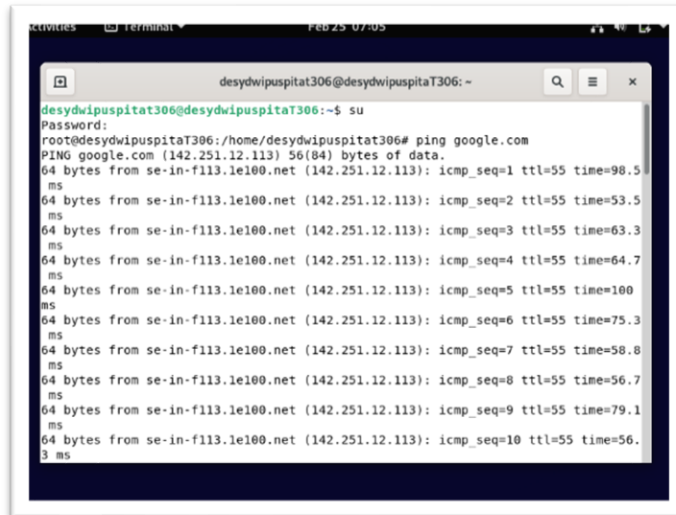


Judul :

Remote Server

Laporan Hasil Tugas Praktikum :

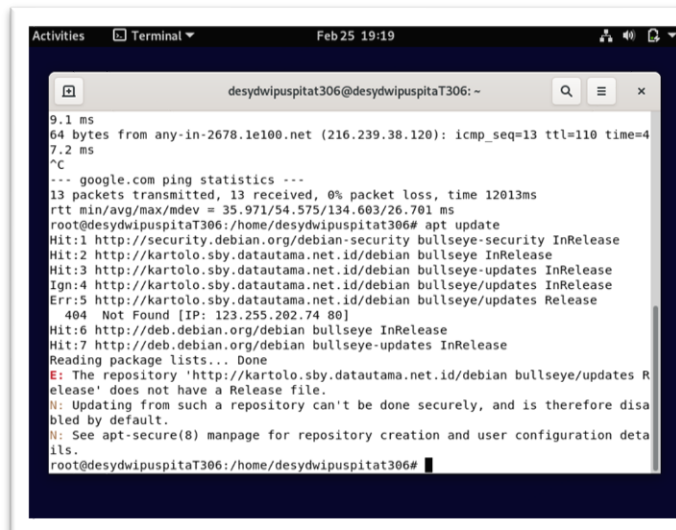
1. Ping google.com

A screenshot of a terminal window titled 'desydwipuspat306@desydwipuspat306: ~'. The user has entered 'su' to become root. The prompt is now 'root@desydwipuspat306:/home/desydwipuspat306#'. The user has entered 'ping google.com'. The terminal shows the output of the ping command: 'PING google.com (142.251.12.113) 56(84) bytes of data.' followed by 10 lines of ping results. Each line shows '64 bytes from se-in-f113.1e100.net (142.251.12.113): icmp_seq=X ttl=55 time=X.X ms' where X ranges from 1 to 10. The times vary between approximately 53.5 ms and 98.5 ms. The terminal window has a search bar and a close button in the top right corner.

Penjelasan :

Masuk ke terminal Debian, kemudian ketikkan “su”, lalu masukkan password root kita. Ketik “ping google.com” untuk memeriksa status target host dan server atau computer, kemudian enter. Jika sudah untuk memberhentikan Linux ping, tekan Ctrl+C.

