

Getting Help with Research Computing

August 12, 2024

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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
- **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

When should I use these?

- **Documentation:** 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
 - 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 is dark grey and contains a list of navigation links categorized by topic: 'Frequently Asked Questions', 'ACCESSING RC RESOURCES' (including 'Logging In', 'Duo 2-factor Authentication', and 'RMACC Access to Alpine'), 'THE COMPUTE ENVIRONMENT' (including 'Node types', 'Filesystems', 'The Modules System', 'Data Transfer', 'Compiling and Linking', and 'Monitoring Resources'), 'CLUSTERS' (including 'Alpine', 'Blanca', and 'Summit'), and 'RUNNING JOBS' (including 'Running applications with Jobs', 'Batch Jobs and Job Scripting', and 'Interactive jobs'). The main content area is white and features the title 'Research Computing User Guide' with a link to 'Edit on GitHub'. Below the title, it states 'Documentation covering the use of Research Computing resources.' and provides 'quick links into the documentation to get you started.' These links include 'Logging In', 'Research Computing Filesystems', 'Compiling Software', 'Batch Jobs', 'The Module System', and 'Frequently Asked Questions (FAQ)'. Further down, there are links for 'Can't find what you need? Provide feedback on the CURC docs!', 'More information is available at https://www.colorado.edu/rc.', and 'If you have any questions, please contact rc-help@colorado.edu.'. The bottom section is titled 'Courses using RC Resources' and explains that students can request access to RC resources for class projects and that instructors must contact rc-help@colorado.edu before using them. A footer at the bottom left shows the University of Colorado Boulder logo and the text 'Research Computing UNIVERSITY OF COLORADO BOULDER'.

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.


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 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 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

Dear Research Computing,

Help! My code won't run! Help!

Help please,
Andy

To: 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

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

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

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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Thanks,
Andy

To: rc-help@colorado.edu

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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

Dear Research Computing,

Can you install pytorch for me?

Thanks,
Andy

To: 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>

