Experiment No: 5

Date: ………..

FTP AND NFS CONFIGURATION

AIM:

To demonstrate FTP Server and NFS configuration.

PROCEDURE:

FTP:

FTP (File Transfer Protocol) is a network protocol for transmitting files between computers over Transmission Control Protocol/Internet Protocol (TCP/IP) connections. FTP is a client-server protocol that relies on two communications channels between the client and server: a command channel for controlling the conversation and a data channel for transmitting file content.

Here is how a typical FTP transfer works:

1. A user typically needs to log on to the FTP server, although some servers make some or all of their content available without a login, a model known as anonymous FTP.
2. The client initiates a conversation with the server when the user requests to download a file.
3. Using FTP, a client can upload, download, delete, rename, move and copy files on a server.

FTP INSTALLATION AND CONFIGURATION:

● On the taskbar, click Server Manager.
● In Server Manager, click the Manage menu, and then click Add Roles and Features.
● In the Add Roles and Features wizard, click Next.
● Select the installation type as Role-based or Feature-based and click Next.
● Select the destination server and click Next.
● On the Server Roles page, select Web Server (IIS), and click next.
● On the Select features page, click Next again.
● In the Select Role Services page, select FTP Server and its child services and click next,
● On the Confirm installation selections page, click Install.
● After successful installation, click Close.

How to use the FTP Site Wizard to Create an FTP Site with basic Read/Write Access

