Passerelles numériques

A Gateway for Life

Chapter 02 Managing Access to Resource

Overview

- Overview of Managing Access to Resources
- Managing Access to Shared Folders
- Managing Access to Files and Folders Using NTFS Permissions
- Determining Effective Permissions
- Managing Access to Shared Files Using Offline Caching
- Configuring Volume and Folder Quotas

Overview of Managing Access to Resources

- What Are Permissions?
- What Are Share and NTFS Permissions?
- What are NTFS Standard and Special permission?

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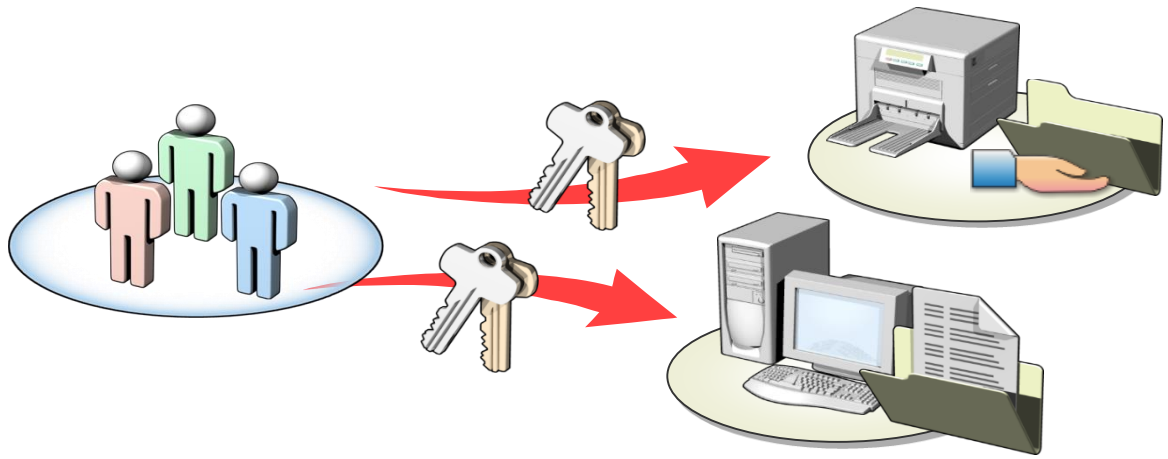
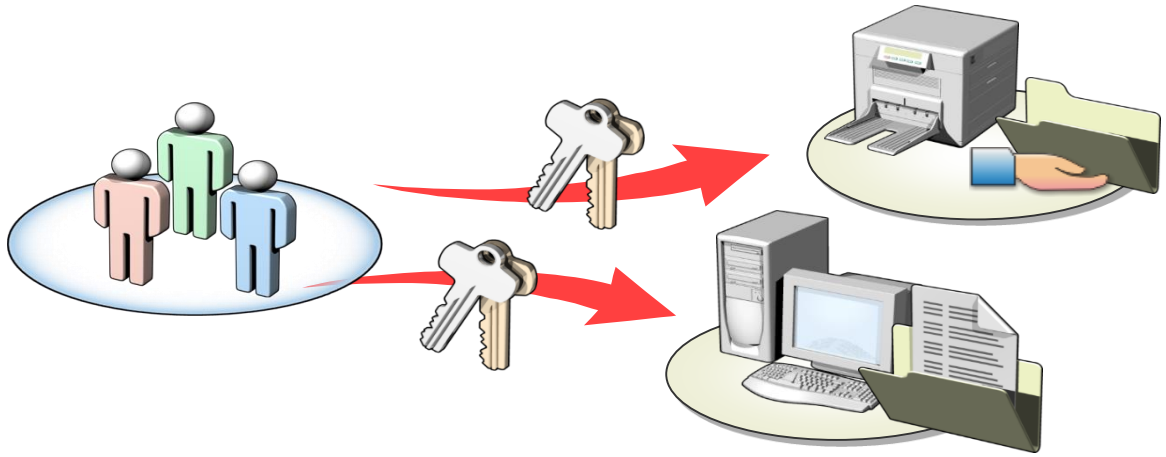
What Are Permissions?

- Permissions define the type of access granted to a user, group, or computer for an object.
- **For example**, Finance group can be granted Read and Write permissions for file named Payroll.txt.
- You apply permissions to objects such as files, folders, shared folders, and printers



What Are Permissions?

- For any object, you can **grant permissions to**:
  - Groups, users, and other objects with security identifiers in the domain
  - Groups and users in that domain and any trusted domain
  - Local groups and users on the computer where the object resides

