Access to computers and OpenFOAM at Chalmers, and the OpenFOAM environment

Access to computers at Chalmers

- Your CID accounts are valid in all Linux computer labs at Chalmers.

- Remote access can be done through:
  ```
  ssh -XY -l <CID> remote1.student.chalmers.se
  ssh -XY -l <CID> remote2.student.chalmers.se
  ```
  (where `<CID>` is your user name at Chalmers)

- Student accounts and temporary accounts only have 1GB disk. You can use /scratch to temporarily store larger files, but they will automatically be removed after 168 hours.

- You should be able to do an `ssh` to your own computing facilities and work there if you like.

Questions

- How can you get remote access to a terminal window on another Linux computer?

- How can you get information regarding flags to Linux-commands?

CHALMERS

Access to OpenFOAM at Chalmers
NOTE: Only if you will use the Chalmers installation!

Set up aliases through `~/.bashrc` by copy-pasting into a terminal window (only once):

```
echo ". /chalmers/sw/unsup64/OpenFOAM/addToBashrc" >> $HOME/.bashrc
```

Also make `~/.profile` point at `~/.bashrc`:

```
ln -s ~/.bashrc ~/.profile
```

This makes everything work when doing remote login.

Open a new terminal window and type the following:

```
OF23x
which icoFoam
```

You should get (something like):

```
/chalmers/sw/unsup64/OpenFOAM/OpenFOAM-2.3.x/platforms/linux64GccDPOpt/bin/icoFoam
```

Also, try opening a new terminal window and type the following:

```
OFextend31
which icoFoam
```

Environment variables

- Some useful OpenFOAM environment variables
  (see `$WM_PROJECT_DIR/etc/bashrc`
  and `$WM_PROJECT_DIR/etc/config/settings.sh` in 2.3.x):

```
env | grep WM
env | grep FOAM_
```

  Type `env` for a complete list

- Find out the value of an environment variable by:

```
echo $FOAM_APP
```

Aliases

- Some useful OpenFOAM aliases
  (see `$WM_PROJECT_DIR/etc/config/aliases.sh` in 2.3.x):

```
alias src='cd $FOAM_SRC'
alias lib='cd $FOAM_LIB'
alias run='cd $FOAM_RUN'
alias foam='cd $WM_PROJECT_DIR'
alias foamsrc='cd $FOAM_SRC/$WM_PROJECT'
alias foamfv='cd $FOAM_SRC/finiteVolume'
alias app='cd $FOAM_APP'
alias util='cd $FOAM_UTILITIES'
alias sol='cd $FOAM_SOLVERS'
alias tut='cd $FOAM_TUTORIALS'
alias foam3rdParty='cd $WM_THIRD_PARTY_DIR'
```

- Type `alias` for a complete list

Questions

- How do you initialize the OpenFOAM environment?

- What is the purpose of the `~/.bashrc` file?

- What is an alias in Linux?

- What does it mean to *source* a file in Linux?

- What does the `ln -s` command do?

- What does the `which` command do?

Organize user directories and find documentation

- In a FRESH terminal window, type:

```
OF23x
mkdir -p $WM_PROJECT_USER_DIR/{run,applications,src}
```

- In a FRESH terminal window, type:

```
OFextend31
mkdir -p $WM_PROJECT_USER_DIR/{run,applications,src}
```

- The OpenFOAM documentation can be found by typing either of the following:

```
acroread $WM_PROJECT_DIR/doc/Guides-a4/UserGuide.pdf
acroread $WM_PROJECT_DIR/doc/Guides-a4/ProgrammersGuide.pdf
```

On your laptop you might not have `acroread`, but you should be able to use `evince` or `xpdf` instead.

Questions

- What does the `mkdir` command do, and what is the purpose of the `-p` flag?

- What is the purpose of the curly brackets { and }

PingPong, E-mail, password and wireless

- Communication will be done through PingPong:
  `https://pingpong.chalmers.se`
  Log in with CID and its password.
  You can get notification by mail, but to the Chalmers address...

- E-mail forwarding for those who will not check Chalmers e-mail:

  `http://www.tfd.chalmers.se/~hani/wikis/haniWiki/index.php?title=Tips_and_tricks_/_Forward_e-mail_using_Outlook_Web_App`

- If you want to change CID password:
  `https://cdks.chalmers.se/`
  Log in using CID and password.

- Wireless network NOMAD:
  Open a web page (will redirect you to the login page of NOMAD)
  Log in with user name `<CID>/net`, and password on second line of card.

- Wireless network Eduroam:
  If your university is connected you should be able to log in as usual.