

# Getting Help with Research Computing

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# Slides

[https://github.com/ResearchComputing/hpc\\_fundamentals\\_micro\\_credential](https://github.com/ResearchComputing/hpc_fundamentals_micro_credential)

- In “asking\_for\_help” directory



# Learning Objectives

1. What resources do I have available?
2. How do I choose which resource is best?
3. How can I compose an effective ticket?

# Things to take note of:

- HPC can have confusing, ambiguous, highly nuanced concepts
- CURC User Support is here to alleviate some of the confusion around HPC!



**Ask Questions!**

# Help! I'm stuck, where do I go?

- **CURC Documentation:** [curc.readthedocs.io](https://curc.readthedocs.io)
- **External Resources**
  - Rocky Mountain Advanced Computing Consortium (RMACC) Cyber Infrastructure Portal
  - The Internet! (Stack Overflow, YouTube, etc.)
- **Trainings & Consults with Center for Research Data and Digital Scholarship (CRDDS)**
- **CURC Helpdesk:** [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

# When should I use these?

- **Documentation:** [curc.readthedocs.io](https://curc.readthedocs.io)
  - Useful at any time! Check the documentation first when you run into issues.
- **External Resources**
  - Useful for learning a new skill or initial troubleshooting. Great first place to look.
- **Trainings with Center for Research Data and Digital Scholarship**
  - Useful for broad, long-term learning
  - Drop-in consult hours are held Tue (12-1p) and Thu (1-2p) during the Fall and Spring semesters
- **CURC Helpdesk:** [rc-help@colorado.edu](mailto:rc-help@colorado.edu)
  - Useful for quick, personalized assistance. We can schedule Zoom consults if needed.


# Our Documentation

Located at: <https://curc.readthedocs.io>


The screenshot displays the 'Research Computing User Guide' page from the 'curc.readthedocs.io' website. The page has a dark blue header with the 'Research Computing University of Colorado Boulder' logo and a 'latest' version indicator. A search bar is located below the header. The left sidebar contains a navigation menu with categories like 'Frequently Asked Questions', 'ACCESSING RC RESOURCES', 'THE COMPUTE ENVIRONMENT', 'CLUSTERS', and 'RUNNING JOBS'. The main content area is titled 'Research Computing User Guide' and includes a 'Docs » Research Computing User Guide' breadcrumb, an 'Edit on GitHub' link, and a list of quick links: 'Logging In', 'Research Computing Filesystems', 'Compiling Software', 'Batch Jobs', 'The Module System', and 'Frequently Asked Questions (FAQ)'. It also features a feedback link, a link to the UCB RC homepage, and contact information for help. The bottom of the page shows a 'Read the Docs' button and a version dropdown set to 'v: latest'.

# CRDDS trainings and consult hours

View upcoming events at: <https://www.colorado.edu/crdds/events>

 University of Colorado **Boulder**

## Center for Research Data & Digital Scholarship


 What We Do   Our People   Opportunities   Learning Materials   **Events**   Contact Us   News

### Events

CRDDS offers a variety of workshops and other events that are open to all faculty, staff, students, and community members.


**All Events**


- All Things Data
- Coding & Digital Tools
- Research Computing
- Scholarly Publishing
- Digital Humanities
- Drop-In Consultations



**Research Computing Summer Camp**

Join us for the 2023 Research Computing Summer Camp! This five-day workshop is intended to give attendees a comprehensive overview of Research Computing - complete with with...

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 9AM

[I'm Interested](#)



# External Resources - RMACC Cyber Infrastructure Portal



- <https://ask.cyberinfrastructure.org/c/rmacc/65>
- This forum provides opportunity for RMACC members to converse amongst themselves and with the larger, global research computing community.
- The “go to” general Q&A platform for the global research computing community - researchers, facilitators, research software engineers, CI engineers, sys admins and others.

# Composing an effective ticket

# Helpdesk Tickets: sub-optimal vs optimal (1)

To: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

Dear Research Computing,

Help! My code won't run! Help!

