

Documentation: Dynamic NFS StorageClass Setup in OpenShift Using Helm

This guide outlines how to set up dynamic storage provisioning in OpenShift using the **NFS Subdir External Provisioner**—deployed via Helm—leveraging your Fedora laptop as the NFS server. This method is ideal for development or testing environments and removes the need to manually clone or edit manifest repositories.

Prerequisites

- An OpenShift cluster with worker nodes able to access your Fedora laptop over the network.
- Fedora laptop configured as an NFS server and exporting a shared directory (e.g., `/srv/openshift_nfs`).
- Proper firewall and SELinux settings to permit NFS traffic.
- Helm installed and configured in your OpenShift cluster.
- The `oc` CLI configured with sufficient permissions.

Set Up NFS Server on Fedora Laptop

Install NFS utilities:

```
sudo dnf install nfs-utils
```

Create export directory and set permissions:

```
sudo mkdir -p /srv/openshift_nfs  
sudo chmod 777 /srv/openshift_nfs
```

Export NFS share:

Edit `/etc/exports`:

```
/srv/openshift_nfs *(rw, sync, no_subtree_check, no_root_squash)
```

Apply changes:

```
sudo exportfs -rav  
sudo systemctl enable --now nfs-server
```

Add Helm repo:

```
helm repo add nfs-subdir-external-provisioner https://kubernetes-sigs.github.io/nfs-subdir-external-provisioner/  
helm repo update
```

Install the Helm chart:

Replace `<NFS_SERVER_IP>` with your laptop's IP and `<NFS_EXPORT_PATH>` with your shared directory (e.g., `/srv/openshift_nfs`):

```
helm install nfs-subdir-external-provisioner nfs-subdir-external-provisioner/nfs-subdir-external-provisioner \
  --namespace nfs-provisioner \
  --set nfs.server=<NFS_SERVER_IP> \
  --set nfs.path=<NFS_EXPORT_PATH>
```