● Open Tools -> Internet Information Services (IIS) Manager
● In the Connections pane, expand the SERVER.
● Right-click the Sites node in the tree and click Add FTP Site, or click Add FTP Site in the Actions pane.
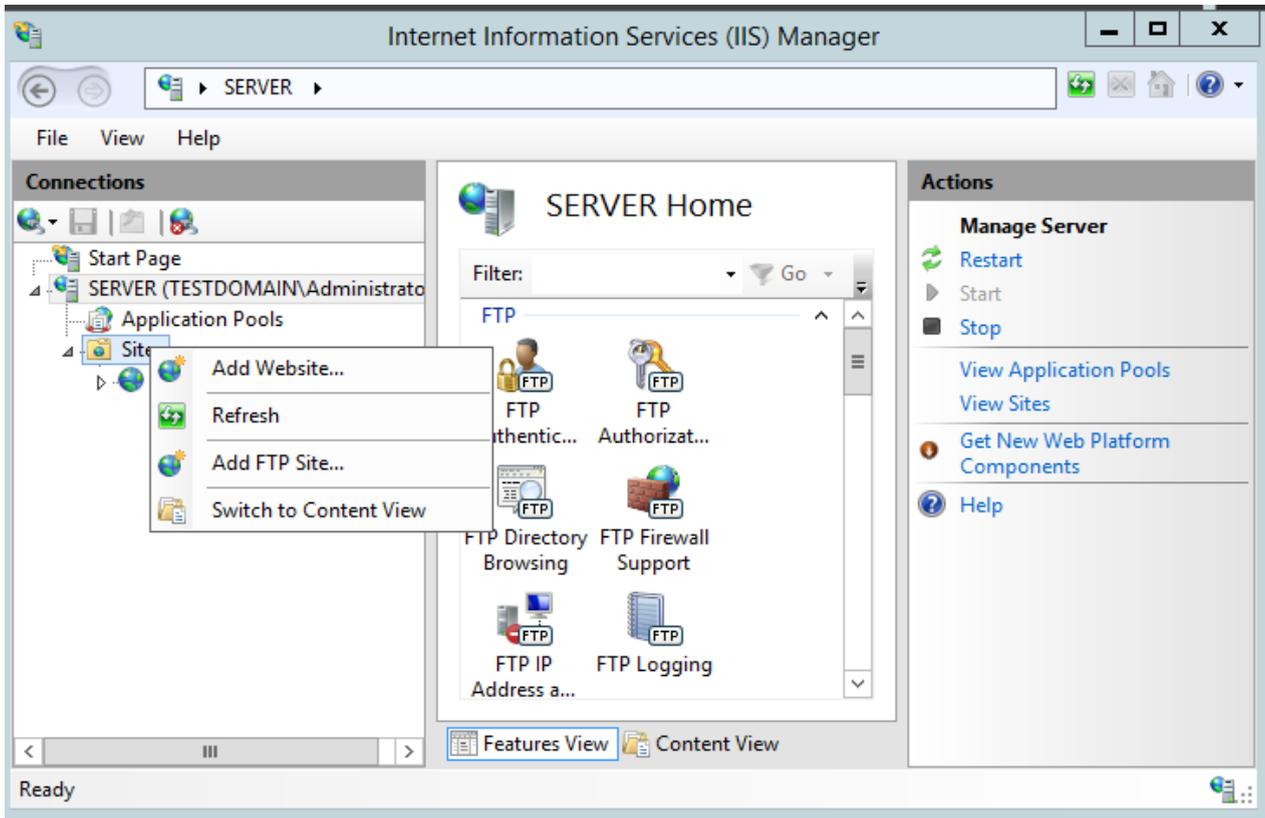
- When the Add FTP Site wizard appears:
  - Enter a site name (eg: "FTP_test_site") in the FTP site name box.
  - For the Physical path box, select the directory to be shared over FTP (here "FTP_folder"). Click Next.
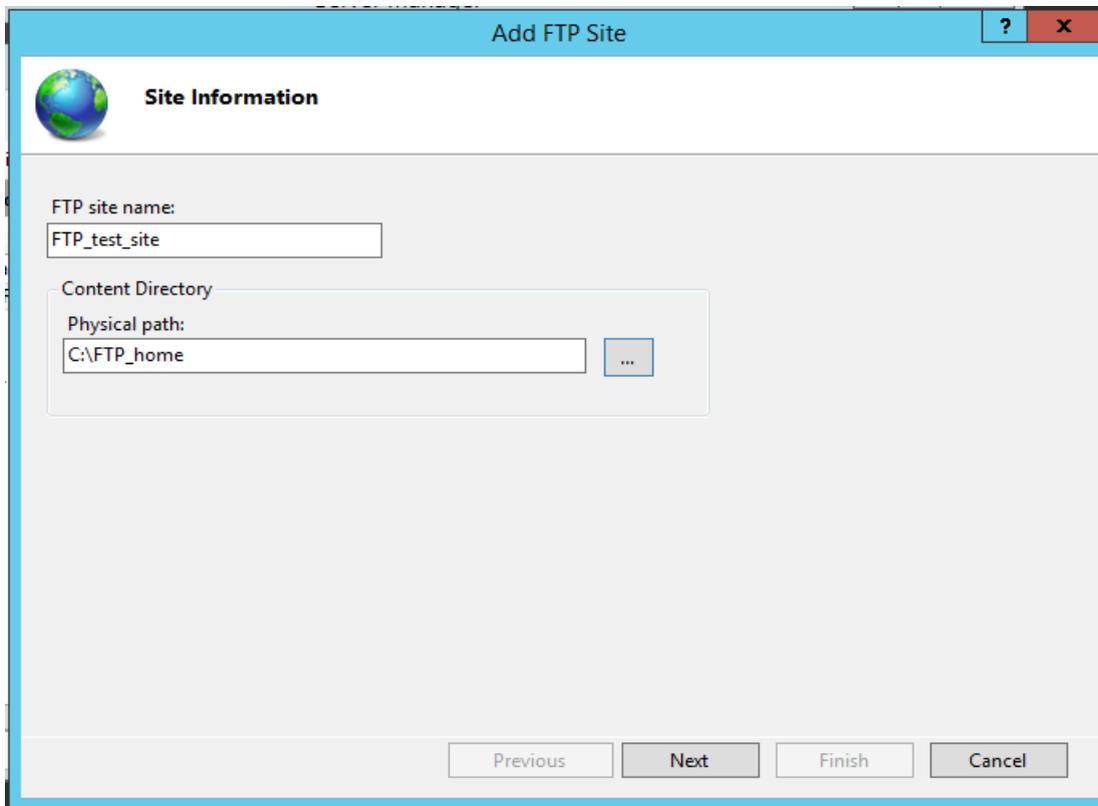
  - On the Binding and SSL Settings page:
    - Choose an IP address for your FTP site from the IP Address drop-down
    - By default, FTP sites and clients use port 21.

■ For the SSL options, choose No SSL to disable the SSL options.

