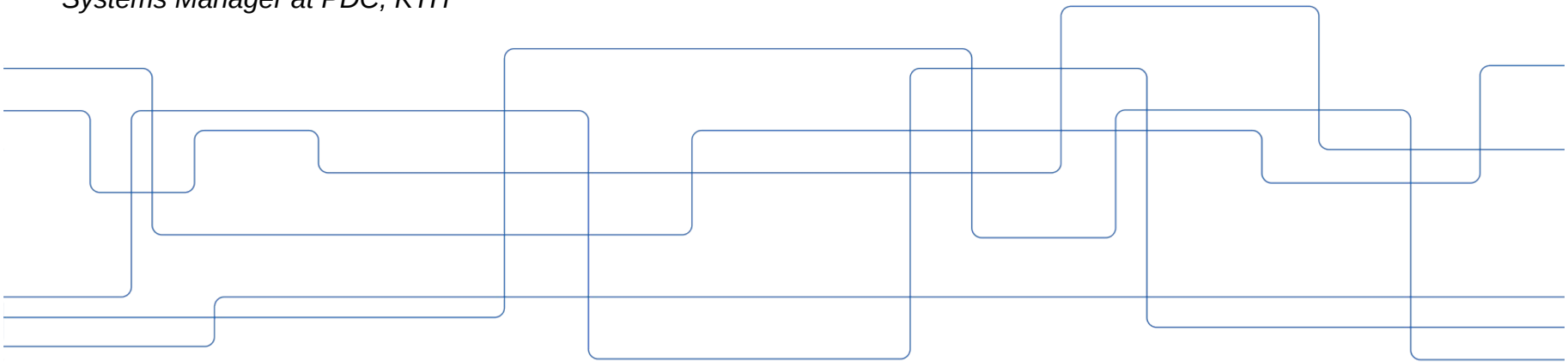
KTH ROYAL INSTITUTE OF TECHNOLOGY

Interactive HPC

A remote desktop environment for HPC Users

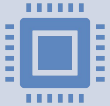
Mustafa Arif

Systems Manager at PDC, KTH



Introduction

Provide Interactive HPC resources to PDC users.



Facilitate code development, real-time data exploration and visualization.

