# 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 `<client\_ip>`):

/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.

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