File Transfer Exercise

Overview

- Upload a file to the iCSF using WinSCP
- Manipulate a file using Linux commands
- Download a file from the iCSF to your desktop

Note

- Commands to be entered at the command line are in `courier` with text in ***bold italics*** to be replaced as described.
- On the iCSF the Linux man command shows manual pages for a command, e.g. enter man ssh to see the manual pages for ssh (use space for next page,q to quit)
- On the iCSF the up and down arrows can be used to scroll through previously entered commands. Press tab while entering a command or filename to auto-complete it (this saves a lot of typing – very handy!)
- It is usually possible to paste into a terminal window, e.g. by using the middle mouse button (sometimes the right mouse button).

1. Upload a file to the iCSF from your PC

- On the Windows desktop First download a sample file called `ex1file.txt` from the following webpage to your desktop/Laptop. You need to do this by right clicking on the filename and selecting '**Save link as**' and save it to **C:\Work**

  http://ri.itservices.manchester.ac.uk/course/icsf-csf/
  OR
  http://personalpages.manchester.ac.uk/staff/Chris.Grave/course/icsf-csf/

- **Resume/Restart** the previously connected session to nyx* by opening the **X2go** software
- Open a new Terminal windows so you arrive at a **nyx*** - **Applications --> System Tools --> Terminal (MATE Terminal)**
- Mount your iCSF home by typing the following

```
[username@nyx* ~]$ mnticsf
```

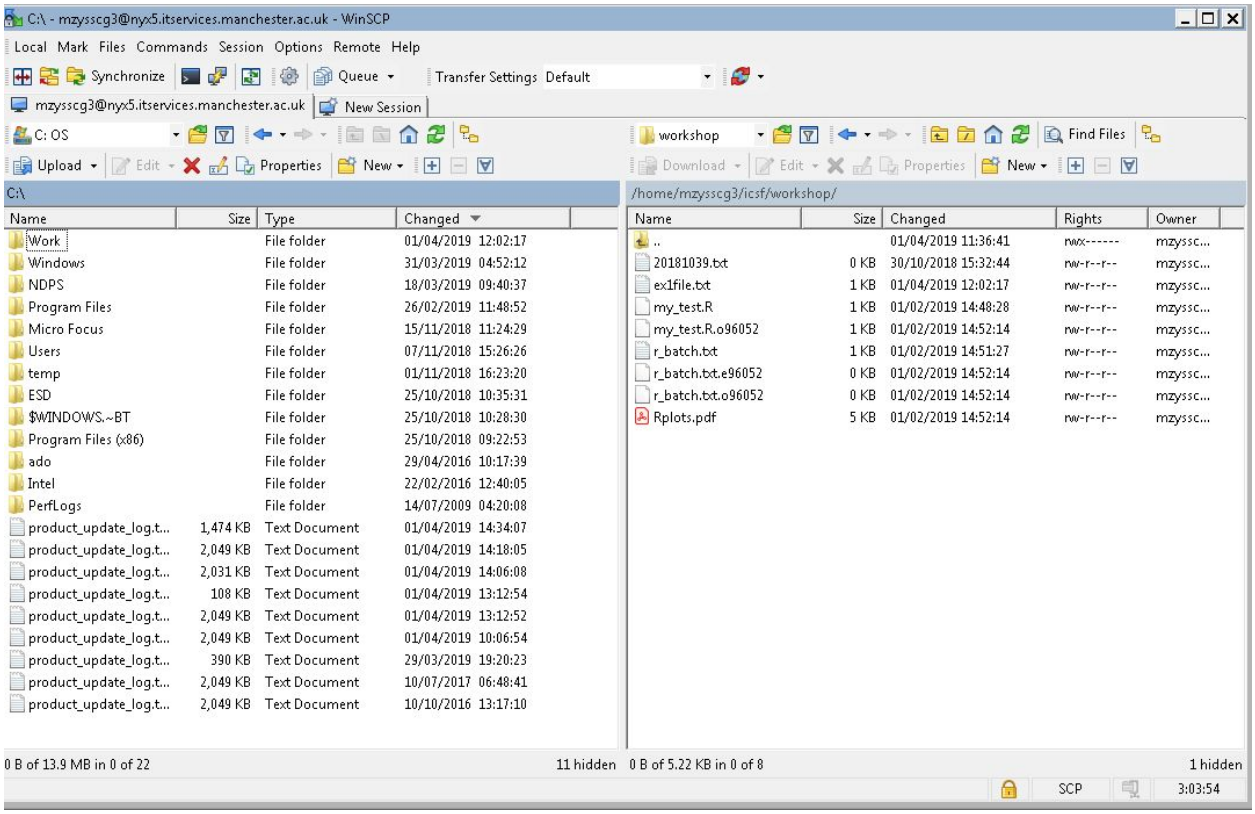
- Accept key by typing '**`yes`**' and **Enter password for iCSF** when prompted. Note this is not opening a new command line connection to the iCSF. It is just mounting you iCSF home directory on the virtual desktop.
- You should be able to see a folder called '`icsf`' when you type: '`ls`'
- Change to that folder

```
[username@nyx* ~]$ cd icsf
[username@nyx* ~/icsf]$  mkdir workshop (mkdir = make directory)
```

