

INTRODUCTION TO LINUX

(in an HPC context)

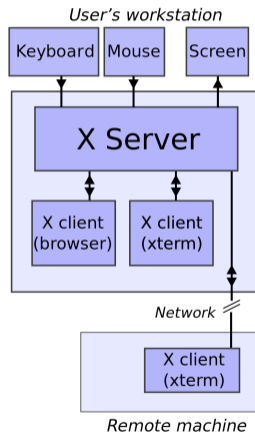
Version 20.09 | HPC.NRW Competence Network

SSH: GRAPHICS AND FILE TRANSFER

HPC.NRW Competence Network

INTRODUCTION TO LINUX

- X Window System
- Basis of all Linux displays
- Can also display windows from other computers
- X server needs to run on PC
- X client is software that window belongs to



- Requirements
 - X server installed on PC
 - SSH connection with X support
 - (Cluster supports X windows)
- Available for all OSes
 - Linux: X server built in
 - Mac OS: XQuartz
 - Windows: xming, MobaXTerm

- Enable X support in SSH
 - `ssh -X <user@<host>`
 - Must be upper case X
- Sometimes `-Y` is used
 - “Trusted” connection
 - Less safe, sometimes necessary for things to work
- In config file: `ForwardX11 yes` or `ForwardX11Trusted yes`

- Copying files between PC and cluster
 - Use `scp` command (secure copy)
- Syntax similar to Linux `cp` command
- Uses SSH, can use same settings/presets
- Console-based, many third-party frontends for all OSes
 - WinSCP, SSHFS, MobaXTerm

- Syntax:

```
scp [options] sourcehost:sourcefile targethost:targetfile
```

- Host may be left out if local
- Host may be SSH preset
- Source or target or both can be remote

- Same rule as `cp` about `-r` when copying entire directories

- Unlike `cp`: will print status of file transfer to screen

- Not only possibility (`rsync`)