○ On the next page of the wizard:
■ Select "Basic" for the Authentication settings.
■ For the Authorization settings, choose "All users" from the *Allow access to* drop-down. We can set the access to specific users and groups also.
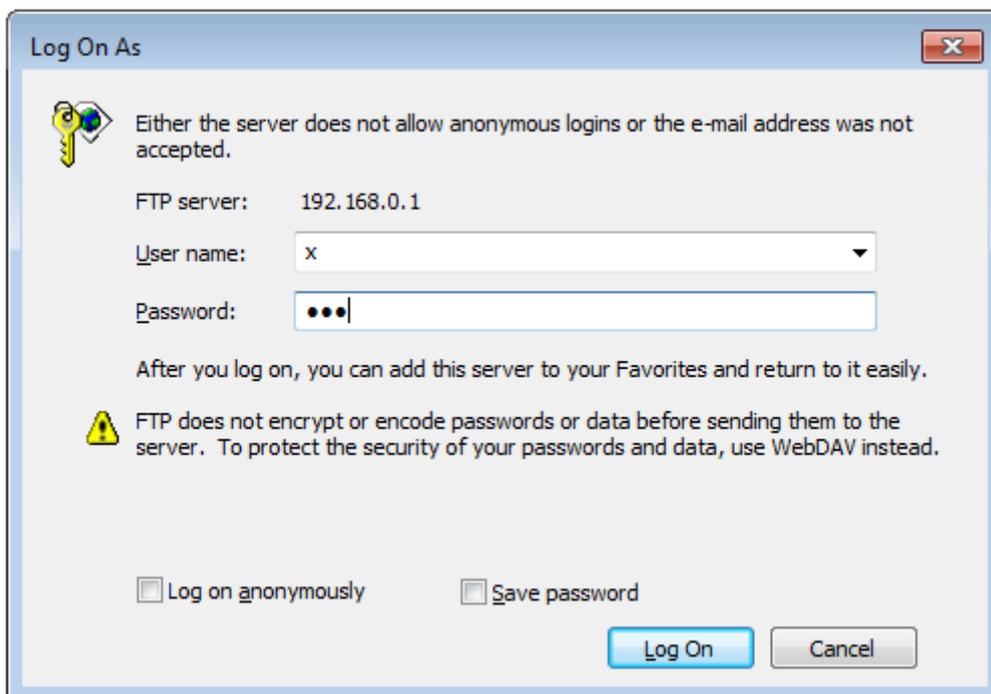■ Select the Permissions option (here Read only), and click Finish.

Client System

- Open any Explorer window.
- Type ftp://ftp_server_ip_address at the address bar (here ftp://192.168.0.1) and press Enter.
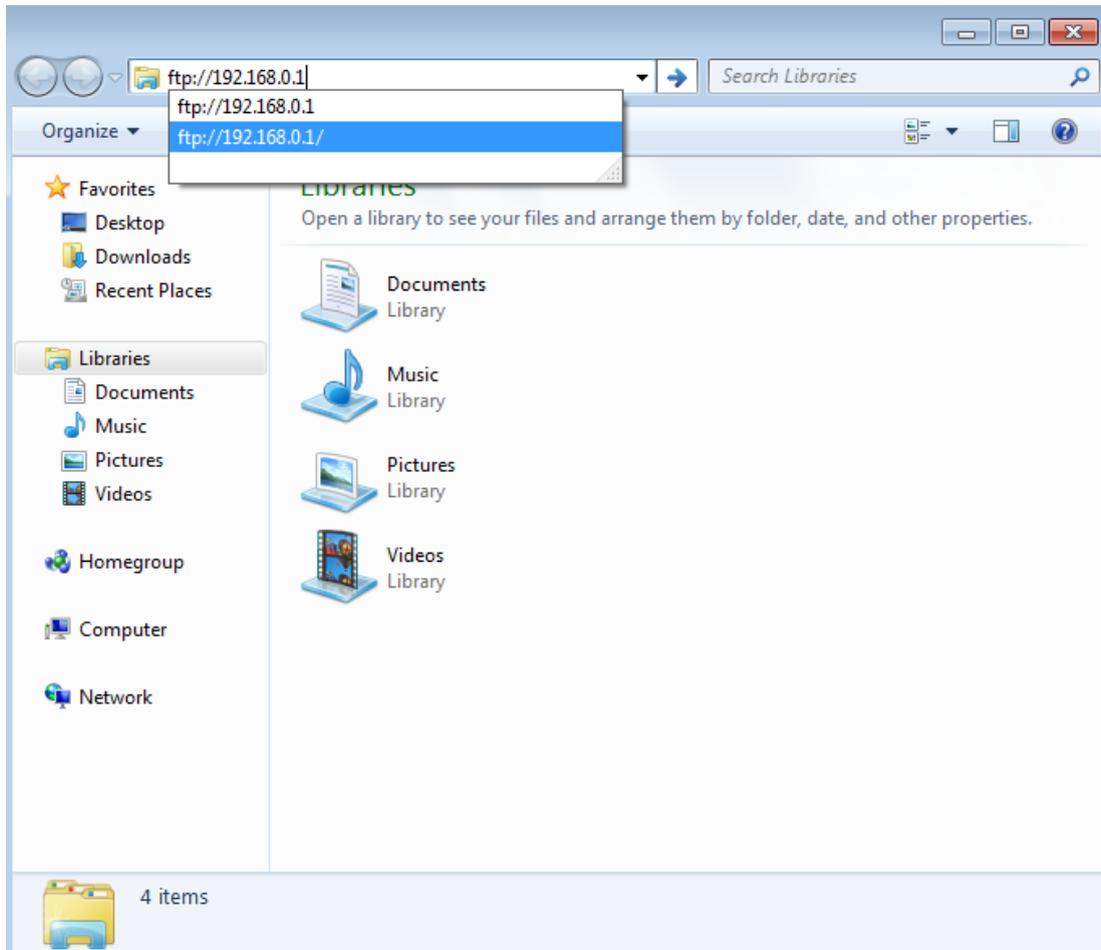
- Give the Username and Password of the domain user and click Logon.

