

| Lab 227

Linux Commands Line

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Bootcamp: Forge AWS re/Start UYMON5

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Objectives

In this lab, you will:

- Run commands to gain knowledge of your current system and current session
- Search and run previous bash commands

Accessing the AWS Management Console

1. At the top of these instructions, choose **Start Lab** to launch your lab. A **Start Lab** panel opens, and it displays the lab status.

Tip: If you need more time to complete the lab, choose the Start Lab button again to restart the timer for the environment.

2. Wait until you see the message *Lab status: ready*, then close the **Start Lab** panel by choosing the X.
3. At the top of these instructions, choose **AWS**. This opens the AWS Management Console in a new browser tab. The system will automatically log you in.

Tip: If a new browser tab does not open, a banner or icon is usually at the top of your browser with a message that your browser is preventing the site from opening pop-up windows. Choose the banner or icon and then choose **Allow pop ups**.

4. Arrange the AWS Management Console tab so that it displays alongside these instructions. Ideally, you will be able to see both browser tabs at the same time so that you can follow the lab steps more easily.

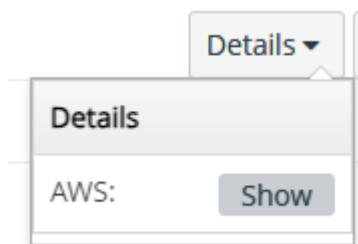


Task 1: Use SSH to connect to an Amazon Linux EC2 instance

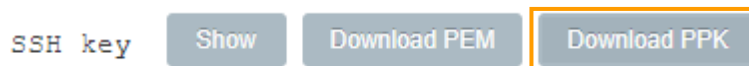
In this task, you will connect to a Amazon Linux EC2 instance. You will use an SSH utility to perform all of these operations.

Windows Users: Using SSH to Connect

1. Select the **Details** drop-down menu above these instructions you are currently reading, and then select **Show**. A Credentials window will be presented.



2. Select the **Download PPK** button and save the **labsuser.ppk** file.



3. Make a note of the **PublicIP** address.

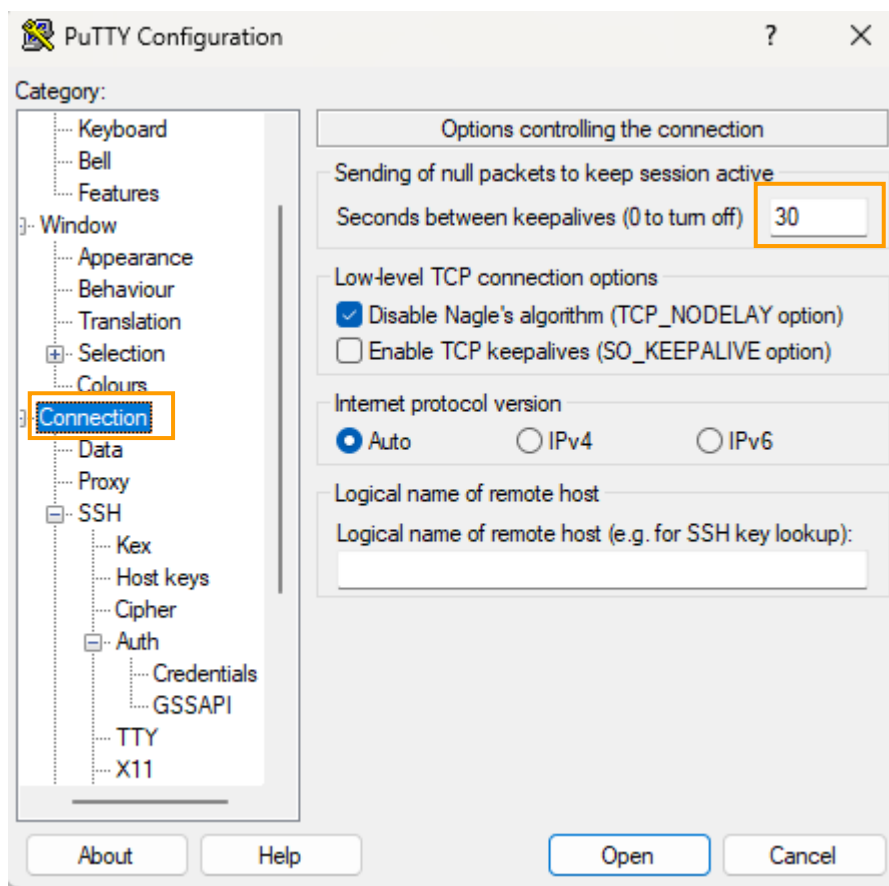
PublicIP

52.34.82.18

4. Then exit the Details panel by selecting the X.
5. Download **PuTTY** to SSH into the Amazon EC2 instance. If you do not have PuTTY installed on your computer.
6. Open **putty.exe**
7. Configure PuTTY timeout to keep the PuTTY session open for a longer period of time.:



