File Server for WinOS

CET 05202: SERVER ADMINISTRATION

UNIT V

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Contents

Introduction

A file server is a central server instance in a computer network that enables connected clients to access the server's storage capacities. The term encompasses both the hardware and software needed to implement such a server.

A file server is a central server in a computer network that provides file systems or at least parts of a file system to connected clients.

- File servers therefore offer users a **central storage place** for files on internal data media, which is **accessible to all authorized clients**.

What is file?

A **file** is an object on a computer that stores data, information, settings, or commands used with a computer program. On a computer there are three types of files:

i. application files: To be opened by specific application

ii. data files: Contains data.

iii. system files: Executable files for installation

File extension acceptable in File server

File type	File extension
Image	.bmp .eps .gif .jpg .pict .png .psd .tif and etc
Text	.asc .doc .docx .rtf .msg .txt .wpd .wps and etc
Video	.avi .mp4 .mpg .mov .wmv and etc
Compressed	.arc .arj .gz .hqx .rar .sit .tar .z .zip and etc
Program	.bat .com .exe .dll and etc
Sound	aac .au .mid .mp3 .ra .snd .wma .wav and etc

How do file servers work?

Special network protocols are responsible for communication between file servers and clients:

- While the SMB protocol (Server Message Block) developed by IBM is used in local networks with Windows and macOS devices,
- computers with Unix-like systems – such as Linux distributions – largely work with the NFS protocol (Network File System).
- Accessing the file server over the internet typically works with FTP (File Transfer Protocol) or it's encrypted variant **SFTP** (**S**ecure **FTP**). Alternatively, the encrypted SCP (Secure Copy) and HTTP-based **WebDAV** protocols are also used.

The functions (Roles) of a file server

As already mentioned, the main functions of a file server are to enable multiple users to **access the stored files** and **free storage space** for the file repository.

- For this reason, these servers are especially popular as a central storage place for internal company files that are not only relevant for individual users.
- In many cases, companies (particularly in the open-source sector) also use a file server as a **download server** connected to their own web offering.
- This way, they allow their customers or website visitors to **download select content such as programs, drivers, updates, images, or videos** with ease.

The functions (roles) of a file server cont…

The second major application of file servers is **data backups**.

- Unlike when saving and jointly managing relevant files, this specifically refers to the **creation** and **maintenance of conventional backups** – of system or user files (or both) depending on the need.
- Storing these backup copies on a file server is both an easy and inexpensive alternative to having to plan and cover the necessary **additional storage requirements** on each individual client.

File server roles

Role description

- File and Storage Services includes technologies that help you set up and manage one or more file servers, which are servers that provide central locations on your network where you can store files and share them with users.
- If your users need access to the same files and applications, or if centralized backup and file management are important to your organization, you should set up one or more servers as a file server by installing the File and Storage Services role and the appropriate role services.

Advantages of using a file server

- Easy organization of the entire file inventory
- High degree of clarity
- Convenient file sharing
- Collaboration without version conflicts
- Relief of client computers (almost unlimited storage possible)
- Remote access via WebDAV, (S)FTP, or SCP possible
- Data protection and security in your own hands

Recovering Windows Server 2016 Files

In case of wrong deletion

Restore files from the Recycle Bin Windows Server 2016:

- Go to the Recycle Bin on your desktop;
- Find the file or folder which you need to restore;
- Right-click on the required element and select Restore in the context menu.

Recovering Windows Server 2016 Files

Use file recovery software

Are you looking for how to restore files which were deleted without using the Recycle Bin?

- If files were deleted with a key combination Shift + Delete and it is impossible to recover them using standard tools of your operating system, the most effective way will be to use **Hetman Partition Recovery**. You can download it and try

Recovering Windows Server 2016 Files

Recover Windows Server 2016 system files

1. Launch Windows Recovery Environment

If the operating system becomes inoperable and won't boot because system files were damaged, you can recover them by using Windows Recovery Environment.

You can launch it like this: By pressing F8 when the computer starts.

With the help of a boot disk (or boot USB drive).