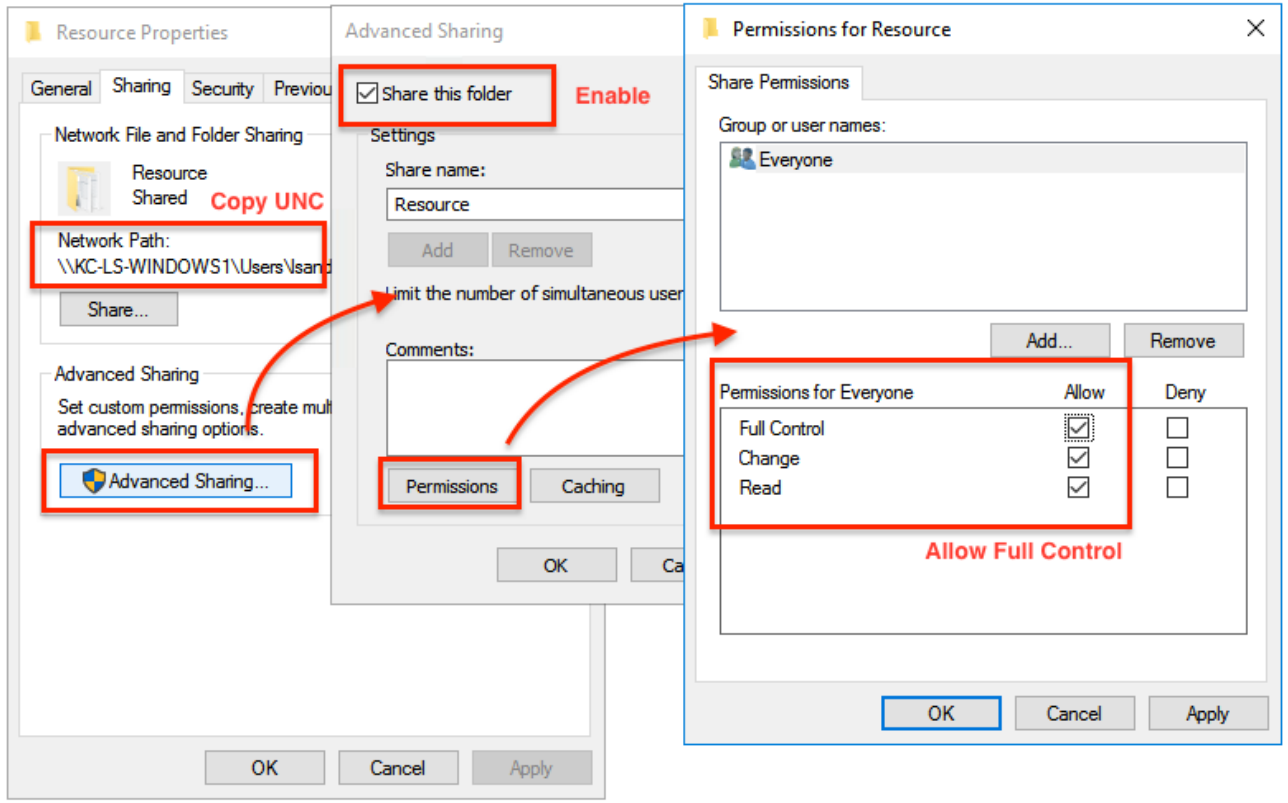


What share and NTFS Permissions?

- **Share permission are the permission you set** to a folder shared over a network, they don't apply to users who log on locally.
- There are three type of share permission:
  - **Read :** Users can view file and subfolder names, read data in files, and run programs. By default, the "**Everyone**" group is assigned "Read" permissions.
  - **Change :** Change means that user can read/execute/write/delete folders/files within share.
  - **Full Control :** Enables users to "read," "change," as well as edit permissions and take ownership of files.

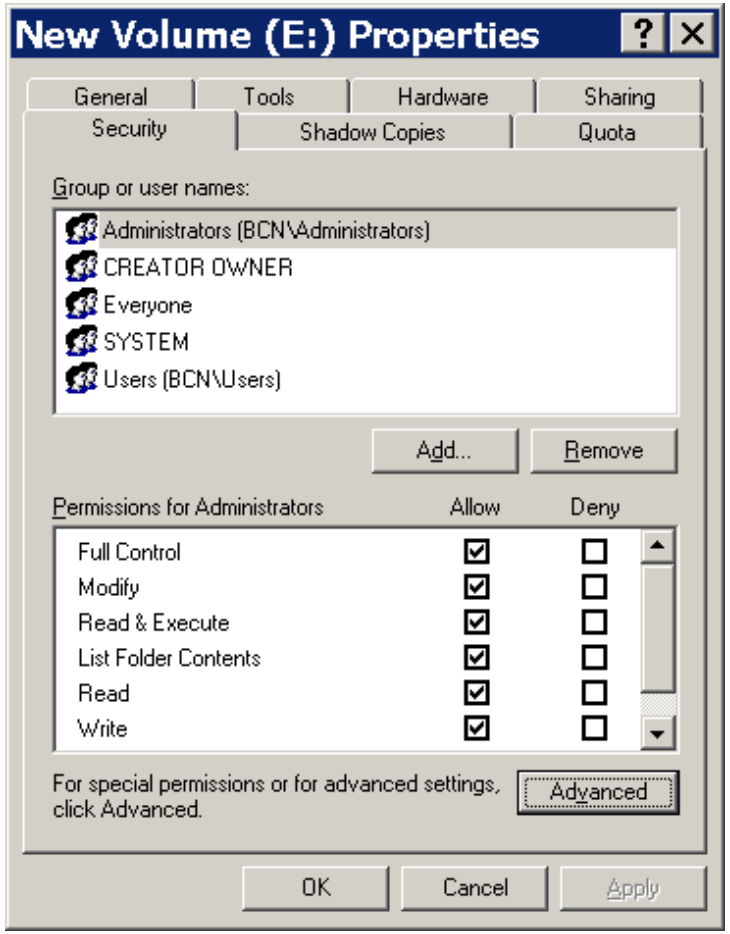
What share and NTFS Permissions?

- **How to change Share permission:**
  - Right-click on shared folder
  - Go to “**Properties**”
  - Click on “**Sharing**” tab
  - Click “**Advanced Sharing**”
  - Click “**Permission**”
  - Select a user or group from the list
  - Select either “**Allow**” or “**Deny**” for each of the setting



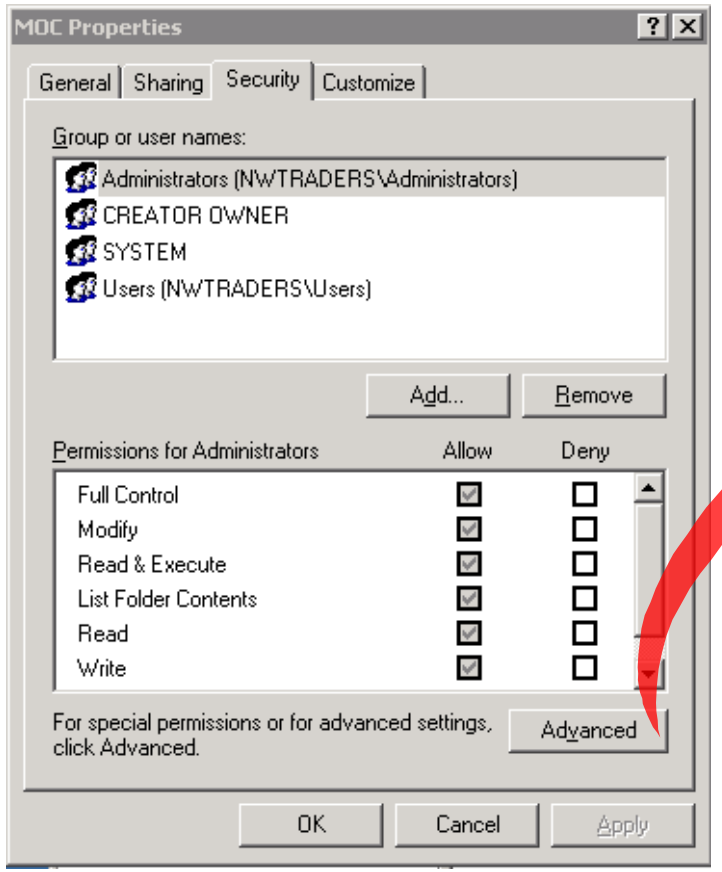
What share and NTFS Permissions?