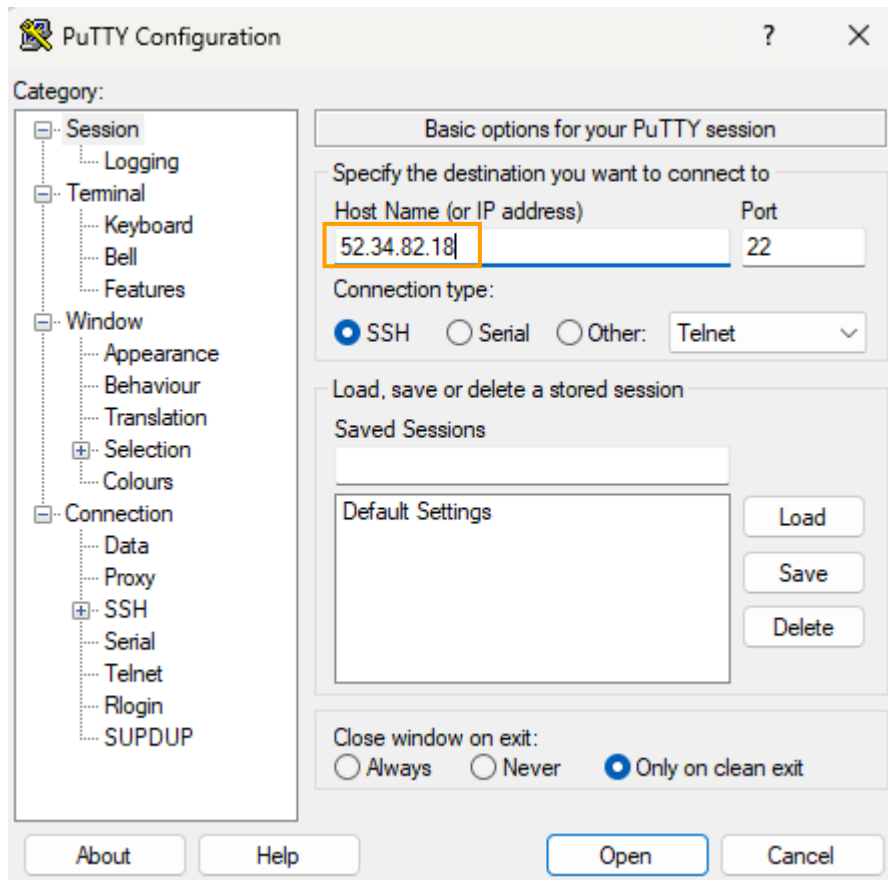
- Select **Connection**
- Set **Seconds between keepalives** to 30



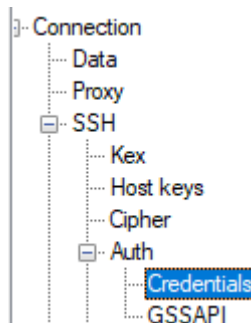
8. Configure your PuTTY session:
- Select **Session**



- **Host Name (or IP address):** Paste the **Public DNS or IPv4 address** of the instance you made a note of earlier. Alternatively, return to the EC2 Console and select **Instances**. Check the box next to the instance you want to connect to and in the *Description* tab copy the **IPv4 Public IP** value

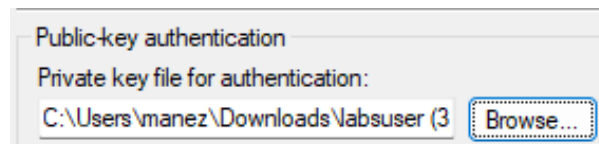


- Back in PuTTY, in the **Connection** list, expand **SSH** and select **Auth** (*don't expand it*)

