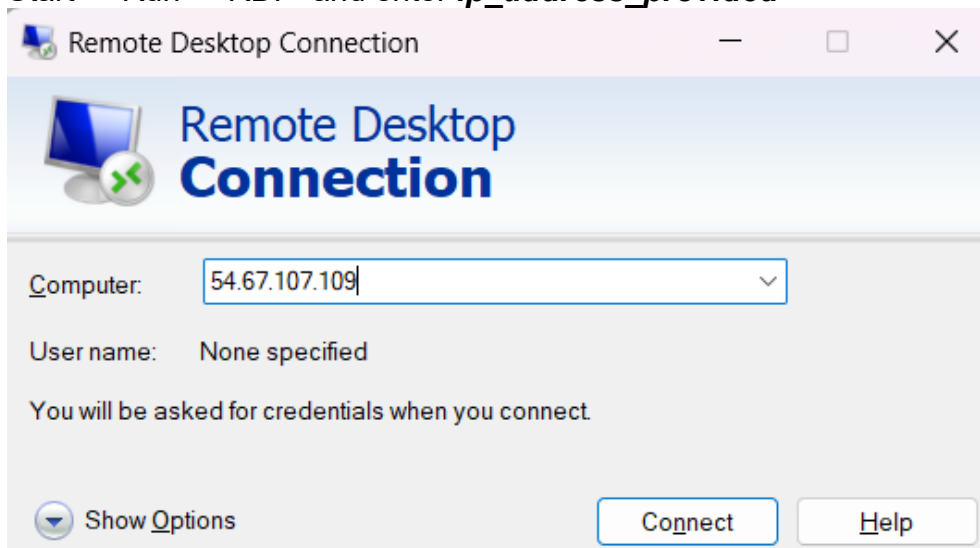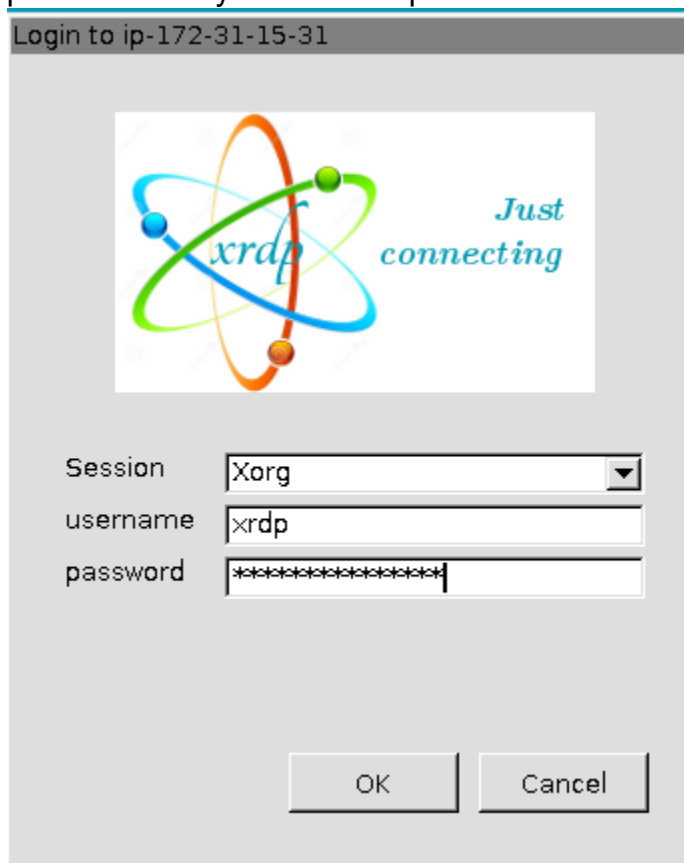# Apache Flink Getting Started
Experiment 0: Setup

1.1 Steps to setup your Experiment Account

1.1.1 Use the provided information to connect to your Windows Jump box environment. https://jruels.github.io/automation-dev/VM_access.html

