CNT 4603: System Administration Spring 2011

Project Seven – `Server02` Resource Access Management

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Project Seven

- **Title:** "Project Seven: `Server02` Resource Access Management"

- **Points:** 30 points

- **Due Date:** April 22nd by 11:55 pm WebCourses time.

- **Objectives:** `Server02` is the file server on the `savn.local` domain. However, since many of you are having memory issues, we'll proceed at this point as if `Server01` is also a file server and we'll do some file management on `Server01`. We need to configure the server so that it will optimally perform resource search access for our clients. This project will focus on `Server01`. (Note that my screen shots are showing these activities on `Server02` – I'm not having the same issues many of you are.)

- **Deliverables:** Screen shots as shown on pages 13, 24.

Project Seven – Background

- As we covered in the lecture notes on managing folder and file access and security, Windows Server 2008 provides an enhanced resource search application knows as Windows Search Service.

- We will need to install this service as a server role on `Server02,` so this is the first step in this project.

- Then we'll create some folders and files and deal with the access permission settings for our users in the `savn.local` domain.

Project Seven – Installing Windows Search Service

- Start `Server02` running, select Administrative Tools from the right pane of options and then select Server Manager from the list of available administrative tools.

- Scroll down the server manager window until you come to the Roles Summary area and select Add Roles from the options on the right side of this area. See next page.

Before You Begin

Before You Begin
Server Roles
Confirmation
Progress
Results

This wizard helps you install roles on this server. You determine which roles to install based on the tasks you want this server to perform, such as sharing documents or hosting a Web site.

Before you continue, verify that:

- The Administrator account has a strong password
- Network settings, such as static IP addresses, are configured
- The latest security updates from Windows Update are installed

If you have to complete any of the preceding steps, cancel the wizard, complete the steps, and then run the wizard again.

To continue, click Next.

☐ Skip this page by default

Click "Next"

< Previous   Next >   Install   Cancel

Start   Server Manager   11:41 AM

Add Roles Wizard

Select Server Roles

- Before You Begin
- **Server Roles**
- File Services
  - Role Services
- Confirmation
- Progress
- Results

Select one or more roles to install on this server.

Roles:

- [ ] Active Directory Certificate Services
- [ ] Active Directory Domain Services
- [ ] Active Directory Federation Services
- [ ] Active Directory Lightweight Directory Services
- [ ] Active Directory Rights Management Services
- [ ] Application Server
- [ ] DHCP Server
- [ ] DNS Server
- [ ] Fax Server
- [x] File Services
- [ ] Network Policy and Access Services
- [ ] Print Services
- [ ] Terminal Services
- [ ] UDDI Services
- [ ] Web Server (IIS)
- [ ] Windows Deployment Services

Description:

File Services provides technologies that help you manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers.

Check "File Services"

More about server roles

< Previous   Next >   Install   Cancel

Add Roles Wizard

File Services

- Before You Begin
- Server Roles
- **File Services**
  - Role Services
- Confirmation
- Progress
- Results

Introduction to File Services

File Services provides technologies that help manage storage, enable file replication, manage shared folders, ensure fast file searching, and enable access for UNIX client computers. With File Services, organizations can store files in a central location and then share them with users across the company network. You can index these shared files to help users find files quickly. In addition, you can synchronize folders on multiple servers to provide fault-tolerant access to shared resources. File Services also enables you to provision storage on Fibre Channel and iSCSI disk storage subsystems.

Things to Note

ⓘ Windows Search Service and Indexing Service cannot be installed on the same computer.

Additional Information

File Services Overview

Share and Storage Management

Distributed File System Management

Read this page and especially the first two links.

Then click "Next"

< Previous   Next >   Install   Cancel

Add Roles Wizard

Select Role Services

Before You Begin
Server Roles
File Services
    Role Services
    Volumes to Index
Confirmation
Progress
Results

Select the role services to install for File Services:

Role services:

- ☑ File Server
- ☐ Distributed File System
  - ☐ DFS Namespaces
  - ☐ DFS Replication
- ☐ File Server Resource Manager
- ☐ Services for Network File System
- ☑ Windows Search Service
- ☐ Windows Server 2003 File Services
  - ☐ File Replication Service
  - ☐ Indexing Service

Description:

Windows Search Service permits fast file searches on this server from clients that are compatible with Windows Search Service. Windows Search Service is intended for desktop search or small file server scenarios, and not for enterprise scenarios.

The File Server option will be selected by default.

Check the box for Windows Search Service.

Then click "Next"

More about role services

< Previous   Next >   Install   Cancel

Start   Server Manager   11:45 AM

Add Roles Wizard

Select Volumes to Index for Windows Search Service

Before You Begin
Server Roles
File Services
  Role Services
  Volumes to Index
Confirmation
Progress
Results

Windows Search Service enables you to perform fast file searches on this server from computers running Windows Vista, or from computers running Windows XP or Windows Server 2003, with Windows Desktop Search installed.

