The Cloud, AWS & Guacamole!
The cloud is everywhere in our lives

Social Media

Cloud Email Providers

Cloud Storage

Cloud Computing
Data centers
Data centers
How does it work?

AMI: Amazon Machine Image

Base computer with all data and software for the workshop
Terminology

- Creating an instance – buying a brand new computer with software already installed
- Starting an instance – turning that computer on
- Stopping an instance – turning that computer off
- Terminating an instance – setting that computer on fire and throwing it out of the window
Connecting to your Instance

- Remote desktop (Guacamole)
- Secure Shell (ssh)
- R Studio Server
- Jupyter Notebook
Connecting to your Instance

https://evomics.org/2024-workshop-on-genomics/

Get ready for May 2023!

Many important details can be read on our FAQ page and our Housing and Transportation page

Instance addresses (check every day for your new one!)

Check here to view Faculty / Organiser / Instructor arrival and departure dates. Check out our Faculty for 2023 here and our instructors for 2023 here

As is tradition, we will be having a T-shirt competition! Best T-shirt design will feature on the Workshop on Genomics 2023 T-shirts – get designing!

Workshop on Genomics 2023 BINGO!

Faculty lunches sign-up sheet

Our Code of Conduct contact points are Josie Paris & Joan Ferrer Obiol
Connecting to your instance

Find your name and check your instance address

Check how to connect to your instance using guacamole, ssh and the RStudio server
Connecting to guacamole

1. Open your preferred internet browser (i.e. chrome, firefox)
2. Paste your instance address followed by :8080/guacamole
Connecting to guacamole

3. Enter the username “genomics” and password
Connecting to guacamole desktop

4. Select Desktop

ALL CONNECTIONS

- Desktop
- Terminal
Connecting to guacamole desktop

5. Enter the username “genomics” and password again
Connecting to guacamole desktop

6. Open a terminal window using the terminal icon
Connecting to guacamole desktop

You are now ready to learn some UNIX!

It’s about as powerful as a laptop
Connecting to guacamole terminal

When connecting to guacamole, select Terminal
Connecting to guacamole terminal

Enter the password
Connecting to guacamole terminal

And you are ready to use the terminal
Copying and Pasting

Try to avoid copying and pasting wherever possible

But if you need it:
1. Press Ctrl+Alt+Shift (Mac: Ctrl+Opt+Shift)
2. Paste the text in the pop-up box
3. Press Ctrl+Alt+Shift (Mac: Ctrl+Opt+Shift) again
4. Paste into the instance using right click
Connecting through SSH

1. Open your preferred terminal on your laptop
2. Type `ssh genomics@[instance address]`
3. Enter the password
Connecting through SSH

And you are ready to use the terminal
Connecting to the RStudio server

1. Open your preferred internet browser (i.e. chrome, firefox)
2. Paste your instance address followed by :8787
3. Enter the username “genomics” and password
Connecting to the RStudio server

4. You are now connected to R Studio in your instance
Before starting the UNIX session

The instance address will change every day after we stop and restart the instances.

Each morning, you will need to return to the “Instance address spreadsheet” on the webpage, retrieve your new address and login again using the type of connection you need.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instance number</td>
<td>First Name</td>
<td>Last Name</td>
<td>Instance address</td>
<td>Guacamole connection</td>
<td>ssh connection</td>
<td>RStudio server connection</td>
</tr>
</tbody>
</table>
Before starting the UNIX session

Connect to your instance and open terminal

SSH to your instance

Desktop → Terminal

Terminal
Before starting the UNIX session

Make sure that you can type the following characters:

- tilde (~)
- backslash (\)
- pipe (|)
- carat (^)

If you can’t type these characters, get our attention!
Before starting the UNIX session!

~

tilde

/ˈtɪldə,ˈtɪldi/
Before starting the UNIX session!

backslash
"bakslash/
Before starting the UNIX session!
Before starting the UNIX session!

Caret
/kɛrət/
Set your keyboard preferences

Select a keyboard layout to be added to the list
Choose a Layout

Country: Czechia

Variants:
- Czech
- Czech Czech (QWERTY)
- Czech Czech (QWERTY, extended backslash)
- Czech Czech (UCW, only accented letters)
- Czech Czech (US, Dvorak, UCW support)
- Czech Czech (US, Dvorak, UCW support)
- Czech Russian (Czech, phonetic)

Keyboard Layout Preview:

`[Keyboard Layout Preview Image]`
Installation and Software Managers

- S
- CONDA
- Jupyter
- R Markdown