

Step-by-Step Guide to Setting Up NFS Server and Client

NFS (Network File System) enables file and directory sharing across a network. Here's the guide to set it up.

Prerequisites

- **Server:** Ubuntu 22.04 LTS.
- **Client:** Linux system (Ubuntu preferred).
- **Permissions:** Root or `sudo` access.

Setting Up the NFS Server

1. Install NFS Kernel Server

Update and install:

```
sudo apt update
sudo apt install nfs-kernel-server
```

2. Create and Configure the Export Directory

Create the directory:

```
sudo mkdir -p /srv/nfs/share
```

Set ownership and permissions:

```
sudo chown nobody:nogroup /srv/nfs/share
sudo chmod 777 /srv/nfs/share
```

3. Edit NFS Exports

Add the following to `/etc/exports` (replace ``):

```
/srv/nfs/share <client_ip>(rw, sync, no_subtree_check)
```

Export the changes:

```
sudo exportfs -a
```

4. Start NFS Service

Enable and start the service:

```
sudo systemctl enable nfs-kernel-server
sudo systemctl start nfs-kernel-server
```

5. Configure Firewall

Allow NFS traffic:

```
sudo ufw allow from <client_ip> to any port nfs
```

Enable UFW and check the status:

```
sudo ufw enable
sudo ufw status
```

Setting Up the NFS Client

The client in this case is the server where Kubernetes is installed and running.

1. Install NFS Common Package

Update and install:

```
sudo apt update
sudo apt install nfs-common
```

2. Create a Mount Point

Create the directory:

```
sudo mkdir -p /mnt/nfs_clientshare
```

3. Mount the NFS Share

Mount the shared directory (replace ``<nfs_server_ip>``):

```
sudo mount <nfs_server_ip>:/srv/nfs/share /mnt/nfs_clientshare
```

4. Verify Mount

Check mounted filesystems:

```
df -h | grep nfs_clientshare
```

List files in the mounted directory:

```
ls /mnt/nfs_clientshare
```

Your NFS server and client setup is complete, enabling efficient file sharing over the network. Ensure regular updates and security checks for optimal performance.

From:

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Last update: **2024/12/18 11:25**