- **NTFS permission** are used to manage access to files and folders are stored in NTFS file systems. The main advantages of NTFS permissions are that they affect both local users and network users.
- NTFS permission include **Standard permissions** and **Special permissions**.
- **To assign NTFS permission to file or folder:**
  - Right click on the file/folder
  - Go to “Properties”
  - Click on the “Security” tab

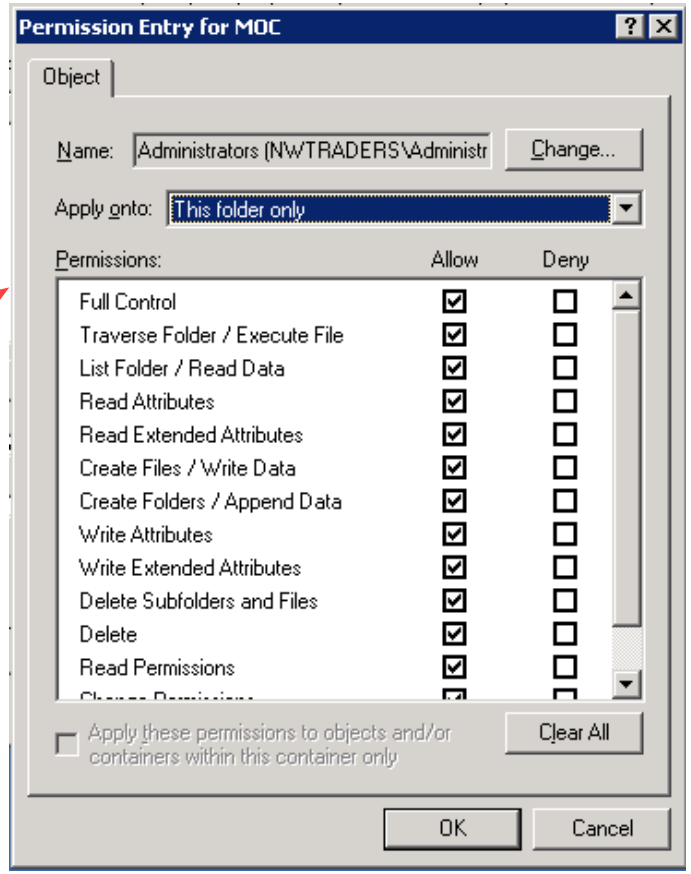


What Are Standard and Special Permissions?

Standard Permissions



Special Permissions



Managing Access to Shared Folders

- What Are Shared Folders?
- What Are Administrative Shared Folders?
- Who Can Access Shared Folders?
- How to Create a Shared Folder
- What Are Published Shared Folders?
- How to Publish a Shared Folder
- Shared Folder Permissions
- How to Set Permissions on a Shared Folder
- How to Connect to Shared Folders

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What Are Shared Folders?

- **Copy a shared folder**
  - The original shared folder is still shared, but the copy of the folder is not shared
- **Move a shared folder**
  - The folder is no longer shared
- **Hide a shared folder**
  - Include a $ after the name of the shared folder
  - Users can access a hidden shared folder by typing the UNC,

    For example, \\server\secrets$

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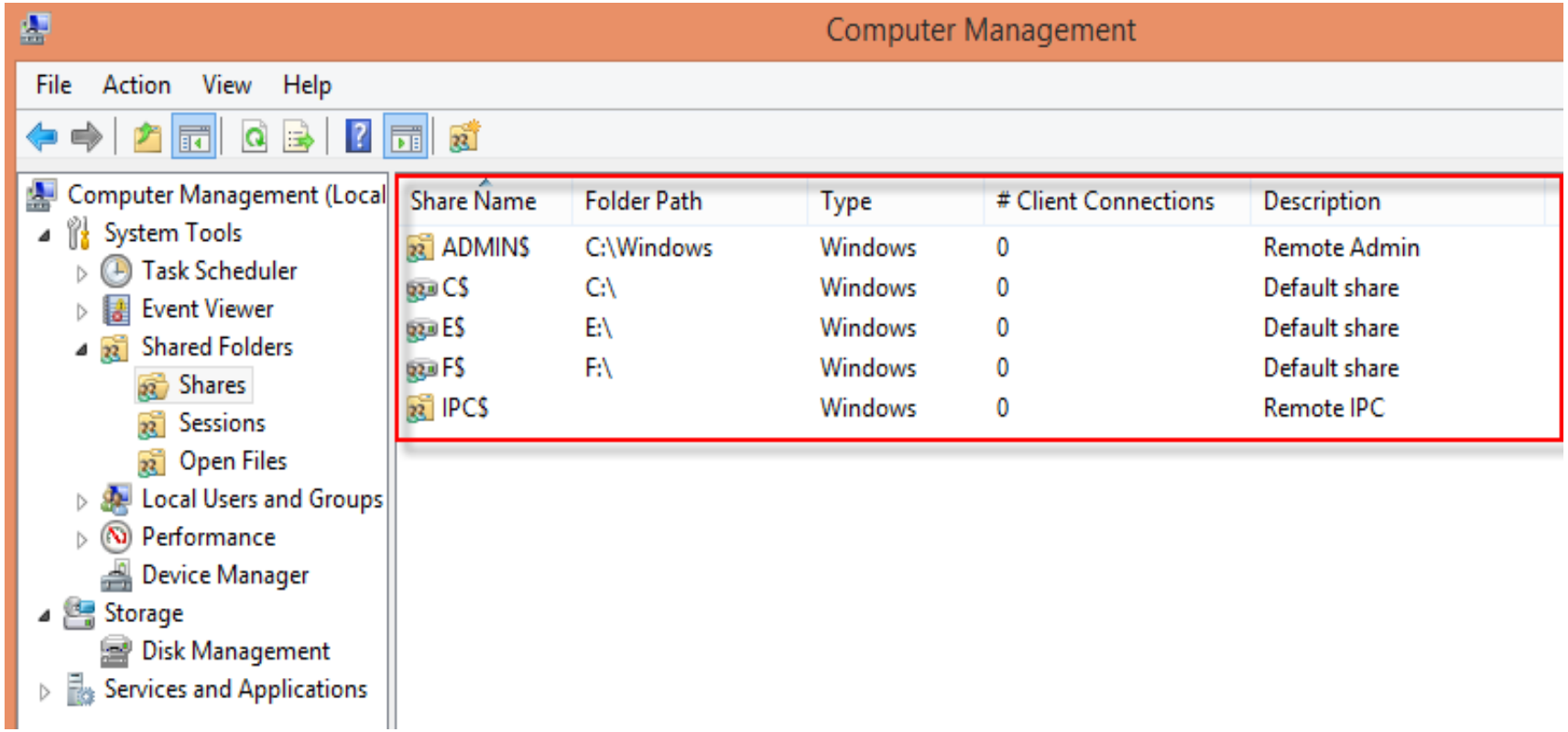
What Are Administrative Shared Folders?