Recovering Windows Server 2016 Files

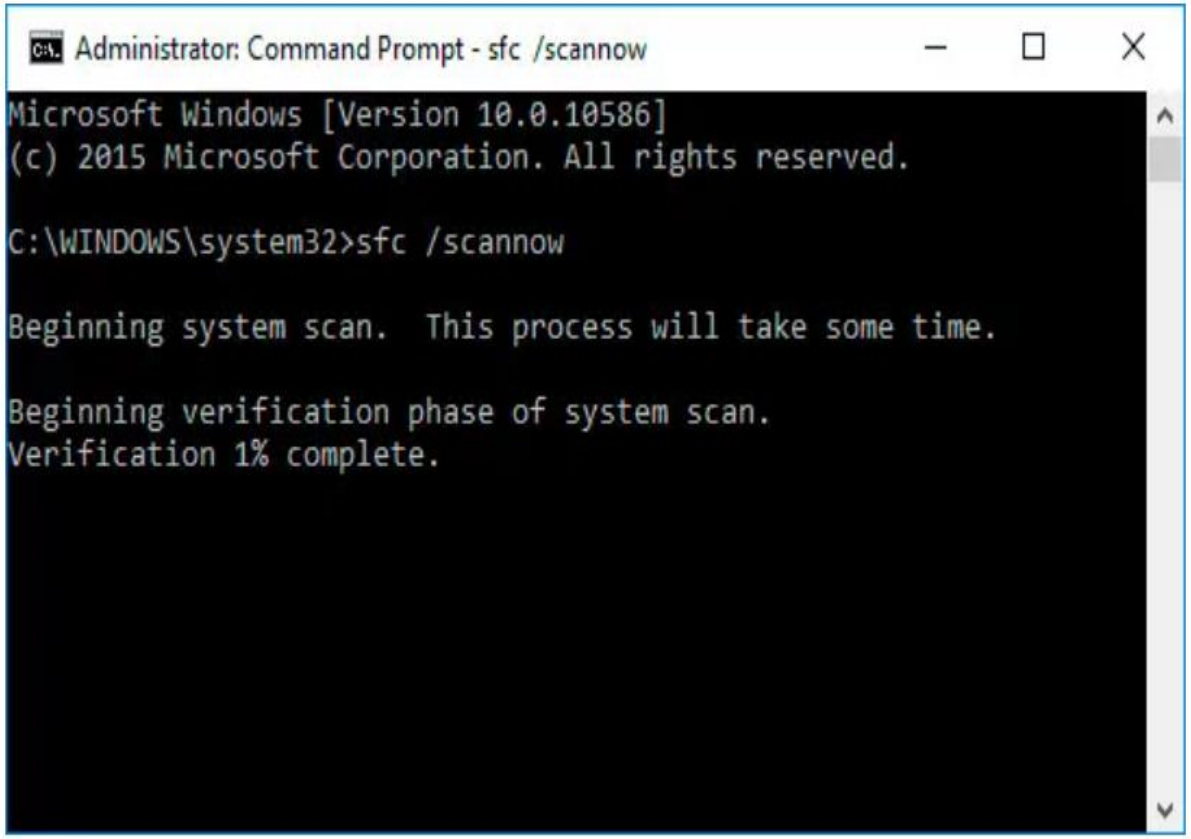
2. Launch the tool for checking system files sfc /scannow

With the help of this command, you can restore system files in case your windows is operable and boots all right.

For this purpose, do the following:

Launch the Command prompt as Administrator.

In the Command prompt window type in the command sfc /scannow and press Enter.



Recovering Windows Server 2016 Files

Recover damaged files

Integrity of Windows can be damaged as a result of incorrect work with them, frequent reinstallation of software or overwriting of data.

Other factors leading to damage can be hardware failures (for example, bad sectors on the hard disk), software failures or viruses.

You can recover damaged files:

With the help of the command DISM (this command should be used if the system file source storage is damaged and Windows files cannot be restored with the help of sfc /scannow).

For this purpose, do the following:

•Launch the Command prompt as Administrator and enter the command to check the source image for damage:

```
DISM /Online /Cleanup-Image /ScanHealth
```

•If the command finds any damage, launch this command to repair them:

```
DISM /Online /Cleanup-Image /RestoreHealth
```

•Run the command sfc /scannow again and restart the system.

If, for some reason, your attempt at recpvering Windows files failed, then you can recover them by complete reinstallation of the operating system.

Recovering Windows Server 2016 Files

Recover file associations

How to return file associations in the Windows?