1.1.2 Grab your flink sandbox credentials to connect, IP address, user (ubuntu), and pem file. This is in the GitHub Repo provided for this class (https://github.com/GeorgeNiece/flink-data-processing-2day), and the FlinkDev-2025-04-14 excel file shared by the Flink course leader. You can copy the pem file after downloading and paste to the desktop in the Windows Jump Box

1.1.3 Ensure the pem file is in the same folder that you do the ssh from following and that you've changed the permissions for the file
In Windows
   attrib -x ansible.pem
In Mac
   chmod 600 ansible.pem

1.1.4 From a command prompt on your jumpbox machine SSH to the Unbuntu server
ssh -o ServerAliveInterval=180 -o ServerAliveCountMax=2 -i ansible.pem ubuntu@*ip_address_provided*

1.1.4 Change the Server RDP user password, (make sure to keep this for access to the Flink WebUI through Remote Desktop Protocol)
   sudo passwd xrdp

1.1.5 Retrieve the Flink download we need with
wget https://dlcdn.apache.org/flink/flink-2.0.0/flink-2.0.0-bin-scala_2.12.tgz

1.1.6 Unpack that in your ubuntu user home folder
cd ~
tar -xzf flink-2.0.0-bin-scala_2.12.tgz

1.1.7 Download the GitHub repo on the dev server
cd ~
git clone https://github.com/GeorgeNiece/flink-data-processing-2day

1.1.8 Change to the flink folder, verify Flink isn't started, start the Flink dev cluster, and verify that it started
ps -ef | grep flink
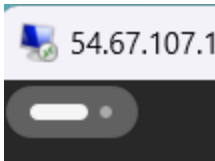**cd ~/flink-2.0.0**
./bin/start-cluster.sh
ps -ef | grep flink

1.1.9 From the Windows Jump Host, RDP to the dev server
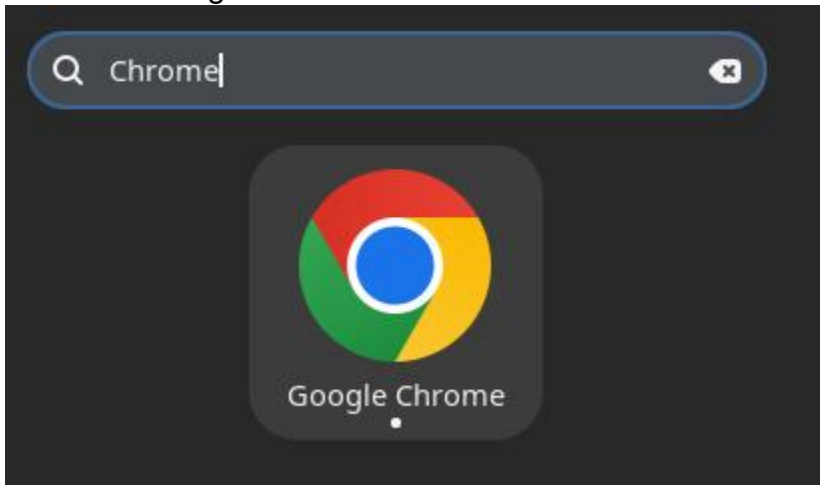   Start -> Run -> RDP and enter *ip_address_provided*

Remote Desktop Connection — □ ✕

Remote Desktop
Connection

Computer: 54.67.107.109

User name: None specified

You will be asked for credentials when you connect.

Show Options   Connect   Help

1.1.10 Login to the ubuntu dev sandbox using Windows RDP with the xrdp user and the
       password that you set in Step 1.14

