Bioplatforms Australia and CSIRO - External Workshop Standard Operating Procedure

Bioplatforms Australia facilitates systems biology research and supports life science research in Australia with a number of bioinformatics training initiatives. Since July 2012, Bioplatforms Australia, in partnership with CSIRO Bioinformatics Core, have developed a program of hands-on bioinformatics workshops with the support of the European Bioinformatics Institute (EBI), a member of the European Molecular Biology Laboratory (EMBL), and The Genome Analysis Centre (TGAC) in the UK.

The workshops will be led by Australian trainers with extensive 'omics experience and are committed to providing world-class bioinformatics training for the benefit of Australian life scientists.

Workshops are delivered on virtual machines (VMs) based on Amazon Web Services (AWS) or Nectar research cloud infrastructure. The VMs allow our workshops to be delivered across Australia with minimal local IT setup. The cloud-based workshops were developed with help from Monash eResearch Centre (MeRC) and have been used to deliver approximately 30 workshops *across the country.*

Bioplatforms Australia and CSIRO require a **minimum of 8 weeks**' notice to host a workshop. Hosting a workshop is primarily dependant on the availability of our trainers, a suitable venue and a local demand. Trainers' availability is often limited as they volunteer their time to develop and deliver these workshops.

The Standard Operating Procedure (SOP) for hosting a bioinformatics workshop for an organisation is outlined below.

1. Overview

Bioplatforms Australia requires a **minimum of 8 week'**s notice to host a bioinformatics workshop. During this time, the workshop organisers and the host organisation will discuss and finalise the following;

- Workshop content
    - Training modules
- Datasets
    - Tools
    - Handouts
    - Relevant storage and computational requirements
- Workshop date and venue
- Format and duration of the workshop (1-3 days long usually)
- Trainers availability and requirements
- Access to computer rooms, the host internet network and the venue
- Attendee registration and selection
    - Expression of interest
    - Min and max numbers
- Cost recovery and payments
- Lunchroom and catering

2. Organisational Timeline

2.1. To complete 8 weeks before the start of the workshop

- Define the program and content of the workshop.
- Select workshop dates. Dates need to be approved by the trainers before workshop can proceed.
- Book a venue that meets the computer room requirements as outlined in Section 3.
- Confirmation of a minimum number of attendees or the option to open the workshop to external attendees.
- Agreement on attendee selection;
    - Who can attend (e.g. local, state, national or international attendees, from industry, medical or environmental research)
    - Workshop attendee selection can be performed either by the host institution or can be handled by the workshop organisers.
    - Please note that the organisers require all attendees to complete a pre-workshop survey as outlined in Section 4.
- Workshop coordinator to contact the trainers and helpers. Number of trainers and helpers will depend on the course duration and contents to be covered.
- Finalise remuneration or payment method;

- o Payment of workshop fees can be organised by the host organisation or can be processed by the workshop organisers. If the latter, please see Section 2.3 for details.
- o Please note that if the minimum number of attendees cannot be met, further discussions of remuneration may be required.

2.2. To initiate 6 weeks before the start of the workshop
- Computers setup;
  - o The workshop organisers require contact with host organisation's IT department to install NoMachine remote desktop client.
  - o Enable room access.
  - o Enable installation of required software for Virtual machines.
  - o Organise computer access (log-in) for all attendees and trainers.
- Booking of lunchroom/break-out room and catering.
- Enable access to port 22 and port 4000 and general networking/internet access.

2.3. Bioplatforms Australia Payment Procedure (Optional)
The workshop organisers require a minimum of **4 weeks** to process applications and payments.
- Announcement of the workshops should be made a minimum of 6 weeks prior to the workshop, allowing attendees 2-3 weeks to apply.
- Applications close 4 weeks before the start of the workshop.
- Attendee selection takes approximately 3-5 days.
- Registration confirmation should be emailed out to attendees no later than 3 weeks prior to the workshop to allow attendees to make payments.

3. Computer and Computer Room Requirements

Minimal requirements:
- Access to the computer room with a projector from 8:30am, for pre-workshop testing.
- Computer access for all attendees and trainers. Note: The workshop organisers require log-ins to be created for both host organisation and non-host organisation attendees.
- High-speed network access to all attendees.
- Approval to install NoMachine client on all computers, including the lectern/presenter's computer, which allows access to the AWS or Nectar-hosted training VMs. This connection uses SSH protocol and port (e.g 22) and local hosting IT will be required to ensure the firewall rules will allow for outgoing SSH connections.

