

# Build Cardano node

Setting up a Cardano node can be done in several ways. Depending on goals, technical expertise, and the environment in which you want to run the node. Here are two main methods:

## Direct Installation from Source

### 1. Install Dependencies

First, you'll need to install some dependencies:

- **GHC (Glasgow Haskell Compiler)**
- **Cabal (a build tool for Haskell)**

For Ubuntu/Debian, you can install them with:

```
sudo apt update
sudo apt install -y ghc cabal-install libssl-dev libncurses-dev
```

### 2. Clone the Cardano Node Repository

```
git clone https://github.com/input-output-hk/cardano-node
cd cardano-node
```

### 3. Build the Cardano Node

Use **cabal** to build the node, might need to install additional Haskell libraries or dependencies if prompted:

```
cabal update
cabal build all
```

### 4. Download the Cardano Configuration Files

Download the configuration files from the official Cardano GitHub repository: <https://github.com/input-output-hk/cardano-configurations>

### 5. Run the Cardano Node

With everything set up, you can now run the node, the detail of running node flag is define in [Running node flags](#). For example:

```
cabal run cardano-node -- run --config ~/cardano-node/config/config.json --database-path ~/cardano-node/db --
socket-path ~/cardano-node/db/node.socket
```

## Docker Containers

### 1. Pull the Cardano Node image

You can pull the docker image with the latest version of cardano-node from <https://github.com/IntersectMBO/cardano-node/pkg/container/cardano-node>

```
docker pull ghcr.io/intersectmbo/cardano-node:9.1.0
```

### 2. Create and run container

Also download the configuration files from the official Cardano GitHub repository: <https://github.com/input-output-hk/cardano-configurations>

You'll need to create a container and configure it with the necessary volumes and environment settings, the detail of running node flag is define in [Running node flags](#). For example:

```
docker run -d \  
  -v ...  
  [Node image] \  
#command  
  cardano-node run \  
  --config /config/config.json \  
  --topology /config/topology.json \  
  --database-path /db \  
  --socket-path /db/node.socket \  
  --host-addr 0.0.0.0 \  
  --port 3001
```