

# LUMI

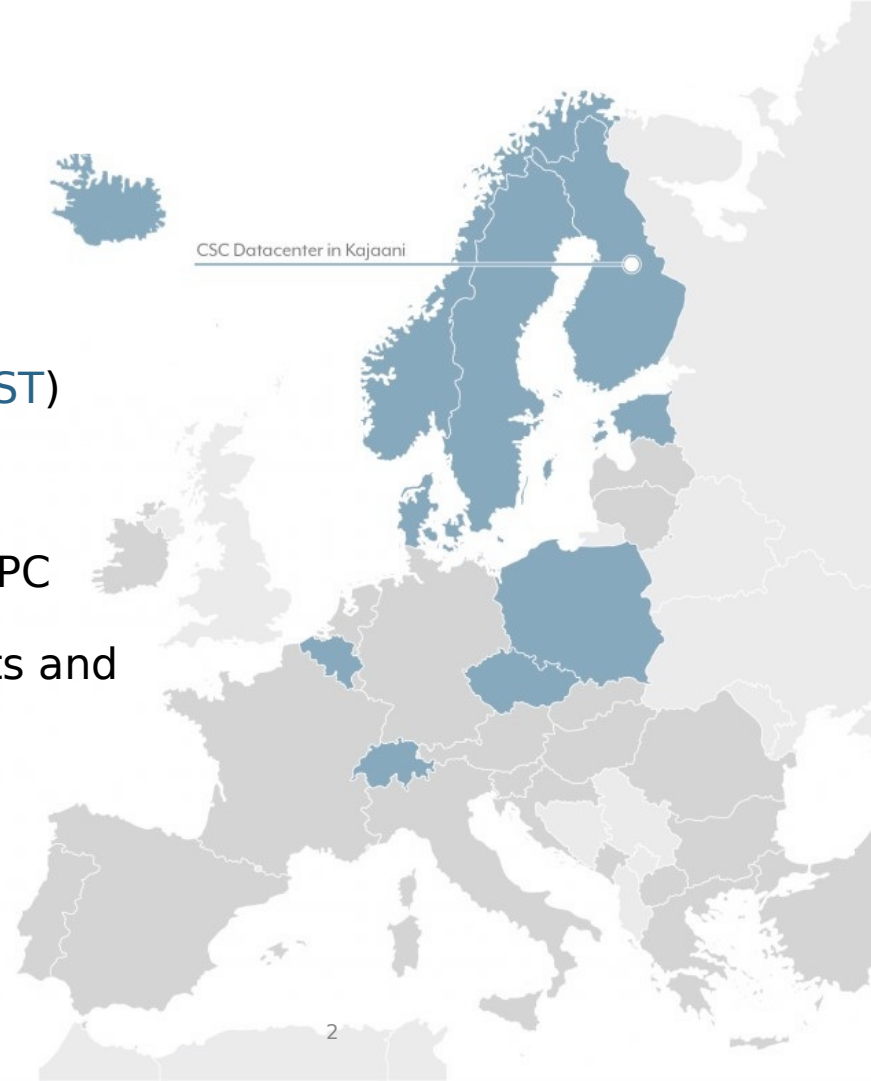


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LUMI User Support

# How is the LUMI support organized?

- Centralized virtual help desk run by the distributed LUMI User Support team (LUST)
  - The model is based on a network of dedicated HPC experts
  - Each partner provides 1 FTE
- Level-3 support via local centers, EuroHPC Competence Centers, HPE and AMD
- National support for issues with accounts and allocations



# Getting help

## LUST offers

- Extensive **documentation**  
<https://docs.lumi-supercomputer.eu>
- **Help desk** (also for future users)  
<https://lumi-supercomputer.eu/user-support/need-help>
- **Trainings** in connection with HPE
- **Porting calls** (1-2 times per year)
- Monthly **public coffee breaks**  
to discuss problems
- Collaboration with local organisation to  
offer advanced software specific help



# Helping yourself

docs.lumi-supercomputer.eu

Divided into 5 main sections

## LUMI Documentation

[Intro](#) [First steps](#) [Hardware](#) [Run jobs](#) [Software](#) [Developing](#) [Help desk](#)

### Hardware

[Overview](#)

[Interconnect](#)

### Compute nodes

[CPU nodes - LUMI-C](#)

[GPU nodes - LUMI-G](#)

[Data analytics nodes - LUMI-D](#)

[GPU Early Access Platform](#)

### Storage

[Main storage - LUMI-P](#)

[Flash storage - LUMI-F](#)

## Overview

Here you find a description of the LUMI system architecture and the different hardware partitions available on LUMI.

LUMI is one of the three European pre-exascale supercomputers. It's an HPE Cray EX supercomputer consisting of several hardware partitions targeted different use cases.

All of the hardware partitions are connected via a HPE Slingshot 11 high-speed [interconnect](#). As of 06/2022, LUMI ranks third on the [top500.org](#) list.