Indexing a volume is an operation that can affect system performance, especially when the volume being indexed is the system volume. For best results, you should select to index volumes that are used only for hosting shared folders. For more information, see Windows Search Service and Indexing Service.

Select the volumes that you want to index.

Volumes:

Name	Capacity
☑ Local Disk (C:)	64.0 GB

ⓘ Other locations on this computer will be indexed by default, ev
change the indexing locations by using Indexing Options in Co

Check the box for "Local Disk (C:)".

Then click "Next"

< Previous   Next >   Install   Cancel

Server Manager

File   Action   View   Help

Server Manager (SERVER02)
- Roles
  - File Services
- Features
- Diagnostics
- Configuration
- Storage

File Services

Provides technologies that help you manage stora[ge], ensure fast file searching, and enable access for U[...]

Summary

This is the first part of the File Services role summary. Do a screen capture of this page.

Events: 3 informational in the last 24 hours

3 Events

Level	Event ID	Date and Time
Information	1003	11/10/2010 11:49:4
Information	1005	11/10/2010 11:49:4
Information	1004	11/10/2010 11:49:3

- Go to Event Viewer
- Filter Events
- Properties
- Hide All Events

System Services: All Running

Display Name	Service Name	S
Server	LanmanServer	R
Windows Search	wsearch	R

- Go to Services
- Preferences
- Stop
- Start

Last Refresh: 11/10/2010 11:52:01 AM   Configure refresh

Project Seven – Creating and Managing Folders and Files

- As the administrator of `Server02` you will create a couple of files within the administrator documents folder.

- Once done, we'll modify the file parameters for client accessibility.

- Create the following two files as the administrator using Notepad.

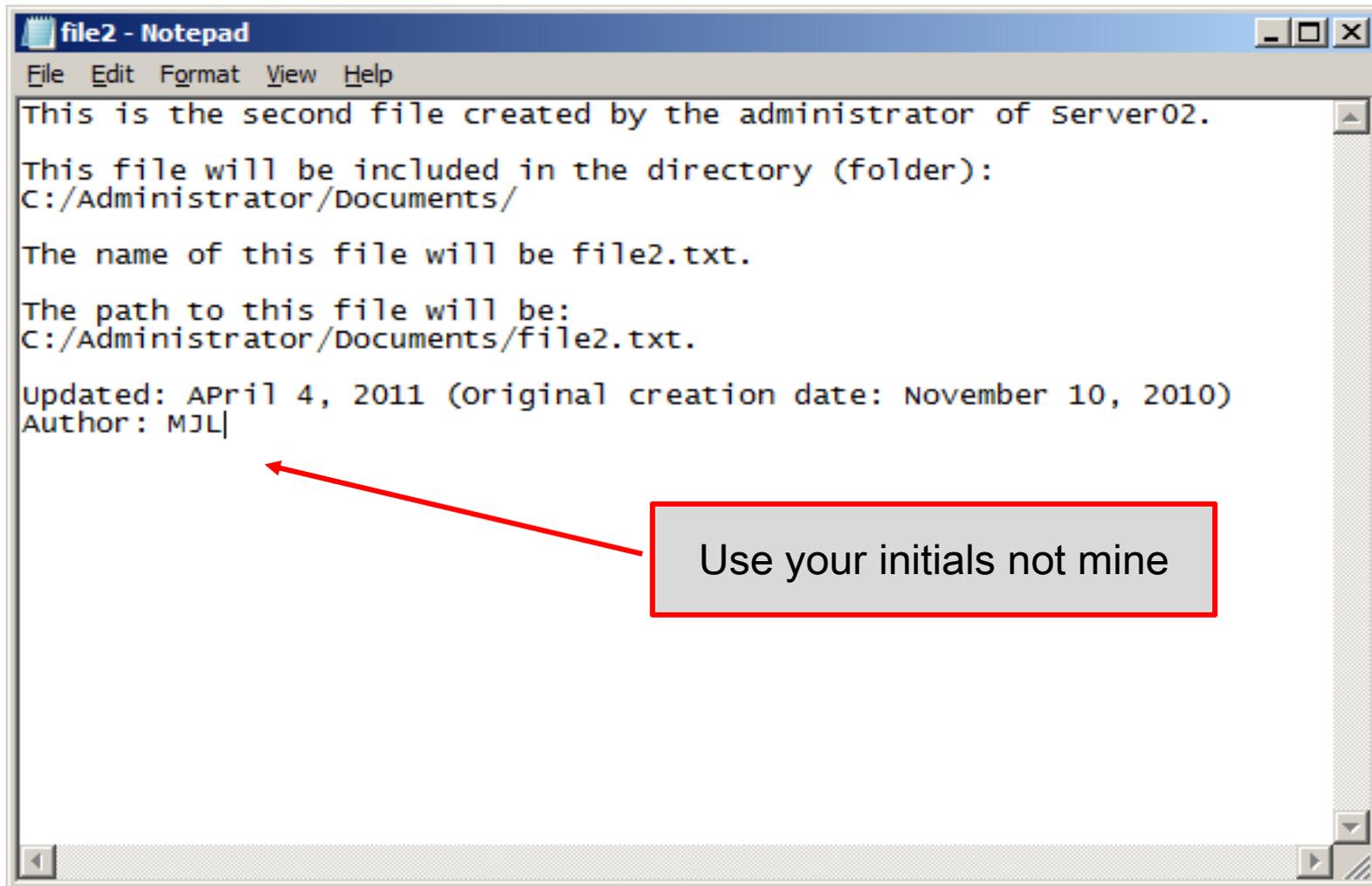# Project Seven – Creating and Managing Folders and Files