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Shared Folder Permissions

Permission	Allows the user to:
Read (Default, applied to the Everyone group)	• View data in files and attributes • View file names and subfolder names • Run program files
Change (Includes all Read permissions)	• Add files and subfolders • Change data in files • Delete subfolders and files
Full Control	• Includes all Read and Change permissions • Enables you to change NTFS files and folders permissions

How to Set Permissions on a Shared Folder

Your instructor will demonstrate how to:

- Set permissions on a shared folder by using Computer Management
- Set permissions on a shared folder by using Windows Explorer

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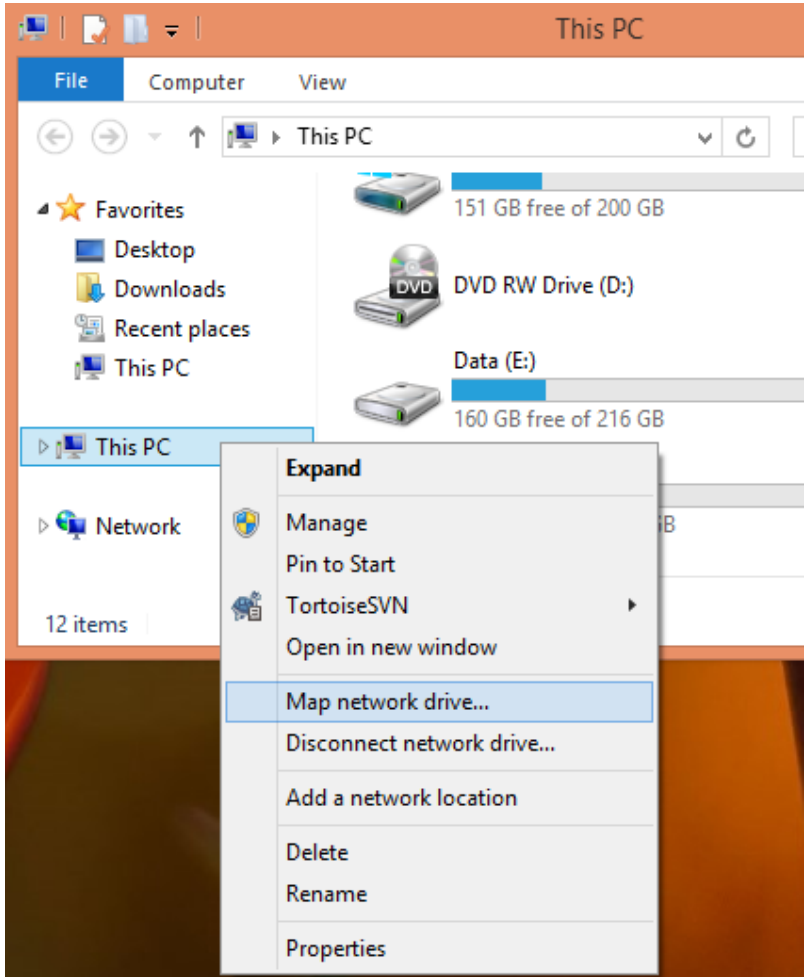
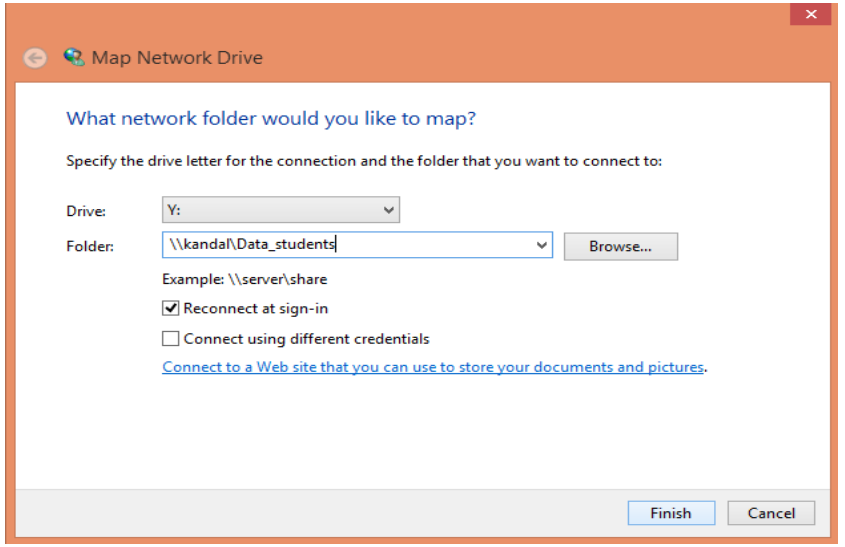
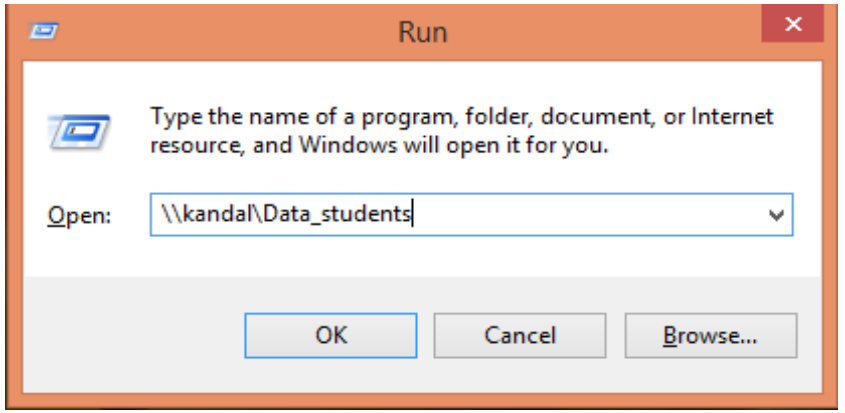
How to Connect to Shared Folders







Practice
Managing Access to Shared Folders

In this practice, you will:

- Create shared folders
- Test Read permissions of the shared folder
- Test Full Control permissions of the shared folder

Managing Access to Files and Folders Using NTFS Permissions

- What Is NTFS?
- NTFS File and Folder Permissions
- Effects on NTFS Permissions When Copying and Moving Files and Folders
- What Is NTFS Permissions Inheritance?
- How to Copy or Remove Inherited Permissions
- Best Practices for Managing Access to Files and Folders Using NTFS Permissions
- How to Manage Access to Files and Folders Using NTFS Permissions

What Is NTFS?