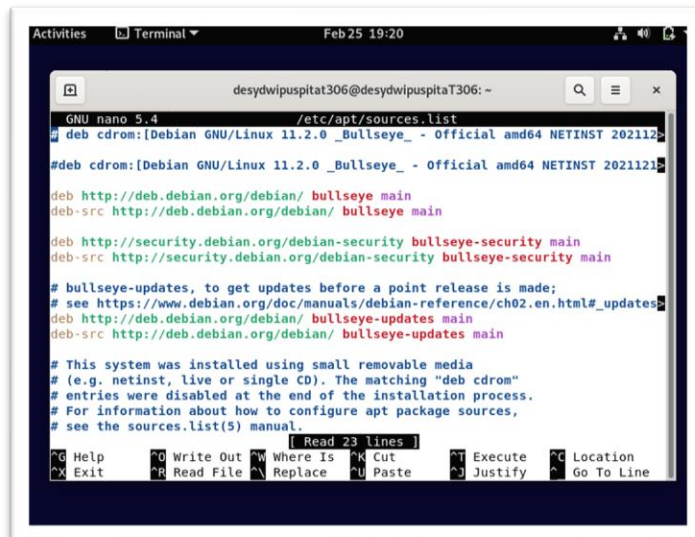
2. Apt update

A screenshot of a terminal window titled 'desydwipuspat306@desydwipuspat306: ~'. The user has entered 'apt update'. The terminal shows the output of the command, including the status of various repositories and the packages to be updated. The output includes: 'Hit:1 http://security.debian.org/debian-security bullseye-security InRelease', 'Hit:2 http://kartolo.sby.datautama.net.id/debian bullseye InRelease', 'Hit:3 http://kartolo.sby.datautama.net.id/debian bullseye-updates InRelease', 'Ign:4 http://kartolo.sby.datautama.net.id/debian bullseye-updates InRelease', 'Err:5 http://kartolo.sby.datautama.net.id/debian bullseye-updates Release', '404 Not Found [IP: 123.255.202.74 80]', 'Hit:6 http://deb.debian.org/debian bullseye InRelease', 'Hit:7 http://deb.debian.org/debian bullseye-updates InRelease', 'Reading package lists... Done', 'E: The repository 'http://kartolo.sby.datautama.net.id/debian bullseye-updates R', 'elease' does not have a Release file.', 'H: Updating from such a repository can't be done securely, and is therefore disa', 'bled by default.', 'H: See apt-secure(8) manpage for repository creation and user configuration deta', 'ils.', The terminal window has a search bar and a close button in the top right corner.

Penjelasan :

Apt update adalah command line untuk distribusi linux Debian dan turunannya. Fungsi apt update adalah untuk mendapatkan “daftar” komponen yang terbaru berdasarkan komponen yang terkonfigurasi pada sebuah terminal. Dan disini apt-get update ini digunakan untuk mengecek apakah debian sudah update atau belum.

3. Nano /etc/apt/sources.list (sebelum input)



```
GNU nano 5.4 /etc/apt/sources.list
deb cdrom:[Debian GNU/Linux 11.2.0 _Bullseye_ - Official amd64 NETINST 202112]
#deb cdrom:[Debian GNU/Linux 11.2.0 _Bullseye_ - Official amd64 NETINST 202112]

deb http://deb.debian.org/debian/ bullseye main
deb-src http://deb.debian.org/debian/ bullseye main

deb http://security.debian.org/debian-security bullseye-security main
deb-src http://security.debian.org/debian-security bullseye-security main

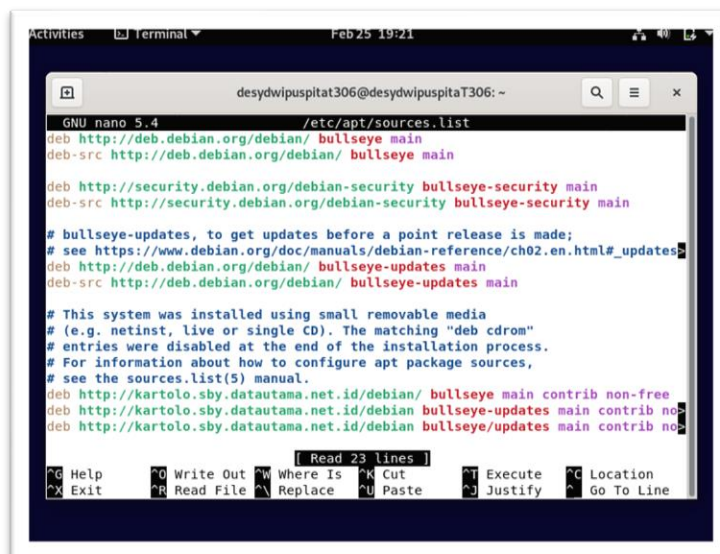
# bullseye-updates, to get updates before a point release is made;
# see https://www.debian.org/doc/manuals/debian-reference/ch02.en.html#_updates
deb http://deb.debian.org/debian/ bullseye-updates main
deb-src http://deb.debian.org/debian/ bullseye-updates main

# This system was installed using small removable media
# (e.g. netinst, live or single CD). The matching "deb cdrom"
# entries were disabled at the end of the installation process.
# For information about how to configure apt package sources,
# see the sources.list(5) manual.
```

Penjelasan :

Untuk melakukan repository atau memperbarui Debian dapat menggunakan dua macam cara yaitu melalui CD dan melalui internet. Untuk melihat isi dari repository dengan menggunakan sintaks “nano /etc/apt/sources.list”. dan pada gambar diatas merupakan tampilan “nano /etc/apt/sources.list” sebelum dimasukkan sintaks repository Debiannya.