file1 - Notepad

File Edit Format View Help

```
This is the first file created by the administrator of Server02.

This file will be included in the directory (folder):
C:/Administrator/Documents/

The name of this file will be file1.txt.

The path to this file will be:
C:/Administrator/Documents/file1.txt.

Updated: April 4, 2011 (originally created:
Author: MJL
```

Use your initials not mine

```
Add many lines below here - just to make a big file content


aaaaaaaaaaaaaaaaaaaaaaa
bbbbbbbbbbbbbbbbbbbbbb
ccccccccccccccccccccc
ddddddddddddddddddddd
eeeeeeeeeeeeeeeeeeeee
fffffffffffffffffff
ggggggggggggggggggggg
hhhhhhhhhhhhhhhhhhhhh
iiiiiiiiiiiiiiiiiiiii
```

Add a bunch of lines below here to get the size of the file up to >12 KB

Project Seven – Creating and Managing Folders and Files

```
file2 - Notepad                                                    _ □ ×
File  Edit  Format  View  Help
This is the second file created by the administrator of Server02.

This file will be included in the directory (folder):
C:/Administrator/Documents/

The name of this file will be file2.txt.

The path to this file will be:
C:/Administrator/Documents/file2.txt.

Updated: APril 4, 2011 (Original creation date: November 10, 2010)
Author: MJL|
```
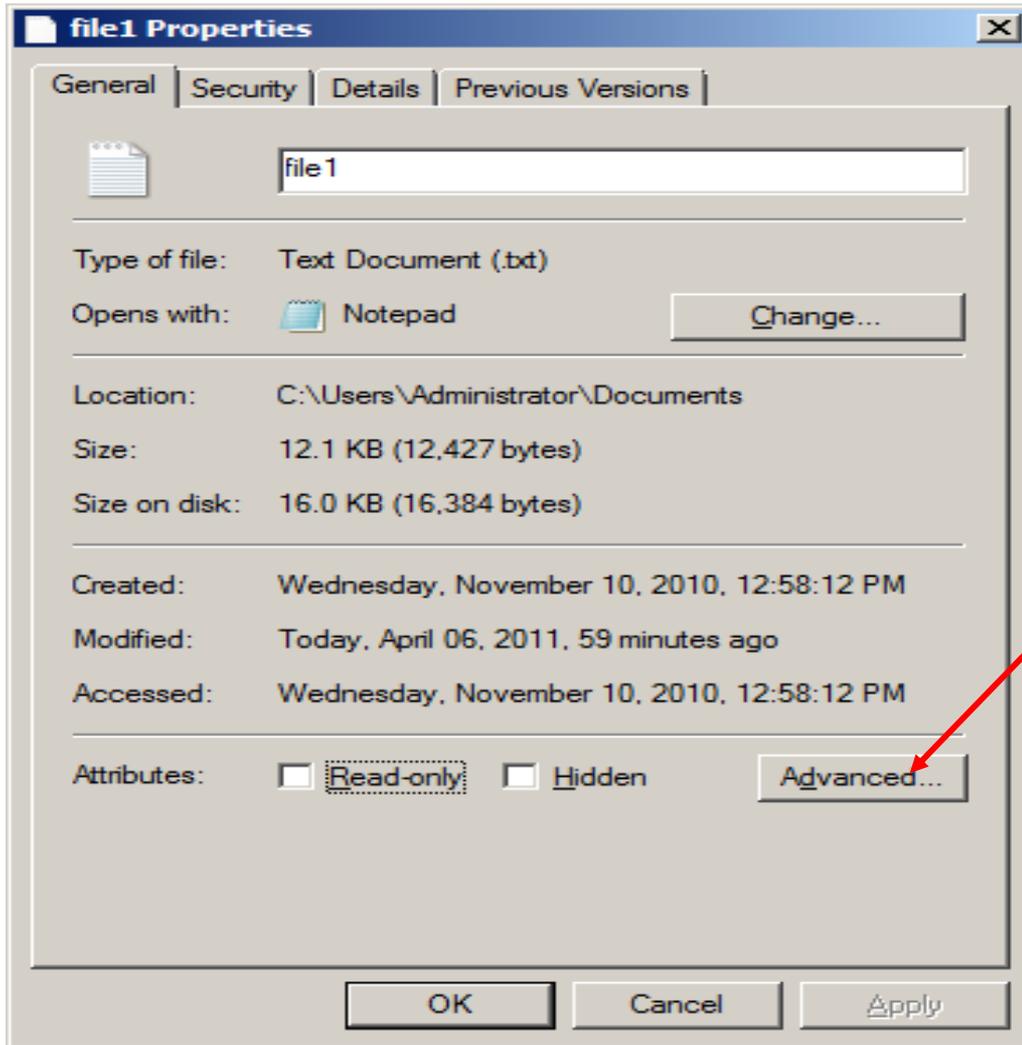
Use your initials not mine

