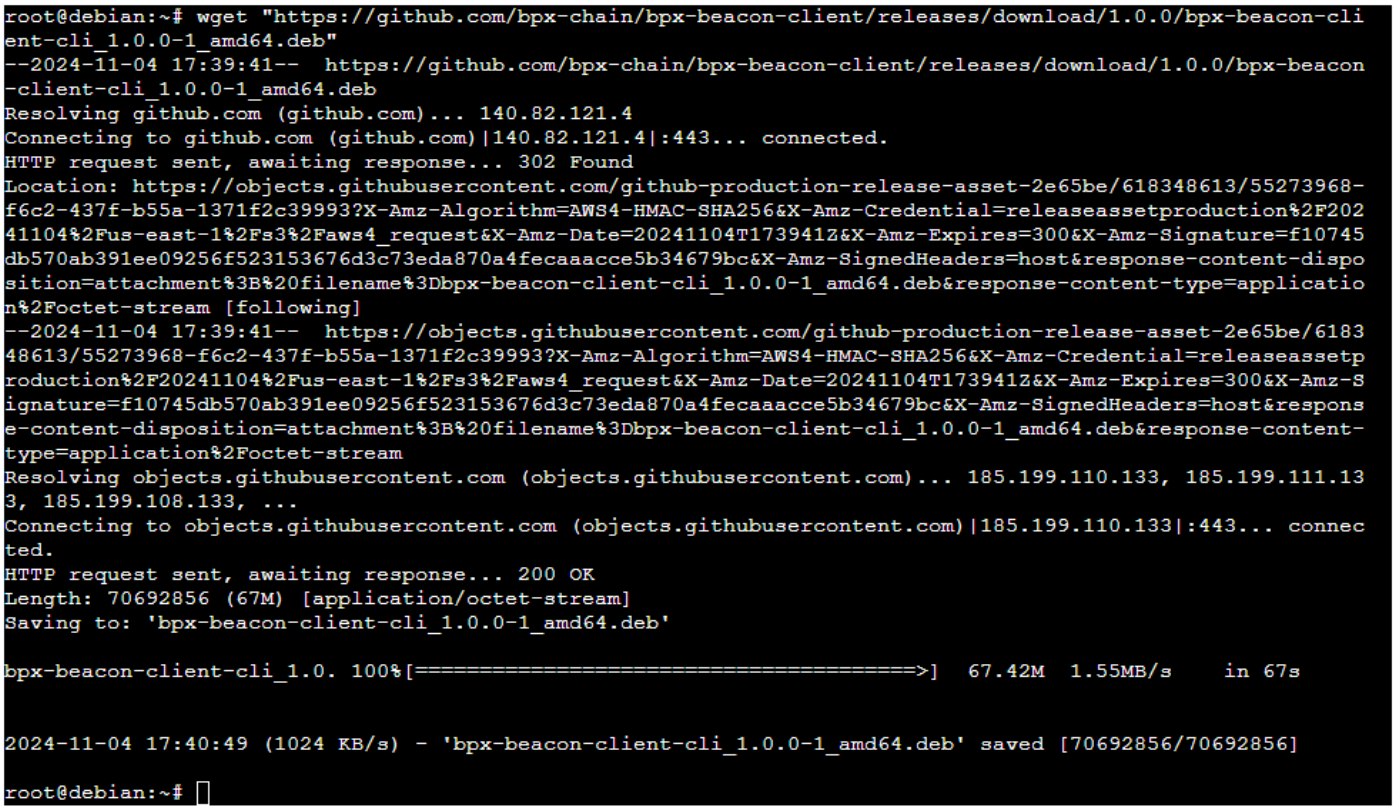
Installing and running BPX full node on Debian / Ubuntu

1. Log in as root. Use **wget** to download the DEB packages for the latest releases of the **Execution Client** and **Beacon Client**. Replace **X.X.X** with the latest versions tags.

```
wget "https://github.com/bpx-chain/bpx-execution-client/releases/download/X.X.X/bpx-execution-client_X.X.X+stable_amd64.deb"
wget "https://github.com/bpx-chain/bpx-beacon-client/releases/download/X.X.X/bpx-beacon-client-cli_X.X.X-1_amd64.deb"
```