4. Nano /etc/apt/sources.list (setelah input)



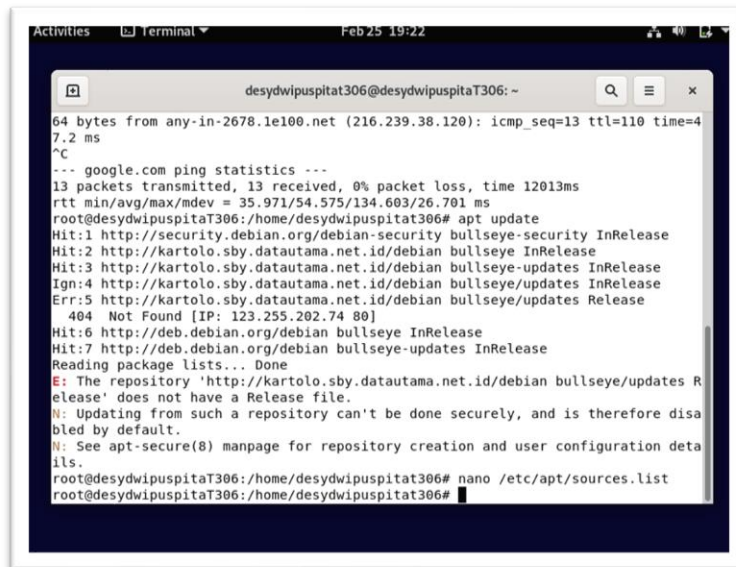
```
GNU nano 5.4 /etc/apt/sources.list
deb http://deb.debian.org/debian/ bullseye main
deb-src http://deb.debian.org/debian/ bullseye main

deb http://security.debian.org/debian-security bullseye-security main
deb-src http://security.debian.org/debian-security bullseye-security main

# bullseye-updates, to get updates before a point release is made;
# see https://www.debian.org/doc/manuals/debian-reference/ch02.en.html#_updates
deb http://deb.debian.org/debian/ bullseye-updates main
deb-src http://deb.debian.org/debian/ bullseye-updates main

# This system was installed using small removable media
# (e.g. netinst, live or single CD). The matching "deb cdrom"
# entries were disabled at the end of the installation process.
# For information about how to configure apt package sources,
# see the sources.list(5) manual.
deb http://kartolo.sby.datautama.net.id/debian/ bullseye main contrib non-free
deb http://kartolo.sby.datautama.net.id/debian bullseye-updates main contrib no
deb http://kartolo.sby.datautama.net.id/debian bullseye/updates main contrib no
```

Setelah dienter :

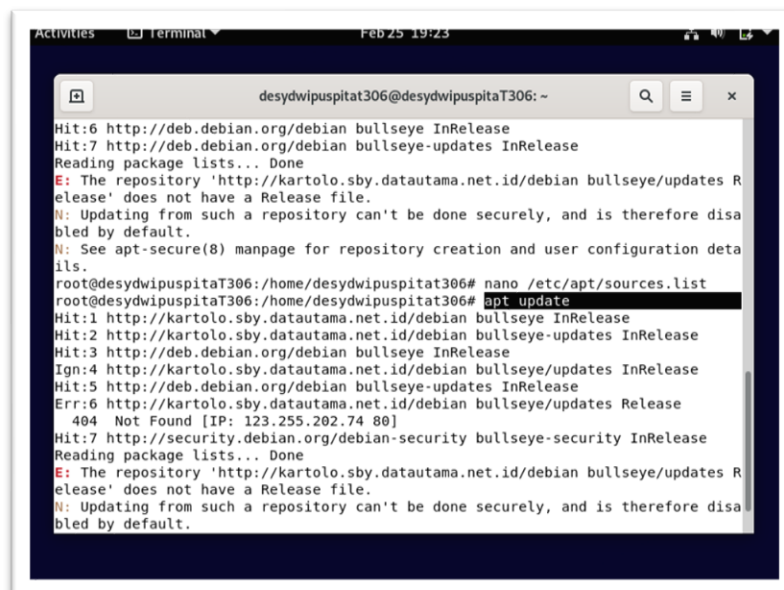


```
64 bytes from any-in-2678.1e100.net (216.239.38.120): icmp_seq=13 ttl=110 time=47.2 ms
^C
--- google.com ping statistics ---
13 packets transmitted, 13 received, 0% packet loss, time 12013ms
rtt min/avg/max/mdev = 35.971/54.575/134.603/26.701 ms
root@desydwipuspitaT306:/home/desydwipuspitaT306# apt update
Hit:1 http://security.debian.org/debian-security bullseye-security InRelease
Hit:2 http://kartolo.sby.datautama.net.id/debian bullseye InRelease
Hit:3 http://kartolo.sby.datautama.net.id/debian bullseye-updates InRelease
Ign:4 http://kartolo.sby.datautama.net.id/debian bullseye/updates InRelease
Err:5 http://kartolo.sby.datautama.net.id/debian bullseye/updates Release
404 Not Found [IP: 123.255.202.74 80]
Hit:6 http://deb.debian.org/debian bullseye InRelease
Hit:7 http://deb.debian.org/debian bullseye-updates InRelease
Reading package lists... Done
E: The repository 'http://kartolo.sby.datautama.net.id/debian bullseye/updates R
elease' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disa
bled by default.
N: See apt-secure(8) manpage for repository creation and user configuration deta
ils.
root@desydwipuspitaT306:/home/desydwipuspitaT306# nano /etc/apt/sources.list
root@desydwipuspitaT306:/home/desydwipuspitaT306#
```

