C2110 UNIX and programming

Lesson 2 / Module 4

PS / 2020 Distance form of teaching: Rev1

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Remote File Transfer

> scp (rsync)

➤ wget (curl)

Data Transfer Between Unix/macOS OS and MS Windows (WinSCP)

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Remote Copying

Use the command **scp** for remote copying.

[] - can be omitted

Syntax:

```
$ scp [-r] source target
```

Source and target can be a file or a directory. When copying directories, the option **-r** (recursive) must be used.

The remote destination or host is identified by the machine name separated from the file or directory name by a colon.

```
[user@] hostname: [/path/]file
```

Examples of use:

- \$ scp test.txt wolf01.ncbr.muni.cz:/scratch/kulhanek
- \$ scp wolf01.ncbr.muni.cz:/scratch/kulhanek/test.txt .



The command more convenient for copying a larger amount of data (directory synchronization) is **rsync** (C2115).

Exercise 1

- Make a copy of the directory ~/Documents/ C2110 to the directory /scratch/username (make sure you have some files in the directory ~ /Documents/C2110, e.g., a presentations for exercises).
- Copy the contents of the directory /scratch/username/Documents to the remote machine of your choice into the directory /scratch/username/wolfXX, where wolfXX is the number of the source machine. Use the command to scp.
- 3. Delete directories /scratch/username/Documents and /scratch/username/wolfXX

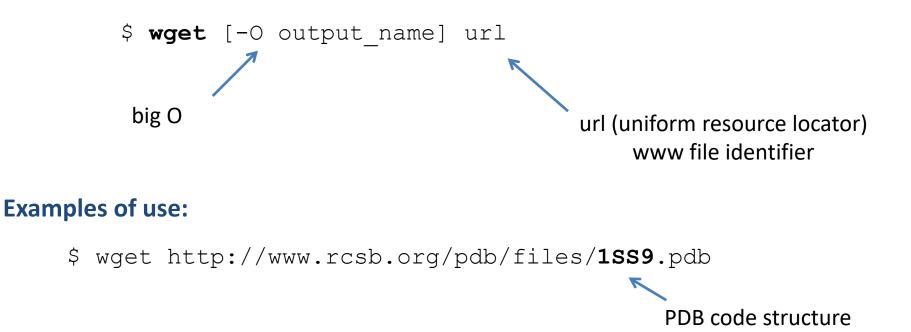
username - your username

use two terminals



Downloading Files from the Web

You can use the command **wget** to download files from the web. Remote machines must provide files using a **ftp**, **http** or **https** protocol.





A similar command is **curl**. However, it allows two-way communication with a remote machine.

Exercise 2

- Use the wget command to download the 1SS9 PDB structure to a file named structure.pdb and save it to a directory ~/Documents/C2110
- Download the installation image using the wget command (iso file) for Ubuntu Server 18.04 to the directory /scratch/username. Verify its checksum by command md5sum or sha256sum.
- 3. Delete the installation image.

username - your username

Data Transfer MS Windows <> UNIX

Text files created under MS Windows and Linux (macOS) **are not** completely **compatible** because each operating system uses a different encoding for **end of line**.

Linux (macOS):\n(line feed 0x0A)MS Windows:\r+\n(carriage return 0x0D, line feed 0x0A)

For coding conversion, see C2110-CZ-MSWindows-M01.pdf

Homework



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Homework

 Download the presentation from the directory /home/kulhanek/Documents/C2110/Presentations to your computer with WinSCP or scp commands. Presentations are available in the format pdf and commented presentations in mkv format (video).