Project Seven – Managing Folders and Files
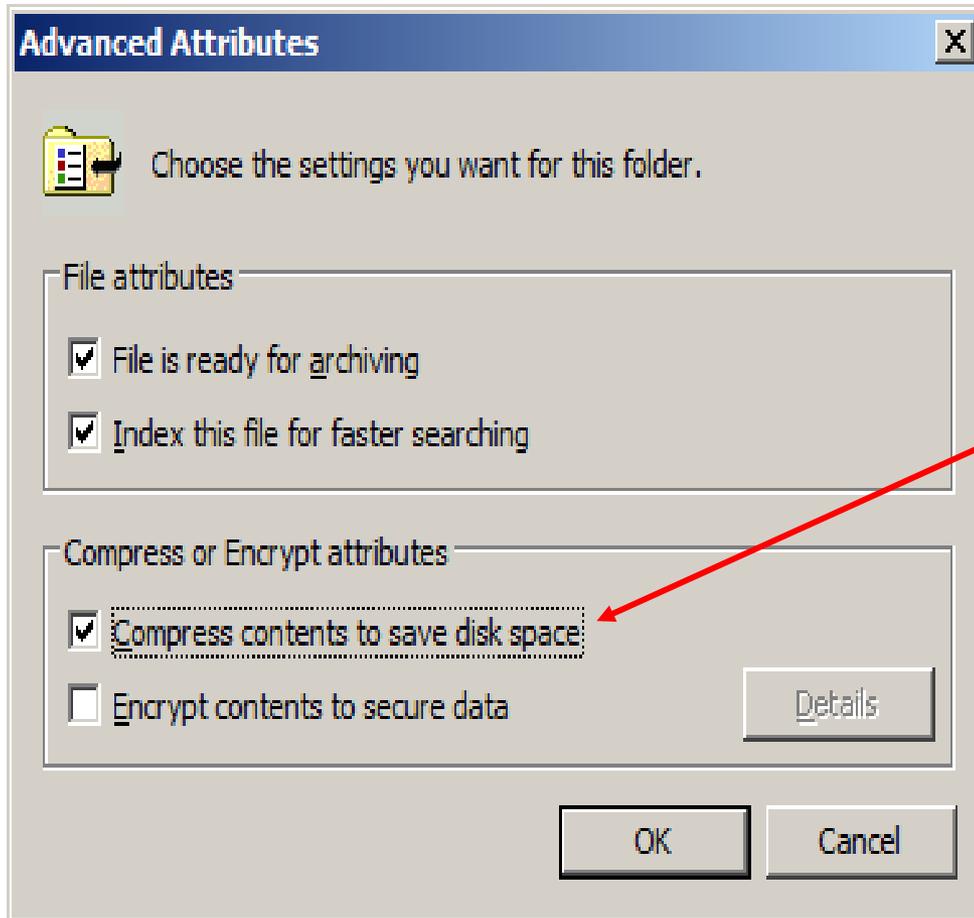
- Now we'll compress `file1` and encrypt `file2`.