Penjelasan :

Mencari repository Debian 11 di google kemudian cari yang data utama yang berjumlah 3, ketik kembali di bawah sendiri, jika sudah di ketik maka tekan Ctrl+X. Kemudian jika muncul opsi yes dan no ketik Y jika ingin menyimpan dan ketik N jika tidak ingin menyimpan lalu enter

5. Apt update

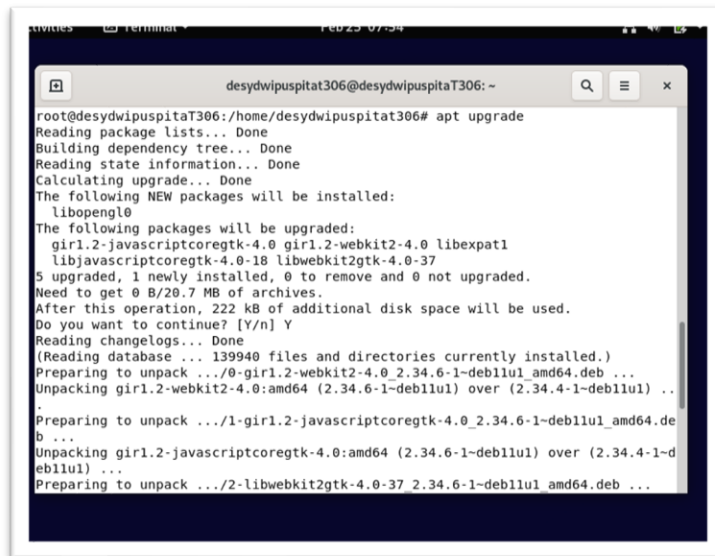


```
Hit:6 http://deb.debian.org/debian bullseye InRelease
Hit:7 http://deb.debian.org/debian bullseye-updates InRelease
Reading package lists... Done
E: The repository 'http://kartolo.sby.datautama.net.id/debian bullseye/updates R
elease' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disa
bled by default.
N: See apt-secure(8) manpage for repository creation and user configuration deta
ils.
root@desydwipuspitaT306:/home/desydwipuspitaT306# nano /etc/apt/sources.list
root@desydwipuspitaT306:/home/desydwipuspitaT306# apt update
Hit:1 http://kartolo.sby.datautama.net.id/debian bullseye InRelease
Hit:2 http://kartolo.sby.datautama.net.id/debian bullseye-updates InRelease
Hit:3 http://deb.debian.org/debian bullseye InRelease
Ign:4 http://kartolo.sby.datautama.net.id/debian bullseye/updates InRelease
Hit:5 http://deb.debian.org/debian bullseye-updates InRelease
Err:6 http://kartolo.sby.datautama.net.id/debian bullseye/updates Release
404 Not Found [IP: 123.255.202.74 80]
Hit:7 http://security.debian.org/debian-security bullseye-security InRelease
Reading package lists... Done
E: The repository 'http://kartolo.sby.datautama.net.id/debian bullseye/updates R
elease' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disa
bled by default.
```

Penjelasan :

Untuk mengecek pembaruan dari aplikasi yang terinstall di linux. Perintah ini akan mengupdate daftar package dari repository yang terdaftar di “/etc/apt/sources.list”. perintah ini dibutuhkan jika kita mengubah isi dari file /etc/apt/sources.list

