

**PRAKTIKUM  
ARSITEKTUR DAN ORGANISASI  
KOMPUTER**

**“Ubuntu server, SSH”**



**Disusun Oleh :**

**Nama : Dwi Aurelia Rahmadani  
NIM : 09030582226038  
Prodi : Teknik Komputer  
Dosen : Adi Hermansyah, S. Kom., M.T.**

**LABORATORIUM PERANGKAT KERAS  
FAKULTAS ILMU KOMPUTER  
UNIVERSITAS SRIWIJAYA PALEMBANG**

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## MENGAKTIFKAN SSH DI UBUNTU 20.04.6

Tahap 1 ketika sudah running, silahkan login nama user.

```
Ubuntu 20.04.6 LTS aurelia tty1
aurelia login: _
```

Setelah memasukkan nama user pada "Login" lalu masukkan "Password".

```
Ubuntu 20.04.6 LTS aurelia tty1
aurelia login: dui
Password: _
```

Ketika berhasil masuk lalu ketikkan "sudo apt update" dan harus selalu mengupdate ketika ingin menggunakan ubuntu.

```
Ubuntu 20.04.6 LTS aurelia tty1
aurelia login: dui
Password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.4.0-166-generic x86_64)

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

System information as of Sun 19 Nov 2023 05:28:08 AM UTC

System load:  0.12               Processes:    140
Usage of /:   54.8% of 11.21GB   Users logged in:  0
Memory usage: 29%               IPv4 address for enp0s3: 172.20.10.5
Swap usage:   0%

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   Just raised the bar for easy, resilient and secure K8s cluster deployment.
   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

5 updates can be applied immediately.
2 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

8 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

Last login: Wed Nov 15 02:46:06 UTC 2023 from 172.20.10.3 on pts/2
dui@aurelia:~$ sudo apt update
[sudo] password for dui: _
```

Selanjutnya menginstall openssh-server dengan mengetikkan "sudo apt install openssh-server".

```
Expanded Security Maintenance for Applications is not enabled.

5 updates can be applied immediately.
2 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

8 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

Last login: Wed Nov 15 02:46:06 UTC 2023 from 172.20.10.3 on pts/2
dwi@aurelia:~$ sudo apt update
Hit:1 http://id.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://id.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Hit:3 http://id.archive.ubuntu.com/ubuntu focal-backports InRelease
Get:4 http://id.archive.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:5 http://id.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2,960 kB]
Get:6 http://id.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [482 kB]
Get:7 http://id.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1,130 kB]
Get:8 http://id.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [270 kB]
Get:9 http://id.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [25.8 kB]
Get:10 http://id.archive.ubuntu.com/ubuntu focal-security/main amd64 Packages [2,570 kB]
Get:11 http://id.archive.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [23.6 kB]
Fetched 7,689 kB in 9s (813 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
7 packages can be upgraded. Run 'apt list --upgradable' to see them.
dwi@aurelia:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
openssh-server is already the newest version (1:8.2p1-4ubuntu0.9).
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
dwi@aurelia:~$
```

Ketika berhasil tidak terdapat error saat penginstallan, lalu kita dapat melihat apakah ssh berjalan dan telah active (running) dengan mengetik "sudo systemctl status ssh".

```
Get:4 http://id.archive.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:5 http://id.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2,960 kB]
Get:6 http://id.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [482 kB]
Get:7 http://id.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1,130 kB]
Get:8 http://id.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [270 kB]
Get:9 http://id.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [25.8 kB]
Get:10 http://id.archive.ubuntu.com/ubuntu focal-security/main amd64 Packages [2,570 kB]
Get:11 http://id.archive.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [23.6 kB]
Fetched 7,689 kB in 9s (813 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
7 packages can be upgraded. Run 'apt list --upgradable' to see them.
dwi@aurelia:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
openssh-server is already the newest version (1:8.2p1-4ubuntu0.9).
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
dwi@aurelia:~$ sudo systemctl status ssh
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2023-11-19 05:19:39 UTC; 13min ago
     Docs: man:sshd(8)
           man:sshd_config(5)
  Process: 735 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)
    Main PID: 781 (sshd)
      Tasks: 1 (limit: 2256)
     Memory: 3.8M
        CGroup: /system.slice/ssh.service
                └─781 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups

Nov 19 05:19:39 aurelia systemd[1]: Starting OpenBSD Secure Shell server...
Nov 19 05:19:39 aurelia sshd[781]: Server listening on 0.0.0.0 port 22.
Nov 19 05:19:39 aurelia sshd[781]: Server listening on :: port 22.
Nov 19 05:19:39 aurelia systemd[1]: Started OpenBSD Secure Shell server.
dwi@aurelia:~$
```

