

UNIVERSITY OF BERGEN

HPC and NIRD Toolkit Day 3



Scientific Computing group, IT department

UNIVERSITY OF BERGEN



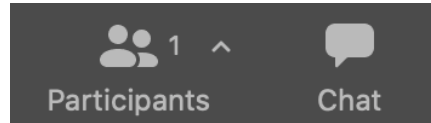
Logistics

Zoom interaction

Course is being recorded for internal use only!

Mute your mic! You may switch off video.

Ask questions for help in chat.



Schedule / breaks, style

Will make a short break at ~ 09:50, ~ 10:50 & ~ 11:50.

Course ends latest 12:30.

Blending of a bit "lecturing" and hands-on exercises.

Ask questions on topic as soon as possible.

Ask general questions in Q & A ~ 12:00.

Recap Days 1 & 2

Recap Day I

- What is HPC?
- What resources/services exist?
- Demo 1st job
- Software modules
- Preparing a job
- Running a job

Recap Day 2

- SLURM / job management
- Data transfers
- Storage areas, quota & backup
- Best practices

Day 3

Goals & Overview

Course goals

Learn about the NIRD Toolkit.

Learn how to get help for using local/national resources and services.

Hands-on exercises

Encourage you to practice

(Most commands are not harmful!)

Agenda Day 3 – NIRD Toolkit & Getting Help

NIRD Toolkit introduction

NIRD Toolkit: jupyter notebooks, minio, jupyterhub, rstudio, vnc

Getting help

Recap & homework

Q & A

NIRD Toolkit

Introduction

NIRD Toolkit

Applications

How to get help

A few reasons to get help

- You don't know where to start
- Something doesn't work as it should
- Something doesn't work anymore
- You don't understand cryptic error messages
- You have tried many things but a problem persists
- You don't know how to improve your use of infrastructure
- You would like to receive some guidance/advice
- You prefer a systematic approach
- You have an idea/need, but lack time/knowledge to implement it

