Transferring Files between Client Computer and Virtual Machine

Introduction

In order to access a customer's workstation from the HSQ office, there are two options available:

1. Connect to a remote workstation (typically an OpenVMS machine) and run a remote session.
2. Transfer the files back and forth between the remote workstation and a client computer that is physically used by HSQ employees.

While option #1 is trivial and typically presents no problems, option #2 while seemingly basic, causes problems and becomes a bottleneck, making remote access complicated.

The procedure below assumes that every employee uses the same client computer. This allows the preparation phase to be performed just once.

Simply put:

Client computer	⟷	Virtual machine	⟷	Remote customer's workstation
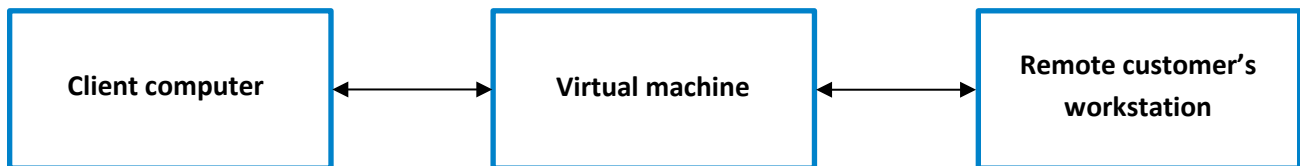
While transferring files between the virtual machine and a remote workstation seems simple (FTP works reliably despite being a bit low level), moving files between the client computer and a virtual machine is not intuitive.

Transferring Files between a VM and a Remote Workstation

As noted above, FTP is a viable option but requires certain prerequisites:
- Remote workstation IP address.
- Remote workstation login credentials (username and password) that allow access to the target (file or directory).

Once this information is known:

1. Open a command window on the virtual machine by clicking the Start (Windows) button and typing "cmd".
2. In the command prompt window type "ftp" and after it opens, connect to the remote workstation using:

```
open nnn.nnn.nnn.nnn
```

(Where nnn.nnn.nnn.nnn is the remote workstation's IP address.)

3. Answer the user and password prompts and you will be connected to the remote computer.
4. Use the "cd" command to change the working directory on the remote (presuming an OpenVMS machine):

```
cd [-.anotherUser.workingDir]
```

5. User the "lcd" command to change the working location on the local (virtual) machine:

```
lcd c:\temp
```

6. Depending on what kind of file(s) you are going to transfer, specify the transfer mode by sending either an "asci" or "bin" command.
7. Transfer the intended files by using either the "put" command (to copy the files from the virtual machine to the remote one), or a "get" command (for the reverse).
8. You can repeat steps 4 through 7 until you have finished the transfer.
9. Close the connection by sending the "close" command.
10. Exit FTP by sending the "bye" command.

Transferring Files Between a VM and a Client Computer

This phase requires preparations:

1. On your local (client) computer use the file explorer and create a folder to be used for the file exchange. For example, `C:\share`.
2. In the explorer window, right-click on this folder and select "Properties" menu item. The folder properties pop-up window will open. Select the "Sharing" tab (see Figure 1).