File associations suggest comparing the file type to the program which will execute this file. Due to failures or Windows errors, such associations may be disrupted.

It may look like this:

- when you try to run a program, the computer opens a browser or Notepad instead of that program.

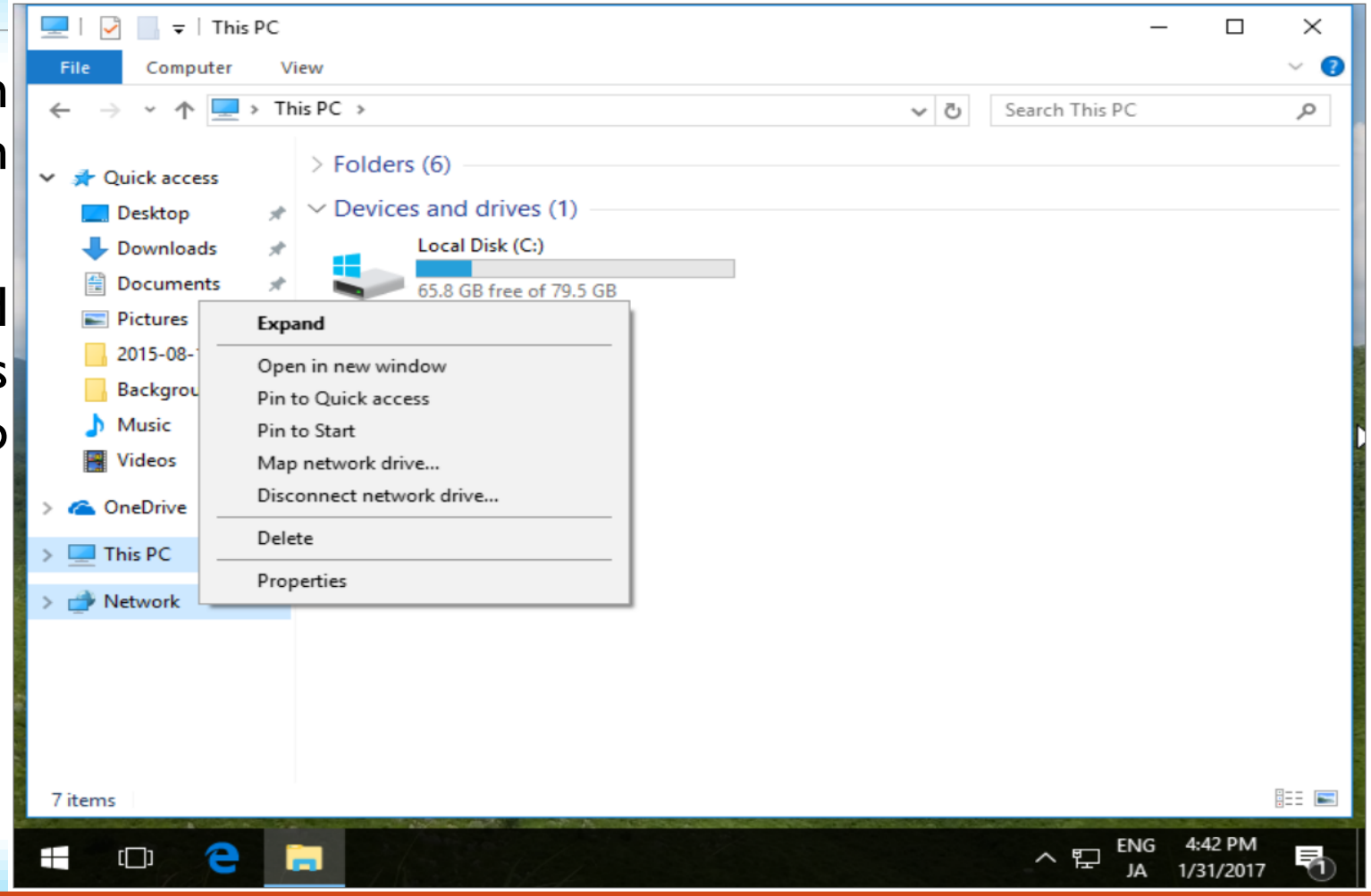
The solution is to restore file associations for the files which encounter this problem.

