Executing Remote Application with X11

Connection to a Linux-Cluster with graphical output (X11)

LOEWE, Uni Frankfurt

```
clustername=loewe-csc.hhlr-gu.de
```

Skylla, Uni Gießen

```
clustername=skylla.hrz.uni-giessen.de
```

Linux-Cluster, Uni Kassel

```
clustername=its-cs1.its.uni-kassel.de
```

Marc2, Uni Marburg

```
clustername=marc2.hrz.uni-marburg.de port=223
```

Lichtenberg, TU Darmstadt

```
clustername=lcluster<n>.hrz.tu-darmstadt.de n=1-4: Sandy Bridge,32 cores,128 GB RAM
clustername=lcluster<n>.hrz.tu-darmstadt.de n=5-12: Haswell,24 cores,128 GB RAM
```

Open an SSH connection to one of the login nodes:

- On Windows: Use `PuTTY` and `X11`
- On Linux and MacOS (on Mac, for graphical output you need Xquartz):

```
ssh -X -C [-p<port>] <username>@<clustername>
```

Example, Lichtenberg-HPC-Cluster: X11 forwarding | Compression (speed up)

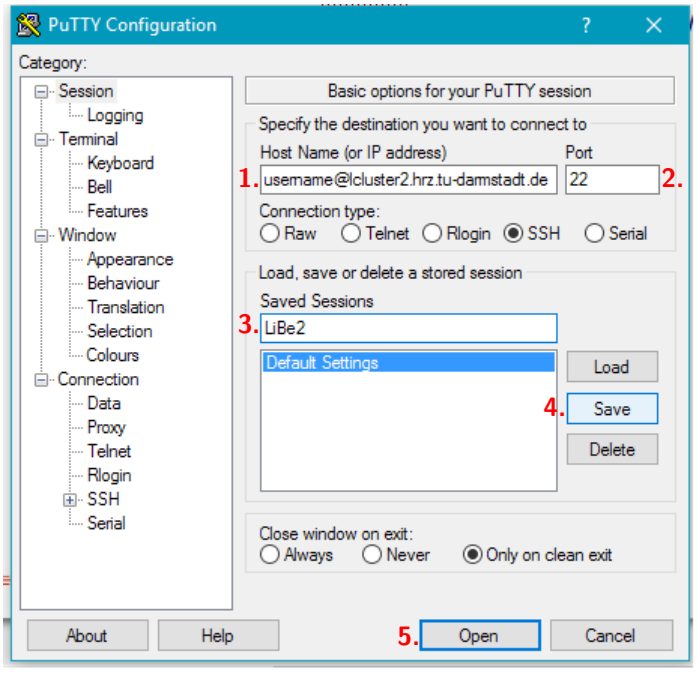
```
ssh -X -C <username>@lcluster9.hrz.tu-darmstadt.de
```

PuTTY

PuTTY (ssh on a windows system)

(A) Download and install PuTTY
`http://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html`

(B) Open PuTTY
(1) Insert `<username>@<clustername>`
(2) Choose port
(3) Choose an abbreviation for clustername
(4) Press the save button
(5) Press the open button
(6) After confirming the security alert, a terminal pops up



PuTTY and X11 on a windows system

(A) Download and install X-Server
`https://sourceforge.net/projects/vcxsrv/`

(B) Open PuTTY and enable X11 forwarding (1.-3.)

(C) Open the session to the chosen cluster