Jika ingin mengecek ip kita dengan mengetik ”ifconfig” atau bisa dengan ”ip a”.

```
Nov 19 05:19:39 aurelia sshd[781]: Server listening on 0.0.0.0 port 22.
Nov 19 05:19:39 aurelia sshd[781]: Server listening on :: port 22.
Nov 19 05:19:39 aurelia systemd[1]: Started OpenBSD Secure Shell server.
dwi@aurelia:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.20.10.5 netmask 255.255.255.240 broadcast 172.20.10.15
    inet6 fe80::a00:27ff:fe3a:2df2 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:3a:2d:f2 txqueuelen 1000 (Ethernet)
    RX packets 5723 bytes 8057124 (8.0 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 2267 bytes 149623 (149.6 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 110 bytes 9182 (9.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 110 bytes 9182 (9.1 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

dwi@aurelia:~$ ip a
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: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:3a:2d:f2 brd ff:ff:ff:ff:ff:ff
    inet 172.20.10.5/24 brd 172.20.10.15 scope global dynamic enp0s3
        valid_lft 85474sec preferred_lft 85474sec
    inet6 fe80::a00:27ff:fe3a:2df2/64 scope link
        valid_lft forever preferred_lft forever
dwi@aurelia:~$
```

Setelah itu kita beralih ke cmd untuk melihat juga status aktif pada ssh dengan menekan ”Windows+R”, setelah berhasil terbuka maka segera login pada cmd dengan mengetik ”ssh user@ip” ”user” nama user kita dan ip adalah ip yang telah kita dapat pada ubuntu.

```
C:\WINDOWS\system32\cmd. x + v
Microsoft Windows [Version 10.0.22621.2715]
(c) Microsoft Corporation. All rights reserved.

C:\Users\lenovo>ssh dwi@172.20.10.5
The authenticity of host '172.20.10.5 (172.20.10.5)' can't be established.
ED25519 key fingerprint is SHA256:IoF52w6Q0Qz/K3LANbl+Q1XLrol+8/nrrH/MGg+nhQc.
This host key is known by the following other names/addresses:
  C:\Users\lenovo/.ssh/known_hosts:1: 172.20.10.4
  C:\Users\lenovo/.ssh/known_hosts:4: 10.1.11.101
  C:\Users\lenovo/.ssh/known_hosts:5: 10.1.11.242
  C:\Users\lenovo/.ssh/known_hosts:6: 10.1.9.104
  C:\Users\lenovo/.ssh/known_hosts:7: 172.20.10.2
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.20.10.5' (ED25519) to the list of known hosts.
dwi@172.20.10.5's password:
```

Terlihat juga pada cmd status ssh telah active (running).

```
dwi@aurelia:~$ sudo apt update
[sudo] password for dwi:
Hit:1 http://id.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://id.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://id.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://id.archive.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
7 packages can be upgraded. Run 'apt list --upgradable' to see them.
dwi@aurelia:~$ sudo systemctl status ssh
* ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2023-11-19 05:19:39 UTC; 28min ago
     Docs: man:ssh(8)
           man:ssh_config(8)
   Process: 735 ExecStartPre=/usr/sbin/ssh -t (code=exited, status=0/SUCCESS)
    Main PID: 781 (sshd)
      Tasks: 1 (limit: 2256)
     Memory: 5.8M
    CGroup: /system.slice/ssh.service
            └─781 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups

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Nov 19 05:19:39 aurelia sshd[781]: Server listening on 0.0.0.0 port 22.
Nov 19 05:19:39 aurelia sshd[781]: Server listening on :: port 22.
Nov 19 05:19:39 aurelia systemd[1]: Started OpenBSD Secure Shell server.
Nov 19 05:39:25 aurelia sshd[1776]: Accepted password for dwi from 172.20.10.4 port 50520 ssh2
Nov 19 05:39:25 aurelia sshd[1776]: pam_unix(sshd:session): session opened for user dwi by (uid=0)
dwi@aurelia:~$
```