NTFS is a file system that provides:

- Reliability
- Security at the file level and folder level
- Improved management of storage growth
- Multiple user permissions

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NTFS File and Folder Permissions

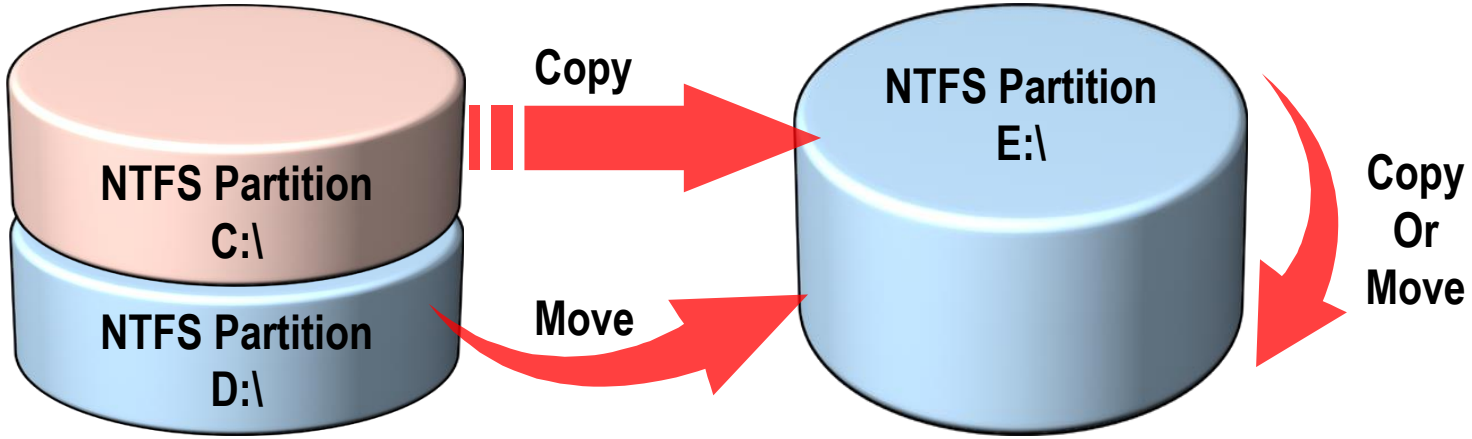
File permissions

- Full Control
- Modify
- Read & Execute
- Write
- Read

Folder permissions

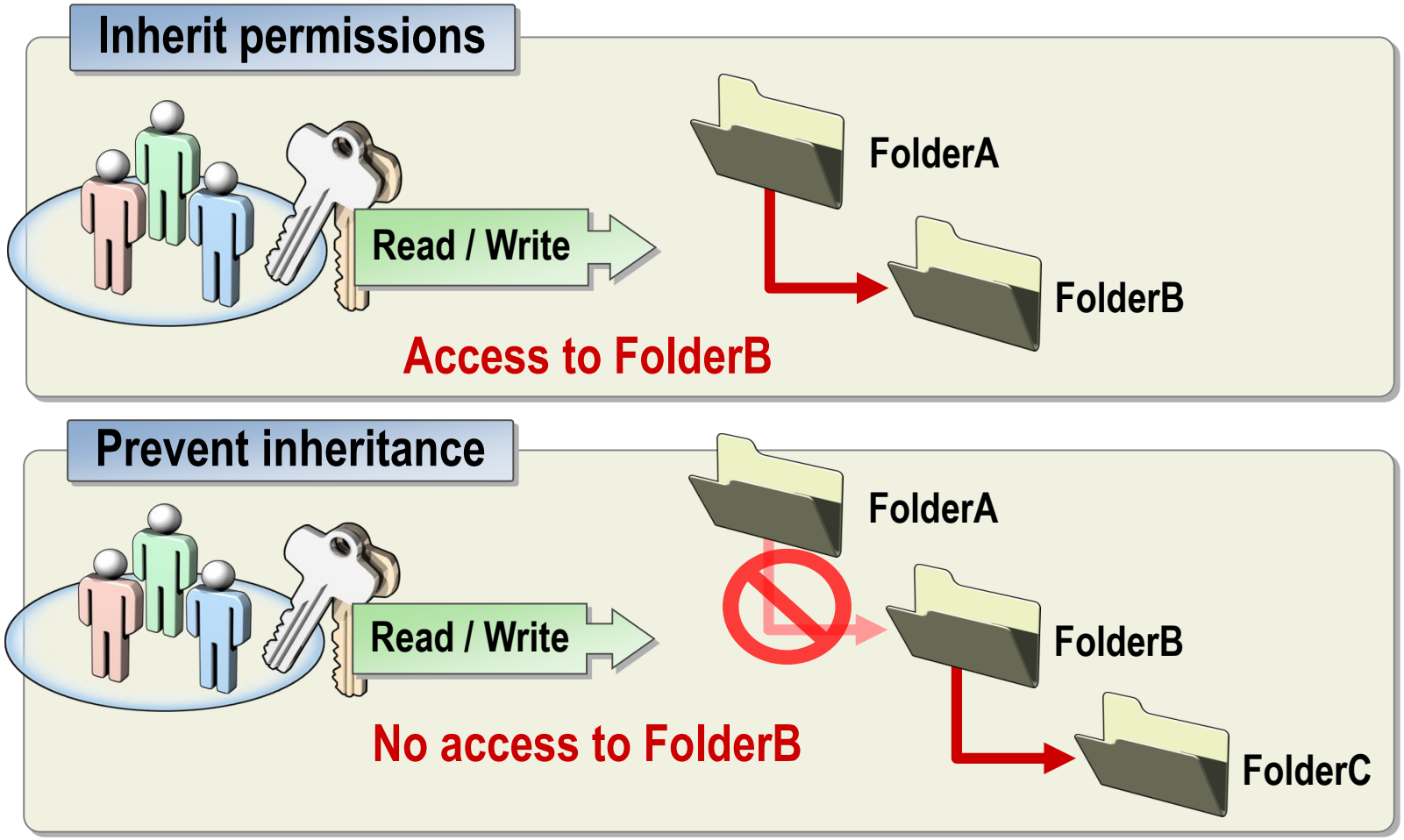
- Full Control
- Modify
- Read & Execute
- Write
- Read
- List Folder Contents

Effects on NTFS Permissions When Copying and Moving Files and Folders



- When you copy files and folders, they **inherit permissions of the destination folder**
- When you move files and folders within the same partition, they **keep their permissions the same**
- When you move files and folders to a different partition, they **inherit the permissions of the destination folder**

What Is NTFS Permissions Inheritance?



