CAR HIA Workshop 2021

Accessing the code and documentation for the HIA long-term burden presentation

Introduction

This document outlines how to access the code and data used in the presentation by Dr Ivan Hanigan in the CAR Health Impact Assessment Workshop.

Important conditions of use and licence information

The data and code in this folder are provided on request for HIA training. They are not to be on-shared or used for purposes beyond this without written permission from Dr Ivan Hanigan (contactable via the CARDAT data team car.data@sydney.edu.au).

Accessing and running the code

The code and data are made available via a folder on the CoESRA online desktops. To access this you need to:

1. Set up a CoESRA account (this gives access to the online desktops)
2. Join the TRAIN_DATASCIENCE group (this grants access to the folder with the data and code)
3. Log into a CoESRA desktop
4. Copy the data, open RStudio and run the code

Set up a CoESRA account

This is the step-by-step instructions to register for access to the Collaborative Environment for Scholarly Research and Analysis (CoESRA) portal. The CoESRA portal provides researchers with services to share and process research data on the cloud and maintain access control to ensure licence restrictions are met. This infrastructure means that the whole team (including international collaborators) can work together while residing in different states/countries.

Sign in

Go to the URL https://coesra.tern.org.au **PLEASE ONLY USE GOOGLE CHROME WEB BROWSER AS OTHER BROWSERS ARE NOT SUPPORTED AND MAY NOT WORK AS EXPECTED**.

CoESRA was developed for linkage with the Australian Access Federation (AAF) authentication, once registered, user will access CoESRA using AAF authentication. Alternatively access can be granted through a google account if your organisation is not part of AAF, or a guest account can be created by contacting esupport@tern.org.au.

In order to login use the login button at the top right of the landing page (outlined in red in Figure 1 below):

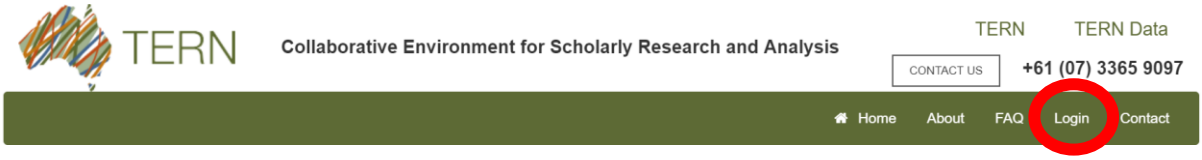


Figure 1: Logging into to CoESRA

Select between using your AAF or Google login.

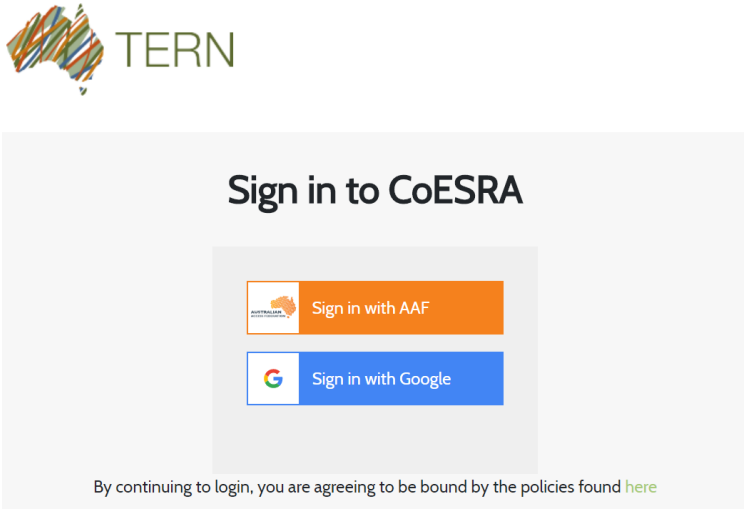


Figure 2: Select how to sign into CoESRA

If using AAF search for and select your institution. You can check the 'Remember my organisation' checkbox to save having to search for your institution in the future. See Figure 3 as an example.

