

Teknik Simulasi  
LAPORAN HASIL OPERASI SISTEM UBUNTU  
MENGUNAKAN VIRTUABOX



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## I. JUDUL PRAKTIKUM

Operasi Sistem Ubuntu Menggunakan Virtualbox

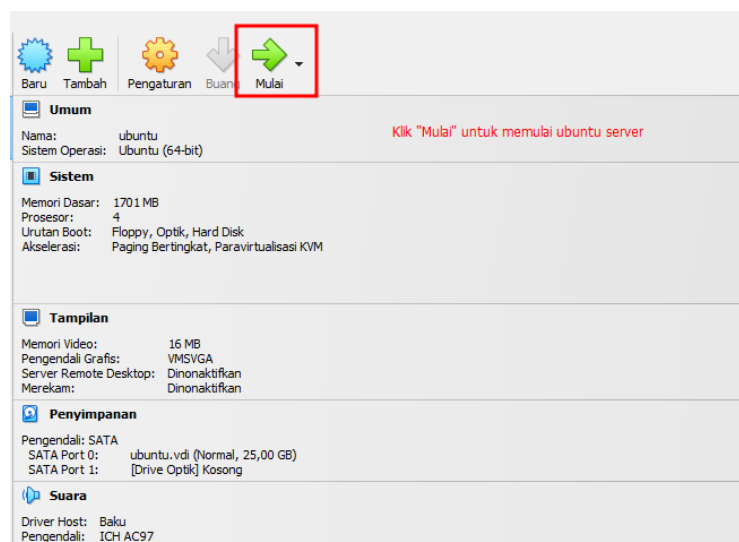
## II. TUJUAN PRAKTIKUM

1. Untuk mengetahui tata cara menggunakan Remote Putty dalam Ubuntu
2. Untuk mengetahui tata cara menggunakan Apache dalam Ubuntu

## III. ALAT DAN BAHAN

1. Modul Praktikum
2. Komputer
3. Internet
4. Ubuntu Server, PUTTY, Apache2

## IV. PEMBAHASAN



Gambar 1

Pada gambar 1 ini terdapat icon “Mulai”, kalian bisa mulai menjalankan Ubuntu server dengan menekan icon “Mulai” tersebut.

```
Ubuntu 22.04.1 LTS azza-server tty1
azza-server login: [ 87.461524] cloud-init[980]: Cloud-init v. 22.2-0ubuntu1~22.04.3 running 'modules:config' at Thu, 23 Feb 2023 06:41:55 +0000. Up 87.15 seconds.
[ 91.214102] cloud-init[994]: Cloud-init v. 22.2-0ubuntu1~22.04.3 running 'modules:final' at Thu, 23 Feb 2023 06:41:59 +0000. Up 90.89 seconds.
[ 92.772994] cloud-init[994]: Cloud-init v. 22.2-0ubuntu1~22.04.3 finished at Thu, 23 Feb 2023 06:42:01 +0000. DataSource DataSourceNone. Up 92.72 seconds
[ 92.775248] cloud-init[994]: 2023-02-23 06:42:01,307 - cc_final_message.py[WARNING]: Used fallback DataSource
azza
Password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-43-generic x86_64)

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

System information as of Thu Feb 23 06:43:03 AM UTC 2023

System load: 0.97021484375   Processes:            139
Usage of /:  47.0% of 11.21GB Users logged in:        0
Memory usage: 13%           IPv4 address for enp0s3: 10.1.11.134
Swap usage:  0%

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

Last login: Thu Feb 23 04:56:29 UTC 2023 on tty1
azza@azza-server:~$
```