From the directory Administrator/Documents – right click on `file1.txt` and select Properties
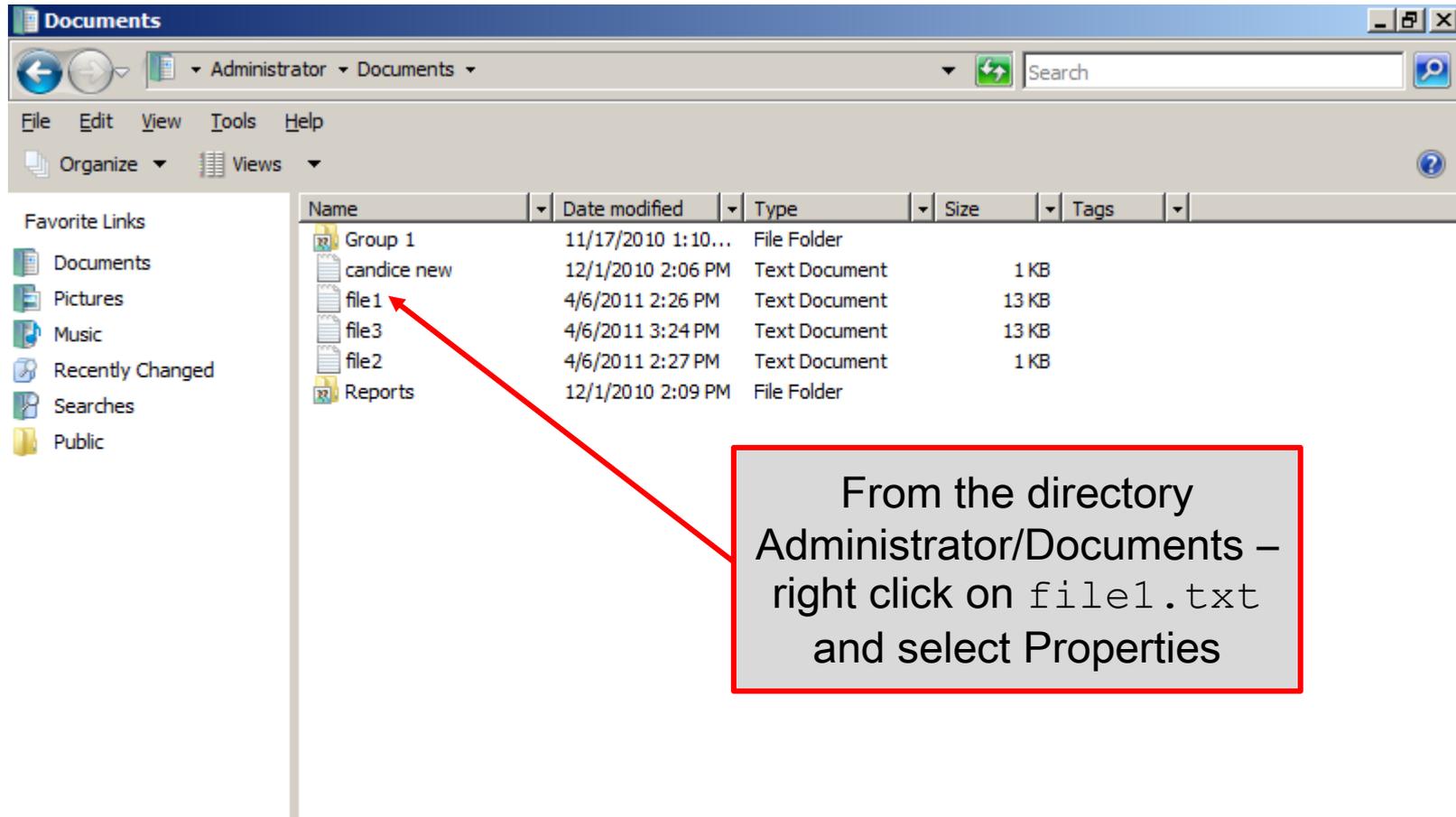
Project Seven – Managing Folders and Files

Click "Advanced"

Project Seven – Managing Folders and Files

Advanced Attributes

Choose the settings you want for this folder.