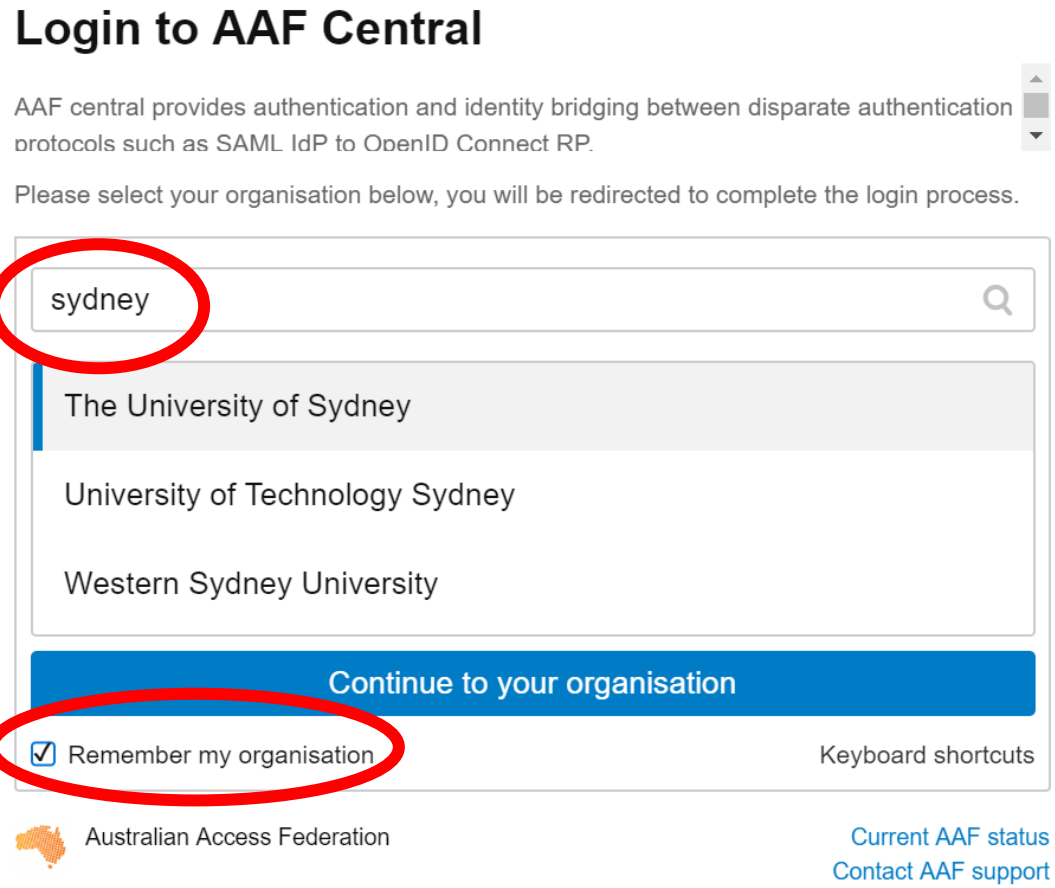


Figure 3: Searching for your institution when logging in with AAF

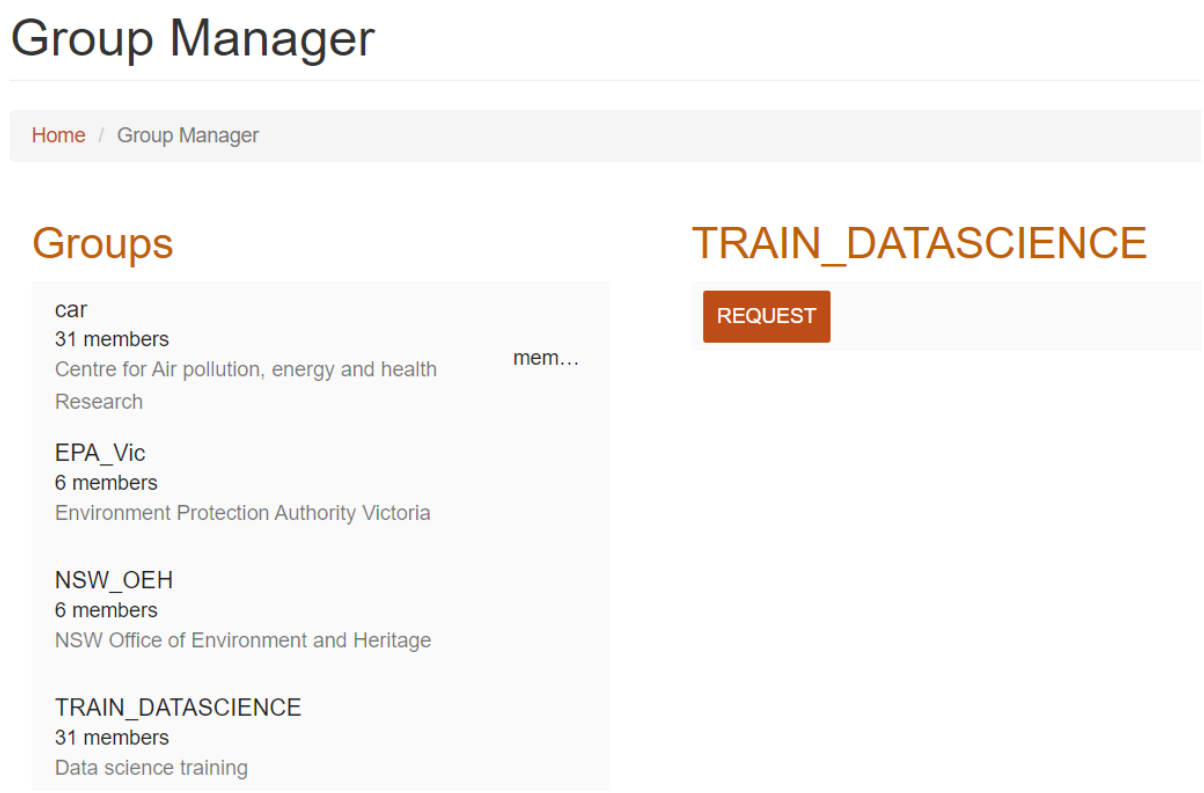
Complete your login using your institutional login and password.

