

Introduction to the University of Aberdeen HPC Cluster and Basic Unix Skills

A Beginners Guide to HPC and Unix for Genomics

Date: 9 am – 5 pm GMT, Tuesday 28th November 2023

Location: Computer Room 3, Polwarth Building, University of Aberdeen, Foresterhill Campus

Format: Instructor led computer-based tutorial with support demonstrators.

Instructor: CGEBM Bioinformaticians (Dr Antonio Ribeiro and Dr Louie van de Lagemaat)

Description: Analysis of next generation sequencing data typically requires high performance computing and use of bioinformatics programs on the Unix command line interface for optimal and fast processing of big data. Here we introduce the University of Aberdeen Computing Cluster and teach you basic Unix skills enabling you to make the most of this valuable resource for analysis of NGS data.

Topics:

- What is a HPC?
- Connecting to the University of Aberdeen's HPC
- Using the HPC to submit and monitor jobs
- What is Unix?
- Unix file structure and hierarchy
- Simple Unix commands and programs
- Joining programs with pipelines
- Shell scripting

Who should attend: This workshop is aimed at researchers, staff and PhD students interested in using the University of Aberdeen's high performance compute cluster to analyse next generation sequencing (NGS) data and those who wish to attend other CGEBM bioinformatics workshops. The aim of the workshop is to demonstrate how to navigate the basics of the system. The workshop does not cover detailed topic specific analysis. Topic specific analyses are covered in other CGEBM workshops and this course is a pre-requisite.

Pre-requisites: An account on the teaching HPC, Macleod, is needed. We are providing teaching accounts for all participants to use for the duration of the workshop. If you would like to use the research HPC, Maxwell, after the workshop you will need to obtain an account (email: digitalresearch@abdn.ac.uk). For more details see <http://www.abdn.ac.uk/staffnet/working-here/hpc.php>. Macleod and Maxwell have the same file structure, operating system and scheduler. What you learn on the course is applicable to both University of Aberdeen HPC clusters.

This workshop is a pre-requisite for all other workshops being run by the CGEBM. If you plan to attend other workshops, please ensure you attend this workshop. If you have existing expertise in using Unix and HPC and do not consider this as a necessary pre-requisite, please email Antonio Ribeiro (antonio.ribeiro@abdn.ac.uk) to discuss to ensure you have the necessary skill level required to benefit optimally from the application specific workshops.

Closing Date for registrations: 21/11/2023

Closing Date for cancellations: Cancellations received by 21/11/2023 will receive a full refund minus a £40 admin fee. Full course fee will be charged for cancellations after this date.

Cost: For University of Aberdeen staff and PhD students the workshop is £180. Payments must be made before registration. Please enter your order details on the registration form. Details on how to raise an internal order for the course fees are provided on the registration form. Separate course fees apply for external or commercial delegates. Please contact us for further details before registering.

Registrations: To register for this course, please complete the registration form [here](#), or scan the QR code



Further Information: Please contact Elaina Collie-Duguid (e.collie-duguid@abdn.ac.uk)