High Performance Computing

Training Workshops and Documentation

UofM-Spring-Workshop 2023
May 17th-19th, 2023

Ali Kerrache

HPC Analyst

★ Workshops and Training
  ○ Local workshops
  ○ Trainings from the Alliance and its partners

★ Getting Help
  ○ How to ask for help?

★ Documentation
  ○ Grex
  ○ The Alliance

Local workshops and training

Contact us for:

support@tech.alliancecan.ca

★ In person session:
  ○ Onboard a beginner on Grex and the Alliance clusters.
  ○ Discussion about a given problem.
★ Group session

Autumn workshop, Oct 2022

- Program and updates
- High Performance Computing: Start Guide
- High Performance Computing and software environments
- OSC OpenOnDemand portal on Grex

Spring workshop, May 2022

- Introduction to local and National HPC at UManitoba
- Introduction to High Performance Computing step by step
- Using GP GPU compute on Grex
- High Performance Computing and software environments
- OSC OpenOnDemand portal on Grex

Autumn workshop, November 2021

Slides from Day 1 (Nov 1, 2021):

- Introduction To HPC
- Basics of Linux Shell

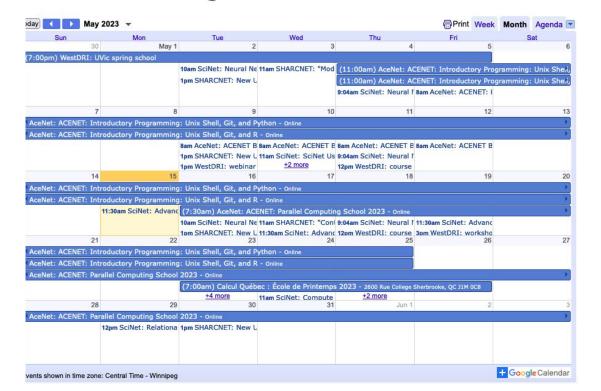Slides from Day 2 (Nov 2, 2021):

- HPC software environments

https://um-grex.github.io/grex-docs/docs/longread/training/

★ Regular meetings for beginners.

★ Workshops from all Alliance regional partners:
  - AceNET
  - Calcul Quebec
  - Compute Ontario
  - BC DRI group
  - Prairies DRI group

★ Field oriented subjects

Information required [edit]

To help us help you better, please include the following information in your support request:

- Cluster name
- Job ID
- Job submission script: you can either give the full path of the script on the cluster; copy and paste the s
- File or files which contain the error message(s): give the full path of the file(s); copy and paste the file(s
- Commands that you were executing
- Avoid sending screenshots or other large image attachments except when necessary - the plain text of
- Software (name and version) you were trying to use
- When did the problem happen?
- If you want us to access, copy or edit your files, or inspect your account and possibly make changes th ... ching files to an email, you may indicate
  where they are located in your account and give us permission to access them. If you have already gra ... then you do not need to do it again in your
  support request.

Things to beware [edit]

- **Never send a password!**
- Maximum attachment size is 40 MB.

Contact support:

support@tech.alliancecan.ca

https://status.alliancecan.ca/

➔ Do not send your password
➔ Case by case agreement
➔ Agreement to access your data

Provide enough information:
★ Name of the cluster
★ Job Id's, path to your files
★ Program, modules, …
★ Describe the problem

★ Avoid sending large files
★ Avoid sending images when possible.

https://docs.alliancecan.ca/wiki/Technical_support

Home | My Account▾ | Resource Application
- View Group Usage
- My Resources and Allocations
- Request access to other clusters
- Manage RAP memberships
- Apply for a New Role
- Contact information
- Manage SSH Keys
- Multifactor Authentication Management
- Manage Shell
- Change Password
- Agreements

Grex documentation

Unofficial Grex User Guide

Search

Notes of Grex Changes

Accessing Compute Canada resources

Grex HPC Documentation

Access and Usage conditions

Connecting / Transferring data

Storage and Data

Running Jobs

Software

Frequently Asked Questions

Local IT Resources

Support and Training

Disclaimer

User documentation for HPC resources at University of Manitoba

Since you have found this Website, you may be interested in Grex documentation. Grex is the University of Manitoba's High-Performance Computing system.

