6258367517@ec2-52-71-153-228.compute-
1.amazonaws.com:5432/deaarpo18a03ir" >> ~/.chainlink/.env

```

Run the Chainlink Node

Currently Running Chainlink `0.9.4`

```

cd ~/.chainlink && docker run -p 6688:6688 -v ~/.chainlink:/chainlink -it --
env-file=.env smartcontract/chainlink:0.9.4 local n

```

Setup an External Initiator

You need to install the latest go to build the initiator. Here is the [link](#). Or just follow the following procedure, its for linux setup.

```
wget https://golang.org/dl/go1.15.5.linux-amd64.tar.gz
tar -C /usr/local -xzf go1.15.5.linux-amd64.tar.gz
export PATH=$PATH:/usr/local/go/bin
go version # to check if go is installed successfully
```

Clone and build external initiator repo

```
git clone https://github.com/Conflux-Network-Global/external-initiator
cd external-initiator
git checkout generalized-EI
go build
```

Create a `.env` file in the `external-initiator` folder with the following contents

```
echo
"EI_DATABASEURL=postgres://oafmwqxyizvobl:6ala78bca748d98a4f0ef744d2b6eefb5376
172361c946375b3fe29e0c665504@ec2-52-203-165-126.compute-
1.amazonaws.com:5432/d29qhrfqsjnh2
EI_CHAINLINKURL=http://localhost:6688
EI_IC_ACCESSKEY=49cafabd90d44a3682e15ef937e6f9f0
EI_IC_SECRET=okPoScjKB2+GQXkiTm3WT+wDn9ARiS7OwjYEE/BMidsd16BRlgxL+PGUhnzOJ1QB
EI_CI_ACCESSKEY=TBjdcAXPNiOAx3KA9wZ7gw8VbM2mHGJMN9qafgovZ+Y0UleJi/amU4OmuTbR7m
mQ
EI_CI_SECRET=72oxivjfbLiBmlt6ZtDHnPaPNW0R+XusXoNlMXVC9llusDY00ob5WvrlUqZuLVQQ"
> ~/external-initiator/.env
```

1. The first line `EI_DATABASEURL`'s postgres url is created using Heroku. Here is the link of the [How to Setup Heroku Remote Postgress Database](#).
2. and the rest of the four keys are generated via following procedure: (or you can watch youtube tutorial [here](#), starting from 3:20)

The 4 keys in the `external-initiator/.env` file are generated by the Chainlink node with the following process. [Link](#) to more Chainlink/Docker documentation.

1. Use `docker ps` and obtain the container ID for the Chainlink node. To access the command line within the container, use `docker exec -it <containerID> /bin/bash`.
2. Once inside the container, log in using `chainlink admin login` and the username/password from when the container is created.
3. To create the keys, `chainlink initiators create <NAME> <URL>`. Note that in this case the name is `cfx` and the url is `http://172.17.0.1:8080/jobs` to access the locally run external-initiator using the docker container gateway. (otherwise, they are on two different networks). The 4 keys are generated in the same order as listed above.

Run Initiator

```
./external-initiator "{\"name\":\"cfx-  
testnet\", \"type\":\"conflux\", \"url\":\"http://test.confluxrpc.org\"}\" --  
chainlinkurl \"http://localhost:6688/\"
```

Setup Solidity Smart Contract

tutorials for Deploy Smart Contract Instance is [here](#)

Setup External Adapters

First you need to have npm and yarn

1. Install [npm\(install LTS version\)](#)
2. Install [yarn](#)
- 3.