Gambar 2

Pada gambar 2 akan tampil tampilan awal Ubuntu server dan tampilan setelah kita log in, cara untuk melog in servernya yaitu memasukkan username dan password yang sudah kita buat sebelumnya, lalu klik enter.

```
ssh.socket is a disabled or a static unit not running, not starting it.
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for ufw (0.36.1-4build1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
azza@azza-server:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:8.9p1-3ubuntu0.1).
0 upgraded, 0 newly installed, 0 to remove and 140 not upgraded.
azza@azza-server:~$ sudo apt update
Hit:1 http://id.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://id.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://id.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://id.archive.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
148 packages can be upgraded. Run 'apt list --upgradable' to see them.
azza@azza-server:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:8.9p1-3ubuntu0.1).
0 upgraded, 0 newly installed, 0 to remove and 148 not upgraded.
azza@azza-server:~$
```

Gambar 3

Pada gambar 3 ini, kalian dapat memasukkan kode server yang pertama yaitu “sudo apt update” dan klik enter, apabila sudah selesai masukkan lagi kode server yang kedua yaitu “sudo apt install openssh-server”

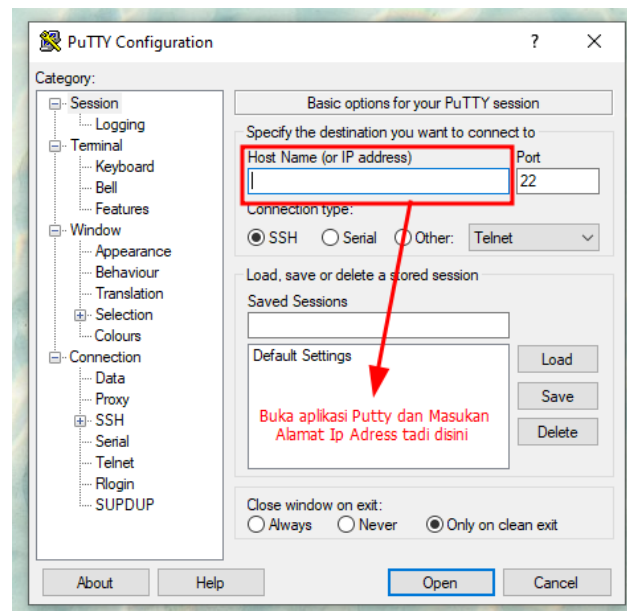
```
openssh-server is already the newest version (1:8.9p1-3ubuntu0.1).
0 upgraded, 0 newly installed, 0 to remove and 148 not upgraded.
azza@azza-server:~$ sudo apt update
Hit:1 http://id.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://id.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://id.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://id.archive.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
148 packages can be upgraded. Run 'apt list --upgradable' to see them.
azza@azza-server:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:8.9p1-3ubuntu0.1).
0 upgraded, 0 newly installed, 0 to remove and 148 not upgraded.
azza@azza-server:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.1.1.138 netmask 255.255.252.0 broadcast 10.1.1.255
    inet6 fe80::a002:c1:fe1c:61ea prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:fc:61:ea txqueuelen 1000 (Ethernet)
    RX packets 2845 bytes 1645395 (1.6 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 469 bytes 46538 (46.5 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 269 bytes 22042 (22.0 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 269 bytes 22042 (22.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

azza@azza-server:~$
```

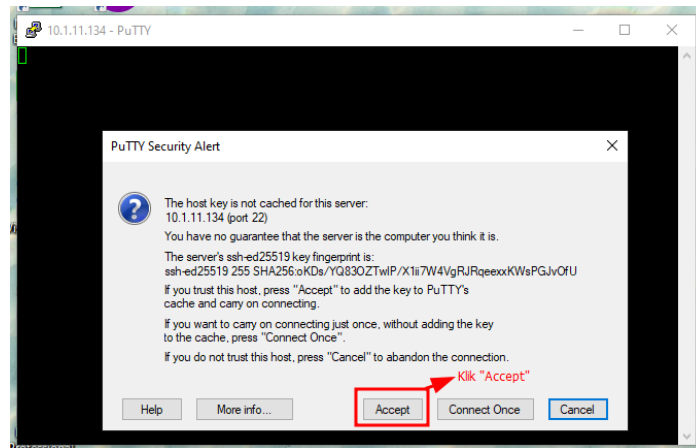
Gambar 4

Setelah semua kode server sudah dimasukkan dengan benar, dan yang terakhir ketik “ifconfig” lalu akan muncul IP Adress, kita harus melakukan cek IP terlebih dahulu untuk memasukkan di aplikasi PUTTY nanti.