2. Install both packages. Replace **X.X.X** with the downloaded versions tags.

```
dpkg -i bpx-execution-client_X.X.X+stable_amd64.deb bpx-beacon-client-cli_X.X.X-1_amd64.deb
```

```
root@debian:~# dpkg -i bpx-execution-client_1.0.0+stable_amd64.deb bpx-beacon-client-cli_1.0.0-1_amd64.deb
Selecting previously unselected package bpx-execution-client.
(Reading database ... 19150 files and directories currently installed.)
Preparing to unpack bpx-execution-client_1.0.0+stable_amd64.deb ...
Unpacking bpx-execution-client (1.0.0+stable) ...
Selecting previously unselected package bpx-beacon-client-cli.
Preparing to unpack bpx-beacon-client-cli_1.0.0-1_amd64.deb ...
Unpacking bpx-beacon-client-cli (1.0.0) ...
Setting up bpx-execution-client (1.0.0+stable) ...
Setting up bpx-beacon-client-cli (1.0.0) ...
root@debian:~#
```

3. Create a new user account for BPX Chain services.

```
adduser bpxchain
```

Set a password for the new account. You can leave the additional information fields empty.

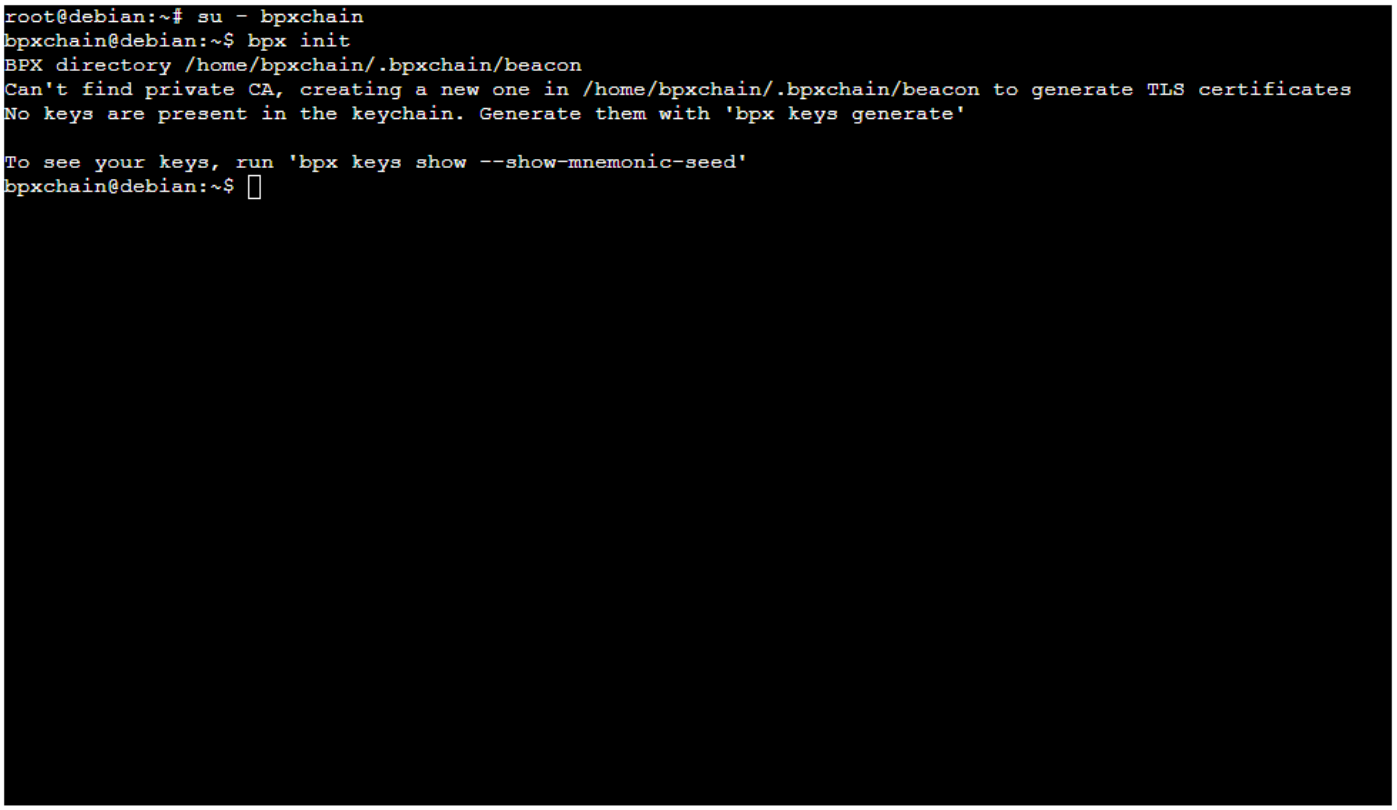
```
root@debian:~# adduser bpxchain
Adding user `bpxchain' ...
Adding new group `bpxchain' (1000) ...
Adding new user `bpxchain' (1000) with group `bpxchain (1000)' ...
Creating home directory `/home/bpxchain' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for bpxchain
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] Y
Adding new user `bpxchain' to supplemental / extra groups `users' ...
Adding user `bpxchain' to group `users' ...
root@debian:~#
```

