



# Getting Help with Research Computing

# Getting Help with Research Computing

Instructor: Trevor Hall

- Website: [www.rc.colorado.edu](http://www.rc.colorado.edu)
- Helpdesk: [rc-help@colorado.edu](mailto:rc-help@colorado.edu)
- Slides: [https://github.com/ResearchComputing/Summer\\_Camp\\_2023](https://github.com/ResearchComputing/Summer_Camp_2023)
- Survey: <http://tinyurl.com/curc-survey18>

# Learning Goals

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

# Things to take note of:

- HPC is comprised of 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?

- **Documentation:** [curc.readthedocs.io/](http://curc.readthedocs.io/)
- **External Resources**
  - RMACC Cyber Infrastructure Portal
  - The Internet! (Man Pages, YouTube, etc.)
- **Trainings with Center for Research Data and Digital Scholarship**
- **Helpdesk:** [rc-help@colorado.edu](mailto:rc-help@colorado.edu)

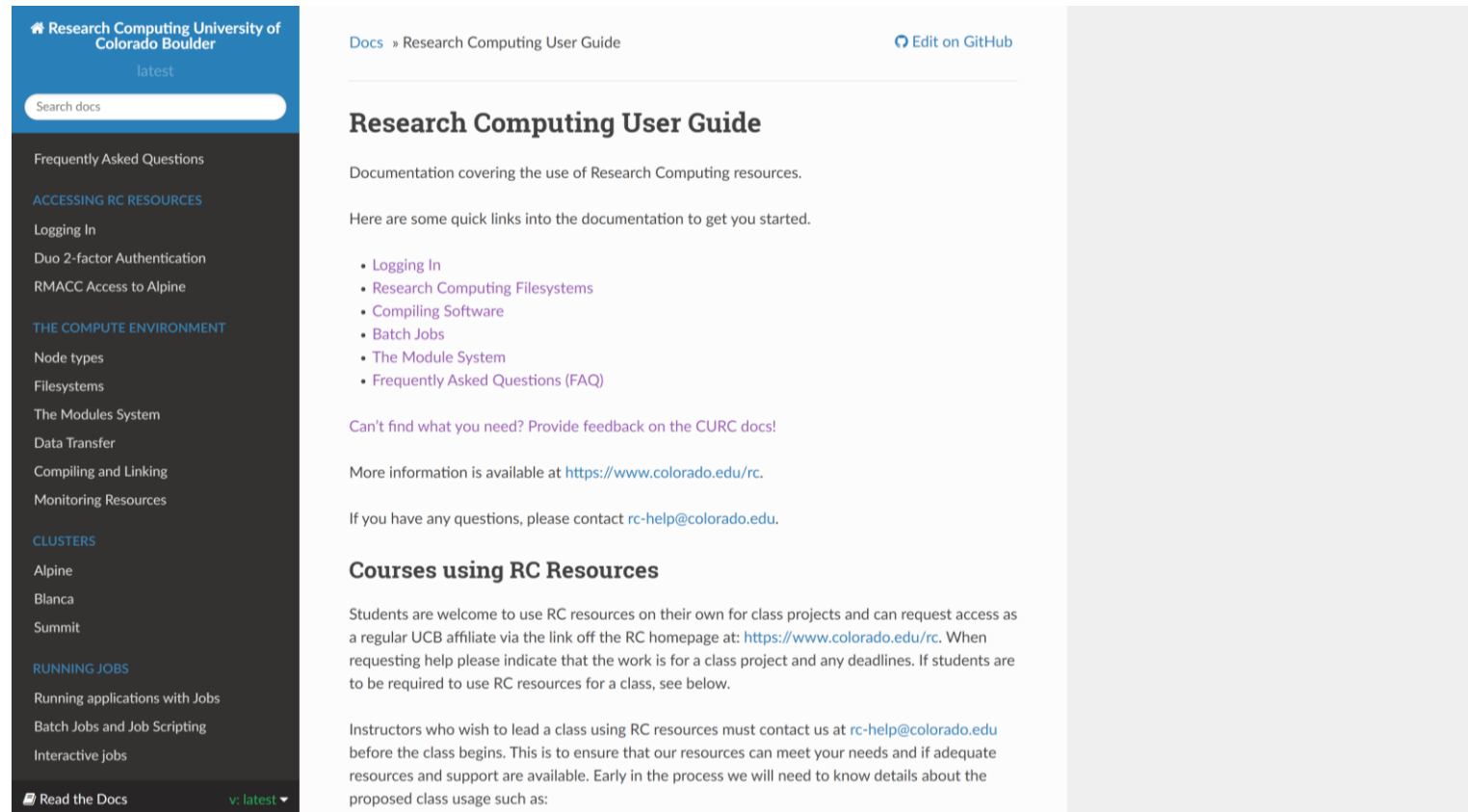
# When should I use these?