- Access to the computer room before the workshop for testing of workshop setup and VM access

Recommended room attributes;
- 30 - 40 computers.
- Front facing tables so that attendees can watch an instructor and use computers at the same time.
- Seating arrangement should be such that the helpers can access trainees easily.
- Lecture theatres are not recommended as their banked floors and fixed seating makes it very difficult for trainers to assist attendees.

A guide to the installation and setup of the NoMachine client software will also be provided. Please note that this process changes regularly due to changes and updates to the VM software. If you have any difficulties please contact the workshop coordinator.

4. Pre-workshop survey / Application Form

Workshop attendees are selected based on their suitability for the advertised workshop(s). The applicants' current research interests, previous bioinformatics and command-line experience and their expectations of the workshop are all taken into consideration. Preference is also given to attendees that already have genomic data to analyse.

Bioinformatic Workshop
APPLICATION FORM

First Name: Family Name:
Current Position: Email Address:
Organisation/Institute:
Postal Address:

Workshop Information- Location and Date
Please answer the following questions in 2 to 3 lines (* = Mandatory):

*What are your expectations from attending this course?

*Describe your current research interests.

*Do you have any bioinformatics experience? If yes, please describe.

*Do you have any experience with the command line, R, Unix, etc? If yes, please describe.

Dietary Requirements:
   None   Dairy Free
   Vegetarian   Other (Please specify)
   Gluten Free

5. Event Management

The following event management can be organised by Bioplatforms Australia.

5.1. To complete 1 week before the start of the workshop

- Catering should be finalised 1 week before the workshop, including the trainers and trainees' dietary requirements. We advise the workshops to be slightly over catered and include tea, coffee and bottled water.
    - o Bioplatforms Australia provides morning tea, lunch and afternoon tea, for all our workshops.
    - o A separate venue or area must be available for catering.

- Workshop content and training materials should be prepared and made available to all trainers and helpers 1-2 weeks before the workshop.
    - o Trainers Material
        - ▪ Trainers should be provided with soft copies of the training material 1-2 weeks before the workshop. This will allow trainers to review material, test the hands-on component and make any changes if required. Bioplatforms Australia uses both GitHub and Dropbox to distribute current training material and general information to trainers.
        - ▪ 1-2 hard copies of the trainer workshop manual should be provided during the workshops.

    - o Trainee Material
        - ▪ If prior experience with the command-line is recommended or required, attendees should be directed to an online tutorial to ensure that attendees are comfortable/familiar with the assumed knowledge.
        - ▪ Trainees are provided with training material via DropBox or as embedded links in the markdown version of handouts. We recommend that presentations are provided as PDFs as some systems do not support powerpoint.
        - ▪ If the workshop is command-line based, copies of a command-line cheat sheet should be provided during the workshop.
        - ▪ At the end of the workshop the trainees are provided with a USB preloaded with the training material. Workshop manuals, presentations and datasets also freely available online at the

Bioplatforms/CSIRO GitHub (https://github.com/BPA-CSIRO-Workshops).

5.2. Required on the day of workshop

- Clear signage for the workshop location both inside and outside building.
- Attendee sign-in sheet and nametags for attendees.
- Name badges for instructors and helpers.
- Whiteboard, whiteboard markers, spare pens, post-it notes and notepads.
- Extra projector cables and chargers (Apple adaptors are generally required for projectors).
- Training material should be uploaded to lectern computer and tested before the workshop.
- A training VM should be set up and tested on trainers computer.
- Printed workshop materials including workshop timetable (for the trainer use), trainer manuals, interactive material (if applicable) and command line cheat sheets.
- Workshop introduction

The introduction to the workshop should include the following (not necessarily in this order):

- Workshop content and learning outcomes of the course:
    - Expectation management for the course is critical!
    - What will not be covered in the course.
- Introduce trainers and helper,
    - Emergency evacuation procedure,
- Bathrooms location,
- Break rooms,
- Turn mobiles to silent,
- Introduce the timetable and that times/order may vary,
- Short introduction to Bioplatforms Australia and/or host institute.
- If taking pictures during the event, make attendees aware of it.
- If allowing social media publicity make attendees aware of twitter handle or hashtag to tag.
- Specify license requirements of the material re-use.
- How to get notified of future BTP events.

6. Post workshop Survey

The post workshop survey should be completed on the final day of the workshop, as otherwise the response rate is very low. The survey takes 10-15 minutes.

An example of the post-workshop survey can be provided on request.