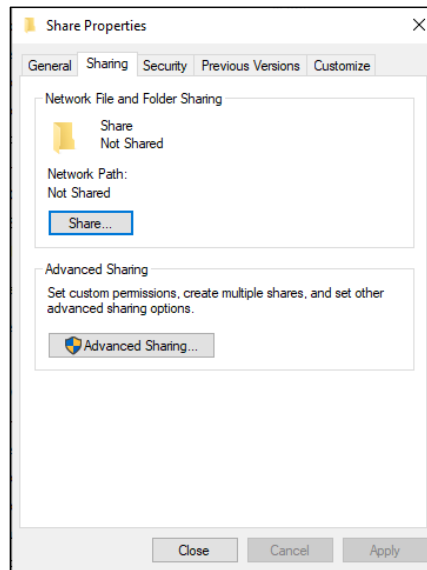*Figure 1: Folder properties window*

3. Click the "Share" button. You will see another pop-up window (as in Figure 2). You will only see your name on the list.
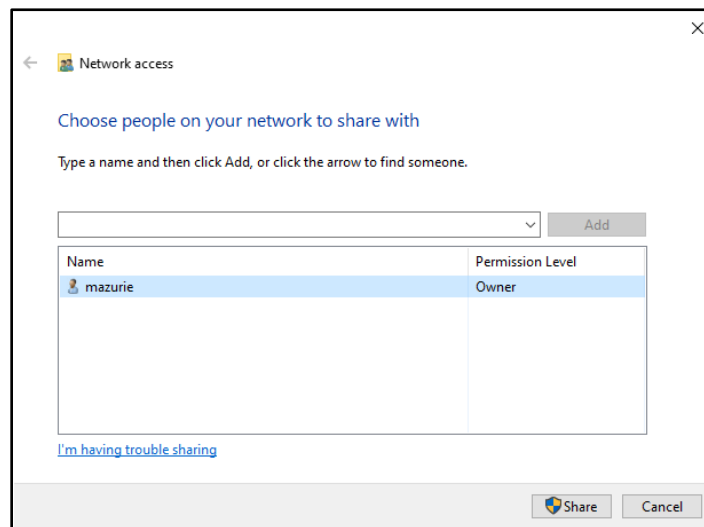

Figure 2: Initial state of sharing list

4. In the edit box above the list, type "Everyone" and click **[Add]**. The new entry will be added to the list, however with only "Read" access (see Figure 3).
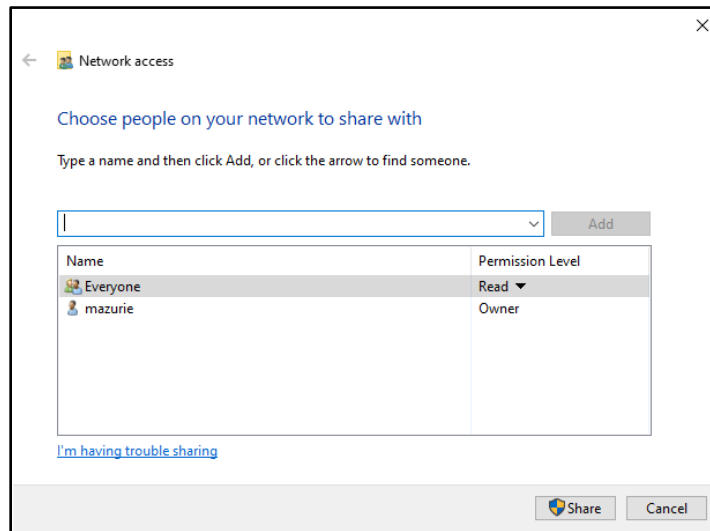

Figure 3: Default state of an added entry

5. Click on the down arrow next to the word "Read" and use the selection to choose the "Read/Write" permission level (see Figure 4).
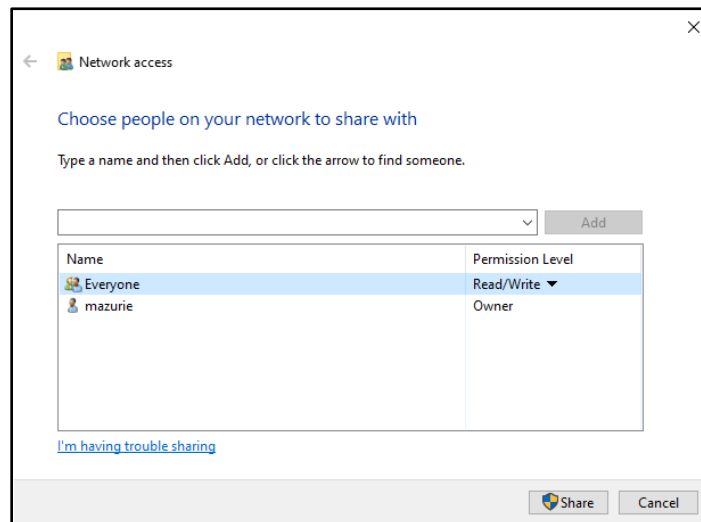

Figure 4: Shared folder list with permissions

6. Click the "Share" button in the bottom of the pop-up window to finalize the folder sharing. At this point Windows will request your local administrative username/password to proceed. If you do not know your local administrative account, ask your IT administrator.

7. Close the "Properties" pop-up window. This completes the preparation phase.

Now this shared folder can be used for file transfers. When connected to the virtual machine, open File Explorer and navigate to the "Network" section on the left-hand side pane. Locate your computer by name and click on it. The first time (after the machine reboots) the system will require your credentials. Enter your name including the domain. For example:

```
hsq\<username>
```

Where <username> is your regular domain username that you use to login to your machine on a daily basis.

After authentication, you will see the shared folder and you can copy/move or drag files to/from this folder as usual.