- The FTP_folder will be opened for reading. We can open or copy any file to our local system.

NFS:

The Network File System (NFS) is a mechanism for storing files on a network. It is a distributed file system that allows users to access files and directories located on remote computers and treat those files and directories as if they were local. Its advantages are;

- Allows easy sharing of data among clients.
- Provides centralized administration.
- Provides security, i.e. one must only secure the servers to secure data.

**NFS Installation and Configuration**

Installation

1. Launch Server Manager.
2. On the top menu, click **Manage**.
3. Click **Add Roles and Features**.
4. On the Before you begin screen, click **Next**.
5. On the Select installation type screen, ensure **Role-based or feature-based installation** is selected, and then click Next.
6. On the Server selection screen, click **Next**.
7. On the Select server roles screen, expand File and Storage Services, expand File and iSCSI Services, and then check **Server for NFS**.
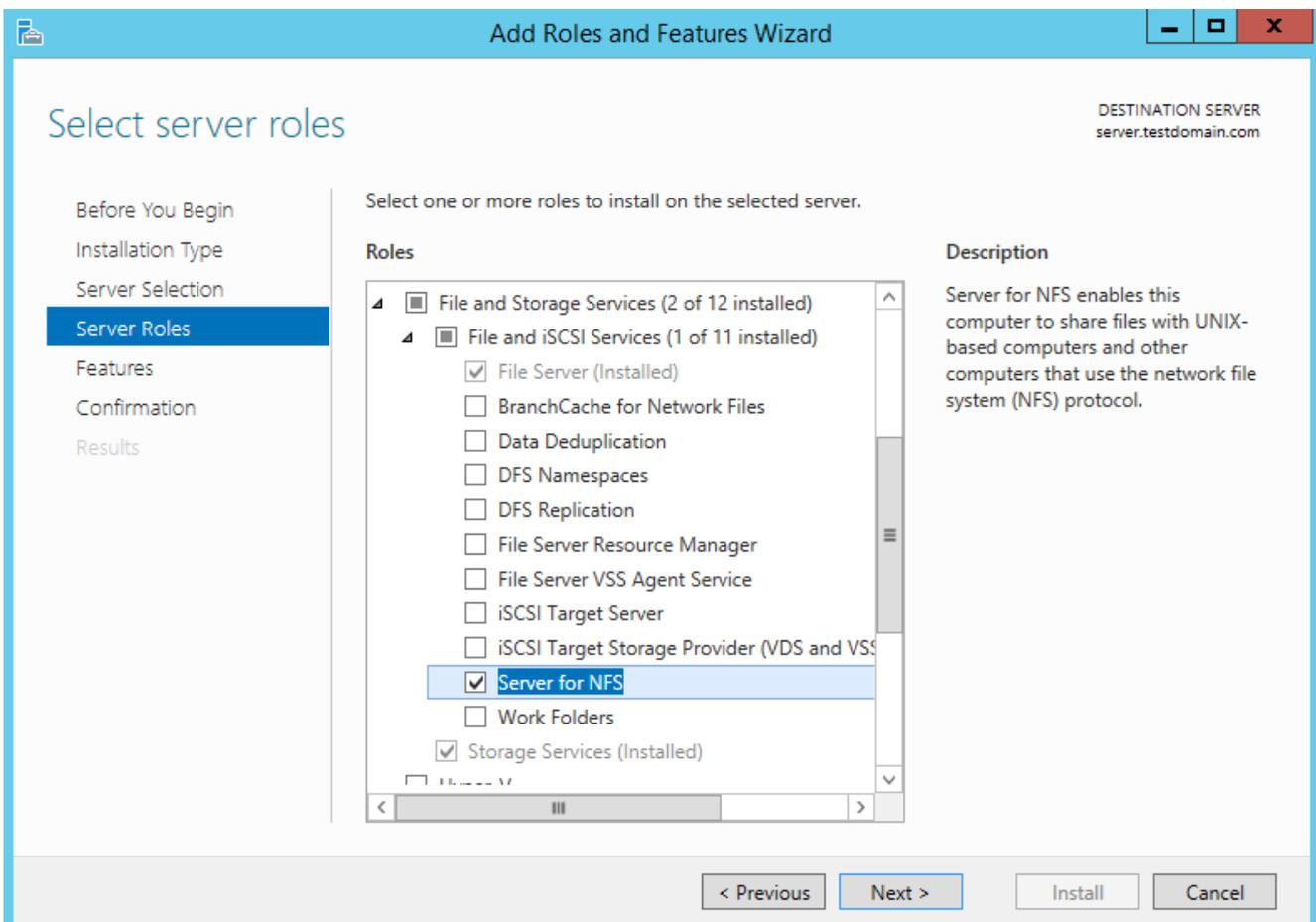
8. Click **Next**.
9. If an Add features that are required for Server NFS dialog box appears, click **Add Features**.
10. On the Select feature screen, click **Next**.
11. Confirm the installation details, and then click **Install**.

