

Server ip : 35.175.243.174

Using aws cloud provider

Users : shery , nada , passant , sohaila , instructor , ec2-user

We added these users using sudo adduser username command

First we downloaded key file named firstawsinstanceserver.pem from aws on the linux machine

Changed to its directory using : \$cd lab3

then tried to connect to it using the following command:

```
[student@client lab3]$ ssh -i firstawsinstanceserver.pem ec2-user@18.212.175.11
Last login: Tue Jan 11 21:03:56 2022 from 102.43.9.23
[ec2-user@ip-172-31-86-123 ~]$ packet_write_wait: Connection to 18.212.175.11 port 22:
Broken pipe
[student@client lab3]$ ssh -i firstawsinstanceserver.pem ec2-user@35.175.243.174
The authenticity of host '35.175.243.174 (35.175.243.174)' can't be established.
ECDSA key fingerprint is SHA256:WFp2TjkAzDZ+dn5hP89Xx9GQpJC7dhWs+Y2ayLpMmVo.
ECDSA key fingerprint is MD5:9a:37:6a:87:07:16:bb:03:35:35:87:8c:a9:1f:38:ba.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '35.175.243.174' (ECDSA) to the list of known hosts.
Last login: Tue Jan 11 21:07:41 2022 from 102.43.9.23
```

Then logged out of the server using exit command

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generated a key and the passphrase is 12345 :

```
[student@client lab3]$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/student/.ssh/id_rsa):
/home/student/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Passphrases do not match. Try again.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/student/.ssh/id_rsa.
Your public key has been saved in /home/student/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:L+dLn7I+GwRuXo55htxdQYoCl4tkxLbuhXDapPPXP48 student@client.redhat.com
The key's randomart image is:
+---[RSA 2048]---+
|      oo .. .      |
|      =0. . 0      |
|    + oo.. . .      |
|      =..0 .        |
|    0 .S o .        |
|  + ++.X . .        |
|    + .B.X .        |
|      o .B+o.o       |
|      . .*BEo.       |
+---[SHA256]-----+
```

ran ssh agent software :

```
[student@client lab3]$ eval $(ssh-agent)
Agent pid 4315
```

Then added the key:

```
[student@client lab3]$ ssh-add  
Enter passphrase for /home/student/.ssh/id_rsa:  
Identity added: /home/student/.ssh/id_rsa (/home/student/.ssh/id_rsa)
```

And copied it to the server :

```
[student@client lab3]$ ssh-copy-id ec2-user@35.175.243.174  
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any  
that are already installed  
/usr/bin/ssh-copy-id: INFO: 3 key(s) remain to be installed -- if you are prompted now  
it is to install the new keys
```

Number of key(s) added: 3

Now try logging into the machine, with: `ssh 'ec2-user@35.175.243.174'`
and check to make sure that only the key(s) you wanted were added.

Logged in again to the server:

```
[student@client lab3]$ ssh ec2-user@35.175.243.174  
Last login: Wed Jan 12 20:11:48 2022 from 41.34.76.151
```

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```
[ec2-user@ip-172-31-86-123 ~]$ sudo vim /etc/ssh/sshd_config  
[ec2-user@ip-172-31-86-123 ~]$
```

```
#LoginGraceTime 2m  
PermitRootLogin no  
#StrictModes yes  
#MaxAuthTries 6  
#MaxSessions 10  
  
#PubkeyAuthentication yes  
  
# The default is to check both .ssh/authorized_keys and .ssh/authorized_keys2  
# but this is overridden so installations will only check .ssh/authorized_keys  
AuthorizedKeysFile .ssh/authorized_keys  
  
#AuthorizedPrincipalsFile none  
  
#AuthorizedKeysCommand none  
#AuthorizedKeysCommandUser nobody  
  
# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts  
#HostbasedAuthentication no  
# Change to yes if you don't trust ~/.ssh/known_hosts for  
# HostbasedAuthentication  
#IgnoreUserKnownHosts no  
# Don't read the user's ~/.rhosts and ~/.shosts files  
#IgnoreRhosts yes  
  
# To disable tunneled clear text passwords, change to no here!  
#PasswordAuthentication yes  
#PermitEmptyPasswords no  
PasswordAuthentication no  
  
