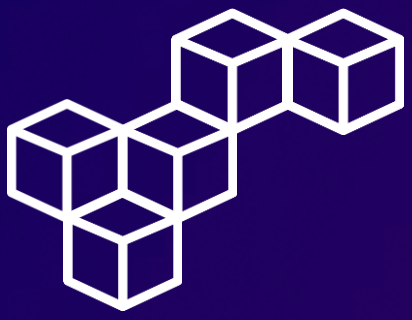
AWS re:Start LAB

Introduction to an Amazon Linux AMI

WEEK 2

aws re/start



Overview

An Amazon Linux AMI (Amazon Machine Image) is a Linux-based operating system provided by Amazon Web Services (AWS) specifically designed for use on Amazon EC2 instances. It includes a variety of pre-installed software packages and configurations optimized for running applications and services on AWS infrastructure.

SSH (Secure Shell) is a protocol used to securely access and manage remote servers or instances over a network. It provides encrypted communication between the client (your computer) and the server (the remote instance), allowing you to execute commands, transfer files, and perform administrative tasks on the remote system.

Note: This lab was made using Windows Subsystem for Linux.

Topics covered

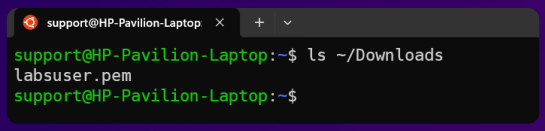
- Use SSH to access an Amazon Linux AMI
- Understand the purpose of the man command
- Demonstrate the search feature of the man pages
- Examine man page headers

Task 1

Use SSH to connect to an Amazon Linux EC2 instance

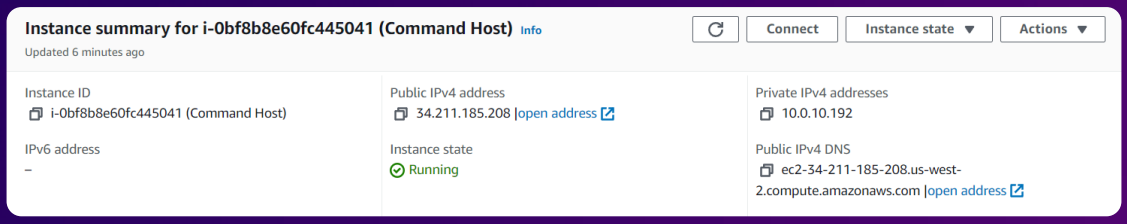
Step 1: Download the private key

Download the **private key file** labsuser.pem and save it in the Downloads directory.



Step 2: Copy the public IPv4 address

In the AWS Management Console, select the EC2 instance and make note of the **Public IPv4 address**.



aws re/start

Task 1

Use SSH to connect to an Amazon Linux EC2 instance

Step 3: Change the permissions on the key

Change to the Downloads directory and modify the permissions on the key to be read-only (r--------). The file permissions are currently rw-r--r--.

```
support@HP-Pavilion-Laptop:~$ cd ~/Downloads
support@HP-Pavilion-Laptop:~/Downloads$ ls -l labsuser.pem
-rw-r--r-- 1 support support 1674 Apr  6 16:45 labsuser.pem
support@HP-Pavilion-Laptop:~/Downloads$ chmod 400 labsuser.pem
support@HP-Pavilion-Laptop:~/Downloads$ ls -l labsuser.pem
-r-------- 1 support support 1674 Apr  6 16:45 labsuser.pem
support@HP-Pavilion-Laptop:~/Downloads$
```

Step 4: Connect to the instance using SSH

Establish a connection to the EC2 instance using the ssh command, the key and the instance's public IPv4 address.

```
support@HP-Pavilion-Laptop:~/Downloads$ ssh -i labsuser.pem ec2-user@34.211.185.208
The authenticity of host '34.211.185.208 (34.211.185.208)' can't be established.
ED25519 key fingerprint is SHA256:3lgKizB/W7HmLC29xxl+jb9YZ3YJT9BltLajsQ/DA7U.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '34.211.185.208' (ED25519) to the list of known hosts.
   ,     #_
   ~\_  ####_        Amazon Linux 2
  ~~  \_#####\
  ~~     \###|       AL2 End of Life is 2025-06-30.
  ~~       \#/ ___
   ~~       V~' '->
    ~~~         /    A newer version of Amazon Linux is available!
      ~~._.   _/
         _/ _/       Amazon Linux 2023, GA and supported until 2028-03-15.
       _/m/'           https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-10-0-10-192 ~]$
```

aws re/start

Task 2

Explore the Linux man pages

Open the manual pages for the man program using the man man command.

```
[ec2-user@ip-10-0-10-192 ~]$ man man
[ec2-user@ip-10-0-10-192 ~]$
```

