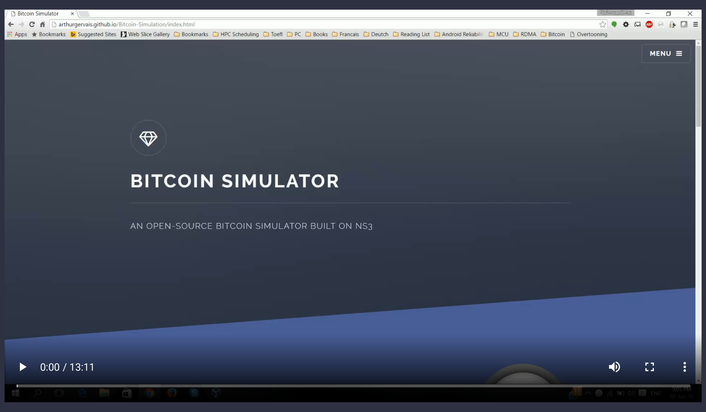
INSTALLATION GUIDE

INSTALL AND START PLAYING IMMEDIATELY.

INSTALLATION TUTORIAL

Did you get confused? Don't worry! You can watch our installation tutorial for a more concrete demonstration.



INSTALLATION STEPS

1. Clone the Bitcoin Simulator.
2. The Bitcoin Simulator is built on **ns3** and it has been tested with versions 3.24 and 3.25. So, go to the official site and grab a suitable release. Detailed installation instructions for various platforms can be found here.
3. Untar it with the following command:
   `tar xvfj ns-allinone-3.25.tar.bz2`
4. For exhanging block messages, **rapidjson** is used. Download it from here.
5. Create a new directory named **rapidjson** under **ns-allinone-3.xx/ns-3.xx** and copy the contents of the directory **include/rapidjson** (from the downloaded rapidjson project in step 4) to the newly created rapidjson folder (**ns-allinone-3.xx/ns-3.xx/rapidjson**). You also have to copy all the files from **Bitcoin-Simulation** to the respective folders under **ns-allinone-3.xx/ns-3.xx/**. All the above can be done automatically by the provided **copy-to-ns3.sh** script.
6. Update the **ns-allinone-3.xx/ns-3.xx/src/applications/wscript**.
   - Add the following lines in **module.source**:

```
'model/bitcoin.cc',
'model/bitcoin-node.cc',
'model/bitcoin-miner.cc',
'model/bitcoin-simple-attacker.cc',
'model/bitcoin-selfish-miner.cc',
'model/bitcoin-selfish-miner-trials.cc',
'helper/bitcoin-topology-helper.cc',
'helper/bitcoin-node-helper.cc',
'helper/bitcoin-miner-helper.cc',
```

   - Add the following lines in **headers.source**:

```
'model/bitcoin.h',
'model/bitcoin-node.h',
'model/bitcoin-miner.h',
'model/bitcoin-simple-attacker.h',
'model/bitcoin-selfish-miner.h',
'model/bitcoin-selfish-miner-trials.h',
'helper/bitcoin-topology-helper.h',
'helper/bitcoin-node-helper.h',
'helper/bitcoin-miner-helper.h',
```

7. Update the **ns-allinone-3.xx/ns-3.xx/src/internet/wscript**.
   - Add the following line in **obj.source**:

```
'helper/ipv4-address-helper-custom.cc',
```

   - Add the following line in **headers.source**:

```
'helper/ipv4-address-helper-custom.h',
```

8. Configure ns3 with the follow command to ensure compatibility and maximum performance.

```
CXXFLAGS="-std=c++11" ./waf configure --build-profile=optimized --out=build/optimized --
```

9. Build ns3 using the `./waf` command.