6. Apt upgrade

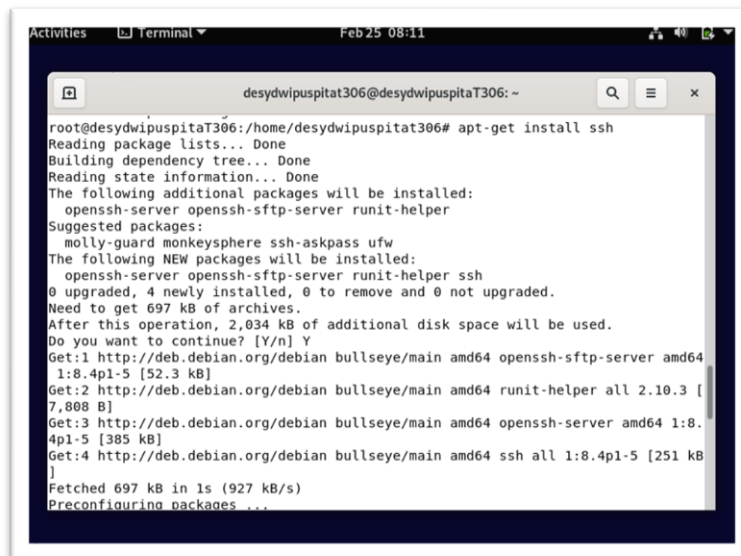


```
desydwipuspat306@desydwipuspat306: ~  
root@desydwipuspat306:/home/desydwipuspat306# apt upgrade  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Calculating upgrade... Done  
The following NEW packages will be installed:  
  libopengl0  
The following packages will be upgraded:  
  gir1.2-javascriptcoregtk-4.0 gir1.2-webkit2-4.0 libexpat1  
  libjavascriptcoregtk-4.0-18 libwebkit2gtk-4.0-37  
5 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.  
Need to get 0 B/20.7 MB of archives.  
After this operation, 222 kB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
Reading changelogs... Done  
(Reading database ... 139940 files and directories currently installed.)  
Preparing to unpack .../0-gir1.2-webkit2-4.0_2.34.6-1-deb11u1_amd64.deb ...  
Unpacking gir1.2-webkit2-4.0:amd64 (2.34.6-1-deb11u1) over (2.34.4-1-deb11u1) ..  
.  
Preparing to unpack .../1-gir1.2-javascriptcoregtk-4.0_2.34.6-1-deb11u1_amd64.de  
b ...  
Unpacking gir1.2-javascriptcoregtk-4.0:amd64 (2.34.6-1-deb11u1) over (2.34.4-1-d  
eb11u1) ...  
Preparing to unpack .../2-libwebkit2gtk-4.0-37_2.34.6-1-deb11u1_amd64.deb ...
```

Penjelasan :

Perintah ini akan melakukan update terhadap semua package yang sudah terinstall di BackTrack./ untuk memperbarui aplikasi linux, biasanya digunakan setelah apt update atau apt-get update. Jika muncul [Y/n] tekan y lalu enter

7. Apt-get install ssh



```
desydwipuspat306@desydwipuspat306: ~  
root@desydwipuspat306:/home/desydwipuspat306# apt-get install ssh  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  openssh-server openssh-sftp-server runit-helper  
Suggested packages:  
  molly-guard monkeysphere ssh-askpass ufw  
The following NEW packages will be installed:  
  openssh-server openssh-sftp-server runit-helper ssh  
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.  
Need to get 697 kB of archives.  
After this operation, 2,034 kB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
Get:1 http://deb.debian.org/debian bullseye/main amd64 openssh-sftp-server amd64  
1:8.4p1-5 [52.3 kB]  
Get:2 http://deb.debian.org/debian bullseye/main amd64 runit-helper all 2.10.3 [7,808 B]  
Get:3 http://deb.debian.org/debian bullseye/main amd64 openssh-server amd64 1:8.4p1-5 [385 kB]  
Get:4 http://deb.debian.org/debian bullseye/main amd64 ssh all 1:8.4p1-5 [251 kB]  
Fetched 697 kB in 1s (927 kB/s)  
Preconfiguring packages ...
```

Penjelasan :

