

## Prac 4: Storing and retrieving data using IPFS

```
namrata@Amei: ~/go-ipfs
namrata@Amei:~$ wget https://dist.ipfs.io/go-ipfs/v0.21.0/go-ipfs_v0.21.0_linux-amd64.tar.gz tar -xvzf go-ipfs_v0.21.0_linux-amd64.tar.gz
wget: invalid option -- 'z'
wget: invalid option -- 'f'
Usage: wget [OPTION]... [URL]...

Try 'wget --help' for more options.
namrata@Amei:~$ wget https://dist.ipfs.io/go-ipfs/v0.21.0/go-ipfs_v0.21.0_linux-amd64.tar.gz
--2025-06-01 15:13:30-- https://dist.ipfs.io/go-ipfs/v0.21.0/go-ipfs_v0.21.0_linux-amd64.tar.gz
Resolving dist.ipfs.io (dist.ipfs.io)... 209.94.90.1, 2602:fea2:2::1
Connecting to dist.ipfs.io (dist.ipfs.io)|209.94.90.1|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://dist.ipfs.tech/go-ipfs/v0.21.0/go-ipfs_v0.21.0_linux-amd64.tar.gz [following]
--2025-06-01 15:13:32-- https://dist.ipfs.tech/go-ipfs/v0.21.0/go-ipfs_v0.21.0_linux-amd64.tar.gz
Resolving dist.ipfs.tech (dist.ipfs.tech)... 209.94.78.1, 2602:fea2:3::1
Connecting to dist.ipfs.tech (dist.ipfs.tech)|209.94.78.1|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 35555117 (34M) [application/gzip]
Saving to: 'go-ipfs_v0.21.0_linux-amd64.tar.gz'

go-ipfs_v0.21.0_linux-amd64.t 100%[=====] 33.91M 2.11MB/s in 30s

2025-06-01 15:14:03 (1.14 MB/s) - 'go-ipfs_v0.21.0_linux-amd64.tar.gz' saved [35555117/35555117]

namrata@Amei:~$ tar -xvzf go-ipfs_v0.21.0_linux-amd64.tar.gz
go-ipfs/LICENSE
go-ipfs/LICENSE-APACHE
go-ipfs/LICENSE-MIT
go-ipfs/README.md
go-ipfs/install.sh
go-ipfs/ipfs
namrata@Amei:~$ cd go-ipfs
namrata@Amei:~/go-ipfs$ sudo bash install.sh
[sudo] password for namrata:
Moved ./ipfs to /usr/local/bin
namrata@Amei:~/go-ipfs$ ipfs --version
ipfs version 0.21.0
namrata@Amei:~/go-ipfs$ ipfs init
generating ED25519 keypair...done
peer identity: 12D3KoolWA3K3yKrXQMxyS6QyGxU4m57Acac4T5TRKryA69sFqCYF
initializing IPFS node at /home/namrata/.ipfs
namrata@Amei:~/go-ipfs$ ipfs daemon
```

```
namrata@Amei: ~/go-ipfs

Repo version: 14
System version: amd64/linux
Golang version: go1.19.10
2025/06/01 15:16:16 failed to sufficiently increase receive buffer size (was: 208 kiB, wanted: 2048 kiB, got: 4
go/wiki/UDP-Receive-Buffer-Size for details.
Swarm listening on /ip4/127.0.0.1/tcp/4001
Swarm listening on /ip4/127.0.0.1/udp/4001/quic
Swarm listening on /ip4/127.0.0.1/udp/4001/quic-v1
Swarm listening on /ip4/127.0.0.1/udp/4001/quic-v1/webtransport/certhash/uEiD3Se1tf57LA89N7vyg3eoPAi8ryZ9wUuxa
qrD0jnjbhbWq28ZBcuvcg
Swarm listening on /ip4/172.22.123.153/tcp/4001
Swarm listening on /ip4/172.22.123.153/udp/4001/quic
Swarm listening on /ip4/172.22.123.153/udp/4001/quic-v1
Swarm listening on /ip4/172.22.123.153/udp/4001/quic-v1/webtransport/certhash/uEiD3Se1tf57LA89N7vyg3eoPAi8ryZ9w
eRjFYqrD0jnjbhbWq28ZBcuvcg
Swarm listening on /ip6:::1/tcp/4001
Swarm listening on /ip6:::1/udp/4001/quic
Swarm listening on /ip6:::1/udp/4001/quic-v1
Swarm listening on /ip6:::1/udp/4001/quic-v1/webtransport/certhash/uEiD3Se1tf57LA89N7vyg3eoPAi8ryZ9wUuxaNa5-95i
jbhbWq28ZBcuvcg
Swarm listening on /p2p-circuit
Swarm announcing /ip4/127.0.0.1/tcp/4001
Swarm announcing /ip4/127.0.0.1/udp/4001/quic
Swarm announcing /ip4/127.0.0.1/udp/4001/quic-v1
Swarm announcing /ip4/127.0.0.1/udp/4001/quic-v1/webtransport/certhash/uEiD3Se1tf57LA89N7vyg3eoPAi8ryZ9wUuxaNa5
D0jnjbhbWq28ZBcuvcg
Swarm announcing /ip4/172.22.123.153/tcp/4001
Swarm announcing /ip4/172.22.123.153/udp/4001/quic
Swarm announcing /ip4/172.22.123.153/udp/4001/quic-v1
Swarm announcing /ip4/172.22.123.153/udp/4001/quic-v1/webtransport/certhash/uEiD3Se1tf57LA89N7vyg3eoPAi8ryZ9wU
jFYqrD0jnjbhbWq28ZBcuvcg
Swarm announcing /ip6:::1/tcp/4001
Swarm announcing /ip6:::1/udp/4001/quic
Swarm announcing /ip6:::1/udp/4001/quic-v1
Swarm announcing /ip6:::1/udp/4001/quic-v1/webtransport/certhash/uEiD3Se1tf57LA89N7vyg3eoPAi8ryZ9wUuxaNa5-95iI
hbWq28ZBcuvcg
RPC API server listening on /ip4/127.0.0.1/tcp/5001
WebUI: http://127.0.0.1:5001/webui
Gateway server listening on /ip4/127.0.0.1/tcp/8080
Daemon is ready
```