# Change to no to disable s/key passwords  
#ChallengeResponseAuthentication yes  
ChallengeResponseAuthentication no  
  
# Kerberos options  
#KerberosAuthentication no  
#KerberosOrLocalPasswd yes  
#KerberosTicketCleanup yes  
#KerberosGetAFSToken no  
#KerberosUseKuserok yes  
  
# GSSAPI options  
GSSAPIAuthentication yes  
-- INSERT --
```

Then ESC :wq

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```
[ec2-user@ip-172-31-86-123 ~]$ sudo vim /etc/sudoers.d/passant
[ec2-user@ip-172-31-86-123 ~]$ sudo vim /etc/sudoers.d/instructor
```

```
passant ALL=(ALL) ALL
```

```
instructor ALL=(ALL) ALL
```

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```
[ec2-user@ip-172-31-86-123 ~]$ vim ~/.bashrc
```

```
# .bashrc

# Source global definitions
if [ -f /etc/bashrc ]; then
    . /etc/bashrc
fi

# User specific environment
if ! [[ "$PATH" =~ "$HOME/.local/bin:$HOME/bin:" ]]
then
    PATH="$HOME/.local/bin:$HOME/bin:$PATH"
fi
export PATH
umask 0022
# Uncomment the following line if you don't like systemctl's auto-paging feature:
# export SYSTEMD_PAGER=

# User specific aliases and functions
```

5.1-

```
[student@client ~]$ ls
bin      Documents  lab3      Pictures  Templates  test4    testumask
Desktop  Downloads  Music     Public    test3      testu2   Videos
[student@client ~]$ cd lab3
[student@client lab3]$ ls
firstawsinstanceserver.pem  lab.txt  WebServer.tar.xz
[student@client lab3]$ scp ec2-user@35.175.243.174
usage: scp [-12346BCpqrv] [-c cipher] [-F ssh_config] [-i identity_file]
          [-l limit] [-o ssh_option] [-P port] [-S program]
          [[user@]host1:]file1 ... [[user@]host2:]file2
[student@client lab3]$ scp WebServer.tar.xz ec2-user@35.175.243.174:~
sign_and_send_pubkey: signing failed: agent refused operation
WebServer.tar.xz                                100% 1473KB 133.7KB/s   00:11
[student@client lab3]$ ssh ec2-user@35.175.243.174
sign_and_send_pubkey: signing failed: agent refused operation
Last login: Sun Jan 16 14:34:47 2022 from 156.222.174.35
[ec2-user@ip-172-31-86-123 ~]$ ls
out.txt  webs  WebServer.tar.xz
```

5.2- , 6-

```
[student@client lab3]$ scp WebServer.tar.xz ec2-user@35.175.243.174:~
sign and send pubkey: signing failed: agent refused operation
WebServer.tar.xz 100% 1473KB 133.7KB/s 00:11
[student@client lab3]$ ssh ec2-user@35.175.243.174
sign and send pubkey: signing failed: agent refused operation
Last login: Sun Jan 16 14:34:47 2022 from 156.222.174.35
[ec2-user@ip-172-31-86-123 ~]$ ls
out.txt webs WebServer.tar.xz
[ec2-user@ip-172-31-86-123 ~]$ tar -xJf WebServer.tar.xz
[ec2-user@ip-172-31-86-123 ~]$ ls
Bonus_Task out.txt webs WebServer.tar.xz
[ec2-user@ip-172-31-86-123 ~]$ cd Bonus_Task
[ec2-user@ip-172-31-86-123 Bonus_Task]$ ls
fakewebserver.py venv WebServer.sh
[ec2-user@ip-172-31-86-123 Bonus_Task]$ ./WebServer.sh
INFO:root:Received GET Request from ip: 152.625.78.3 Status: OK 200
ERROR:root:Received DELETE Request from ip: 652.545.51.3 Status: ERROR 500
INFO:root:Received GET Request from ip: 139.321.21.3 Status: OK 200
ERROR:root:Received POST Request from ip: 545.254.21.3 Status: ERROR 500
INFO:root:Received POST Request from ip: 545.254.21.3 Status: OK 200
ERROR:root:Received DELETE Request from ip: 652.545.51.3 Status: ERROR 500
^CTraceback (most recent call last):
  File "./fakewebserver.py", line 28, in <module>
    time.sleep(1)
KeyboardInterrupt
[ec2-user@ip-172-31-86-123 Bonus_Task]$
```

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```
File Edit View Search Terminal Help
# .bashrc

# Source global definitions
if [ -f /etc/bashrc ]; then
    . /etc/bashrc
fi

# User specific environment
if ! [[ "$PATH" =~ "$HOME/.local/bin:$HOME/bin:" ]]
then
    PATH="$HOME/.local/bin:$HOME/bin:$PATH"
fi
export PATH =/home/ec2-user/Bonus_Task:$PATH
umask 0022
# Uncomment the following line if you don't like systemctl's auto-paging feature:
# export SYSTEMD_PAGER=

# User specific aliases and functions
~
~
~
~
```