Apt-get install ssh adalah perintah untuk menginstall ssh server di linux Debian

8. Nano /etc/ssh/ssh_config



```
desydwipuspat306@desydwipuspat306: ~
GNU nano 5.4 /etc/ssh/ssh_config

# This is the ssh client system-wide configuration file. See
# ssh_config(5) for more information. This file provides defaults for
# users, and the values can be changed in per-user configuration files
# or on the command line.

# Configuration data is parsed as follows:
# 1. command line options
# 2. user-specific file
# 3. system-wide file
# Any configuration value is only changed the first time it is set.
# Thus, host-specific definitions should be at the beginning of the
# configuration file, and defaults at the end.

# Site-wide defaults for some commonly used options. For a comprehensive
# list of available options, their meanings and defaults, please see the
# ssh_config(5) man page.

Include /etc/ssh/ssh_config.d/*.conf

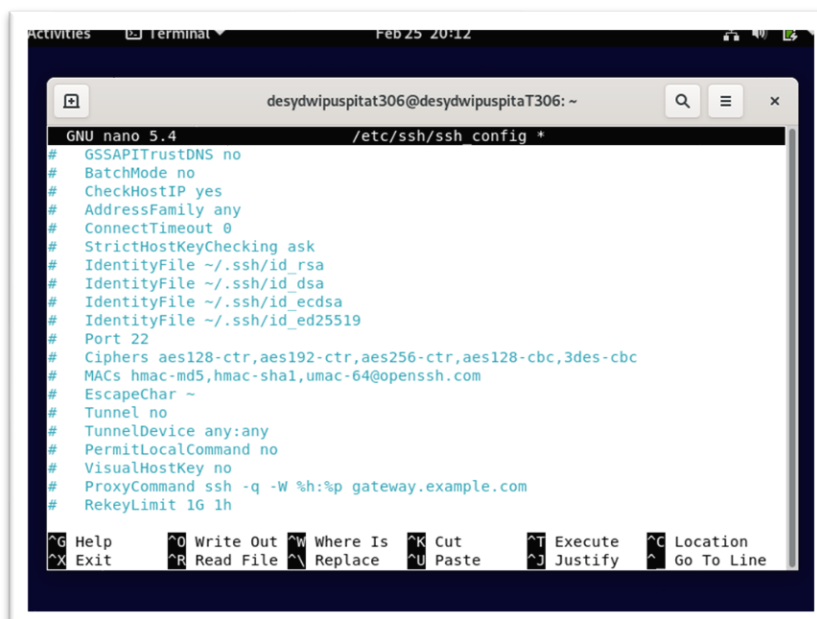
[ Read 53 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute  ^C Location
^X Exit      ^R Read File ^V Replace   ^U Paste     ^J Justify  ^_ Go To Line
```

Penjelasan :

Ini merupakan perintah untuk mengkonfigurasi ssh ke Debian. Setelah ssh diinstall, maka Langkah selanjutnya yaitu dengan melakukan konfigurasi ssh dengan menggunakan perintah tsb.

9. Mengaktifkan port 22

Sebelum mengaktifkan port 22

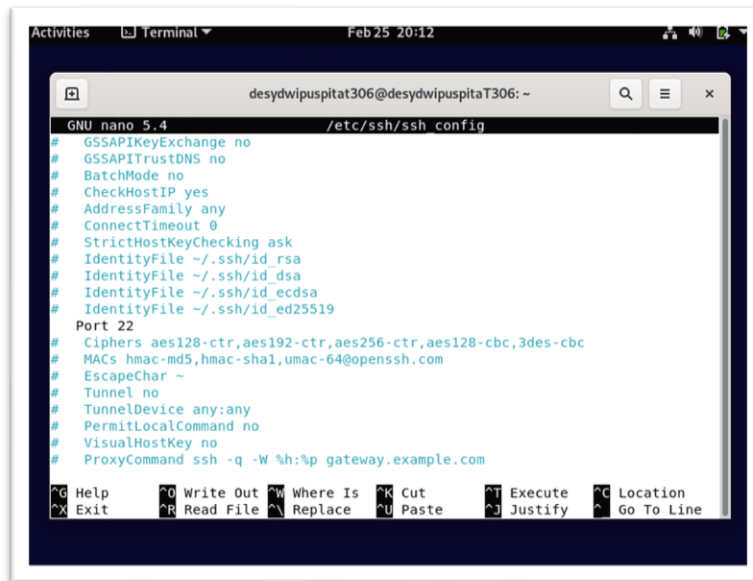


```
desydwipuspat306@desydwipuspat306: ~
GNU nano 5.4 /etc/ssh/ssh_config

# GSSAPITrustDNS no
# BatchMode no
# CheckHostIP yes
# AddressFamily any
# ConnectTimeout 0
# StrictHostKeyChecking ask
# IdentityFile ~/.ssh/id_rsa
# IdentityFile ~/.ssh/id_dsa
# IdentityFile ~/.ssh/id_ecdsa
# IdentityFile ~/.ssh/id_ed25519
# Port 22
# Ciphers aes128-ctr,aes192-ctr,aes256-ctr,aes128-cbc,3des-cbc
# MACs hmac-md5,hmac-sha1,umac-64@openssh.com
# EscapeChar ~
# Tunnel no
# TunnelDevice any:any
# PermitLocalCommand no
# VisualHostKey no
# ProxyCommand ssh -q -W %h:%p gateway.example.com
# RekeyLimit 1G 1h

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute  ^C Location
^X Exit      ^R Read File ^V Replace   ^U Paste     ^J Justify  ^_ Go To Line
```