Configuration
1. Launch File Explorer.
2. Create a new directory for your NFS share.
3. Right-click the directory and click **Properties**.
4. Select the **NFS Sharing** tab.
5. Under the NFS Sharing tab, click the **Manage NFS Sharing…** button
6. Check the **Share this folder** check box.
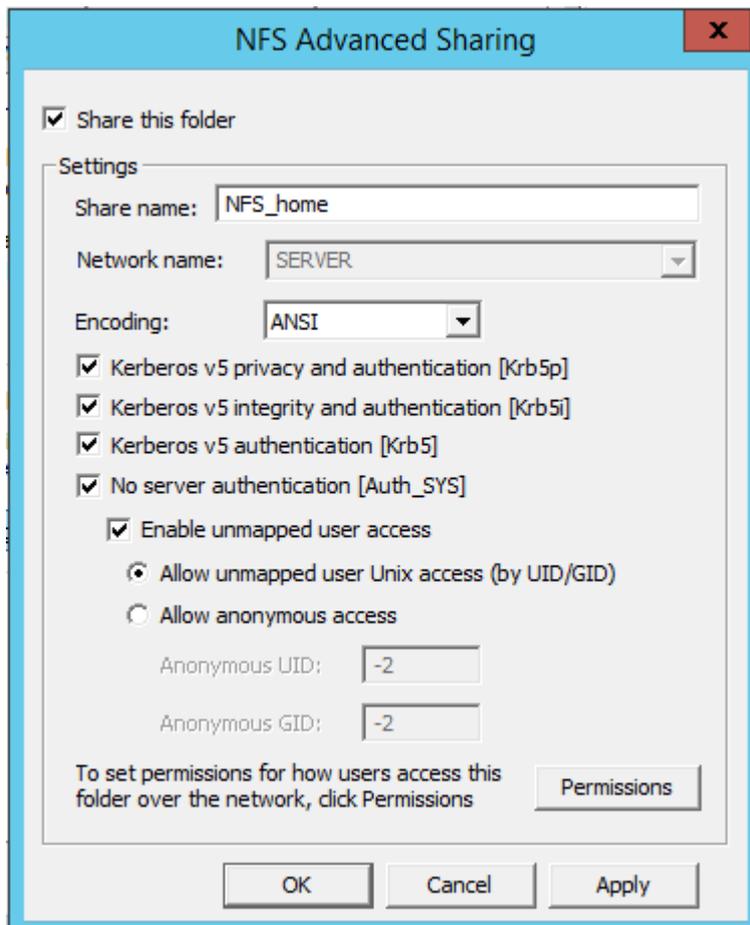
7. Enter a name into the Share name text field. This will be used when a user connects to your NFS share.
8. Click the **Permissions** button.