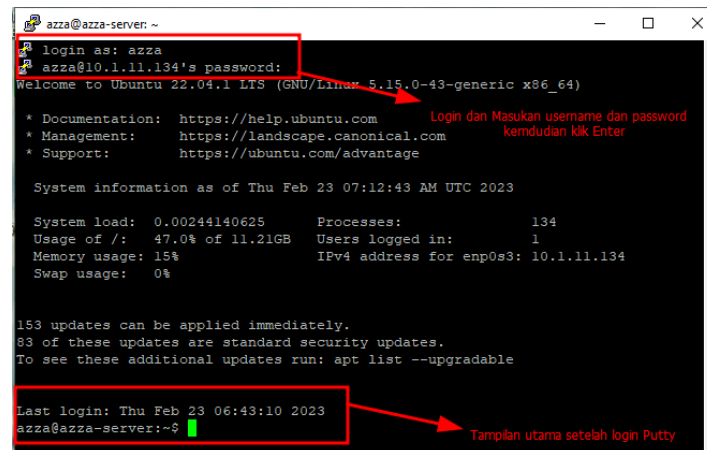
Gambar 5

Buka Aplikasi PUTTY dan masukkan Alamat IP Adress tadi. Pada gambar 5 inilah kita harus memasukkan IP Adress yang ada pada tampilan sebelumnya, ingat jangan menggunakan tanda koma ketika mengcopy alamat IP Adress.



Gambar 6

Klik “Accept” pada gambar 6, maka anda akan lanjut ke step selanjutnya



Gambar 7

Berdasarkan gambar 7 dapat dilihat apabila kita ingin memulai putih kita harus log in terlebih dahulu dengan memasukkan username dan password yang sudah ada.

```
azza@azza-server: ~  
System load: 0.00244140625      Processes: 134  
Usage of /: 47.0% of 11.21GB    Users logged in: 1  
Memory usage: 15%              IPv4 address for enp0s3: 10.1.11.134  
Swap usage: 0%  
  
153 updates can be applied immediately.  
83 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
Last login: Thu Feb 23 06:43:10 2023  
azza@azza-server:~$ sudo apt update  
[sudo] password for azza:  
Sorry, try again.  
[sudo] password for azza:  
Sorry, try again.  
[sudo] password for azza:  
Hit:1 http://id.archive.ubuntu.com/ubuntu jammy InRelease  
Hit:2 http://id.archive.ubuntu.com/ubuntu jammy-updates InRelease  
Hit:3 http://id.archive.ubuntu.com/ubuntu jammy-backports InRelease  
Hit:4 http://id.archive.ubuntu.com/ubuntu jammy-security InRelease  
Reading package lists... 99%
```

Gambar 8

```
azza@azza-server: ~  
Last login: Thu Feb 23 06:43:10 2023  
azza@azza-server:~$ sudo apt update  
[sudo] password for azza:  
Sorry, try again.  
[sudo] password for azza:  
Sorry, try again.  
[sudo] password for azza:  
Hit:1 http://id.archive.ubuntu.com/ubuntu jammy InRelease  
Hit:2 http://id.archive.ubuntu.com/ubuntu jammy-updates InRelease  
Hit:3 http://id.archive.ubuntu.com/ubuntu jammy-backports InRelease  
Hit:4 http://id.archive.ubuntu.com/ubuntu jammy-security InRelease  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
148 packages can be upgraded. Run 'apt list --upgradable' to see them.  
azza@azza-server:~$ sudo apt install apache2  
E: Invalid operation install  
azza@azza-server:~$ sudo apt install apache2  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
apache2 is already the newest version (2.4.52-1ubuntu4.3).  
0 upgraded, 0 newly installed, 0 to remove and 148 not upgraded.  
azza@azza-server:~$
```

