Grand Challenges R Server Setup

Purpose

Two servers are available for this Grand Challenge event – the "Default" server mainly for Python programming, and the "R" server providing an attractive interface RStudio for R programming – This document provides you a detailed guide on accessing the R server.

Formats of this document follow "How to use this document" section in **Grand Challenges Default Platform Setup** document.

Access the server

Step 1:

Go to https://grandchallenge.informaticslab.co.uk/hub/login

If you do not have access to email Liam or Tim and we will grant access.

You have a choice of either Default or R. Select R.

(If you have previously logged into the Default server, you may need to stop your server and restart it at https://grandchallenge.informaticslab.co.uk/hub/home so that the Default/R choice page can reappear where you complete this step.)

No matter what appears on the screen afterwards (could be a screen showing the Default Platform, or an error message), disregard it and proceed to Step 2.

Step 2:

Using a separate tab, go to

https://grandchallenge.informaticslab.co.uk/user/<your_github_username>/proxy/8787/auth-sign-in

A sign in page to RStudio will appear. Enter the following credentials:

Username: rstudio
Password: challenging

No matter what appears on the screen afterwards (could be a screen showing the Default Platform, or an error message), disregard it and proceed to Step 3.

Step 3:

Using another separate tab, go to

https://grandchallenge.informaticslab.co.uk/user/<your_github_username>/proxy/8787/

Ensure the above URL has a trailing slash (the slash (/) after the 8787 element of the URL)

The R Studio Server will appear.

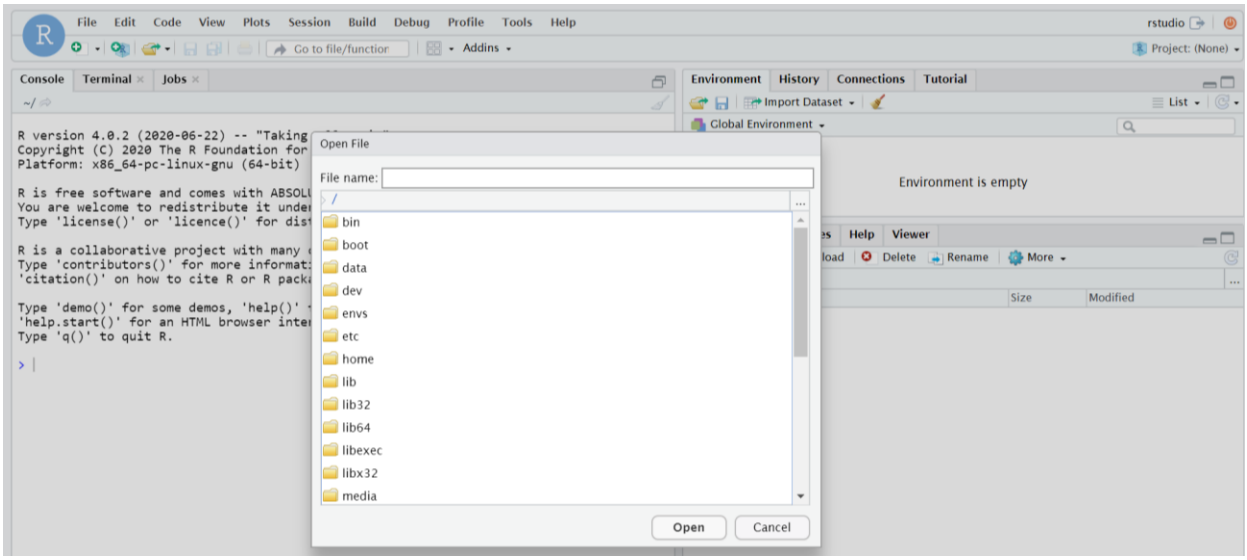
If the R Studio Server does not appear, try to repeat the steps by copying and pasting the URLs into a text editor, and then pasting into the search bar.

You may then use the R Studio to run Base R (see https://rstudio.com/wp-content/uploads/2016/10/r-cheat-sheet-3.pdf), plus install, load and use packages/libraries.

Getting around the server

Once you get into the server you will be at the "home" directory.

The folder structure is as follows (you could view it by clicking on "File" at top left hand corner, then "Open File", then press "/" and enter) –



Data is accessible at "data" folder. You may use the "home" directory or create your own directory for your work.

Recommended R Libraries

Library name	Purpose
tools	For utilities
methods	For utilities
tidyverse	A "Package of libraries" for data science
ggplot2	For plotting graphs
stringr	For string manipulations
abind	For array manipulations
grid	For graphics
spam	For matrix manipulations
maps	For map display
fields	For spatial data
ncdf4	For reading NetCDF files