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How to Copy or Remove Inherited Permissions

Your instructor will demonstrate how to copy or remove inherited permissions

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Best Practices for Managing Access to Files and Folders Using NTFS Permissions

- It's recommend to always assign share permission as Full Control to shared folder
- Assigns permission to groups, not user accounts
- Allow users only the level of access that they require
- Grant Read & Execute permission for application folders
- Grant Read & Execute and Write permissions for data folders
- Use only NTFS permission for local users

Practice
Managing Access to Files and Folders Using NTFS Permissions

In this practice, you will manage access to files and folders by using NTFS permissions

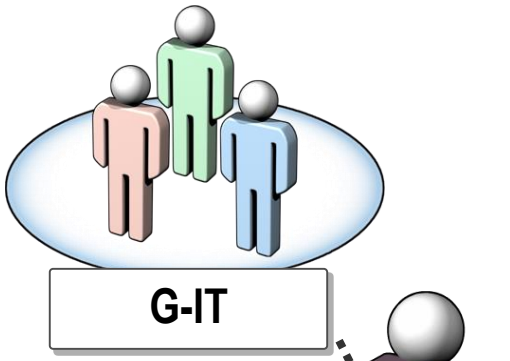
Determining Effective Permissions

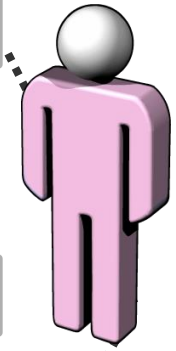
- What Are Effective Permissions on NTFS Files and Folders?
- How to Determine Effective Permissions on NTFS Files and Folders
- Effects of Combined Shared Folder and NTFS Permissions
- How to Determine the Effective Permissions on Combined Shared Folder and NTFS Permissions

Effective Permissions on NTFS Files and Folders

- Permissions are cumulative
- File permissions are separate from folder permissions
- Deny overrides all permissions
- Take ownership

Class Discussion: Applying NTFS Permissions

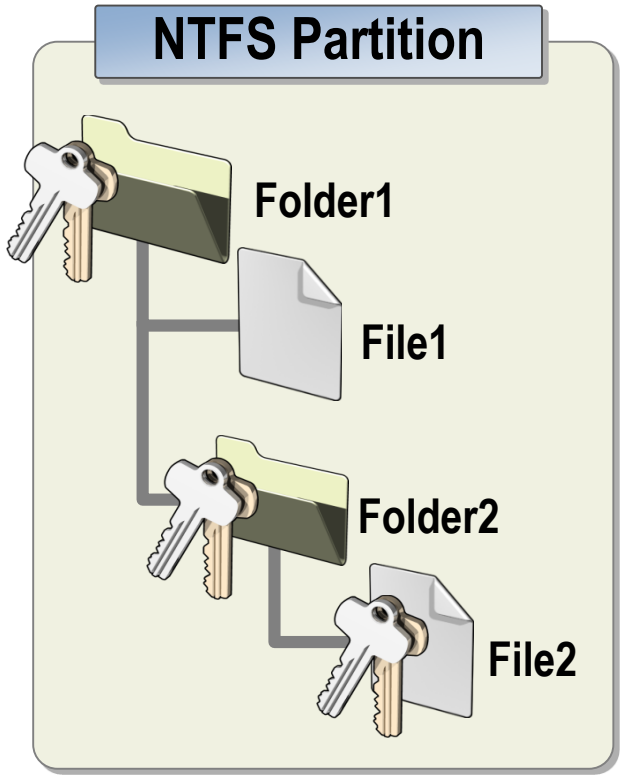




1. G-IT
   Write for Folder1
   - G-Marketing
     Read for Folder1

2. G-IT
   Read for Folder1
   - G-Marketing
     Write for Folder2

3. G-IT
   Modify for Folder1
   - File2 should only be accessible to G-Marketing and only with Read permission



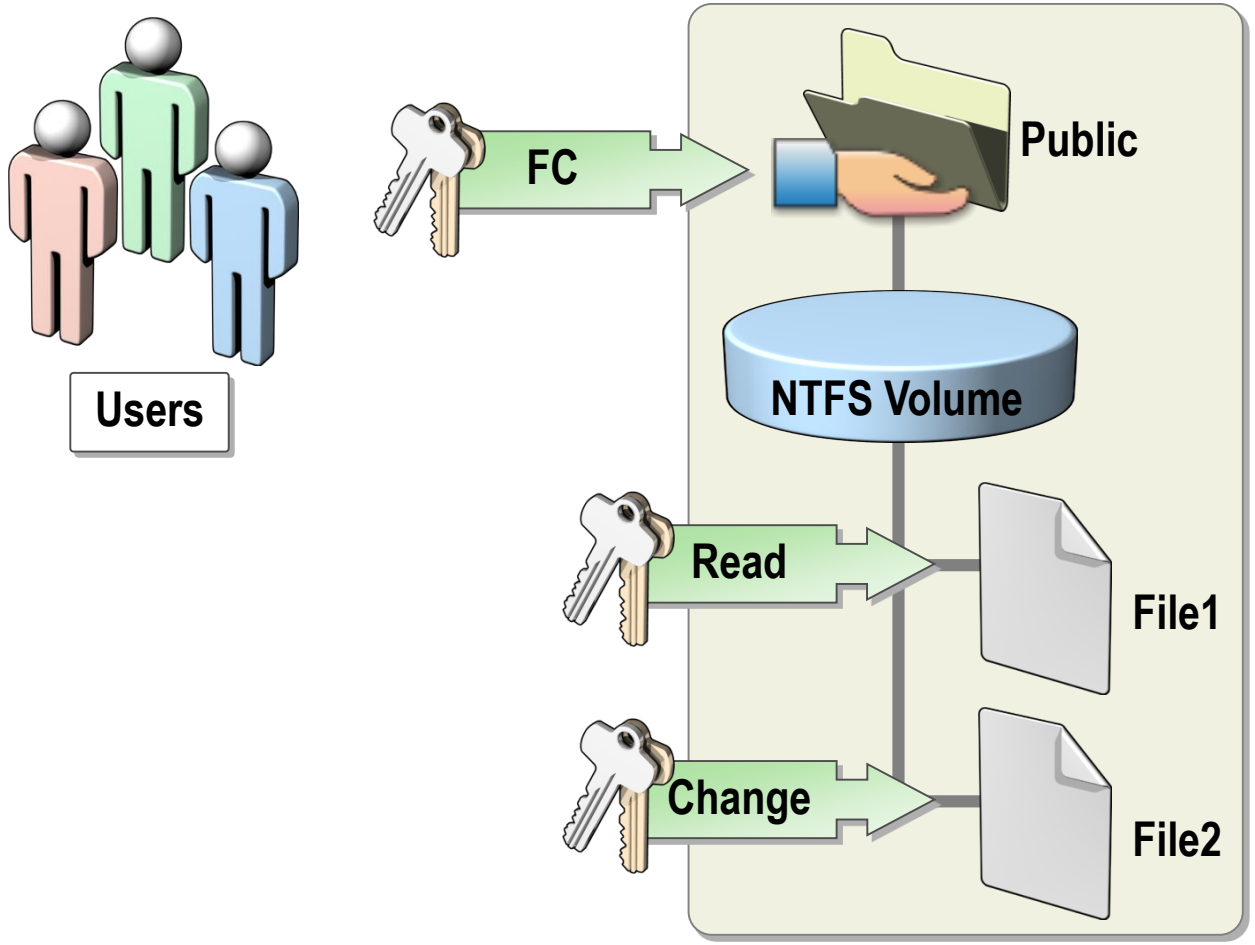
How to Determine Effective Permissions on NTFS Files and Folders