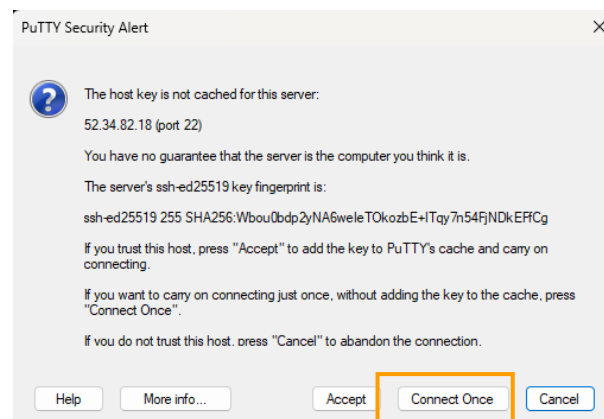




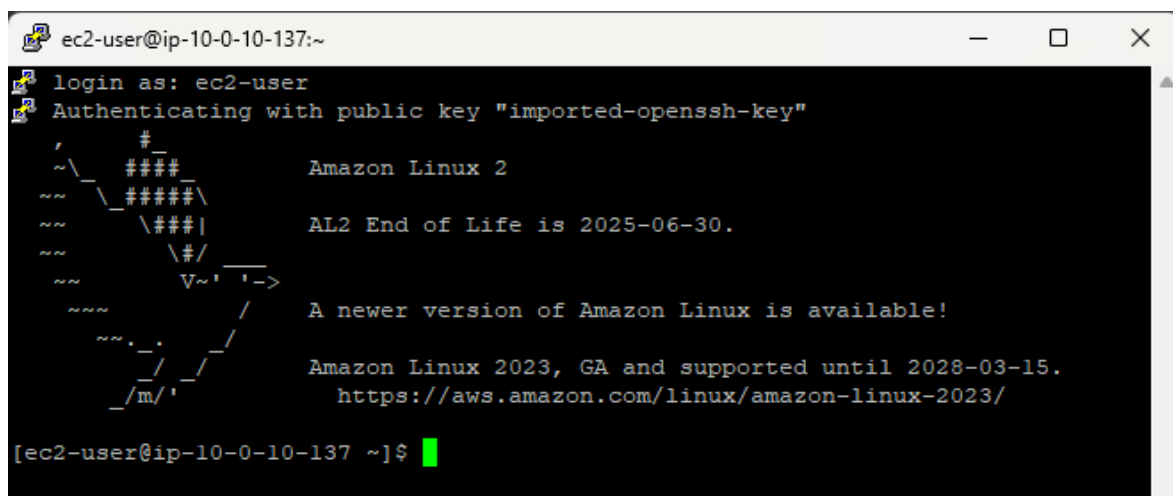
- Select **Browse** and select the lab#.ppk file that you downloaded



- Select **Open** to select it and then select **Open** again.
9. Select **Yes**, to trust and connect to the host.



10. When prompted **login as**, enter: `ec2-user` This will connect you to the EC2 instance.





Task 2: Run familiar commands

In this exercise, you run a few commands to gain some general knowledge of the system and session that you are using.

24. From the terminal, enter `whoa` and press Tab. Notice that the auto complete feature displays the full command, `whoami`.

```
[ec2-user@ip-10-0-10-8 ~]$ whoami  
ec2-user
```

25. Press Enter to display your current username.

26. Enter `hostname -s` and press Enter to display a shortened version of computer's host name.

```
[ec2-user@ip-10-0-10-8 ~]$ whoami  
ec2-user  
[ec2-user@ip-10-0-10-8 ~]$ hostname -s  
ip-10-0-10-8  
[ec2-user@ip-10-0-10-8 ~]$
```

27. Enter `uptime -p` and press Enter to display the uptime of the system in an easily readable format.

```
[ec2-user@ip-10-0-10-8 ~]$ uptime -p  
up 36 minutes
```

Figure: The `whoami`, `hostname`, and `uptime` commands give basic information about the system you are currently using. This can be useful if you need to find the user, IP address, or how long your system has been running for troubleshooting purposes.

28. From the terminal, enter `who -H -a` and press Enter to display information about the users who are logged in and some additional information.





Figure: The `who -H -a` command displays the information about the user such as the name, line which gives information, time the event occurred, idle time of the user, Process Identifier (PID), comment and exit time.

```
[ec2-user@ip-10-0-10-8 ~]$ who -H -a
NAME      LINE      TIME      IDLE      PID COMMENT  EXIT
system    system boot 2023-10-25 22:11
LOGIN     ttyS0     2023-10-25 22:12      2276 id=ttyS0
LOGIN     tty1      2023-10-25 22:12      2274 id=tty1
run-level 5      2023-10-25 22:12
ec2-user + pts/0 2023-10-25 22:14      .      2368 (rl67-57-251-165.dial
up.adsl.anteldata.net.uy)
[ec2-user@ip-10-0-10-8 ~]$
```

29. Enter `TZ=America/New_York date` and press Enter. Then enter `TZ=America/Los_Angeles date`

These commands identify the date and time of alternate locations in the world.

```
[ec2-user@ip-10-0-10-8 ~]$ TZ=America/New_York date
Wed Oct 25 18:52:28 EDT 2023
```

Note: If your time on your system is not set properly, you will receive a time that is incorrect.

