

Signing in AWS EC2 instance with ssh command

- After setting up the AWS account and choosing the correct configurations to work with, we have to start the instance and retrieve its Public IPv4 DNS address to login to the server.

Instance: i-01dc373cb3e33c345

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

▼ Instance summary [Info](#)

Instance ID i-01dc373cb3e33c345	Public IPv4 address 3.94.167.6 open address	Private IPv4 addresses 172.31.23.166
IPv6 address -	Instance state Running	Public IPv4 DNS <u>ec2-3-94-167-6.compute-1.amazonaws.com</u> open address
Hostname type IP name: ip-172-31-23-166.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-23-166.ec2.internal	Answer private resource DNS name IPv4 (A)
Instance type	Elastic IP addresses	Auto-assigned IP address

Signing in AWS EC2 instance with ssh command

- In this case, I have already placed the pem key in my WSL(Windows Subsystem for Linux) \$HOME directory, and according to the “-i” flag for the ssh command, this is used as “the device ssh should use to communicate with a smartcard used for storing the user's private RSA key”.
- Result:

```
qbee@qbee:~$ ssh -i ~/myawskey.pem ec2-user@ec2-3-94-167-6.compute-1.amazonaws.com
Last login: Tue May 17 03:54:57 2022 from 061092072118.ctinets.com

  __|  __|_  )
 _| (    /   Amazon Linux 2 AMI
---|\\---|---|

https://aws.amazon.com/amazon-linux-2/
2 package(s) needed for security, out of 5 available
Run "sudo yum update" to apply all updates.
```

Sudo -i and yum install tree

- The command “sudo -i” allows me to login as root, which in turns provides me an elevated access to commands like “yum install” (i.e. a package manager for linux where you can install packages and its dependencies easily) which normal user typically do not have access to use it.
- The following slide shows the directory /opt, which is usually for extra and third party software – and after installing tree using yum we are able to visual the structure of the directory more intuitively.

Sudo -i and yum install tree

- Assignment 1
- Result:

```
Complete!
[root@ip-172-31-23-166 ~]# cd /opt
[root@ip-172-31-23-166 opt]# tree
.
├── aws
│   ├── apitools
│   │   ├── cfn-init -> ./cfn-init-2.0-10
│   │   └── cfn-init-2.0-10
│   │       ├── bin
│   │       │   ├── cfn-elect-cmd-leader
│   │       │   ├── cfn-get-metadata
│   │       │   ├── cfn-hup
│   │       │   ├── cfn-init
│   │       │   ├── cfn-send-cmd-event
│   │       │   ├── cfn-send-cmd-result
│   │       │   └── cfn-signal
│   │       ├── init
│   │       │   ├── redhat
│   │       │   │   └── cfn-hup
│   │       │   ├── systemd
│   │       │   │   └── cfn-hup.service
│   │       │   ├── ubuntu
│   │       │   │   └── cfn-hup
│   │       ├── share
│   │       │   └── doc
│   │       │       ├── aws-cfn-bootstrap-2.0
│   │       │       │   ├── CHANGELOG.txt
│   │       │       │   ├── LICENSE.txt
│   │       │       │   └── NOTICE.txt
│   └── bin
│       ├── cfn-elect-cmd-leader -> ../apitools/cfn-init/bin/cfn-elect-cmd-leader
│       ├── cfn-get-metadata -> ../apitools/cfn-init/bin/cfn-get-metadata
│       ├── cfn-hup -> ../apitools/cfn-init/bin/cfn-hup
│       ├── cfn-init -> ../apitools/cfn-init/bin/cfn-init
│       ├── cfn-send-cmd-event -> ../apitools/cfn-init/bin/cfn-send-cmd-event
│       ├── cfn-send-cmd-result -> ../apitools/cfn-init/bin/cfn-send-cmd-result
│       ├── cfn-signal -> ../apitools/cfn-init/bin/cfn-signal
│       ├── ec2-metadata -> /usr/bin/ec2-metadata
│       ├── eic_curl_authorized_keys
│       ├── eic_harvest_hostkeys
│       ├── eic_parse_authorized_keys
│       └── eic_run_authorized_keys
└── rh
```