Your instructor will demonstrate how to determine effective permissions on NTFS files and folders

Practice
Determining Effective Permissions on NTFS Files and Folders

In this practice, you will determine effective NTFS permissions

Effects of Combined Shared Folder and NTFS Permissions



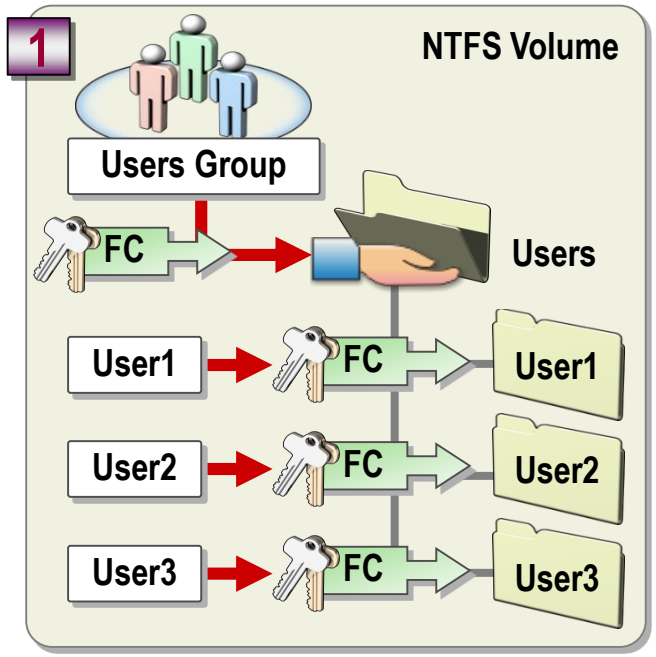
How to Determine the Effective Permissions on Combined Shared Folder and NTFS Permissions

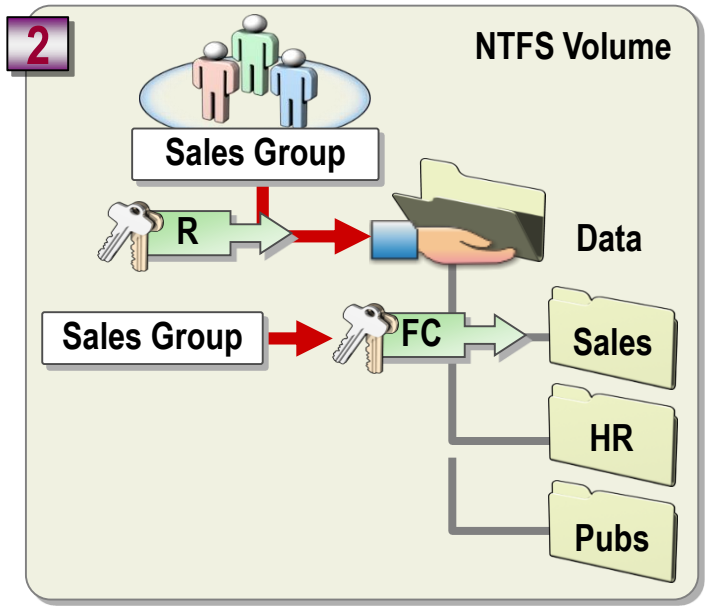
Your instructor will demonstrate how to determine effective permissions on combined shared folder and NTFS permissions

Practice
determining Effective NTFS and Shared Folder Permissions

In this practice, you will:

- Determine effective NTFS permissions
- Determine shared folder permissions





Managing Access to Shared Files Using Offline Caching

- What Is Offline Files?
- How Offline Files Are Synchronized
- Offline File Caching Options
- How to Use Offline Caching