File attributes

☑ File is ready for archiving

☑ Index this file for faster searching

Compress or Encrypt attributes

☑ Compress contents to save disk space
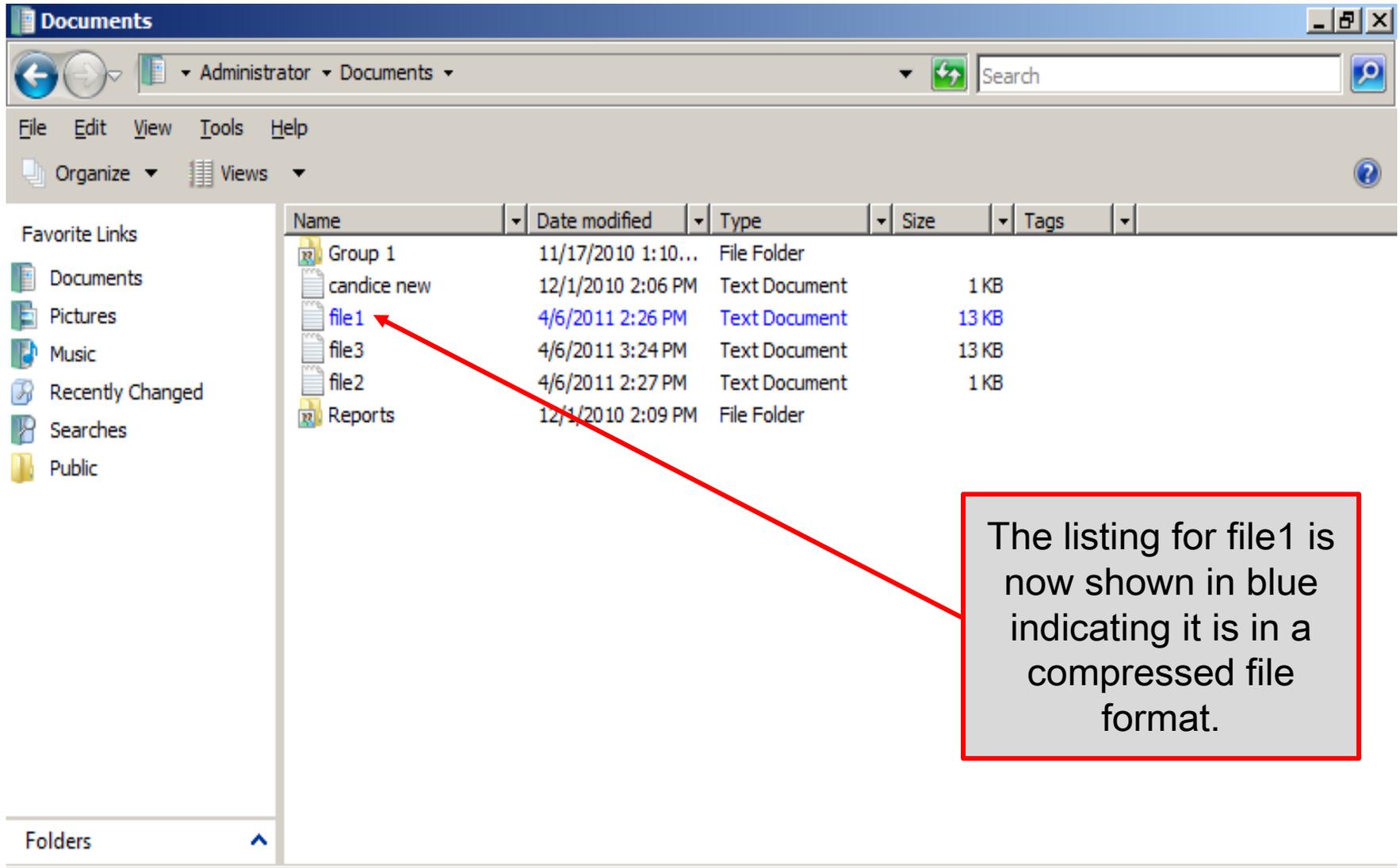
☐ Encrypt contents to secure data   Details

OK   Cancel

From the pop-up menu, check the box for "Compress contents to save disk space", then click "OK".

Then back at the original dialog box, click "Apply"

Project Seven – Managing Folders and Files

The listing for file1 is now shown in blue indicating it is in a compressed file format.

Project Seven – Creating and Managing Folders and Files

NOTE

If by some chance your server is not defaulting to indicated different colors for your various file formats you can reconfigure this with the following steps:

1. Click Start and click Control Panel
2. In the Control Panel Home View (not classic view), click Appearance and Personalization and click Folder Options. (In classic view, double click Folder Options.)
3. Click the View tab.
4. Scroll down the list and click Show encrypted or compressed NTFS files in color.
5. Close the Folder Options dialog box and the Control Panel.

Advanced Attributes

Choose the settings you want for this folder.