30. Some professions use the Julian date to conduct business. The Julian format continues consecutively instead of restarting the date at 1 at the beginning of each month. For example, in the Gregorian calendar format, the day after January 31 is February 1. However, in the Julian format, the day after January 31 is February 32 instead of February 1. You can check this information by entering `cal -j` in your terminal to see the Julian dates for your current month.

```
[ec2-user@ip-10-0-10-8 ~]$ TZ=America/Los_Angeles date
Wed Oct 25 15:54:45 PDT 2023
```




31. Enter the `cal -s` or `cal -m` commands to display alternate views of the calendar.

Figure: The `cal -s` command gives the output of September from Sunday through Saturday. The `cal -m` command gives the output from Monday through Sunday.

```
[ec2-user@ip-10-0-10-8 ~]$ cal -j
      October 2023
Sun Mon Tue Wed Thu Fri Sat
274 275 276 277 278 279 280
281 282 283 284 285 286 287
288 289 290 291 292 293 294
295 296 297 298 299 300 301
302 303 304

[ec2-user@ip-10-0-10-8 ~]$
```

Note: There are many options to display calendars. Check the `cal` man page for details.

32. For your last command, enter `id ec2-user` into the terminal, and press Enter to see your unique ID and group information about your specific user.

Figure: The output of the `id ec2-user` gives the user id, group id, and groups that the user is apart of.

```
[ec2-user@ip-10-0-10-8 ~]$ cal -s
      October 2023
Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7
 8  9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31

[ec2-user@ip-10-0-10-8 ~]$
```



Task 3: Improve workflow through history and search

In this task, you attempt to ease your overall workload by reusing commands through search techniques, manual visualization of the bash history log, and reuse of the last command.

33. Start by viewing the current bash history. Enter `history` and press ENTER. In the output, check if the commands that you see are the commands that you used in task 2.

Figure: When the history command is entered, you should see a list of all of the commands that were used within this lab.

```
[ec2-user@ip-10-0-10-8 ~]$ history
 1 man man
 2 clear
 3 whoami
 4 hostname -s
 5 uptime -p
 6 From the terminal, enter who -H -a and press Enter to display information
about the users who are logged in and some additional information.
 7 clear
 8 whoami
 9 hostname -s
10 uptime -p
11 who -H -a
12 TZ=America/New_York date
13 TZ=America/Los_Angeles
14 TZ=America/Los_Angeles date
15 cal -j
16 cal -s
17 cal -m
18 id ec2-user
19 history
[ec2-user@ip-10-0-10-8 ~]$
```



34. To search your previous history, press CTRL+R to bring up a reverse history search. In the reverse history search feature of the terminal, enter `TZ` and press Tab. This step brings up an old use of the `date` command that you can edit. Using your arrow buttons, you can now edit the command inline.

Note: This is a history searching feature that gives you the ability to edit the command that you search for. You must use Tab autocomplete to edit and run the commands.

Figure: To run a reverse history search, press CTRL+R. Typing TZ (from the previous steps) then the Tab button will bring up the use of the date command. In this example, the up and down arrows were used to bring up the date command.

```
(reverse-i-search) '^':  
[ec2-user@ip-10-0-10-8 ~]$ TZ=America/Los_Angeles date  
Wed Oct 25 16:10:44 PDT 2023  
[ec2-user@ip-10-0-10-8 ~]$
```

35. Enter `date` into the terminal, and press Enter. Enter `!!` and press Enter. This step gives you the ability to rerun the most recent command.

```
[ec2-user@ip-10-0-10-8 ~]$ date  
Wed Oct 25 23:12:21 UTC 2023  
[ec2-user@ip-10-0-10-8 ~]$ !!  
date  
Wed Oct 25 23:12:25 UTC 2023  
[ec2-user@ip-10-0-10-8 ~]$
```

Figure: To run the last command that was entered into the keyboard, `!!` was used. For this last example, `date` was the last command that was used. To run this command again, `!!` was used.



Lab Complete



Congratulations! You have completed the lab.

28. Select **End Lab** at the top of this page and then select Yes to confirm that you want to end the lab. A panel will appear, indicating that "DELETE has been initiated... You may close this message box now."
29. Select the X in the top right corner to close the panel.



Commands Used:

On this lab we used several commands to perform different tasks. Here is a summary of the commands used:

| <i>Command</i> | <i>Description</i> |
|----------------|----------------------------------------------------------|
| ls | Lists the files and directories in the current directory |
| cd | Changes the current directory to the specified directory |
| pwd | Prints the current working directory |
| mkdir | Creates a new directory |
| wget | Downloads files from the web |
| cat | Concatenates and displays the contents of a file |
| head | Displays the first few lines of a file |
| tail | Displays the last few lines of a file |
| grep | Searches for a pattern in a file |
| cp | Copies files or directories |
| mv | Moves or renames files or directories |
| rm | Removes files or directories |
| chmod | Changes the permissions of a file or directory |
| tar | Archives or extracts files from a tarball |
| zip | Compresses files into a ZIP archive |
| unzip | Extracts files from a ZIP archive |