Experiment 4: Understanding NFS and Its Configuration

Aim:

To understand the Network File System (NFS), a distributed file system protocol that allows users to access files over a network seamlessly.

Description:

NFS enables a server to share files with clients. The server administrator configures the NFS service, specifies shared files, and manages client access. Clients use the `mount` command to access the shared data, enabling them to interact with the files as if they were local.

Procedure:

Server Setup:

1. **Create a Shared Folder:**
   Create a folder `nfs/abc.txt`.
2. **Configure Network Settings:**
   - Check the IP address using `ifconfig` in the terminal.
   - Adjust network settings if required.
3. **Enable Required Services:**
   - Enable `Network` and `NFS` services.
   - Disable `iptables` (firewall).
4. **Set Security Levels:**
   - Disable the firewall and SELinux under system security settings.
5. **Configure NFS Server:**
   - Go to `System Settings -> Server Settings -> NFS`.
   - Add shared directories with appropriate permissions.
6. **Restart NFS Service:**
   Run `service nfs restart` in the terminal.

Client Setup:

1. **Mount the NFS Directory:**
   Run the following in the terminal:

   ```bash
   mount -t nfs <server-ip>:/usr/nfs /root/abc
   cd /root/abc
   ls
   ```

   You should see `abc.txt`.
2. **Unmount the Directory:**
   Use the command:

   ```bash
   umount -t nfs <server-ip>:/usr/nfs
   ```

Note:

If the network is disabled, restart it using:

```bash
service network restart
```