Running Multiple Nodes on the Same Server

It's possible to run multiple Secret Nodes on the same Secret-compatible server, and it is fairly easy to do so.

Important Notes

There are 2 important things that must be done for each node:

1. A unique system file is necessary for each node
2. A uniquesgx_secrets
3. path is necessary for each node
4. All Secret Nodes should have their own user to simplify
5. It's easiest to do this withauto-register
6. , but it's possible manual as well
7. Each node must be registered
8.

Setup

This process assumes you already have a full node running. If you do not, proceed by[Setting Up a Full Node](#) , then returning.

1. Create a User

This isn't necessary, but will help with keeping nodes organized. From here on, the assumption is the username issecret , but it can be anything of your choosing.

```

Copy adduser secret usermod secret -aG sudo

```

1. Verify secretd Access

This will make it so you don't need to installsecretd multiple times, and therefore, can upgrade all nodes at the same time.

```

Copy secretd status

```

1. Begin Setting up a Node

On the new user, execute steps 1 and 2 of[Setting Up a Full Node](#) . You should now have a.secretd directory on the new user, and the correct genesis file.

1. Register the Node

The variablesSCRT_ENCLAVE_DIR andSCRT_SGX_STORAGE are going to need to be custom for each user/node. These variables are NOT the same as the ones in step 3 of setting up a full node.

```

Copy exportSCRT_ENCLAVE_DIR=~/lib exportSCRT_SGX_STORAGE=~/.secretd/.sgx_secrets secretdauto-register

```

1. Change Ports

In order for these nodes to work in tandem, they cannot use the same ports. I recommend[this tool](#) to help automate changing them.

Example Ports Which will then create a command that looks like this:

```

Copy sed -i.bak -e "s%^proxy_app = \"tcp://127.0.0.1:26658\"%proxy_app = \"tcp://127.0.0.1:10658\"%; s%^laddr = \"tcp://127.0.0.1:26657\"%laddr = \"tcp://127.0.0.1:10657\"%; s%^pprof_laddr = \"localhost:6060\"%pprof_laddr =

\"localhost:10060\"%; s%^laddr = \"tcp://0.0.0.0:26656\"%laddr = \"tcp://0.0.0.0:10656\"%; s%^prometheus_listen_addr = \":26660\"%prometheus_listen_addr = \":10660\"%" HOME/.secretd/config/config.toml && \ sed -i.bak -e "s%^address = \"tcp://0.0.0.0:1317\"%address = \"tcp://0.0.0.0:10317\"%; s%^address = \":8080\"%address = \":10080\"%; s%^address = \"0.0.0.0:9090\"%address = \"0.0.0.0:10090\"%; s%^address = \"0.0.0.0:9091\"%address = \"0.0.0.0:10091\"%" HOME/.secretd/config/app.toml

```

1. Create Service File

Note that this service file has two environment variables that are set, as well as a--home directory. These will be unique to your user.

```

Copy sudotee/etc/systemd/system/secretd.service>/dev/null<<EOF [Unit] Description=Secret Node service After=network.target

[Service] Type=simple Environment=SCRT_ENCLAVE_DIR=/home/secret/lib Environment=SCRT_SGX_STORAGE=/home/secret/.secretd/.sgx_secrets WorkingDirectory=/home/secret ExecStart=/usr/local/bin/secretd start --home /home/secret/.secretd User=secret Restart=on-failure StartLimitInterval=0 RestartSec=3 LimitNOFILE=65535 LimitMEMLOCK=209715200

[Install] WantedBy=multi-user.target EOF

```

1. Continue Setting Up a Full Node

At this point, all unique behavior for additional nodes is complete!

From here, you can return to of setting up a full node. Note that the service file name is different. The following is what the system file commands would look like.

```

Copy sudo systemctl daemon-reload && sudo systemctl enable secretd && \ sudo systemctl restart secretd && sudo journalctl -u secretd -f -o cat

```

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