4. Switch to the newly created account.

```
su - bpxchain
```

5. Initialize the Beacon Client configuration.

```
bpx init
```



6. Press **Control + D** to log out and return to the root console.

7. Create a configuration file for the BPX Execution Client **systemd** service using any text editor, for example **nano**:

```
nano /etc/systemd/system/bpx-execution.service
```

Insert the following file content:

```
[Unit]
Description=BPX Execution Client

[Service]
Type=simple
User=bpxchain
ExecStart=bpx-geth --http
```

```
Restart=always

[Install]
WantedBy=multi-user.target
```

Save the file by pressing **Control + O** and close the editor with **Control + X**.

8. Follow the same procedure to create a configuration file for the Beacon Client service:

```
nano /etc/systemd/system/bpx-beacon.service
```

Insert the following file content:

```
[Unit]
Description=BPX Beacon Client

[Service]
Type=forking
User=bpxchain
ExecStart=bpx start beacon
ExecStop=bpx stop -d all
Restart=always

[Install]
WantedBy=multi-user.target
```

9. Reload the system services configuration.

```
systemctl daemon-reload
```

10. Enable automatic startup of the BPX Chain services.

```
systemctl enable bpx-execution
systemctl enable bpx-beacon
```

11. Start both services.

```
systemctl start bpx-execution
systemctl start bpx-beacon
```

```
root@debian:~# systemctl daemon-reload
root@debian:~# systemctl enable bpx-execution
Created symlink /etc/systemd/system/multi-user.target.wants/bpx-execution.service -> /etc/systemd/system/b
px-execution.service.
root@debian:~# systemctl enable bpx-beacon
Created symlink /etc/systemd/system/multi-user.target.wants/bpx-beacon.service -> /etc/systemd/system/bpx-
beacon.service.
root@debian:~# systemctl start bpx-execution
root@debian:~# systemctl start bpx-beacon
root@debian:~#
```

12. Your full node has just started and will begin the initial synchronization of the blockchain. This process may take several hours or even days. Use the following command to watch the sync status.

```
su - bpxchain
watch -n 10 bpx show -s
```

```
Every 10.0s: bpx show -s                                                debian: Mon Nov  4 17:51:27 2024

Network: mainnet    Port: 6201   RPC Port: 8201
Node ID: f0757f051e8c6d48252d775e1d6ce17ae18a136c5ebefd6da2b86a0e7a9a6a51
Genesis Challenge: 511d20a74f1453a9dcf39108a854417a31ff56aa333fd64d888b584994d08dd4

Beacon Client Status: Syncing 111/40318 (40207 behind).
Execution Client Status: Syncing

Peak: Height: 111
      Hash: 6f94224352cfe10ee085dbbb89d8319ba00c3a2c492889f919f44067cc558f05
      Time: Thu Oct 31 2024 13:33:10 UTC

Estimated network space: 961.153 TiB
Current difficulty: 30
Current VDF sub_slot_iters: 1048576

  Height: |   Hash:
     111 | 6f94224352cfe10ee085dbbb89d8319ba00c3a2c492889f919f44067cc558f05
     110 | 5edf8a9e4aafef1558434ec7fcc1114cf4f2fe97243f8555132b272c3e222af0
     109 | ebe4b959e64519febc569eb38fc0d07e01abcbc1f060d5d83a8bfc4a46b52c33
     108 | d124e53c65db5a051e9c3ccefb91d0c638a4c84afa1dab010485958dcfc0cb8e
     107 | 752a4cb787b4141098790e49422b235f233e5dfca9042b567a4be7d04afe3695
     106 | b4ffaba040e048ccb23430d313021c093f5ed2fafb218d6e2124fea01ce3fa4b
     105 | 047c26eb19fa66973a178246c07dffeb837c8023d01f3acfa8e35dea156b3c94
     104 | 0dbb254722bc9d4818df81a63329dc2060d1efe2b85d638ddfb2581d6d13475d
     103 | fde0060931f5bdbc47d4daaf92633991e60b33a7382f349b3f7acff4049aae45
     102 | bf4e65e1fb2e095565e65504512321fab3fad3fedda3ab016117f0142c85a7a1
```

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