Cyber Aces Online
Module 1 – Operating Systems
Windows Networking and Sharing

By Tim Medin
Presented by Tim Medin
v15Q1

Welcome to Cyber Aces Online, Module 1! A firm understanding of operating systems is essential to being able to secure or attack one. This module dives in to the Microsoft Windows Operating System, specifically Windows networking and sharing.

Networking – SMB

The Windows Operating System can support a variety of networking protocols to share resources, but SMB is by far the most widely used. SMB or Server Message Block is used to share files, printer and other networking resources between Windows hosts. You access resources on a remote system by mapping the drive through Windows Explorer, by clicking START >RUN and entering the UNC, or mapping the drive at the command line.

NET VIEW

The "net view" command can be used to perform most of the browsing functions available via "Network " or "My Computer." Running the command without options will list computers in the current domain or workgroup. To see the resources available on a system, type "net view" followed by two backslashes and the system name:

```
C:\> net view \\srvr

Shared resources at \\srvr
Share name    Type         Used as      Comment
-------------------------------------------------------------------------------
HP            Print
pub           Disk                      Public access
private       Disk                      My Stuff, STAY OUT!
```

NET USE

The "net use" command is used to connect or disconnect from remote resources, typically file servers or network shares. The command can also be used to list open connections to these remote resources.

When connecting to a remote system, the double backslash (\\) must be used before the server's name. The Share name must also be preceded by a backslash. E.g.

\\servername\sharename

A drive letter can be specified to "mount" the remote resource. Your computer will authenticate as the currently logged in user.

```
C:\> net use z: \\srvr\pub
```

In addition, alternate credentials can be used to access the resource, either in the command itself:

```
C:\> net use z: \\srvr\pub P@55wd /user:john
```

…or via a more secure password prompt using the asterisk (*) in place of the password:

```
C:\> net use z: \\srvr\pub * /user:john
```

Similar to the net user command, the password can be entered as part of the command.

NET USE (2)

We can also remove the mapping we created previously using the /delete switch. Think of delete as the eject button for network shares.

We can delete a single mapping in either of these two ways, by drive letter:

`C:\> ` **`net use z: /delete`**

Or by sharename:

`C:\> ` **`net use \\servername\sharename /delete`**

We can also delete all the mappings:

`C:\> ` **`net use * /delete`**

NET USE & VIEW Review

1) You are trying to access a share named "FILES" on a server named "SERVER". Your account has permissions to access that directory. How would you map a drive to this server?
   - A) net use * \\server\files
   - B) net use z: \\server\files
   - C) mount \\server\files z:
   - D) A or B

2) Which of the following commands will list the files on a remote share?
   - dir \\servername\share
   - dir <IPADDRESS>\share
   - net use \\servername\share
   - net view \\servername\share

Answers

- You are trying to access a share named "FILES" on a server named "SERVER". Your account has permissions to access that directory. How would you map a drive to this server?
  - **D) A or B**
  - Both "net use * \\server\files" and "net use z: \\server\files" will accomplish the same thing. When the asterisk is used instead of a specific drive letter, the operating system will pick a letter for you.

- Which of the following commands will list the files on a remote share?
  - **dir \\servername\share**
  - The dir command is used to list files and it can be used with UNC paths. The command "dir \\ipaddress\share" will work, but the answer on the previous slide did not include the leading double backslashes.

Exercise Complete!

- Congratulations! You have completed the Windows Network Sharing tutorial

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Congratulations, you have completed the tutorial on Windows file sharing.