Introduction

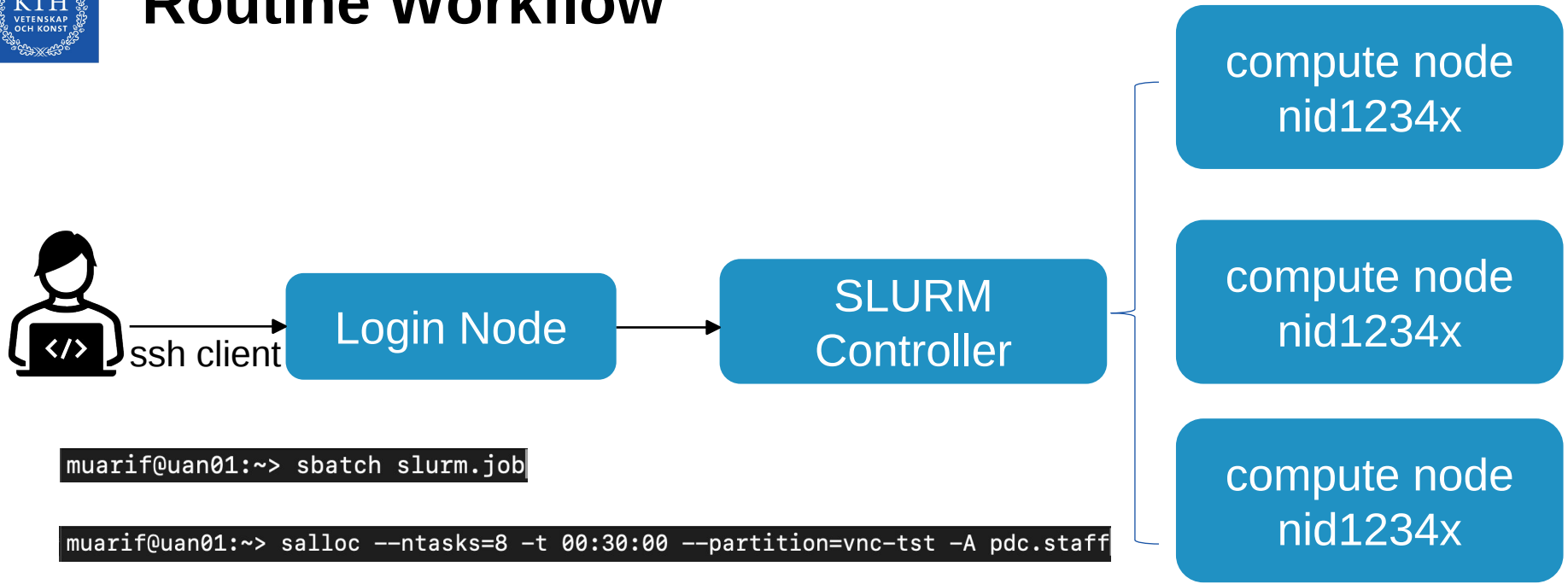
ThinLinc Server

- A remote Desktop Server (VNC)

GfxLauncher

- User interface for launching applications through SLURM interactively.

Routine Workflow

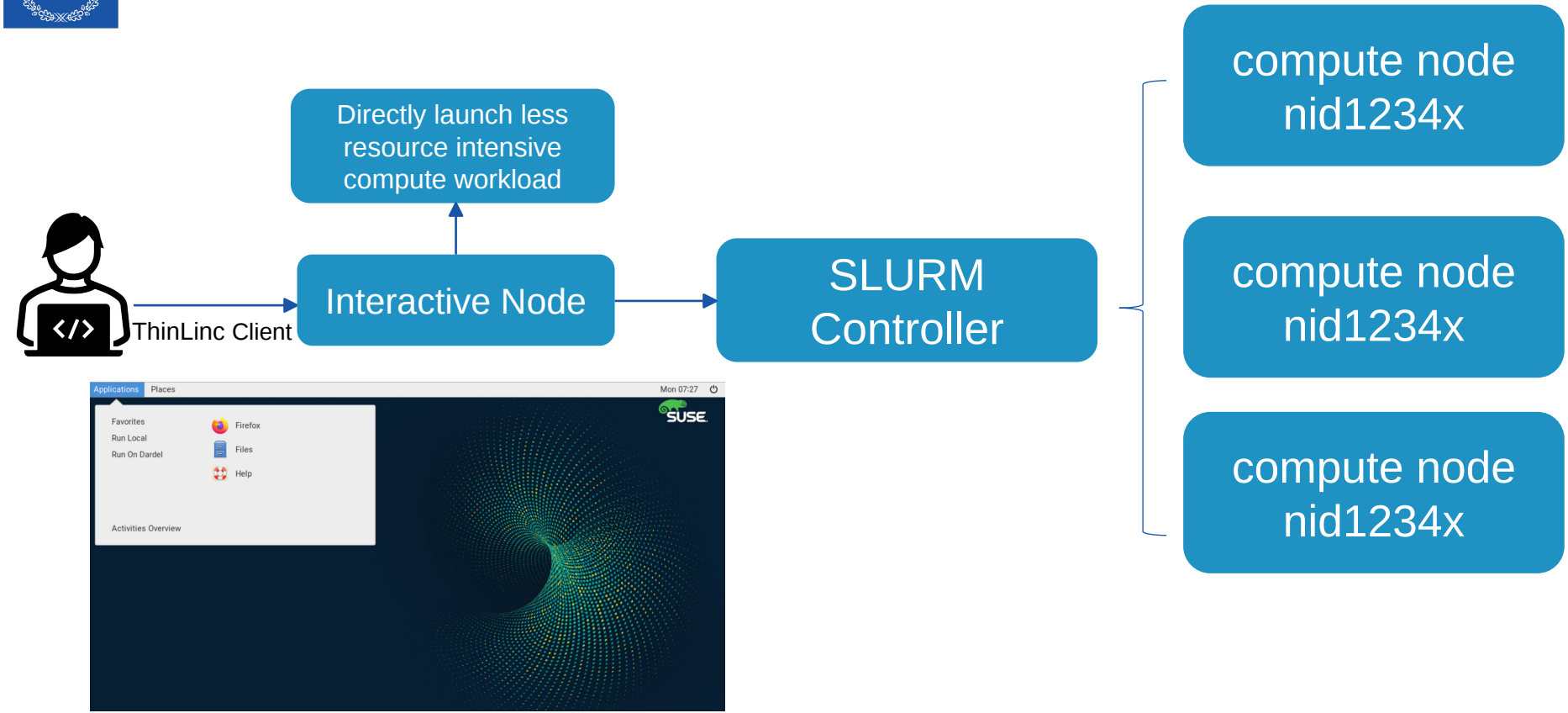



```
muarif@uan01:~> sbatch slurm.job
```

```
muarif@uan01:~> salloc --ntasks=8 -t 00:30:00 --partition=vnc-tst -A pdc.staff
```