Access to Shared Folder

Access to Shared Folder

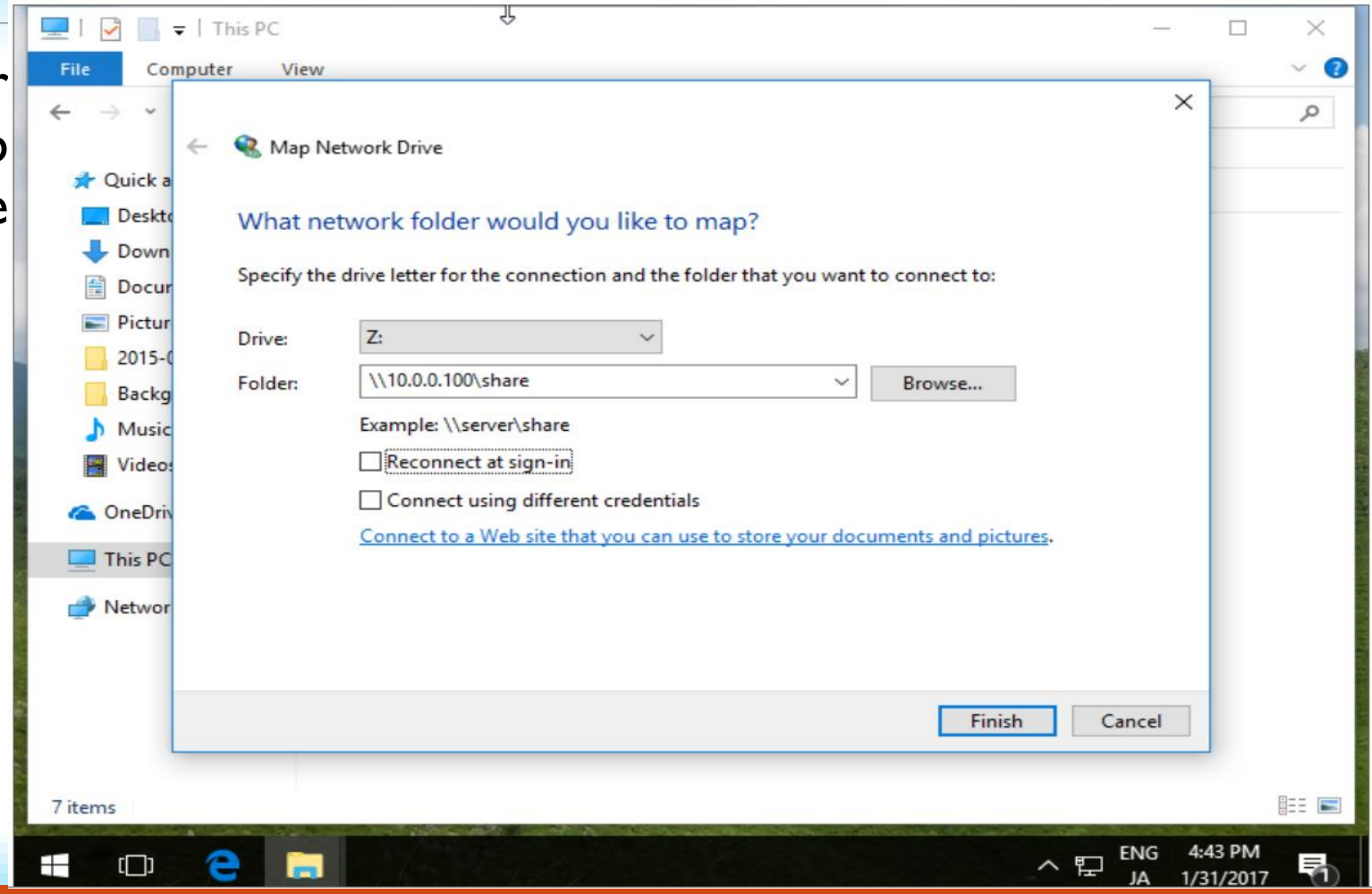
Access to Shared Folder from Clients. This example is on Windows 10 Pro.

[1] Run Explorer and right-click [Network] which is on left side and select [Map network drive].