User documentation for HPC resources at University of Manitoba

For experienced Grex users

For new Grex users
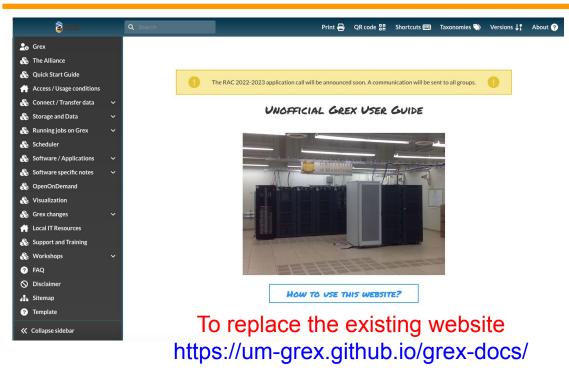
A Very Quick Start guide

Useful links

- Updating the documentation after adding the new hardware.

- Hosted on GitHub

- The link is available as MOTD when login to Grex.

https://um-grex.github.io/grex-docs/

Grex documentation: new website

To replace the existing website
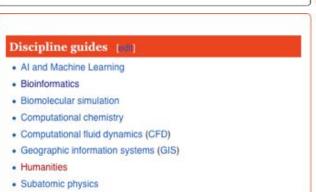https://um-grex.github.io/grex-docs/

Online soon !

The Alliance [Compute Canada] wiki

- Systems and services
- Guides

- Links to specific documentation by disciplines
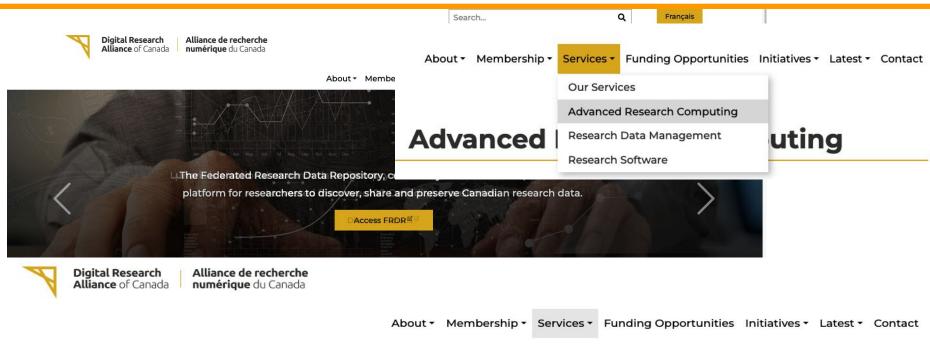- Links to the documentation from regional partners

Systems and services [edit]

- List of current Compute Canada systems
- Cedar, Graham and Béluga, general-purpose clusters
  - System status and **upcoming outages**
  - Known issues
- Niagara, a cluster designed for large parallel jobs
- Hélios, a GPU cluster
- Available software
- National Data Cyberinfrastructure, long-term and tape storage services (limited availability)
- Cloud computing service
- Globus file transfer service
- Policy table of contents
- FAQ, Frequently Asked Questions
- Using a resource allocation, a guide for Principal Investigators
  - RAC 2019 transition FAQ, notes on the implementation of 2019 RAC awards

How-to guides [edit]

- Getting started
  - Getting started with the new national systems (mini-webinar series)
  - Niagara Quick Start Guide
  - SSH - How to connect to our servers
  - Linux introduction
- Storage and file management
  - Transferring data
  - Scratch purging policy
- Best practices for data migration
- Using modules to access software
- Running jobs
- Installing software yourself
- Programming guide
- Visualization
- How to get technical support

Discipline guides [edit]

- AI and Machine Learning
- Bioinformatics
- Biomolecular simulation
- Computational chemistry
- Computational fluid dynamics (CFD)
- Geographic information systems (GIS)
- Humanities
- Subatomic physics

Regional partners and services [edit]

- WestGrid
- SHARCNET
- SciNet
- Centre for Advanced Computing
- Calcul Québec
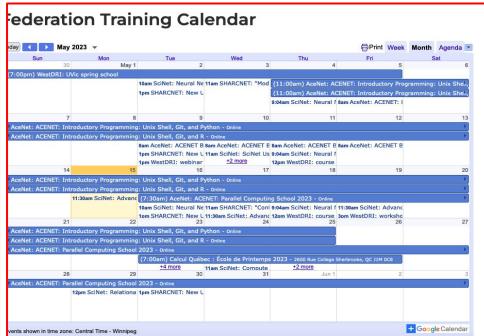- ACENET
- ownCloud storage service

Alliance website

current and upcoming trainings

https://training.westdri.ca/

https://alliancecan.ca/en

Thank you for your attention

Any question?