# Getting help from us

Available **Monday to Friday** 8:00–18:00 CE(S)T

<https://lumi-supercomputer.eu/user-support/need-help>

**L U M I**

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[Get Started](#)

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[User Support](#)



[User Support](#) → [Need help?](#)

[LUMI Documentation](#)

[FAQ](#)

[Need help?](#)

[Service breaks](#)

## Need help?

If you did not find what you were looking for in our documentation or in the FAQs section, contact our Support Team!

Choose the section which best fits your needs and contact our experts.

Please be as detailed as possible in describing your issue and include your full name and organization, this will help us in solving your problem promptly.

### General



General enquirers about LUMI, LUMI documentation, trainings and any other question.

### Account



Problems related to accounts on LUMI, login issues, and access.

# The ticketing system

- Typically 3-10 new requests per day (but soon more)
- A new form opens a "ticket"
- The first thing we see is the subject
- Each new ticket gets a new number
- Reply to email/ticket is filed under the same number
- Tickets/issues have owners but owners can change

^ [ToDo: All active tickets](#) (Found 74 tickets)

#	Subject	Status	Priority	Owner	Category
	Requestor	Created	Told	Last Updated	Tags
1168	<b>Managed memory on LUMI</b> <[redacted]@ntnu.no>	open 2 hours ago	Low 83 minutes ago	[redacted]@eth.se (Peter Larsson) 49 minutes ago	general-info
1167	<b>[CSC #587053] Re: LUMI supercomputer access granted</b> <[redacted]@meteo.be>	open 7 hours ago	Low 5 hours ago	jorn.dietze@uit.no (Jørn Dietze) 5 hours ago	

# How **not** to write a ticket

## Problems on LUMI

Hi,

I have problems logging into LUMI. Can you help me?

Thanks

John Doe

# How to write a ticket

## Sudden SSH login issue

Hi,

I am user "johndoe" on the cluster LUMI with the project XXXX and since this morning I can't log in anymore.

I have tried to log into one of my local clusters and this works.

I use ssh keys to log in and the error that I get since this morning is:

```
$ ssh lumi
```

```
johndoe@lumi: Permission denied
```

```
(publickey,gssapi-keyex,gssapi-with-mic,password,hostbased).
```

Thank you in advance for help/advice on how to solve this,

John Doe



# Create a ticket for **each** issue

- Don't reuse old emails with new problems
- New ticket with new subject line
- Easier for us to categorize & prioritize
- Faster answer
- But if persistent or connected issue  
--> Reply to email and keep ticket number

# Give descriptive & specific subject line

- Subject line the first thing we see
- Helps us categorize & prioritize your issue
- Include keywords like software used or research field
- Some examples
  - “Problem on LUMI”
  - “Installation issue”
  - “ICON installation requires libxml2”

# Provide context

- Username
- Which part of the machine (LUMI-C/LUMI-G)?
- Which software?
- Tell us about your environment
  - Modules loaded
  - How was the software installed?
  - Special stuff in your `.bashrc`
  - How does your runscript look like?

# Tell us what you have done **before**

- What worked so far?
- What changed?
- What did you try to solve the issue?
- “I cannot get X to run on two nodes” doesn’t mention whether it runs on one node

# Describe the **original** problem and **intent**

Often we know the solution but we don't know the problem

- Tell us your ultimate goal
- Original problem is sometimes masked by different problem
- XY problem (<http://xyproblem.info>)

# Describe the **original** problem and **intent**

In short (quoting from <http://xyproblem.info>):

- User wants to do X
- User thinks that Y is a way to solve X
- User tries Y and hits a problem
- User asks for help with Y
- After much interaction it becomes clear that the user really wants help with X, and that Y wasn't even a suitable solution for X

# Create an **example**

- If possible send us an example demonstrating the problem
- Making the example smaller often simplifies the problem
- This process can help identifying the reason
- Reduce the number of possible reasons
- Eases our work
  - Helps narrow issue down
  - Saves time and resources
    - More resources for helping users

# Take our **restrictions** into account

LUST doesn't have elevated privileges on LUMI

- Can't access your files → send us error messages and jobscripts
- Can't install/modify system packages or settings
- Can't extend walltime of jobs
- But we are in close contact to sys admins



# Writing **good** support requests

- Create a ticket for each issue
- Give descriptive and specific subject line
- Provide context
- Tell us what you have done before
- Describe the original problem and intent (the XY problem)
- Create an example which reproduces the problem
- Take our restrictions into account

# What can LUST **not help** you with?

- Installing software for you
- Project management (increasing compute/storage quotas)
- Introduction to HPC
- Complex/time consuming trouble shooting of your own code
- Providing advice with application specific/scientific problems
- Optimize code for you

# What **can** LUST help you with?

- Login issues
- Help in preparing software installation recipes
- Job crashed & Slurm issues
- Poor performance
- Help with installing/compiling software
- Questions regarding compute and storage resources
- Limited work on adapting code to LUMI

**We are here to help you**

LUST can't do your work but we can  
**support** you in many aspects of your work.

# LUMI

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[www.lumi-supercomputer.eu](http://www.lumi-supercomputer.eu)

[contact@lumi-supercomputer.eu](mailto:contact@lumi-supercomputer.eu)



**EuroHPC**  
Joint Undertaking



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2014–2020



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**Kainuun liitto**