Setelah mengaktifkan port 22



```
GNU nano 5.4 /etc/ssh/ssh_config
# GSSAPIKeyExchange no
# GSSAPITrustDNS no
# BatchMode no
# CheckHostIP yes
# AddressFamily any
# ConnectTimeout 0
# StrictHostKeyChecking ask
# IdentityFile ~/.ssh/id_rsa
# IdentityFile ~/.ssh/id_dsa
# IdentityFile ~/.ssh/id_ecdsa
# IdentityFile ~/.ssh/id_ed25519
Port 22
# Ciphers aes128-ctr,aes192-ctr,aes256-ctr,aes128-cbc,3des-cbc
# MACS hmac-md5,hmac-sha1,umac-64@openssh.com
# EscapeChar ~
# Tunnel no
# TunnelDevice any:any
# PermitLocalCommand no
# VisualHostKey no
# ProxyCommand ssh -q -W %h:%p gateway.example.com
```

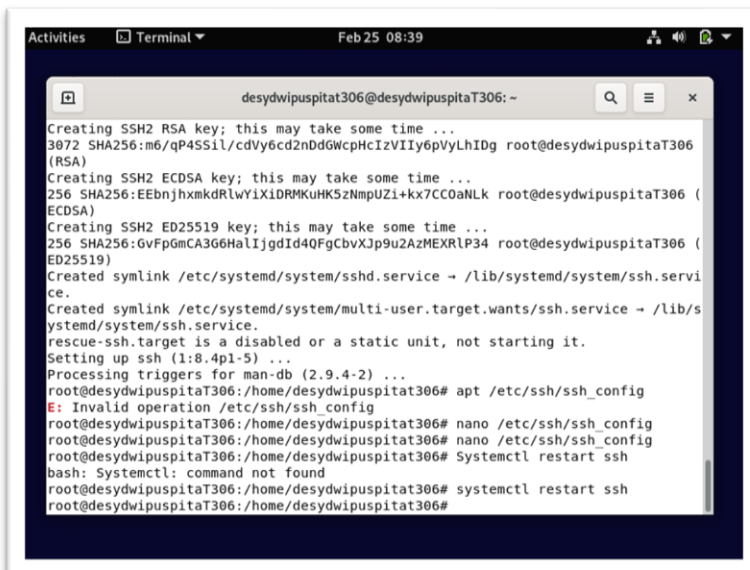
Setelah menekan Ctrl + X kemudian Y lalu enter

Penjelasan:

Cara mengaktifkan port 22 adalah dengan menghapus atau menghilangkan tanda # didepan port 22, jangan gunakan backspace tetapi gunakan delete. Perbedaan port 22 ketika belum diaktifkan (belum dihapus) tulisan port 22 berwarna biru. Jika sudah diaktifkan (sudah dihapus) maka tulisan port 22 berubah menjadi hitam