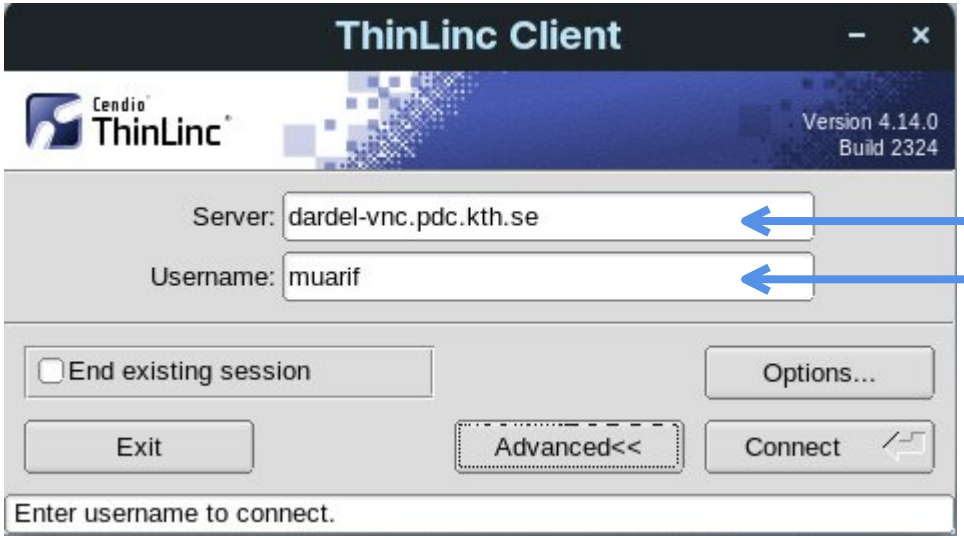
> Download results for visualization

Interactive HPC



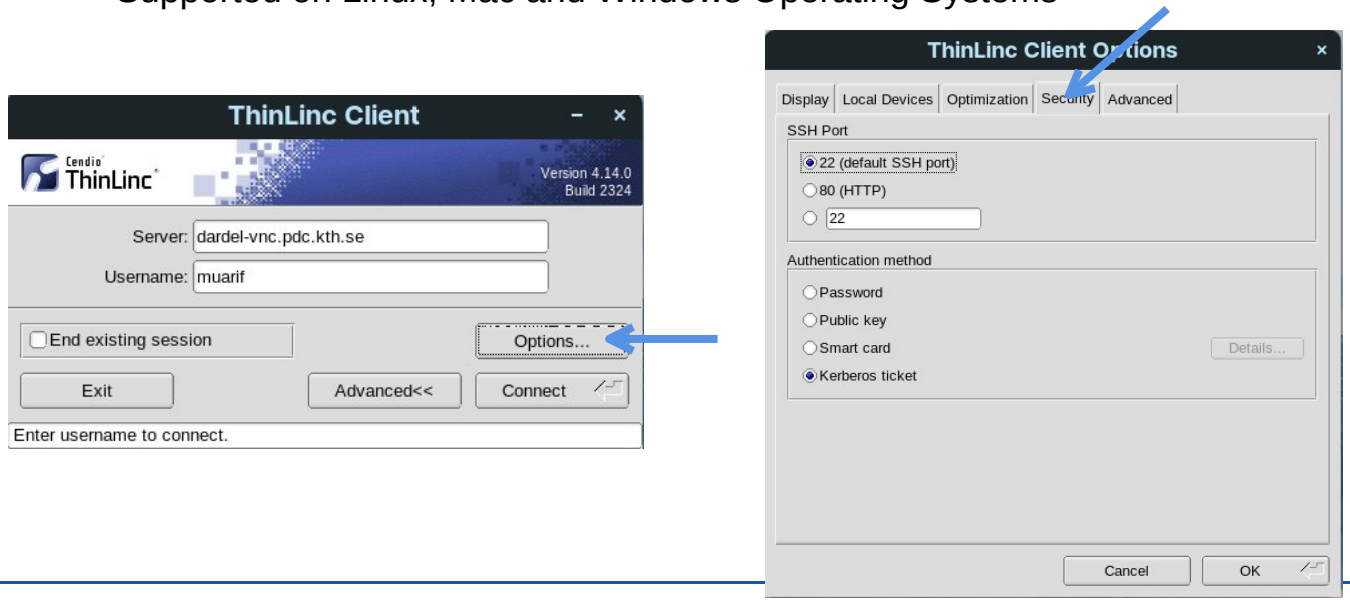
How to use ThinLinc at PDC?