9. By default, all machines have Read-only access. Click **Add** and then enter the IP address or hostname of the client(s) you want to allow connections to.
10. When added, you may also select whether they have readwrite access or read-only access.
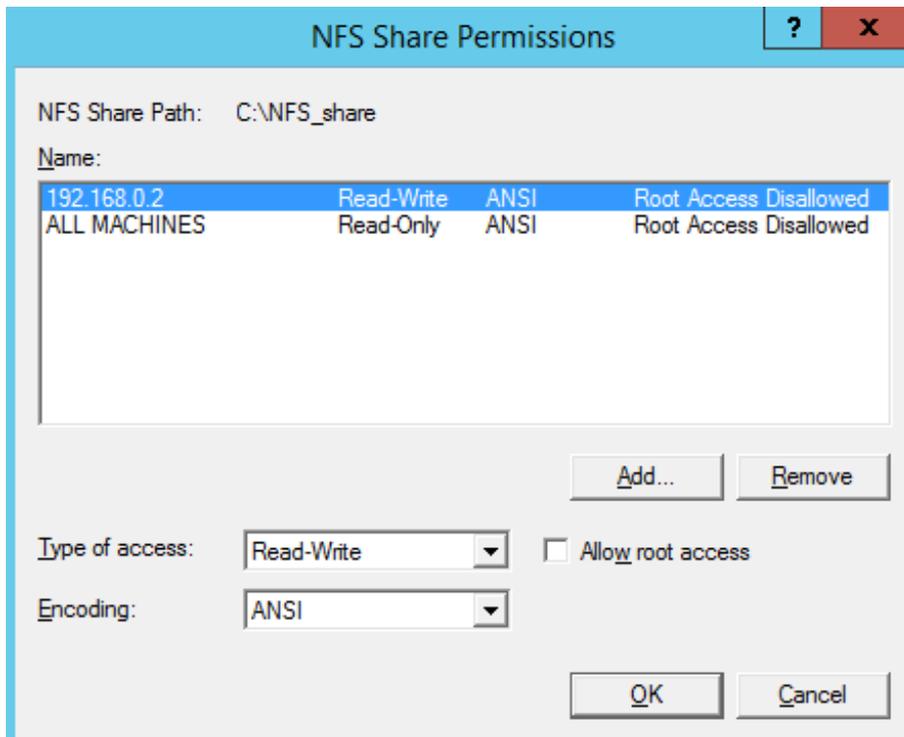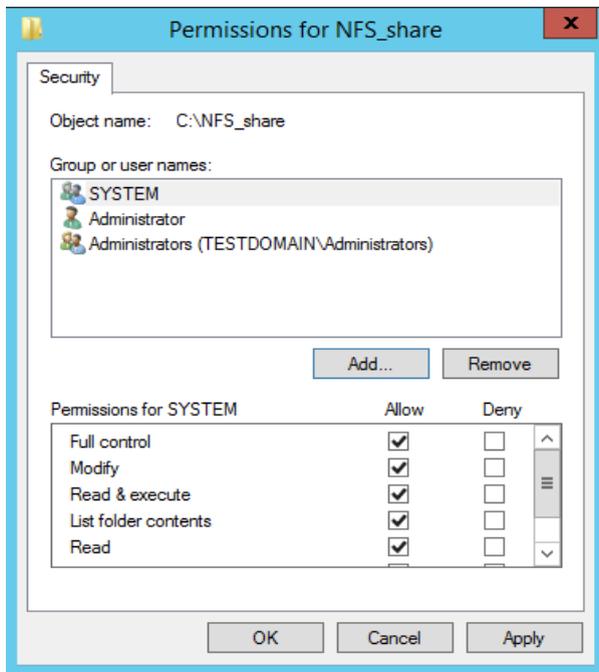
11. Click **OK**.
12. Click **Apply** and then **OK**.
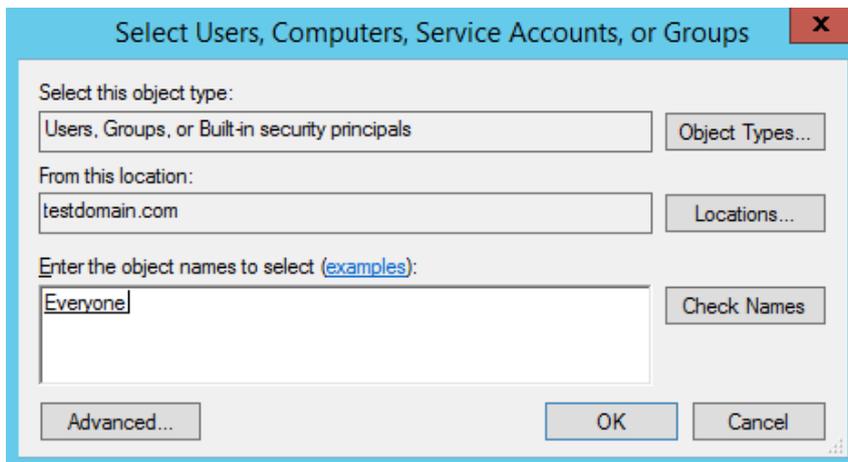
Setting the Security Permissions