Help please,  
Andy

To: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

Dear Research Computing,

I am running into issues running my Python script. I am using a conda environment called `my_python_env` with the pytorch software, and I am receiving the following error. I am not sure how to troubleshoot. My job ID is 620350. Let me know what I can try!

`srun: fatal: SLURM_MEM_PER_CPU,  
SLURM_MEM_PER_GPU, and  
SLURM_MEM_PER_NODE are mutually exclusive.`

Thanks,  
Andy

# How can I compose an effective ticket? (1)

- Provide detail!
  - Specify your goal, your Job ID (if applicable), and the issue you are encountering.
    - Specific error messages, error codes, or descriptions of behavior are all helpful. The more information you can provide, the better.
  - Provide job specifics!
    - Which environment or software are you using? What hardware are you taking advantage of? The more information you can provide, the better.

# Helpdesk Tickets: sub-optimal vs optimal (2)

To: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

Dear Research Computing,

Hello, I am having trouble running my job. My job ID is 620350. The job loads in 1 TB of data, on which I am running some scikit-learn operations. The job has a wall clock time of 96 hours.

Thanks,  
Andy

To: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

Dear Research Computing,

Hello, I am having trouble running my job. My job ID is 620350. The job loads in 1 TB of data, on which I am running some scikit-learn operations. I have provided a 10GB test dataset here. The job has a wall clock time of 96 hours, but can be run with the smaller dataset in two hours.

Thanks,  
Andy

[attachment: File (10GB)]



# How can I compose an effective ticket? (2)

- Provide detail!
- Scale down your workflows for testing!
  - It is a challenge to quickly troubleshoot massive workflows, even for us.
  - If you'd like us to test your workflows using data, please provide a reduced version of the data for testing purposes.

# Helpdesk Tickets: sub-optimal vs optimal (3)

To: [Andrew.Monaghan@colorado.edu](mailto:Andrew.Monaghan@colorado.edu)

Dear Research Computing,

I am running into issues running my Python script. I am using a conda environment called `my_python_env` with the pytorch software, and I am receiving the following error. I am not sure how to troubleshoot. My job ID is 620350. Let me know what I can try!

`srun: fatal: SLURM_MEM_PER_CPU, SLURM_MEM_PER_GPU, and SLURM_MEM_PER_NODE are mutually exclusive.`

Thanks,  
Andy

To: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

Dear Research Computing,

I am running into issues running my Python script. I am using a conda environment called `my_python_env` with the pytorch software, and I am receiving the following error. I am not sure how to troubleshoot. My job ID is 620350. Let me know what I can try!

`srun: fatal: SLURM_MEM_PER_CPU, SLURM_MEM_PER_GPU, and SLURM_MEM_PER_NODE are mutually exclusive.`

Thanks,  
Andy

# How can I compose an effective ticket? (3)

- Provide detail!
- Scale down your workflows for testing!
- Email our helpdesk!
  - We will be significantly more responsive to emails which arrive at our helpdesk than other inboxes.
  - Please do not email us personally. If an issue is particularly urgent, please indicate 'URGENT' in the subject line of your ticket.



# Helpdesk Tickets: sub-optimal vs optimal (4)

To: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

Dear Research Computing,

Can you install pytorch for me?

Thanks,  
Andy

To: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

Dear Research Computing,

I am looking to utilize PyTorch to use in conjunction with AMD GPUs. I have tried an anaconda installation and have so far been unsuccessful. Could you please help me complete this install?

Thanks,  
Andy

# How can I compose an effective ticket? (4)

- Provide detail!
- Scale down your workflows for testing!
- Email our helpdesk!
- Try a few things and let us know what you've tried!
  - We are not just being lazy – it helps us contextualize the issue.
  - We would likely try the same things as you – if you can eliminate potential solutions, it will help us get to a solution more quickly.

# How can I compose an effective ticket? (summary)

- Provide detail!
- Scale down your workflows for testing!
- Email our helpdesk!
- Try a few things and let us know what you've tried!

# Items We've Covered

1. What resources do I have available?
2. How do I choose which resource is best?
3. How can I compose an effective ticket?

# Questions?

# Thank you!

## Survey and feedback

<http://tinyurl.com/curc-survey18>

