

Installation of WSL and Miniconda

Sequencing and bioinformatics course

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18-Mar-2024

Bioinformatics Scope

- Introduction to UNIX/Command line
- Introduction to Conda package manager
- Accessing Data and QC
- Short read genome assembly
- Long read genome assembly
- Detection of resistance genes
- Bacterial isolates characterization - strain types, serotypes, phylogroups
- Viral isolates characterization - Lineages
- Phylogenetics and visualization
- Metagenomics - QC, Meta assembly, classification and quantification, AMR prediction
- Online tools - Resfinder, Pathogen watch, CARD, enterobase, Microreact

WSL

WSL stands short for “**Windows Subsystem for Linux**”. It allows you to run a Linux environment directly on Windows, where you can use all command-line tools you know from Linux.

Installation of WSL

Step 1: In your Laptop/PC, open the Microsoft store app

Step 2: In the search bar, type "Ubuntu"

Step 3: Select Ubuntu 20.0.4 LTS and click install. Wait for installation to complete

Step 4: Go to "Control Panel", click on "Programs" then "Turn Windows features on or off"

Step 5: In the pop-up window, scroll down to the end and check the box for "Windows Subsystem for Linux" and restart when prompted.

Step 6: Open the Ubuntu software you installed

Step 7: When prompted, enter your username of choice (must be one name with no spaces)

Step 8: Enter password of your choice. (As you type the password, it will not display it entering; just continue typing and press enter)

Installation of Miniconda

- conda is a popular package management system and environment management system that runs on Windows, macOS, and Linux. It's primarily used for installing and managing packages and dependencies

<https://github.com/ckigenk/sequencing-and-bioinformatics-training-KEMRI-2024>

Install Miniconda

Step 1. Download Miniconda Installer

```
wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh .
```

Step 2. Install Miniconda

```
bash Miniconda3-latest-Linux-x86_64.sh
```

Follow the instructions shown on the screen.
Next, you will be shown this option below.

Miniconda3 will now be installed into this location:
`/root/miniconda3`

- Press ENTER to confirm the location
- Press CTRL-C to abort the installation
- Or specify a different location below

Just press ENTER and continue.

Once the installation is finished, you will be prompted to start Miniconda or not.

Step 3. Configure Miniconda

Do you wish the installer to initialize Miniconda3 by running conda init? [yes|no]
[no] >>>

Type 'yes', then hit ENTER. You should see this as an output.

```
no change /root/miniconda3/condabin/conda
no change /root/miniconda3/bin/conda
no change /root/miniconda3/bin/conda-env
no change /root/miniconda3/bin/activate
no change /root/miniconda3/bin/deactivate
no change /root/miniconda3/etc/profile.d/conda.sh
no change /root/miniconda3/etc/fish/conf.d/conda.fish
no change /root/miniconda3/shell/condabin/Conda.psm1
no change /root/miniconda3/shell/condabin/conda-hook.ps1
no change /root/miniconda3/lib/python3.11/site-packages/xontrib/conda.xsh
no change /root/miniconda3/etc/profile.d/conda.csh
modified  /root/.bashrc
```

==> For changes to take effect, close and re-open your current shell. <==

If you'd prefer that conda's base environment not be activated on startup, set the `auto_activate_base` parameter to false:

```
conda config --set auto_activate_base false
```

Thank you for installing Miniconda3!

Thank You