1. Right click on the folder and click on **Properties**.
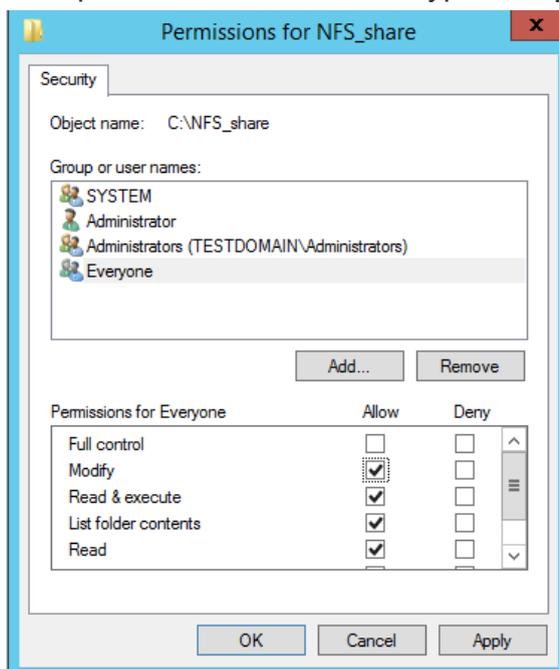2. Click on **Security**.
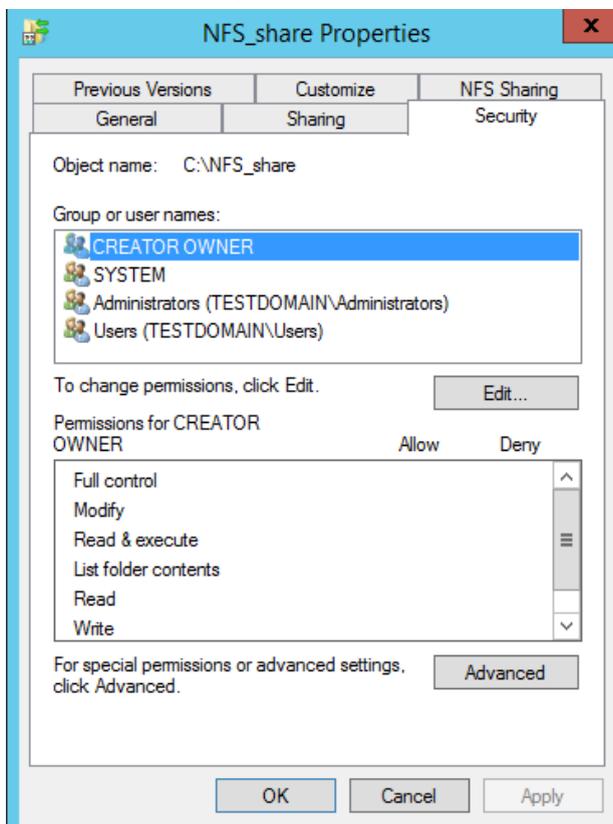
3. Click on **Edit**.

