

Linaro Forge Hands On Session

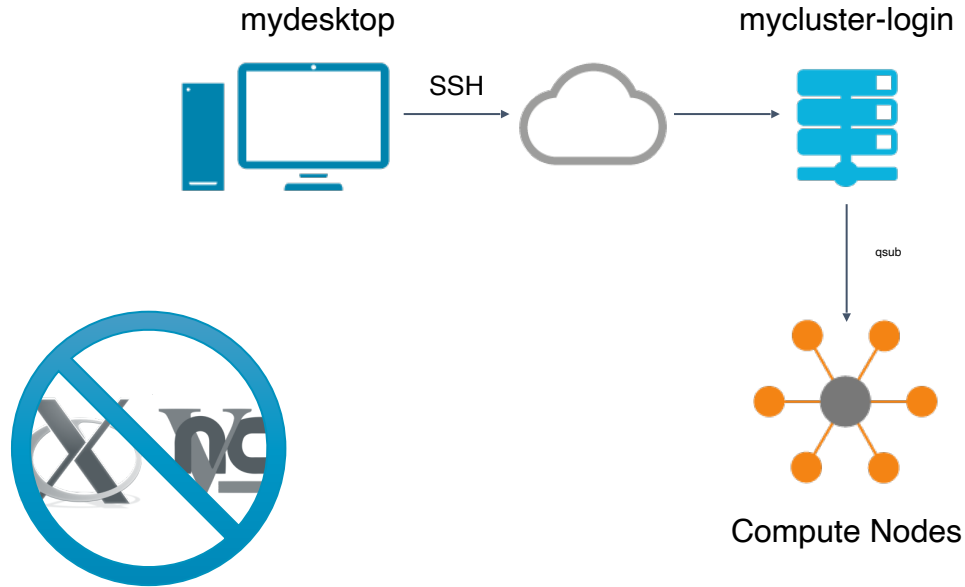
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The Forge GUI and where to run it

Forge provides a powerful GUIs that can be run in a variety of configurations.



Hands on Setup

Remote System

Host coolmuc2

Hostname lxlogin1.lrz.de

user <username>

/lrz/sys/courses/vihps/2024/material/linaro/linaro-forge-training.tar.gz

module load ddt/23.1.1

Local Machine

Install Forge <https://www.linaroforge.com/downloadForge>

[Forge userguide](#)

Hands on session

System Info

<https://doku.lrz.de/coolmuc-2-11484376.html>

CoolMUC-2: 812 nodes:

- 28-core Intel Hazwell processor per node
- 64GB DDR4 memory per node
- cm2_tiny partition

<https://doku.lrz.de/running-parallel-jobs-on-the-linux-cluster-11484078.html>

Interactive Session:

- `module load salloc_conf/cm2_tiny`
- `salloc -J linaro-hands-on --nodes=1 --partition=cm2_tiny --time 00:30:00 --reservation=hhps1s24`

Scripting:

- `<linaro-forge-training>/slurm-coolmuc2.qtf`
- `<linaro-forge-training>/submit-job.sh`

Remote connection to Perlmutter

The screenshot displays the Linaro Forge web interface with a 'Remote Launch Settings' dialog box open. The dialog box contains the following fields and options:

- Connection Name: CoolMUC2
- Host Name: coolmuc2
- Remote Installation Directory: //lrz/sys/tools/ddt/23.1.1 (highlighted with a red box)
- Remote Script: Optional
- Private Key: Optional
- Always look for source files locally:
- KeepAlive Packets: Enable
- Interval: 60 seconds
- Proxy through login node:

Buttons at the bottom of the dialog include 'Help', 'Test Remote Launch', 'OK', and 'Cancel'. In the background, the Linaro Forge interface shows a sidebar with 'Linaro Forge', 'Linaro DDT', and 'Linaro MAP' logos, and a main area with 'RUN', 'ATTACH', 'OPEN CORE', 'MANUAL LAUNCH (ADVANCED)', and 'OPTIONS' sections. The 'Remote Launch:' button in the 'OPTIONS' section is highlighted with a red box.

Matrix Multiplication example

Build and run matrix multiplication example

https://docs.linaroforge.com/23.1.1/html/forgeworked_examples_appendix/mmult/analyze.html

```
# Build C and Fortran Examples
export MPIF90=mpif90
cd <linaro-forge-training>/performance
make

# Offline profile
sbatch submit-job.sh
```

Thank You

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