

Task: Deploy Linux and Windows virtual machine and access them using SSH and RDP

Solution:

Accessing virtual Linux machine to another Linux terminal using ssh.

I have a linux virtual machine with username “neelmani” and another my local linux with username “developer”.

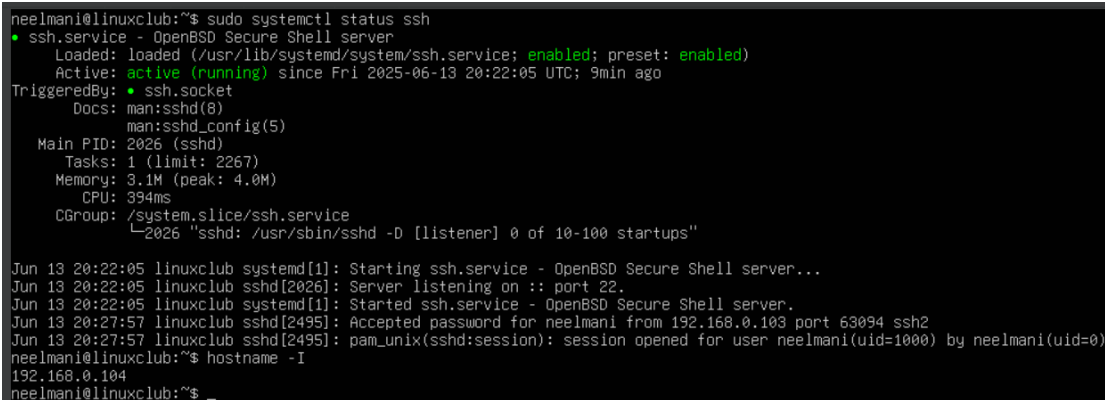
For this process, firstly i checked status of both machines, if status is inactive or ssh.services not present then we'll first install and then start and enable ssh as follow.

```
$ sudo apt update
$ sudo apt install openssh-server -y
$ sudo systemctl status ssh
$ sudo systemctl start ssh
$ sudo systemctl enable ssh
$ sudo systemctl status ssh
```

As ssh in running or active status, next task is to find ip address of remote machines

```
$ hostname -I
```

By this we get ip address

A terminal window showing the status of the SSH service and its logs. The user 'neelmani' is at the 'linuxclub' machine. The command 'sudo systemctl status ssh' is executed, showing that the 'ssh.service' is loaded, active (running), and enabled. It also shows the service's main PID, tasks, memory, CPU, and cgroup. Below this, the system logs are displayed, showing the service starting, listening on port 22, and accepting a password for the user 'neelmani' from IP 192.168.0.103. The user then runs 'hostname -I', which returns '192.168.0.104'.

```
neelmani@linuxclub:~$ sudo systemctl status ssh
• ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/usr/lib/systemd/system/ssh.service; enabled; preset: enabled)
   Active: active (running) since Fri 2025-06-13 20:22:05 UTC; 9min ago
   TriggeredBy: • ssh.socket
     Docs: man:sshd(8)
           man:sshd_config(5)
    Main PID: 2026 (sshd)
      Tasks: 1 (limit: 2267)
     Memory: 3.1M (peak: 4.0M)
        CPU: 394ms
     CGroup: /system.slice/ssh.service
            └─2026 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Jun 13 20:22:05 linuxclub systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
Jun 13 20:22:05 linuxclub sshd[2026]: Server listening on :: port 22.
Jun 13 20:22:05 linuxclub systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
Jun 13 20:27:57 linuxclub sshd[2495]: Accepted password for neelmani from 192.168.0.103 port 63094 ssh2
Jun 13 20:27:57 linuxclub sshd[2495]: pam_unix(sshd:session): session opened for user neelmani(uid=1000) by neelmani(uid=0)
neelmani@linuxclub:~$ hostname -I
192.168.0.104
neelmani@linuxclub:~$ _
```

The above mentioned image is describing status of remote virtual machines

```
neelmani@linuxclub: ~
developer@DESKTOP-6AHML91:~$ sudo systemctl status ssh
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/usr/lib/systemd/system/ssh.service; enabled; preset: enabled)
   Active: active (running) since Fri 2025-06-13 20:13:23 UTC; 23min ago
   TriggeredBy: ● ssh.socket
     Docs: man:sshd(8)
           man:sshd_config(5)
    Main PID: 4533 (sshd)
      Tasks: 1 (limit: 4623)
     Memory: 1.2M ( )
    CGroup: /system.slice/ssh.service
            └─4533 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Jun 13 20:13:22 DESKTOP-6AHML91 systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
Jun 13 20:13:23 DESKTOP-6AHML91 sshd[4533]: Server listening on :: port 22.
Jun 13 20:13:23 DESKTOP-6AHML91 systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
developer@DESKTOP-6AHML91:~$ ssh neelmani@192.168.0.104
neelmani@192.168.0.104's password:
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-60-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

System information as of Fri Jun 13 08:36:11 PM UTC 2025

System load:  0.1          Processes:      131
Usage of /:   39.7% of 11.21GB   Users logged in: 1
Memory usage: 11%          IPv4 address for enp0s3: 192.168.0.104
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

57 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

Last login: Fri Jun 13 20:36:14 2025 from 192.168.0.103
neelmani@linuxclub:~$
```

```
developer@DESKTOP-6AHML91:~
Jun 13 20:13:23 DESKTOP-6AHML91 sshd[4533]: Server listening on :: port 22.
Jun 13 20:13:23 DESKTOP-6AHML91 systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
developer@DESKTOP-6AHML91:~$ ssh neelmani@192.168.0.104
neelmani@192.168.0.104's password:
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-60-generic x86_64)

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Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

Last login: Fri Jun 13 20:36:14 2025 from 192.168.0.103
neelmani@linuxclub:~$ whoami
neelmani
neelmani@linuxclub:~$ pwd
/home/neelmani
neelmani@linuxclub:~$ date
Fri Jun 13 08:38:31 PM UTC 2025
neelmani@linuxclub:~$ hostname -I
192.168.0.104
neelmani@linuxclub:~$ exit
logout
Connection to 192.168.0.104 closed.
developer@DESKTOP-6AHML91:~$
```

Above mentioned both images shows the login status of remote machine to local machine using ssh

\$ ssh username@ip_address

SSH (Secure Shell) is a **secure protocol** used to remotely access and control another computer over a network, typically via the **command line**.

Accessing virtual window machine to another Linux terminal using ssh.

For accessing the window machine, we simply enable SSH Access in windows and by applying same process, it can be remotely accessed.

Accessing virtual window machine using Remote Desktop Protocol (RDP):

If we are using Azure or any cloud virtual machine then by simply
go to resource
go to deployed virtual machines
click on connect
click on RDP

It will download a file, by executing that file, we can remotely access virtual window machine to local machines

Same as we can access linux virtual machine by downloading ssh file and mention that file in ssh command

```
$ ssh ssh_file_path username@ip\_address
```

In such a ways, we can access linux and window machine