Identify the **major sections of the man pages**, look for the headers in the terminal.

```
MAN(1)                                    Manual pager utils                                    MAN(1)

NAME
       man - an interface to the on-line reference manuals

SYNOPSIS
       man  [-C  file]  [-d]  [-D]  [--warnings[=warnings]]  [-R  encoding] [-L locale] [-m system[,...]] [-M path] [-S list] [-e extension]
       [-i|-I] [--regex|--wildcard] [--names-only] [-a] [-u] [--no-subpages] [-P pager] [-r prompt] [-7]  [-E  encoding]  [--no-hyphenation]
       [--no-justification] [-p string] [-t] [-T[device]] [-H[browser]] [-X[dpi]] [-Z] [[section] page ...] ...

DESCRIPTION
       man is the system's manual pager. Each page argument given to man is normally the name of a program, utility or function.  The manual
       page  associated  with  each  of these arguments is then found and displayed. A section, if provided, will direct man to look only in
       that section of the manual.  The default action is to search in all of the available sections, following a pre-defined order  and  to
       show only the first page found, even if page exists in several sections.

OVERVIEW
       Many options are available to man in order to give as much flexibility as possible to the user.  Changes can be made  to  the  search
       path, section order, output processor, and other behaviours and operations detailed below.

EXAMPLES
       man ls
           Display the manual page for the item (program) ls.

FILES
       /etc/man_db.conf
              man-db configuration file.

OPTIONS
       Non  argument options that are duplicated either on the command line, in $MANOPT, or both, are not harmful.  For options that require
       an argument, each duplication will override the previous argument value.

SEE ALSO
       apropos(1), groff(1), less(1), manpath(1), nroff(1), troff(1), whatis(1), zsoelim(1), setlocale(3), manpath(5), ascii(7),  latin1(7),
       man(7), catman(8), mandb(8), the man-db package manual, FSSTND
```

aws re/start

Task 2

Explore the Linux man pages

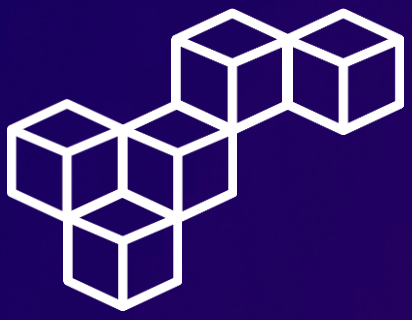
Take note of the **DESCRIPTION** header, particularly the section numbers.

```
DESCRIPTION
       man is the system's manual pager. Each page argument given to man is normally the name of a program, utility or function.  The manual
       page  associated  with  each  of these arguments is then found and displayed. A section, if provided, will direct man to look only in
       that section of the manual.  The default action is to search in all of the available sections, following a pre-defined order  and  to
       show only the first page found, even if page exists in several sections.

       The table below shows the section numbers of the manual followed by the types of pages they contain.

       1   Executable programs or shell commands
       2   System calls (functions provided by the kernel)
       3   Library calls (functions within program libraries)
       4   Special files (usually found in /dev)
       5   File formats and conventions eg /etc/passwd
       6   Games
       7   Miscellaneous (including macro packages and conventions), e.g. man(7), groff(7)
       8   System administration commands (usually only for root)
       9   Kernel routines [Non standard]

       A manual page consists of several sections.

       Conventional  section  names include NAME, SYNOPSIS, CONFIGURATION, DESCRIPTION, OPTIONS, EXIT STATUS, RETURN VALUE, ERRORS, ENVIRON-
       MENT, FILES, VERSIONS, CONFORMING TO, NOTES, BUGS, EXAMPLE, AUTHORS, and SEE ALSO.

       The following conventions apply to the SYNOPSIS section and can be used as a guide in other sections.

       bold text          type exactly as shown.
       italic text        replace with appropriate argument.
       [-abc]             any or all arguments within [ ] are optional.
       -a|-b              options delimited by | cannot be used together.
       argument ...       argument is repeatable.
       [expression] ...   entire expression within [ ] is repeatable.
```

Close the SSH connection using the exit command.

```
[ec2-user@ip-10-0-10-192 ~]$ exit
logout
Connection to 34.211.185.208 closed.
support@HP-Pavilion-Laptop:~/Downloads$
```

aws re/start



Conclusions

Using SSH to connect to an EC2 Instance

To establish a secure connection to an EC2 Instance (the remote server) using the SSH protocol, we need to use a key pair where the public key is stored on AWS and the private key should be on our computer (the local client). Then, we use the ssh command and specify the private key file and the public IPv4 address of the remote server.

Linux man pages

Linux man pages are reference documents that provide detailed information about commands, programs, and functions available in the Linux operating system. These pages contain syntax descriptions, command options, usage examples, and technical details relevant to each specific command or function. You can access a man page by using the man command.

aws re/start

Cristhian Becerra

cristhian-becerra-espinoza

+51 951 634 354

cristhianbecerra99@gmail.com

Lima, Peru