4. Click on **Add**, type **Everyone** in the object names field and click on **Check Names**. Click **OK**.

5. Give permissions to the user type Everyone. Click **Apply** and **Ok**.

Enabling the NFS client on a Windows 7 system:

1. Click on **Start** and select the **Control Panel**.
2. Select **Programs**.
3. Select **Programs and Features**.
4. Select **Turn Windows Features on or off**. (Mostly, it needs to enter the domain administrator password to get the Windows Features window).
5. Expand **Services for NFS**.
6. Select the checkbox **Client for NFS** and click **OK**.
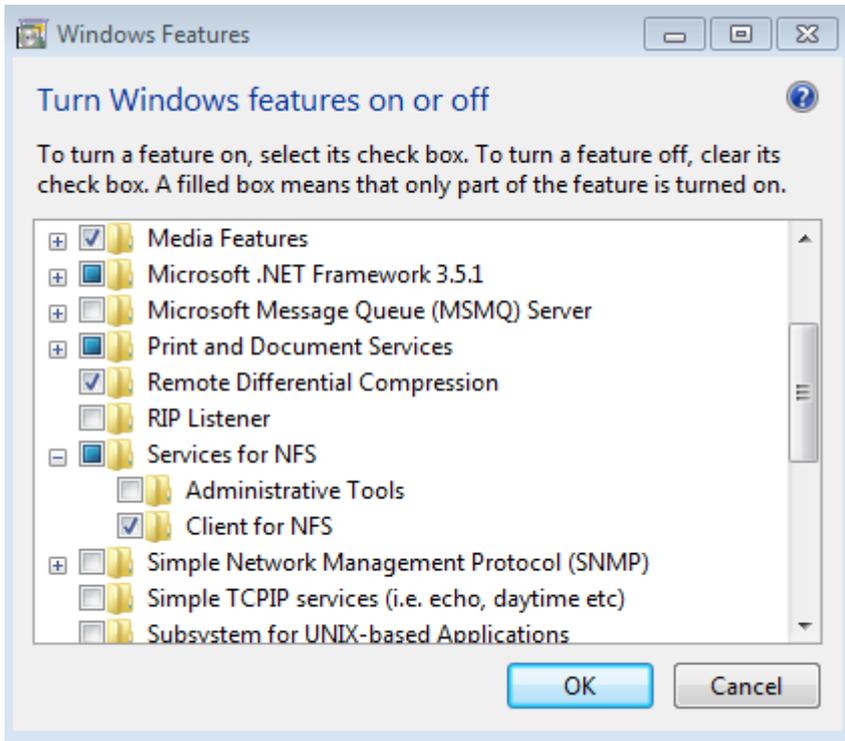
7. A window will pop up indicating service installation status. After successful operation, both windows will go off.
8. Close all windows.
9. Go to **Start**-> **Computer**.
10. Right click on Computer and click on **Map network drive.**
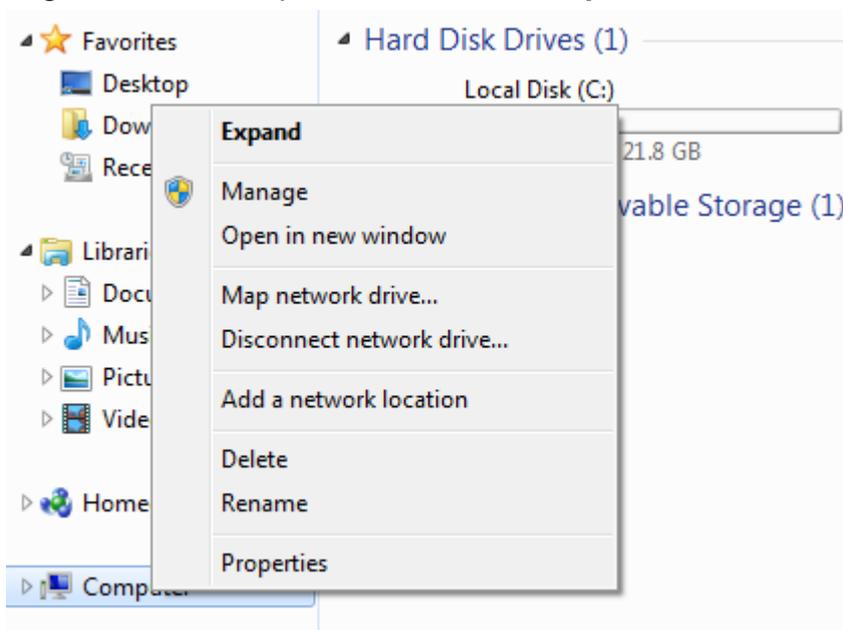
11. Select a suitable Drive letter. Type the NFS shared folder in the format
server_ip:/shared_folder_name. Make sure that Reconnect at logon is checked.

12. Now we can use the drive (here Z:) as local.

RESULT:

      Installed and configured the FTP and NFS in the server and tested using the client successfully.