- Download and install ThinLinc client.
  - Installation available for Windows, Mac and Linux
  - Download Link: https://www.cendio.com/thinlinc/download



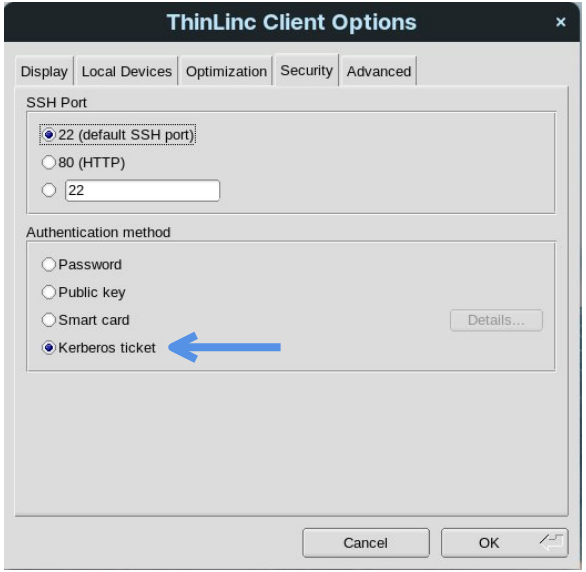
Authentication Options

- Kerberos Authentication
  - Only supported on Linux and Mac Operating Systems
- SSH Key based authentication
  - Supported on Linux, Mac and Windows Operating Systems



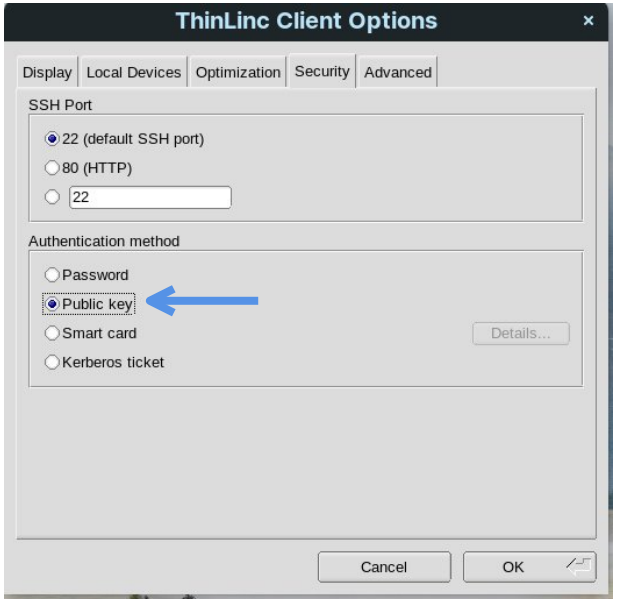
Kerberos Authentication

- Obtain kerberos ticket from terminal
  - `kinit muarif@NADA.KTH.SE`
- Launch ThinLinc client and choose Kerberos Authentication from Security Tab.