# For Linux/macOS

```
wget https://dist.ipfs.io/go-ipfs/v0.21.0/go-ipfs_v0.21.0_linux-amd64.tar.gz
```

```
tar -xvzf go-ipfs_v0.21.0_linux-amd64.tar.gz
```

```
cd go-ipfs
```

```
sudo bash install.sh
```

# Verify installation

```
ipfs --version
```

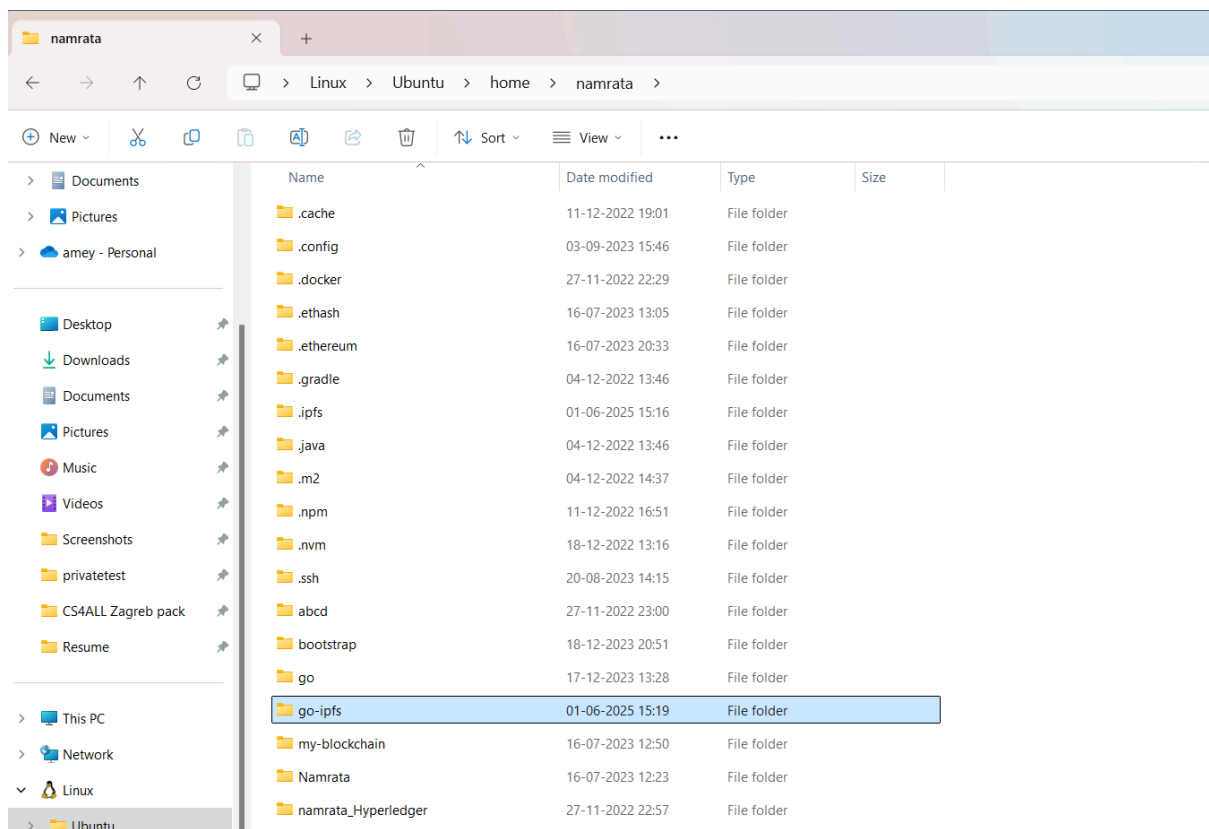
```
ipfs init
```

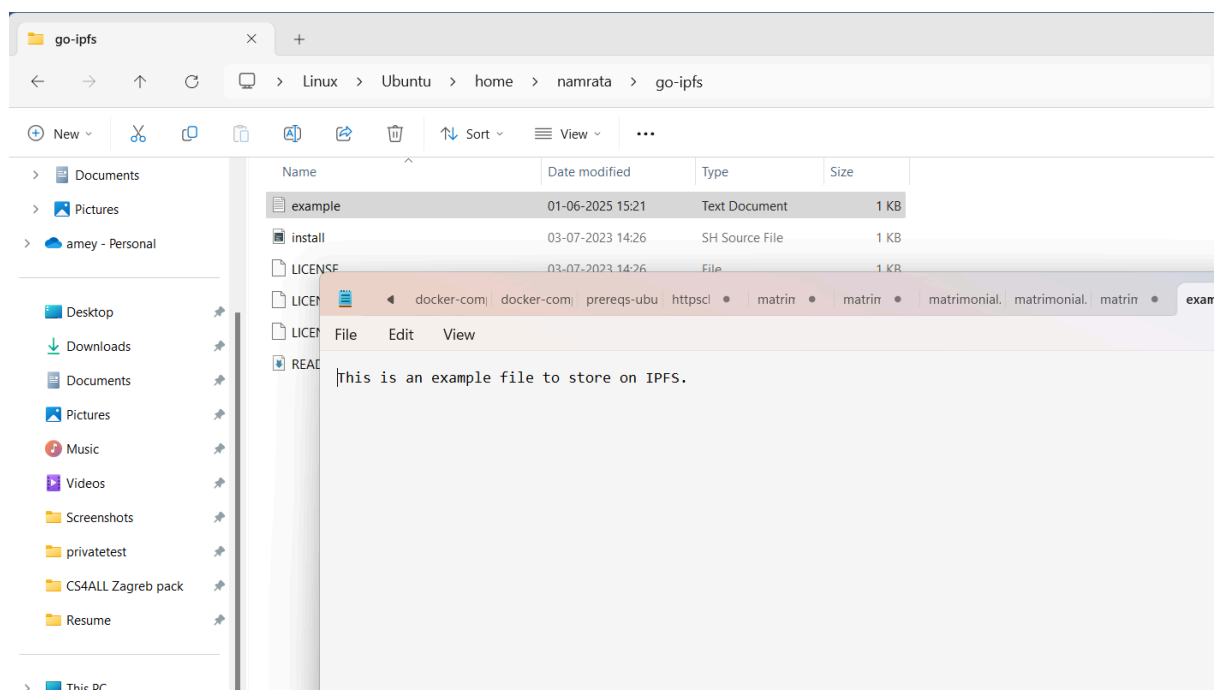
```
ipfs daemon
```

**create file in go-ipfs folder**

```
echo "This is an example file to store on IPFS." > example.txt
```

```
ipfs add example.txt
```





Open new Ubuntu Window

```
namrata@Amey: ~/go-ipfs  X  +  v
namrata@Amey:~$ cd go-ipfs
namrata@Amey:~/go-ipfs$ echo "This is an example file to store on IPFS." > example.txt
namrata@Amey:~/go-ipfs$ ipfs add example.txt
added QmbvwgbYaiPnBqCvV3hwVJBB2BHRje5QphbzHydpYzWVXa example.txt
42 B / 42 B [=====]
vwgbYaiPnBqCvV3hwVJBB2BHRje5QphbzHydpYzWVXa example.txt
Error: invalid path "example.txt": invalid cid: selected encoding not supported
namrata@Amey:~/go-ipfs$ ipfs cat QmbvwgbYaiPnBqCvV3hwVJBB2BHRje5QphbzHydpYzWVXa> example.txt
namrata@Amey:~/go-ipfs$ |
```