Use WinSCP to transfer some files

- On your desktop/laptop **open WinSCP** – it should be under ***Start --> Programs***
- Enter the following information, we are not going to save the session as this is a public PC cluster:
  File Protocol: `SCP`
  Host name: `nyx*.itservices.manchester.ac.uk`*(so it matches the nyx* you are currently using)*
  User name: ***`your University IT username`***

- Press 'Login' , Accept any key and **enter your University IT password** when prompted.
- You should now have a window consisting of a left pane which is your PC and right pane which is **nyx***.



- In the right hand pane locate the '**icsf**' folder, open it by double clicking, then open the **workshop** folder you created.
- Next, find `ex1file.txt` from **C:\Work** in the left hand pane –Drag the file from the left pane to the **workshop** folder in the right pane. (Please Note it does not remove the file from your PC, it copies it).
- **Minimise** the WINSCP window for now.

PLEASE NOTE: Instructions for other operating systems can be found by following this link http://ri.itservices.manchester.ac.uk/userdocs/file-transfer/

View the file on NYX*

- Using **X2go** go back to your nyx Terminal you should still be in the 'icsf' folder To check type:

  ```
  [username@nyx* ~/icsf]$ pwd
  ```

  It should report: /home/username/icsf , but you should also be able to tell from your prompt which tells you are you, on nyx* in folder icsf e.g. [username@nyx* ~/icsf]$

- Change to the workshop directory

  `[username@nyx* ~/icsf]$ cd workshop` (cd = change directory)

- list the files, can you see the one you just transferred.

```
[username@nyx* ~/icsf/workshop]$ ls -lh
```

The '**–lh**' is an option and it should have told you the size of the file and a date/timestamp of its creation.

- Read the file using the

```
[username@nyx* ~/icsf/workshop]$ cat ex1file.txt
```

- Make a copy of the file:

```
[username@nyx* ~/icsf/workshop]$ cp ex1file.txt ex1file.copy
```

- Rename the file to give it a .R extension (linux generally doesn't care what extensions you use but we want .R in this case so that rstudio will understand the file):

```
[username@nyx* ~/icsf/workshop]$ mv ex1file.txt ex1.R
```

- List the files in your directory again:

```
[username@nyx* ~/icsf/workshop]$ ls
```

Note that there is no file called ex1file.txt anymore.

- Now edit the file:

```
[username@nyx* ~/icsf/workshop]$ nano ex1.R
```

add the following line to the end of the file and then save it.

```
print(t)
```

Save the file (Ctrl+O), Press Enter, and **exit** with (Ctrl +X) nano.

View the file on iCSF

- Open the iCSF terminal window via X2go (its should be minimised at the bottom)

```
[username@incline21 ~]$ cd workshop
[username@incline21 ~/workshop]$ ls
```

You should see the ex1.R file in the workshop folder

2. Download file from the iCSF to your PC using WinSCP:

- Open **WinSCP**
- In the right hand pane locate the **ex1.R** file in the **workshop** folder (may need to refresh)
- Drag the file from the right pane to the **C:\Work** folder in the left pane. **Minimise** the WINSCP window for now.
- **Open File Explorer** and navigate to **C:\Work** to locate file