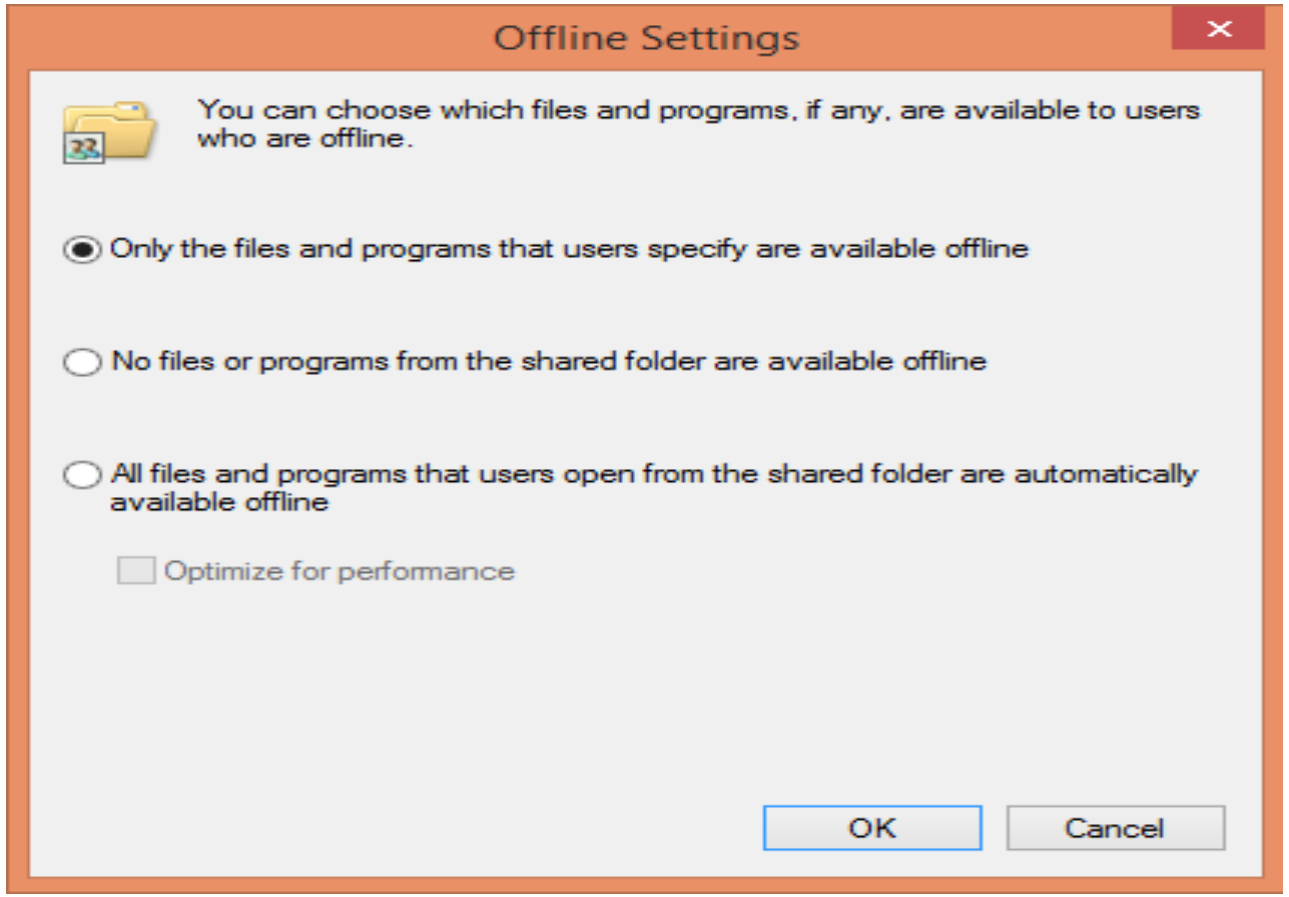
What Is Offline Files?

- Offline Files is a document-management feature that provides the user with consistent online and offline access to files
- Advantages of using Offline Files:
  - Support for mobile users
  - Automatic synchronization
  - Performance advantages
  - Backup advantages

How Offline Files Are Synchronized

- Disconnected from the network
  - Windows Server 2016 synchronizes the network files with a locally cached copy of the file
  - The user works with the locally cached copy
- Logged on to the network
  - Windows Server 2016 synchronizes offline files that the user has modified with the network version of the files
- If a file has been modified in both locations
  - The user is prompted to choose which version of the file to keep or to rename one file and keep both versions

Offline File Caching Options



How to Use Offline Caching

Your instructor will demonstrate how to:

- Configure offline settings by using Computer Management
- Configure offline settings by using Windows Explorer

Practice
Using Offline Caching

In this practice, you will:

- Create a shared folder with no caching for documents or programs
- Enable manual caching of documents

Configuring Volume and Folder Quotas

- What is Quotas?
- Folder Quotas
- How to create and configure Volume and Folder quotas

What is Quotas?

- **Quota management** is a valuable feature that enables users to restrict the storage capacity of shared resources in Windows Server 2016.

- If you create quotas, you will limit the space allocated to a volume or a folder - allowing you to practice capacity management conveniently.
- There are two type of quota:
  - Soft quota
  - Hard quota

Folder Quotas

- Windows Server 2016 overcomes these limitations with new storage management capabilities called File System Resource Manager (FSRM).
- The differences between **volume** and **folder quotas** in NTFS disk quotas
  - Quotas can now be set at the folder level and not just the volume level.
  - These quotas apply to all users who store their files in a quota-enabled volume or folder.
  - Quotas are calculated using actual physical disk space occupied by files.
  - You can easily configure quotas on multiple volumes and/or folders by creating quota templates.

Folder Quotas

- You can have quotas automatically created for all subfolders in a given folder, including subfolders not yet created.
- When a quota is exceeded, you have a variety of notifications you can trigger including logging to the Event log, sending an email, execute a command or script, and generate a storage report.

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How to create volume and Folder Quotas

Your instructor will demonstrate how to:

- How to install File System Resource Manager
- How to apply quotas for the folder level
- Create quotas templates
- Quotas automatically create for the sub-folder

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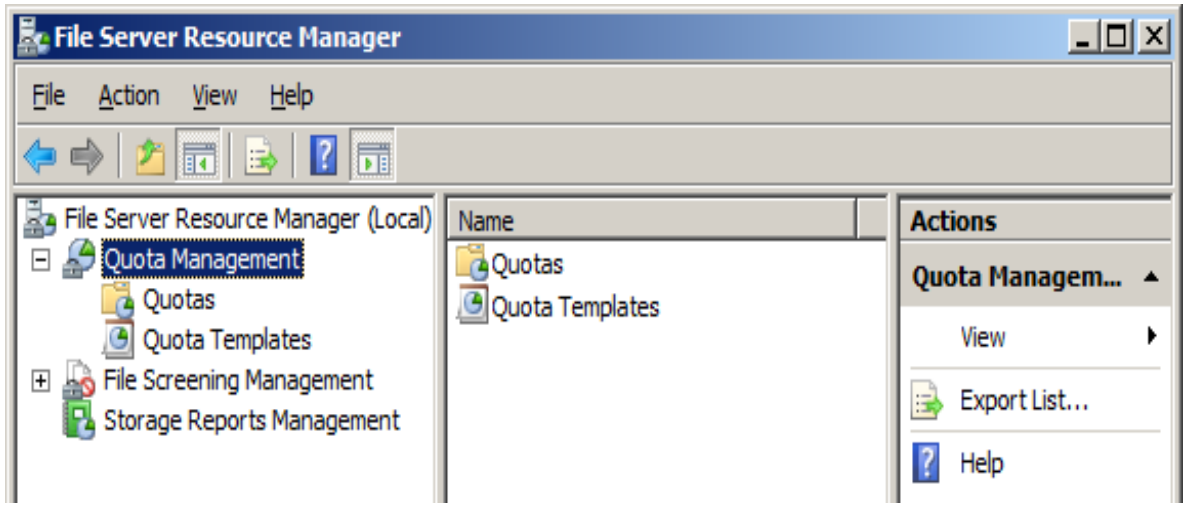
Practice
Folder Quotas

- In this practice you will be able to:
  - Quotas Folder
  - Create quotas templates
  - Create automatic quotas for sub-folder



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Lab A
Managing Access to Resources

- In this lab, you will:
  - Create groups
  - Configure NTFS security
  - Configure shared folder security
  - Configure offline settings
  - Configure quota

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