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```
connection to 35.175.243.174:22: success.
[student@client ~]$ ssh ec2-user@35.175.243.174
sign and send pubkey: signing failed: agent refused operation
Last login: Sun Jan 16 18:25:00 2022 from 41.235.218.119
-bash: export: `~/Bonus Task': not a valid identifier
[ec2-user@ip-172-31-86-123 ~]$ cat server_logs.txt
-bash: bg: %1: no such job
[ec2-user@ip-172-31-86-123 ~]$ cd Bonus_Task
[ec2-user@ip-172-31-86-123 Bonus_Task]$ ./WebServer.sh >server_logs.txt 2>&1 &
[1] 61836
[ec2-user@ip-172-31-86-123 Bonus_Task]$ cat server_logs.txt
INFO:root:Received PUT Request from ip: 782.254.523.3 Status: OK 200
ERROR:root:Received POST Request from ip: 545.254.21.3 Status: ERROR 500
INFO:root:Received DELETE Request from ip: 652.545.51.3 Status: OK 200
ERROR:root:Received GET Request from ip: 139.321.21.3 Status: ERROR 500
INFO:root:Received GET Request from ip: 139.321.21.3 Status: OK 200
ERROR:root:Received GET Request from ip: 139.321.21.3 Status: ERROR 500
INFO:root:Received GET Request from ip: 139.321.21.3 Status: OK 200
ERROR:root:Received GET Request from ip: 139.321.21.3 Status: ERROR 500
INFO:root:Received PUT Request from ip: 782.254.523.3 Status: OK 200
```

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```
valid_lft 2779sec preferred_lft 2779sec
[ec2-user@ip-172-31-86-123 Bonus_Task]$ cd
[ec2-user@ip-172-31-86-123 ~]$ ip addr show >network.txt
[ec2-user@ip-172-31-86-123 ~]$ cat network.txt
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen
1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 9001 qdisc fq_codel state UP group defau
lt qlen 1000
    link/ether 12:be:d0:ee:bf:2b brd ff:ff:ff:ff:ff:ff
    inet 172.31.86.123/20 brd 172.31.95.255 scope global dynamic noprefixroute eth0
        valid_lft 2779sec preferred_lft 2779sec
[ec2-user@ip-172-31-86-123 ~]$
```

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```
[ec2-user@ip-172-31-86-123 ~]$ ls
Bonus_Task network.txt out.txt server_logs.txt Task.tar.xz webs WebServer.tar.xz
[ec2-user@ip-172-31-86-123 ~]$ rm Task.tar.xz
[ec2-user@ip-172-31-86-123 ~]$ ls
Bonus_Task network.txt out.txt server_logs.txt webs WebServer.tar.xz
[ec2-user@ip-172-31-86-123 ~]$ tar cJf Task.tar.xz network.txt server_logs.txt
[ec2-user@ip-172-31-86-123 ~]$ ls
Bonus_Task network.txt out.txt server_logs.txt Task.tar.xz webs WebServer.tar.xz
[ec2-user@ip-172-31-86-123 ~]$
```

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```
[ec2-user@ip-172-31-86-123 ~]$ exit
logout
Connection to 35.175.243.174 closed.
[student@client ~]$ scp ec2-user@35.175.243.174:Task.tar.xz ~
sign_and_send_pubkey: signing failed: agent refused operation
/home/ec2-user/.bashrc: line 14: export: `~/Bonus_Task': not a valid identifier
Task.tar.xz                                100% 2008  10.8KB/s  00:00
[student@client ~]$ ls
bin      Documents  lab3  Pictures  Task.tar.xz  test3  testu2  Videos
Desktop  Downloads  Music  Public    Templates   test4  testumask
[student@client ~]$
```