- **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.
- **Helpdesk:** [rc-help@colorado.edu](mailto:rc-help@colorado.edu)
  - Useful for quick, personalized assistance.
- **Trainings with Center for Research Data and Digital Scholarship**
  - Useful for broad, long-term learning



# Our Documentation

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



The screenshot displays the 'Research Computing User Guide' page on the Read the Docs platform. The left sidebar features a navigation menu with categories like 'ACCESSING RC RESOURCES', 'THE COMPUTE ENVIRONMENT', 'CLUSTERS', and 'RUNNING JOBS'. The main content area is titled 'Research Computing User Guide' and includes a search bar, a list of frequently asked questions, and a list of quick links to various documentation topics. The page also contains a feedback link and contact information for the Research Computing team.

Research Computing University of Colorado Boulder

latest

Search docs

Frequently Asked Questions

ACCESSING RC RESOURCES

Logging In

Duo 2-factor Authentication

RMACC Access to Alpine

THE COMPUTE ENVIRONMENT

Node types

Filesystems

The Modules System

Data Transfer

Compiling and Linking

Monitoring Resources

CLUSTERS

Alpine

Blanca

Summit

RUNNING JOBS

Running applications with Jobs

Batch Jobs and Job Scripting

Interactive jobs

Read the Docs v: latest

Docs » Research Computing User Guide Edit on GitHub

## Research Computing User Guide

Documentation covering the use of Research Computing resources.

Here are some quick links into the documentation to get you started.

- [Logging In](#)
- [Research Computing Filesystems](#)
- [Compiling Software](#)
- [Batch Jobs](#)
- [The Module System](#)
- [Frequently Asked Questions \(FAQ\)](#)

Can't find what you need? [Provide feedback on the CURC docs!](#)

More information is available at <https://www.colorado.edu/rc>.

If you have any questions, please contact [rc-help@colorado.edu](mailto:rc-help@colorado.edu).

## Courses using RC Resources

Students are welcome to use RC resources on their own for class projects and can request access as a regular UCB affiliate via the link off the RC homepage at: <https://www.colorado.edu/rc>. When requesting help please indicate that the work is for a class project and any deadlines. If students are to be required to use RC resources for a class, see below.

Instructors who wish to lead a class using RC resources must contact us at [rc-help@colorado.edu](mailto:rc-help@colorado.edu) before the class begins. This is to ensure that our resources can meet your needs and if adequate resources and support are available. Early in the process we will need to know details about the proposed class usage such as:

# CRDDS Trainings and Workshops

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

The screenshot shows the CRDDS website. At the top is the University of Colorado Boulder logo and name. Below is a dark header for the "Center for Research Data & Digital Scholarship". A navigation bar includes links for "What We Do", "Our People", "Opportunities", "Learning Materials", "Events" (which is highlighted), "Contact Us", and "News". The "Events" section is titled "Events" and includes a paragraph stating that CRDDS offers a variety of workshops and other events open to all faculty, staff, students, and community members. Below this is a section titled "All Events" with a sidebar menu listing categories: "All Things Data", "Coding & Digital Tools", "Research Computing", "Scholarly Publishing", "Digital Humanities", and "Drop-In Consultations". The main content area features a card for the "Research Computing Summer Camp". The card includes a photo of a laptop in a field, the dates "MAY 22 - MAY 26", a description: "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...", the location "NORLIN LIBRARY", the time "9AM", and an "I'm Interested" button.

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...

📍 NORLIN LIBRARY

🕒 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.

# How can I submit an effective ticket?

# Helpdesk Tickets

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

Dear Research Computing,

Help! My code won't run!  
Help!

Help please,  
Trevor

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,  
Trevor

# How can I submit an effective ticket?

- 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

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,  
Trevor

To: 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,  
Trevor

[attachment: File (10GB)]

# How can I submit an effective ticket?

- 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

To: [trevor.hall@colorado.edu](mailto:trevor.hall@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,  
Trevor

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!

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SLURM\_MEM\_PER\_NODE are mutually exclusive.

Thanks,  
Trevor

# How can I submit an effective ticket?

- 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

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

Dear Research Computing,

Can you install pytorch for me?

Thanks,  
Trevor

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,  
Trevor

# How can I submit an effective ticket?

- 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 you have – if you can eliminate potential solutions, it will help us get to a solution more quickly.

# How can I submit an effective ticket?

- 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 submit an effective ticket?



# Questions?