Join the TRAIN_DATASCIENCE group

Request access to the train_datascience shared data group

Now that you are logged in you want to ask for permission to access the shared data folder. To access the CAR environment general data (i.e. non-restricted data), go to the groups tab (or use the URL https://coesra.tern.org.au/#/group-manager).

Select the TRAIN_DATASCIENCE group and click on the Request button.



This will require one of the CARDAT data team to grant access, so please be patient while this happens.

Log into a CoESRA desktop

Step 3: Start your remote desktop

To start a remote desktop click on the 'Launch a desktop' button (see Figure 4). Your virtual desktop will be allocated to you for a set amount of time (currently 5 days), and the expiry will be presented in a pop-up box. Click Yes.

After a short time, your new desktop should be available to select under the Running desktops heading. Click on the 'Go to desktop button'. See Figure 4.

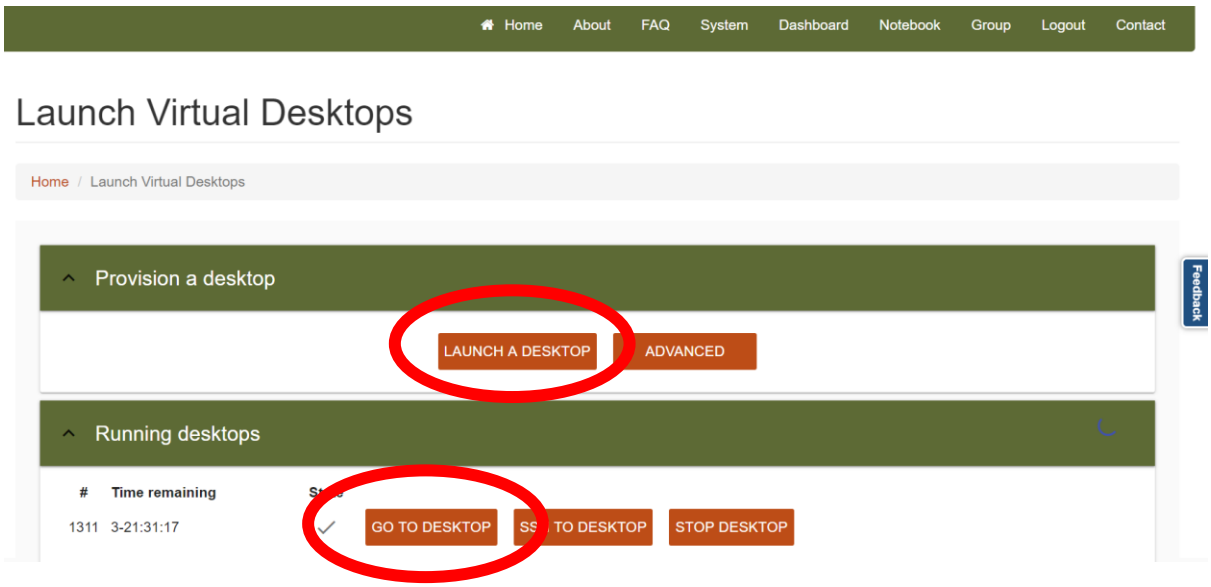


Figure 4: Launching a new desktop

There are some options for customising desktops availible by using the 'Advanced' button next to the 'Launch a desktop' button (see Figure 4). For more information refer to the 'CoESRA Features' section of the webpage https://coesra.tern.org.au/#/tern-landingpage.

You now have a folder that is just for you called "Your_Username's Home". This appears as an icon under the "Computer" icon at the top left. Double click on "Your_Username's Home" to open it. See Figure 5.