File attributes

☑ File is ready for archiving

☑ Index this file for faster searching

Compress or Encrypt attributes

☐ Compress contents to save disk space

☑ Encrypt contents to secure data   Details

OK   Cancel
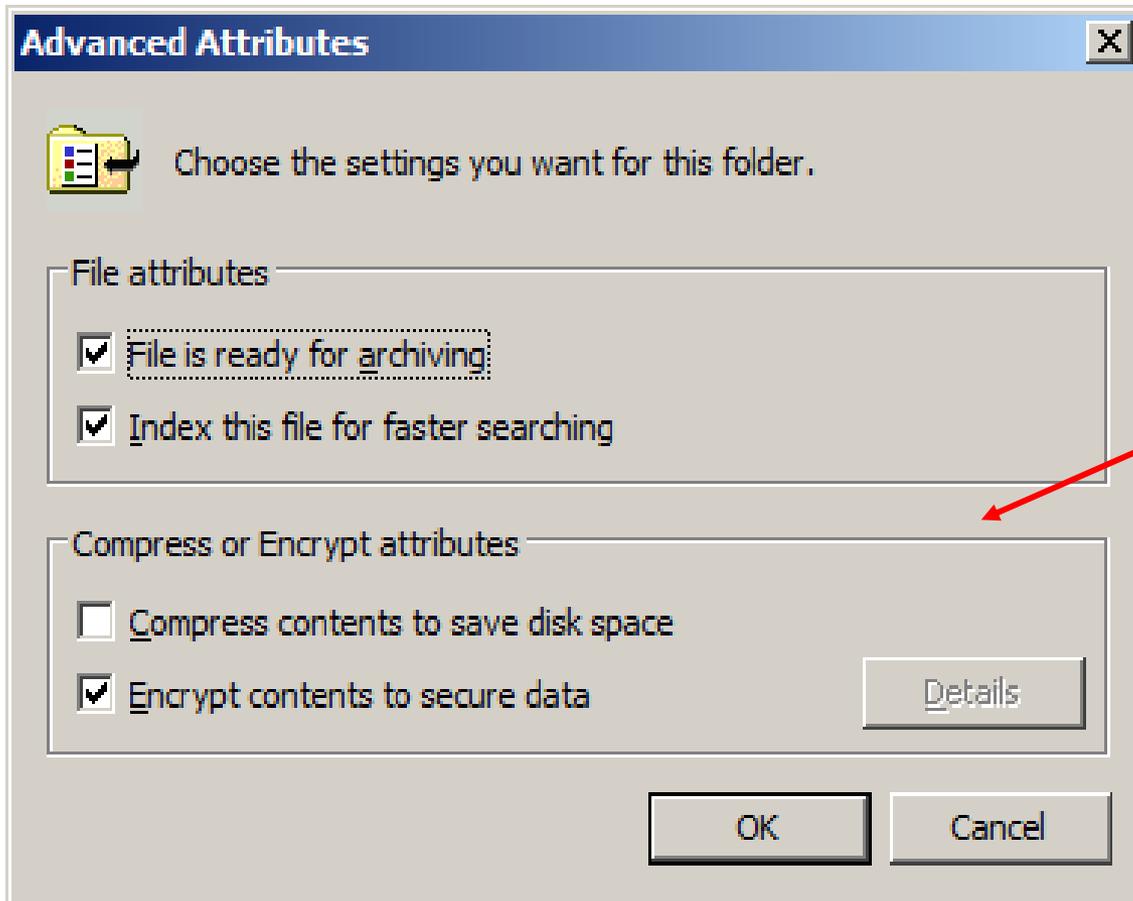
Repeat the process for file2, but this time elect to encrypt the file rather than compress it.

Click OK, then Apply

You'll see this warning dialog appear since we are encrypting a file that is not in a folder marked for encryption. For this case, select "Encrypt the file only".

Click OK, then Apply

Encryption Warning

⚠️ You are encrypting a file that is in an unencrypted folder. If this file is modified, the editing software might store a temporary, unencrypted, copy of the file. To ensure that files created in the parent folder are encrypted, encrypt the parent folder.

What do you want to do?

○ Encrypt the file and its parent folder (recommended)
● Encrypt the file only

☐ Always encrypt only the file   [OK]   [Cancel]

Project Seven – Configuring Folder and File Permissions

- Permissions control access to an object, such as a folder or file. For example, when you configure a folder so that a domain local group has access to only read the contents of that folder, you are configuring permissions.

- At the same time, you are configuring that folder's discretionary access control list (DACL) of security descriptors. See the lecture notes on Managing Folder and File Security for more details on DACLs and SACLs.

- The NTFS system supports the folder and file permissions as shown in the table on the next page.