Login to ip-172-31-15-31

xrdp   Just connecting

Session   Xorg

username   xrdp
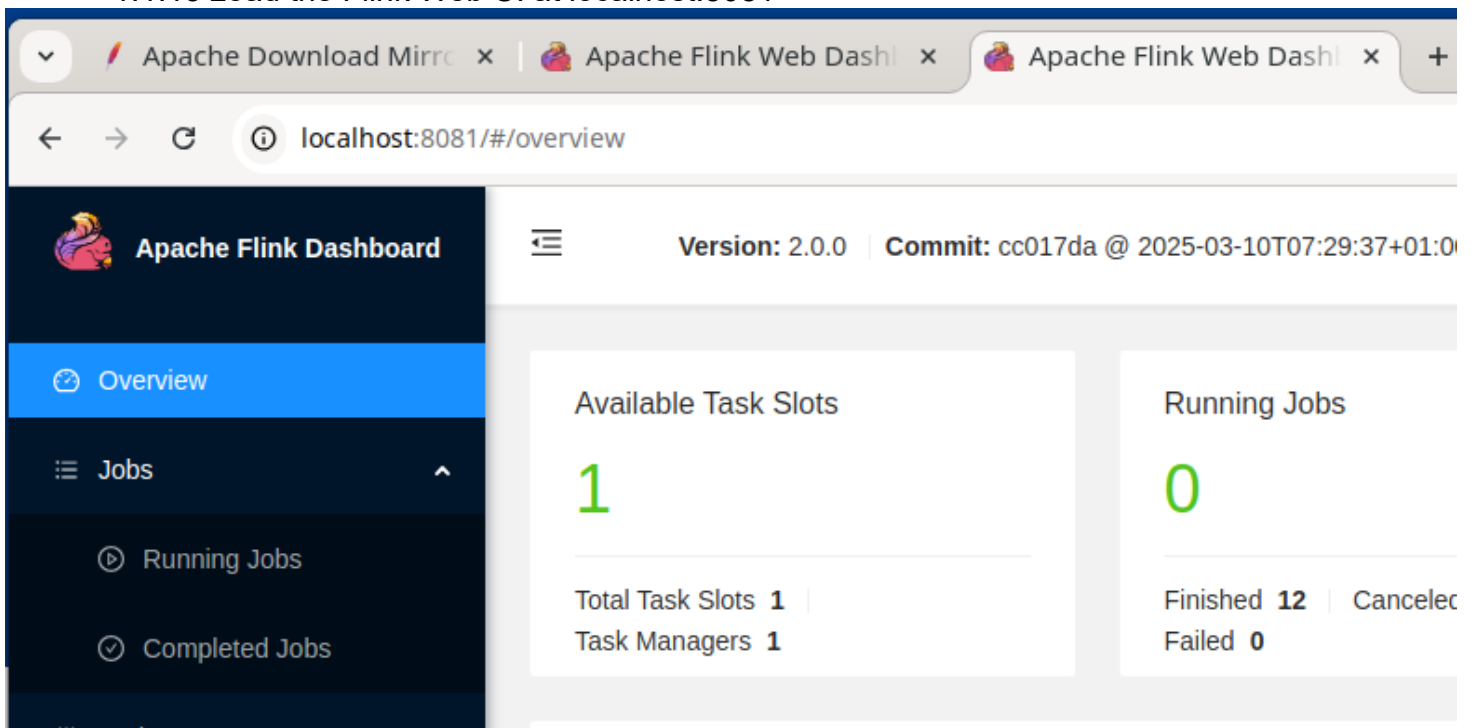
password   ***************

OK   Cancel

1.1.11 Click the Activities button in the top left corner of the Ubuntu Desktop

54.67.107.1

1.1.12 Wait for the Search Box at the top of the Ubuntu Desktop, and enter Chrome, click on the Launch Logo

1.1.13 Load the Flink Web UI at localhost:8081

1.1.14 Click the Job Manager in the left hand navigation

1.1.15 Select Log List in the page navigation. These are the logs we'll monitor while we're running some of our experiments

1.1.16 The first flink-ubuntu-taskexecutor*.out file will be the one we spend the most time looking at.

1.1.17 Navigate back to the SSH terminal and open the Flink configuration

cd ~/flink-2.0.0
./vi conf/config.yaml

1.1.18 Review the file (if you're not VI proficient, use "**nano conf/config.yaml**")

1.1.19 # Congratulations, time to celebrate finishing the setup of a Flink Developer Sandbox