Installing MultiChain on Linux

su (enter root password)

cd /tmp  
wget <https://www.multichain.com/download/multichain-1.0.4.tar.gz>  
tar -xvzf multichain-1.0.4.tar.gz  
cd multichain-1.0.4  
mv multichaind multichain-cli multichain-util /usr/local/bin (to make easily accessible on the command line)

exit (to return to your regular user)

Port 6749

#### 1. Creating a blockchain

First we will create a new blockchain named chain1. On the first server, run this command:

multichain-util create chain1

(If you are using Windows, you need to first open a DOS command line in the directory where you installed the MultiChain executables. You can do this by navigating to that directory in the Windows Explorer, then typing cmd in the address bar at the top.)

View the blockchain’s default settings (these can also be [modified](https://www.multichain.com/developers/blockchain-parameters/) but we recommend using the defaults for now):

cat ~/.multichain/chain1/params.dat   (on Windows, view %APPDATA%\MultiChain\chain1\params.dat)

Initialize the blockchain, including mining the genesis block:

multichaind chain1 -daemon

You should be told that the server has started and then after a few seconds, that the genesis block was found. You should also be given the node address that others can use to connect to this chain.

Copy and paste the node address

#### 2. Connecting to a blockchain

Now we’ll connect to this blockchain from elsewhere. On the second server, run the following:

multichaind chain1@[ip-address]:[port]

You should be told that the blockchain was successfully initialized, but you do not have permission to connect. You should also be shown a message containing an address in this node’s wallet.

Back on the first server, add connection permissions for this address:

multichain-cli chain1 grant 1... connect

Now try reconnecting again from the second server:

multichaind chain1 -daemon

You should be shown a message that the node was started, and it should display this second node’s address.

#### 3. Some commands in interactive mode

Before we proceed, let’s enter interactive mode so we can issue commands without typing multichain-cli chain1 every time. On both servers:

multichain-cli chain1

(If you are using Windows, interactive mode is not yet available, so all commands in this guide should be preceded by multichain-cli chain1. You will also need to open another DOS command line in the directory where you installed the MultiChain executables.)

Now that the blockchain is working on two nodes, you can run the commands in this section on either or both. To get general information:

getinfo

See a list of all available commands:

help

Show all permissions currently assigned:

listpermissions

Create a new address in the wallet:

getnewaddress

List all addresses in the wallet:

getaddresses

Get the parameters of this blockchain (based on params.dat file):

getblockchainparams

For each node, get a list of connected peers:

getpeerinfo

#### 4. Using native assets

If you only interested in blockchains for data storage and retrieval, rather than representing asset transactions, skip straight to section 6.

Now we are going to create a new asset and send it between nodes. On the first server, get the address that has the permission to create assets:

listpermissions issue