Sudo yum erase -y

- In this part, we execute “yum erase -y” for the tree package. The command is used to remove installed package and related **unused** dependencies in the system. Also, the “-y” flag stands for “Automatically answer yes for all questions” so you will not be prompted.

```
--> Running transaction check
---> Package tree.x86_64 0:1.6.0-10.amzn2.0.1 will be erased
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                        Arch                        Version
=====
Removing:
tree                          x86_64                      1.6.0-10.amzn2.0.1

Transaction Summary
=====
Remove 1 Package

Installed size: 83 k
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Erasing      : tree-1.6.0-10.amzn2.0.1.x86_64
  Verifying    : tree-1.6.0-10.amzn2.0.1.x86_64

Removed:
tree.x86_64 0:1.6.0-10.amzn2.0.1

Complete!
```

Sudo yum erase -y

- Assignment 2
- As a result, it is clear that you are no longer able to use the tree command.

```
[root@ip-172-31-23-166 ~]# tree  
-bash: tree: command not found
```

Mkdir, echo, ls and cat

- Assignment 3
- Here we performed some basic file operations: making new directory with “mkdir”; printing a output using “echo” and redirected it with “>” operator; listing the contents of the directory with “ls”; and finally checking the contents of the file with “cat”.

```
[root@ip-172-31-23-166 ~]# cd /opt
[root@ip-172-31-23-166 opt]# ls -l
total 0
drwxr-xr-x 4 root root 33 Apr 28 19:54 aws
drwxr-xr-x 2 root root  6 Aug 16 2018 rh
[root@ip-172-31-23-166 opt]# mkdir demolinux
[root@ip-172-31-23-166 opt]# echo "abc" > abc.txt
[root@ip-172-31-23-166 opt]# ls
abc.txt  aws  demolinux  rh
[root@ip-172-31-23-166 opt]# cat abc.txt
abc
[root@ip-172-31-23-166 opt]# ls
abc.txt  aws  demolinux  rh
[root@ip-172-31-23-166 opt]# echo "abc1" > abc1.txt
[root@ip-172-31-23-166 opt]# ls
abc.txt  abc1.txt  aws  demolinux  rh
[root@ip-172-31-23-166 opt]# cat abc1.txt
abc1
[root@ip-172-31-23-166 opt]# |
```

Mkdir, echo, ls and cat

- Assignment 4
- Here we actually did similar operations with the previous commands, only that we have listed the directory with “-ltr” flag which stands for “long listing(-l) the contents by time (-t) in reversed order (-r, so the newer files are in the bottom), including hidden files (-a)”.

```
[root@ip-172-31-23-166 demolinux]# echo "abc" > abc.txt
[root@ip-172-31-23-166 demolinux]# ls -ltr
total 4
-rw-r--r-- 1 root root 4 May 10 11:22 abc.txt
[root@ip-172-31-23-166 demolinux]# cat abc.txt
abc
[root@ip-172-31-23-166 demolinux]# ls -ltra
total 4
drwxr-xr-x 5 root root 75 May  9 13:08 ..
drwxr-xr-x 2 root root 21 May 10 11:22 .
-rw-r--r-- 1 root root  4 May 10 11:22 abc.txt
[root@ip-172-31-23-166 demolinux]# echo "abc1" > abc1.txt
[root@ip-172-31-23-166 demolinux]# ls
abc.txt  abc1.txt
[root@ip-172-31-23-166 demolinux]# cat abc1.txt
abc1
[root@ip-172-31-23-166 demolinux]# |
```


Yum install httpd, service, chkconfig

- In order to host a http webpage, we have installed Apache Web Server “httpd” using yum, and in order to start the service, we need to run “service httpd start” command, which is used for managing the start, stop, and restart of the daemons in a linux machine. Then we use “chkconfig” command to check/update their run level settings of the httpd daemon.

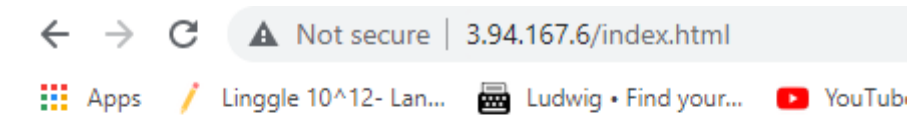
```
[root@ip-172-31-23-166 ~]# service httpd start  
Redirecting to /bin/systemctl start httpd.service
```

```
[root@ip-172-31-23-166 ~]# chkconfig httpd on  
Note: Forwarding request to 'systemctl enable httpd.service'.
```

Hosting a webpage

- Assignment 5
- With the html file ready in the designated path, we are able to view the page in the using the AWS public IP.

```
[root@ip-172-31-23-166 html]# pwd
/var/www/html
[root@ip-172-31-23-166 html]# cat index.html
<html><body><h1>Welcome! </br> Design & Developed by Jonas</h1></body></html>
```



Welcome!
Design & Developed by Jonas