Access to Shared Folder

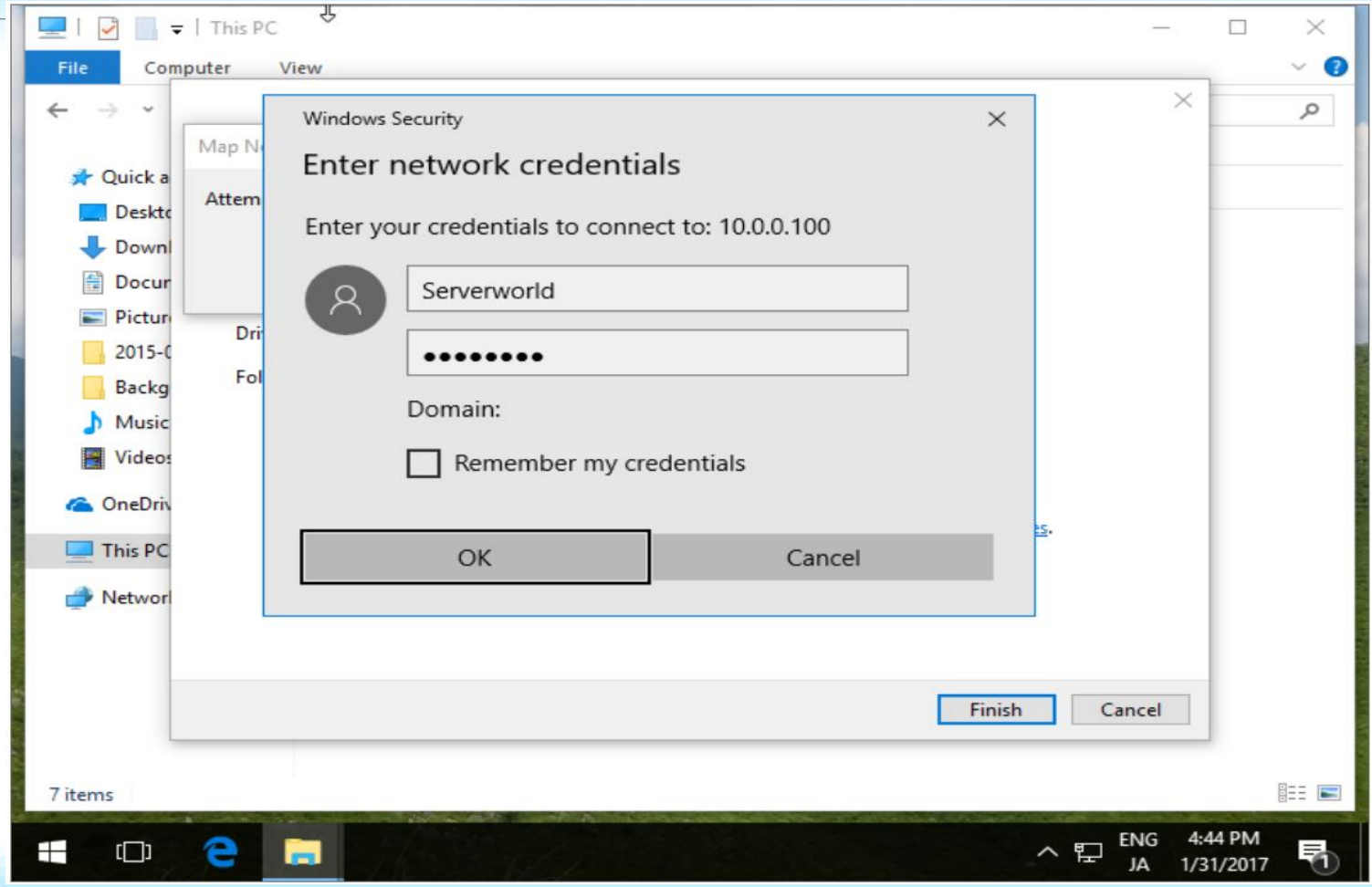
[2] Select a Drive for [Drive] section to map network drive and input share name for [Folder] section.



Access to Shared Folder

[3] For this case of example, the Server and Client are not in the same Domain, so authentication is required like follows

[4] Just accessed.



Access to Shared Folder

[3] For this case of example, the Server and Client are not in the same Domain, so authentication is required like follows

File Server : Install

Thank you!!

For listen