Something doesn't work as it should

Something doesn't work anymore

You don't understand cryptic error messages

SUPPORT

You have tried many things but a problem persists

You would like to receive some guidance/advice

You don't know how to improve your use of infrastructure

You have an idea/need, but lack time/knowledge to implement it

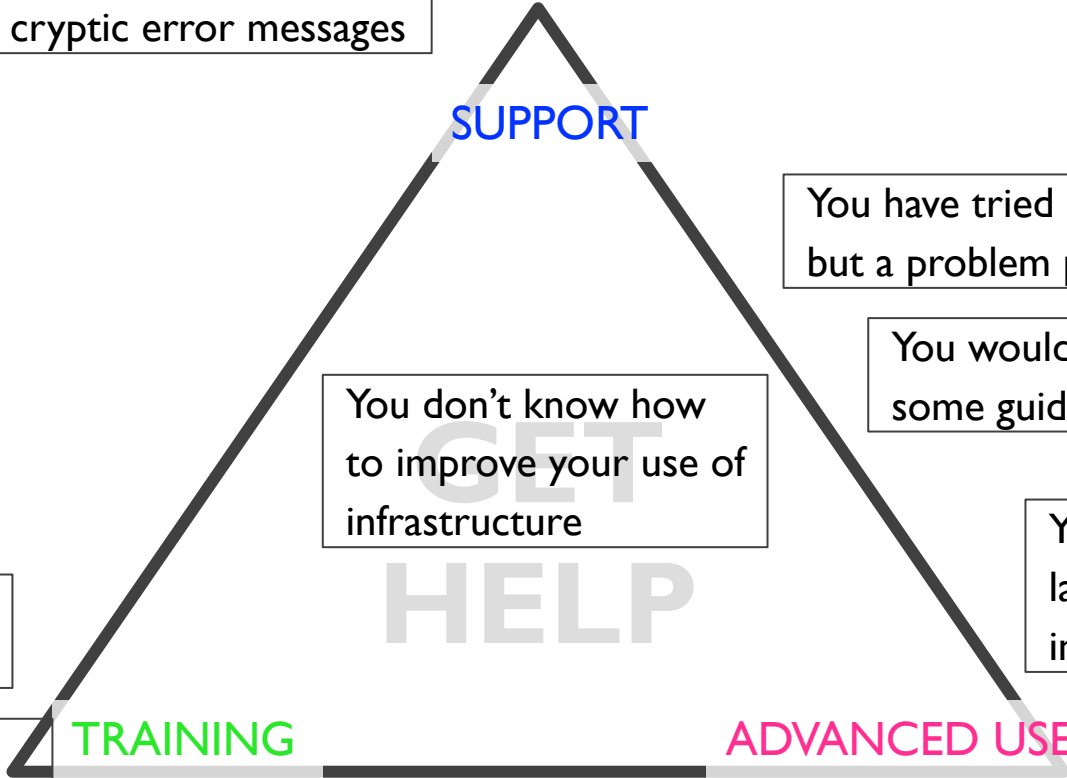
You don't know where to start

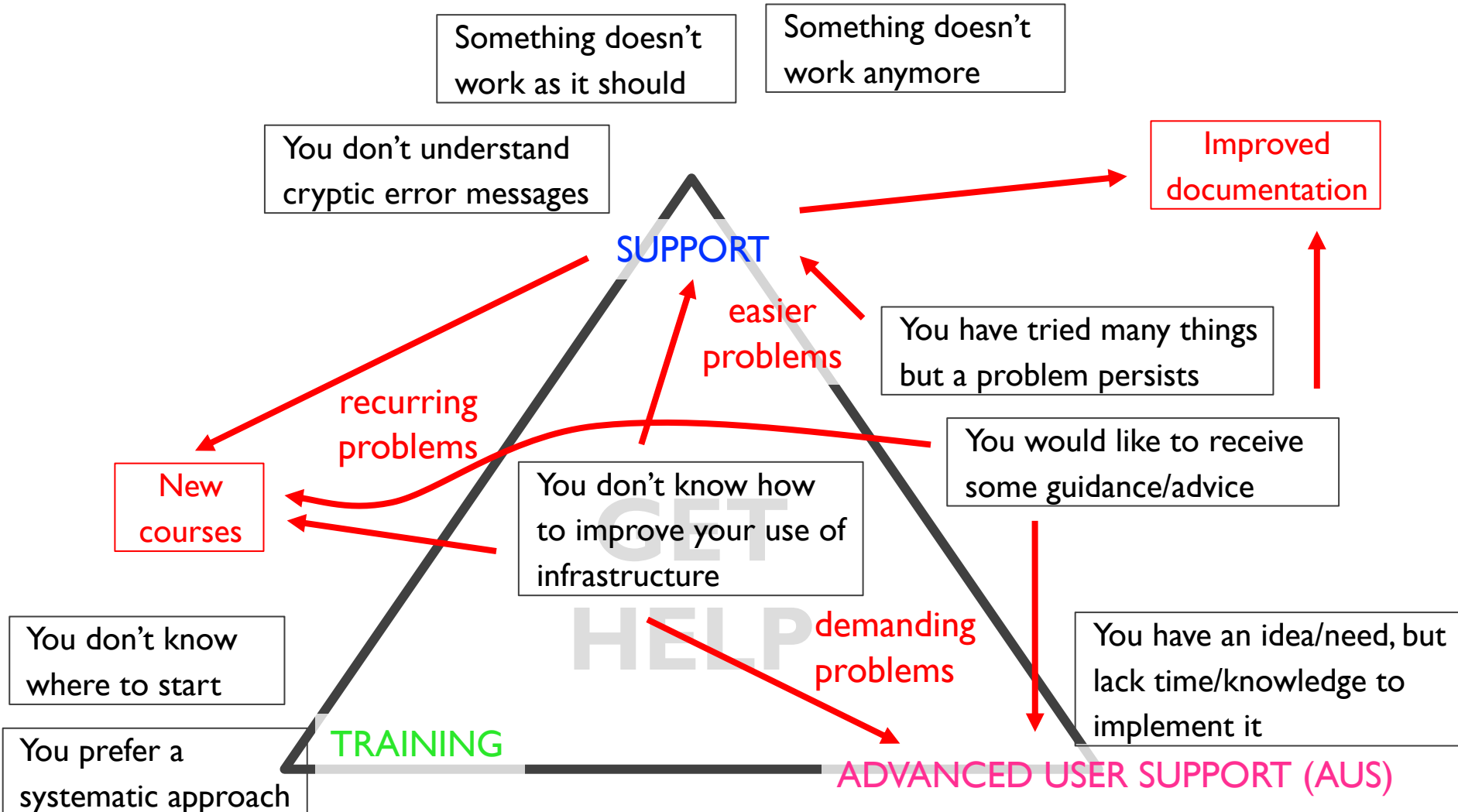
GET HELP

You prefer a systematic approach

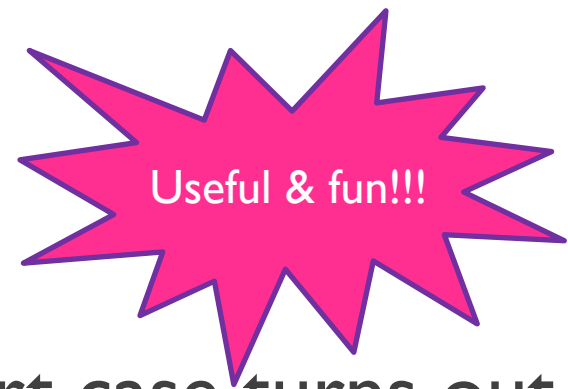
TRAINING

ADVANCED USER SUPPORT (AUS)





ADVANCED USER SUPPORT



You can apply for it!