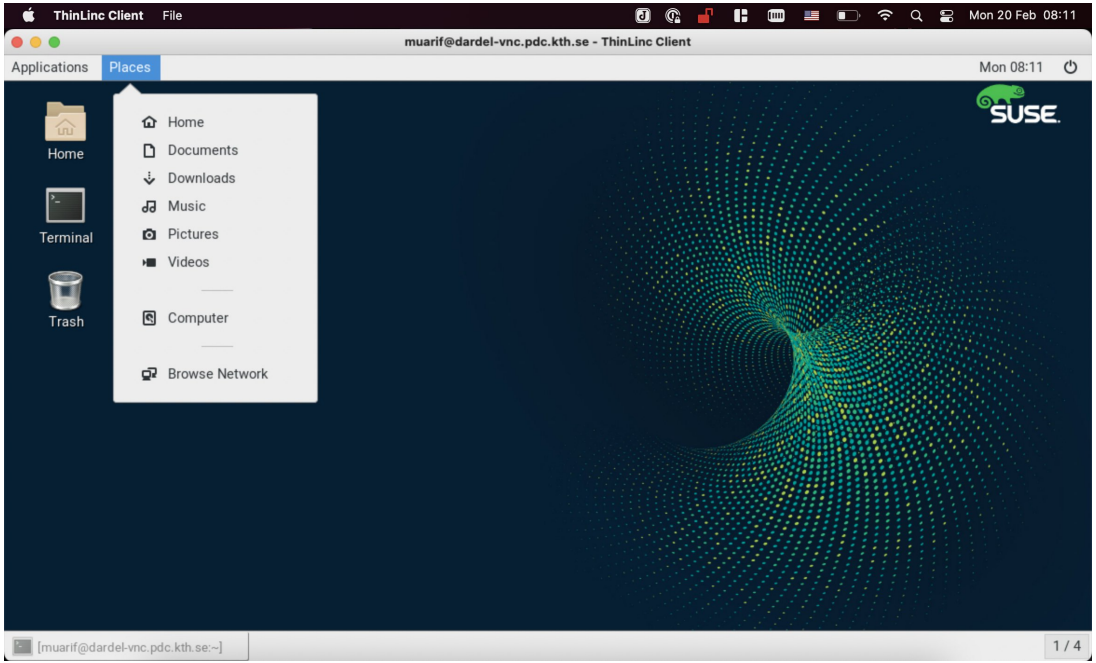
SSH Key based authentication

- Choose ’Public Key’ authentication from Security Tab
- Provide path to your private key in ThinLinc



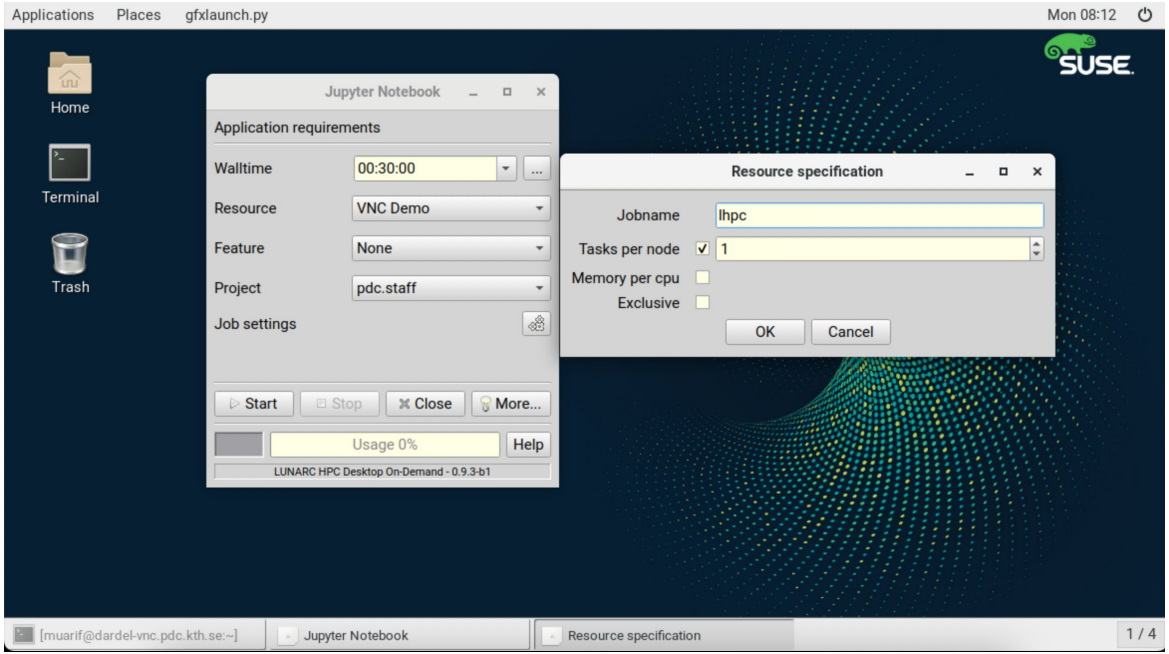
ThinLinc

- Linux remote desktop server



gfxlauncher

- A Graphical interface to submit HPC jobs using GUI tools
- Developed at LUNARC



Demo