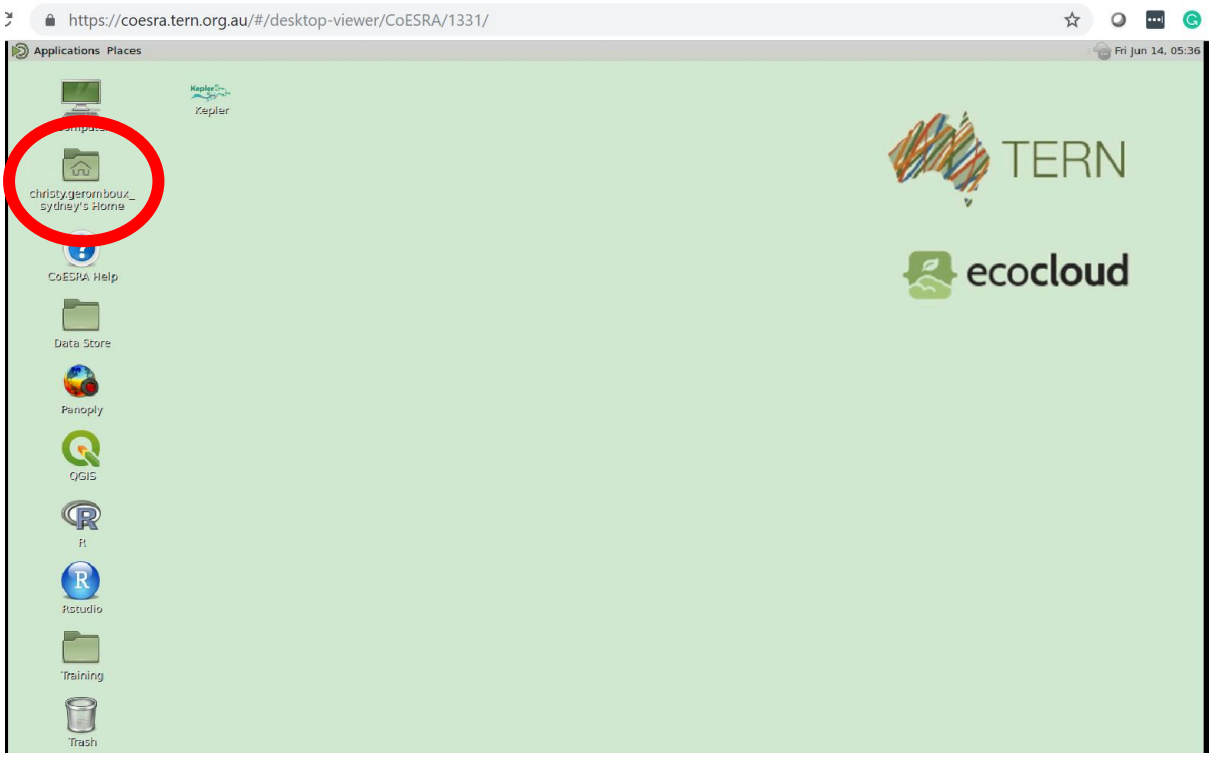


Figure 5: The personal user workspace

Then double click on the "public_share_data" link.

Now open the "ResearchData_Train_DataScience/HIA_Health_Impact_Assessments/HIA_workshop_2021/2_burden_long_term" folder (This is only accessible by the members of the group.) **Note access to this file is read only.**

Copy the data, open RStudio and run the code

Copy the data

Copy the HIA_Perth_PM25_2014_2016 folder to a local location (e.g. your home folder). This provides a copy of the data that you can edit and run.

Open RStudio

Using the menu at the top of the CoESRA desktop go to: Applications -> CoESRA -> RStudio.

Open the HIA_Perth_PM25_2014_2016.Rproj file in RStudio

1. In RStudio use the top menu to go to: File - > Open Project
2. Navigate to the place you copied the HIA_Perth_PM25_2014_2016 folder to and open HIA_Perth_PM25_2014_2016.Rproj
3. Open the file hia-perth-pm25-2014-2016-main.R

Run the code

Starting at the top of the file run each line of the code in RStudio using the Alt-Enter command. Some may take a little time as RStudio will need to download and install packages and libraries.

For the commands that load source code (e.g. source("code/load_pops_mb.R")) you can open the relevant file in the code folder and see the individual steps.

Look at the output

After all the steps have been run, you will see a new file in the folder figures_and_tables called "results_XYYYY.MM.DD.HH.mm.ss.csv" where YYYY.MM.DD.HH.mm.ss is a date-timestamp of the time the code was run. This is the output of the HIA. You will note that Perth has a higher attributable number of deaths than the rest of WA.