Kemudian setelah mengaktifkan port 22, kita tekan Ctrl + X lalu y kemudian enter

10. Systemctl restart ssh

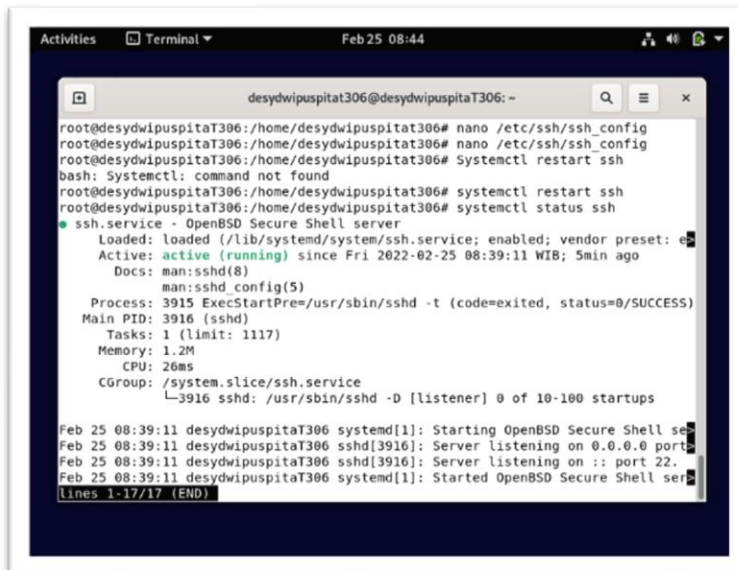


```
Creating SSH2 RSA key; this may take some time ...
3072 SHA256:m6/qP45S1l/cdVy6cd2nddGwcpHcIzVIIy6pVyLhIDg root@desydwipuspitaT306
(RSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:EEbnjHxmkdRlWYiX1DRMKuHK5zNmpUZI+kx7CC0aNLk root@desydwipuspitaT306
(ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:GvFpGmCA3G6HalIjgdId4QFgCbVxJp9u2AzMEXRLP34 root@desydwipuspitaT306
(ED25519)
Created symlink /etc/systemd/system/sshd.service -> /lib/systemd/system/ssh.servi
ce.
Created symlink /etc/systemd/system/multi-user.target.wants/ssh.service -> /lib/s
ystemd/system/ssh.service.
rescue-ssh.target is a disabled or a static unit, not starting it.
Setting up ssh (1:8.4p1-5) ...
Processing triggers for man-db (2.9.4-2) ...
root@desydwipuspitaT306:/home/desydwipuspita306# apt /etc/ssh/ssh_config
E: Invalid operation /etc/ssh/ssh_config
root@desydwipuspitaT306:/home/desydwipuspita306# nano /etc/ssh/ssh_config
root@desydwipuspitaT306:/home/desydwipuspita306# nano /etc/ssh/ssh_config
root@desydwipuspitaT306:/home/desydwipuspita306# Systemctl restart ssh
bash: Systemctl: command not found
root@desydwipuspitaT306:/home/desydwipuspita306# systemctl restart ssh
root@desydwipuspitaT306:/home/desydwipuspita306#
```

Penjelasan :

Pada perintah ini fungsinya untuk merestart ssh

11. Systemctl status ssh

A terminal window titled 'Terminal' with a timestamp of 'Feb 25 08:44'. The window shows a series of commands and their outputs. The user is in a root shell on a machine named 'desydwipusipita306'. They run 'nano /etc/ssh/ssh_config', then 'Systemctl restart ssh', which fails with 'Systemctl: command not found'. They then run 'systemctl restart ssh', which succeeds. Finally, they run 'systemctl status ssh', which shows the 'ssh.service' is 'loaded' and 'active (running)'. Below this, system logs are displayed, showing the SSH service starting and listening on port 22.

```
desydwipusipita306@desydwipusipita306: ~  
root@desydwipusipita306:/home/desydwipusipita306# nano /etc/ssh/ssh_config  
root@desydwipusipita306:/home/desydwipusipita306# nano /etc/ssh/ssh_config  
root@desydwipusipita306:/home/desydwipusipita306# Systemctl restart ssh  
bash: Systemctl: command not found  
root@desydwipusipita306:/home/desydwipusipita306# systemctl restart ssh  
root@desydwipusipita306:/home/desydwipusipita306# systemctl status ssh  
● ssh.service - OpenBSD Secure Shell server  
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: en  
   Active: active (running) since Fri 2022-02-25 08:39:11 WIB; 5min ago  
     Docs: man:sshd(8)  
           man:sshd_config(5)  
  Process: 3915 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)  
    Main PID: 3916 (sshd)  
      Tasks: 1 (limit: 1117)  
     Memory: 1.2M  
        CPU: 26ms  
   CGroup: /system.slice/ssh.service  
           └─3916 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups  
  
Feb 25 08:39:11 desydwipusipita306 systemd[1]: Starting OpenBSD Secure Shell se  
Feb 25 08:39:11 desydwipusipita306 sshd[3916]: Server listening on 0.0.0.0 port  
Feb 25 08:39:11 desydwipusipita306 sshd[3916]: Server listening on :: port 22.  
Feb 25 08:39:11 desydwipusipita306 systemd[1]: Started OpenBSD Secure Shell ser  
(lines 1-17/17) (END)
```

Penjelasan :

Perintah ini untuk mengetahui ssh kita sudah aktif atau belum. Jika sudah muncul tulisan tulisan berwarna hijau “active (running)” berarti ssh kita sudah aktif