Getting Help with Research Computing

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Slides

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?

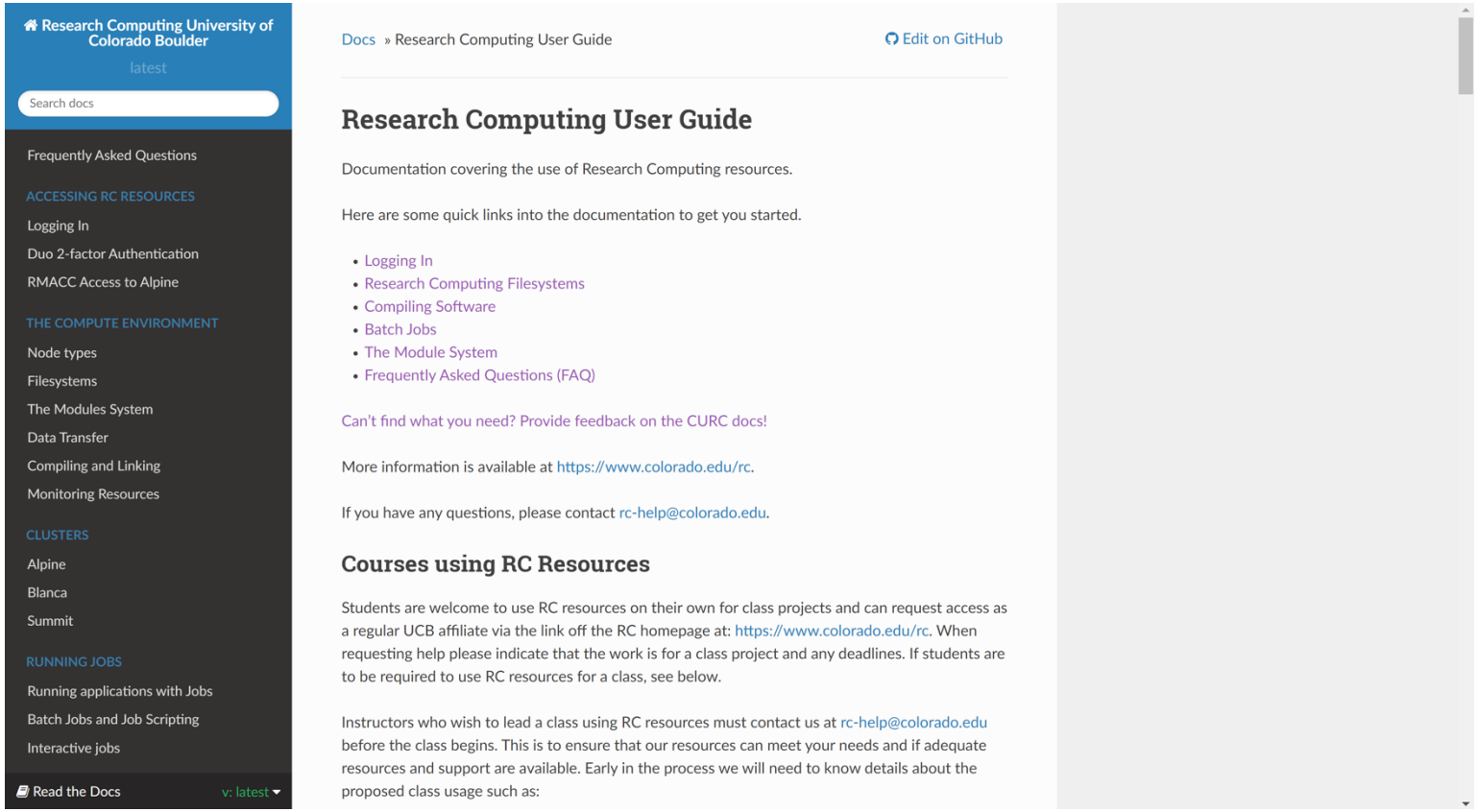
- **CURC Documentation**: curc.readthedocs.io
- **External Resources**
  - Rocky Mountain Advanced Computing Consortium (RMACC) Cyber Infrastructure Portal
  - The Internet! (Stack Overflow, YouTube, etc.)
- **Trainings & Consults with Center for Research Data and Digital Scholarship (CRDDS)**
- **CURC 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.

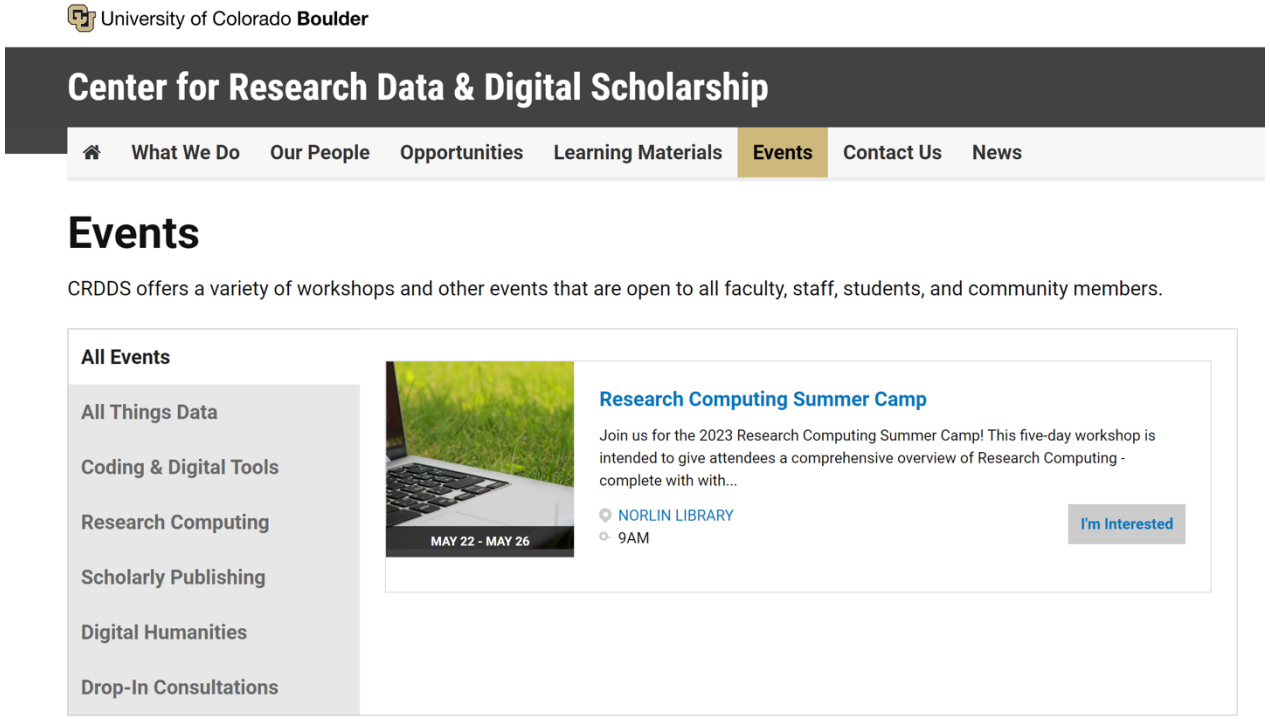
Our Documentation

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



CRDDS trainings and consult hours

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



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!

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

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

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