Project Seven – Configuring Folder and File Permissions

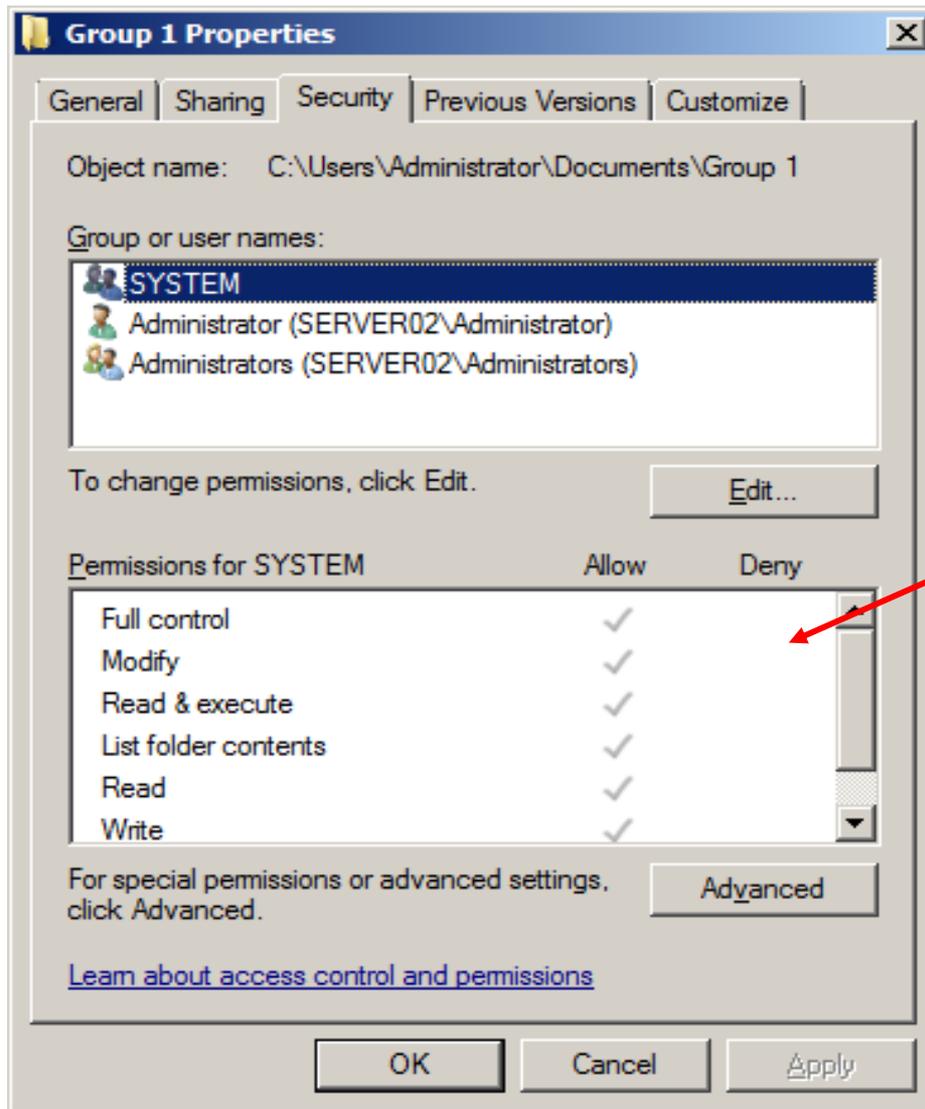| Permission	Description	Applies to
Full control	Can read, add, delete, execute, and modify files plus change permissions and attributes, and take ownership	Folders and files
Modify	Can read, add, delete, execute, and modify files; cannot delete subfolders and their file contents, change permissions, or take ownership	Folders and files
Read & execute	Implies the capabilities of both List folder contents and Read (traverse folders, view file contents, view attributes and permissions, and execute files)	Folders and files
List folder contents	Can list (traverse) files in the folder or switch to a subfolder, view folder attributes and permissions, and execute files, but cannot view file contents	Folders only
Read	Can view file contents, view folder attributes and permissions, but cannot traverse folders or execute files	Folders and files
Write	Can create files, write data to files, append data to files, create folders, delete files (but not subfolders and their files), and modify folder and file attributes	Folders and files
Special permissions	Special permissions apply	Folders and files

Project Seven – Configuring Folder and File Permissions

• If none of the Allow or Deny boxes are checked, then the associated group or user has no access to the folder.

• Also, when a new folder or file is created, it typically inherits permissions from the parent folder or from the root.

• Finally, if the Deny box is checked, this overrides any other access. For instance, if an account in a group has Allow checked for a specific permission, but the group to which the account belongs has Deny checked - Deny prevails, even for the account with Allow checked.

• The next page illustrates the security settings dialog box for a folder I created in the Administrators/Documents folder named Group 1.

Project Seven – Configuring Folder and File Permissions

Group 1 Properties

| General | Sharing | Security | Previous Versions | Customize |

Object name: C:\Users\Administrator\Documents\Group 1

Group or user names:

- SYSTEM
- Administrator (SERVER02\Administrator)
- Administrators (SERVER02\Administrators)

To change permissions, click Edit.   Edit...

Permissions for SYSTEM	Allow	Deny
Full control	✓	
Modify	✓	
Read & execute	✓	
List folder contents	✓	
Read	✓	
Write	✓	

For special permissions or advanced settings, click Advanced.   Advanced

Learn about access control and permissions

| OK | Cancel | Apply |

> These characteristics are basically what is defining the DACL.