We may trigger it when a support case turns out to be too demanding.

Different types: (1) Project-based, (2) Discipline-specific, (3) User Liaisons

For details and application see

<https://www.sigma2.no/advanced-user-support>

TRAINING / EVENTS

Locally organised courses.

- ➔ Striving for coordination with other universities.
- ➔ Let us know what training (topics) you need.

Nationally organised courses.

Events related to current and future infrastructures.

For more information see

<https://www.sigma2.no/events>

SUPPORT

Solving (smaller) problems in day-to-day use of resources & services.

All technical questions: support@metacenter.no

All administrative questions (applications for user accounts, project accounts, extensions of CPU hours/storage for projects): sigma2@uninett.no

SUPPORT TEAM

Distributed over Metacenter partners: NTNU, Sigma2, UiB, UiO & UiT.

Tries to solve all problems unless they require expert knowledge → involves other teams.

Standard working hours: 08:00–16:00 Mo–Fr

How to contact the support team? How is a request handled?

Via email (support@metacenter.no).

Support team tries to understand the problem, may ask for more information to reproduce the problem and will eventually provide a solution.

Solution could involve changes on resources (fixing issues) and/or changes on the user side (changing scripts, cleaning up data, recommendations what tools could be used, ...).

Be as precise and concise as possible!

How to get problems solved quickly?

The support team receives dozens requests daily – every request may be different and may require a different solution.

Be as precise and concise as possible when contacting user support!

What information helps the support team? 1/2

Email subject – brief description (job issue, file system, login, software installation, deleted file, ... on Saga/Fram/Betzy/NIRD/...)

Who – your username and project account

Where – Saga/Fram/Betzy/NIRD storage/NIRD Toolkit/... + hostname

When – just now, at about 09:15 today, in job 1234567, ...

What – ...

What information helps the support team? 2/2

What

- what did you try to do and what was the result/observed behaviour/error message/...
 - copy paste of commands and their outputs
 - job script(s), job id(s), submission command, submission directory, slurm-JOBID.out, directory with input/output data
- what would you like the support team do for you (extending a job, retrieving a file from backup, help to understand some behaviour/error, ...)
- what documentation (internal/external) you might have consulted to do something or to solve a problem

What if you don't have all this information?

Don't worry, the support team will help you!

It may just take a little bit more time.

GETTING HELP ELSEWHERE

Not all problems may require assistance from the support team.

What can you do yourself?

- Ask a colleague.
- Consult our <https://documentation.sigma2.no>
- Use `man` pages on the systems.
- Try to find information/solution on the WWW (Google)
- Find other (online) courses/tutorials ...

NO EXERCISES HERE

Rather sooner than later you will experience some problems.

Don't hesitate to contact us! Try to remember the recommendations on these slides.

You'll find additional information in our documentation, e.g.,

https://documentation.sigma2.no/getting_help/support_line.html

https://documentation.sigma2.no/getting_help/how_to_write_god_support_requests.html

Curious to meet the support staff?

We organise regular Zoom meetings open to everyone!

Objective: Learn new tricks and ask & discuss questions

For details and next meetings see

https://documentation.sigma2.no/getting_help/qa-sessions.html

Recap UNIX, HPC & NIRD Toolkit

Recap: UNIX, HPC & NIRD Toolkit

- UNIX: login & most useful commands
- HPC: what is it, how to use HPC systems: software modules, jobs, storage, data transfers
- NIRD Toolkit: introduction, example applications
- How to get help

What can you do now?

- Get more comfortable with UNIX, HPC systems and NIRD Toolkit by using them!
- Repeat command examples & exercises on the slides.
- Let us know what other topics you would like to learn about.

What we will do?

- We will review the course, adjust the content, etc.
 - Will repeat the course next year. Let your colleagues know if they are new to UNIX, HPC or NIRD Toolkit.
- We will start planning additional lectures/courses
 - One possible approach: more in-depth lectures focusing on specific topics, e.g., parallel jobs, installing software, ...
 - Please let us know what is interesting for you. Also what level you prefer (beginner, intermediate, advanced).

Feedback form

Please, help us getting better by filling out the anonymous form at

<https://skjemaker.app.uib.no/view.php?id=9260040>

THANKS!

To users for attending the courses (UNIX, HPC & NIRD Toolkit).

To Sigma2/Marius Linge for helping creating dozens of new accounts on short notice!!!

To members of Scientific Computing group at UiB for helping to resume training services at UiB.