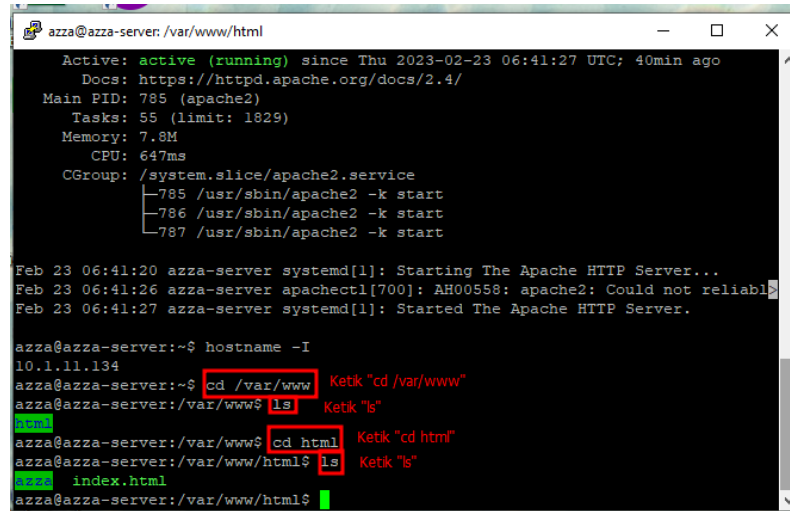
Gambar 9

Pada gambar 8 & 9 terlihat sebelum memasuki Apache kita harus update sudo dan install apache terlebih dahulu supaya terhindar dari beberapa crash.

```
azza@azza-server: ~  
[sudo] password for azza:  
Hit:1 http://id.archive.ubuntu.com/ubuntu jammy InRelease  
Hit:2 http://id.archive.ubuntu.com/ubuntu jammy-updates InRelease  
Hit:3 http://id.archive.ubuntu.com/ubuntu jammy-backports InRelease  
Hit:4 http://id.archive.ubuntu.com/ubuntu jammy-security InRelease  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
148 packages can be upgraded. Run 'apt list --upgradable' to see them.  
azza@azza-server:~$ sudo apt install apache2  
E: Invalid operation install  
azza@azza-server:~$ sudo apt install apache2  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
apache2 is already the newest version (2.4.52-1ubuntu4.3).  
0 upgraded, 0 newly installed, 0 to remove and 148 not upgraded.  
azza@azza-server:~$ sudo ufw app list  
Available applications:  
Apache  
Apache Full  
Apache Secure  
OpenSSH  
azza@azza-server:~$  
  
azza@azza-server:~$ sudo systemctl status apache2  
● apache2.service - The Apache HTTP Server  
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor prese  
   Active: active (running) since Thu 2023-02-23 06:41:27 UTC; 40min ago  
     Docs: https://httpd.apache.org/docs/2.4/  
   Main PID: 785 (apache2)  
     Tasks: 55 (limit: 1029)  
    Memory: 7.8M  
       CPU: 647ms  
   CGroup: /system.slice/apache2.service  
           └─785 /usr/sbin/apache2 -k start  
             └─786 /usr/sbin/apache2 -k start  
               └─787 /usr/sbin/apache2 -k start  
  
Feb 23 06:41:20 azza-server systemd[1]: Starting The Apache HTTP Server...  
Feb 23 06:41:26 azza-server apache2[700]: AH00558: apache2: Could not reliabl  
Feb 23 06:41:27 azza-server systemd[1]: Started The Apache HTTP Server.  
lines 1-16/16 (END)
```

Gambar 10

Pada gambar 10 kita bisa melihat beberapa list app yang sudah terinstall dengan mengetik “sudo ufw app list”, setelah itu untuk melihat apakah apache berjalan atau tidak kita bisa mengetik “sudo systemctl status apache”, terlihat pada gambar terdapat kata *active running* itu artinya apache sudah berjalan dengan baik.



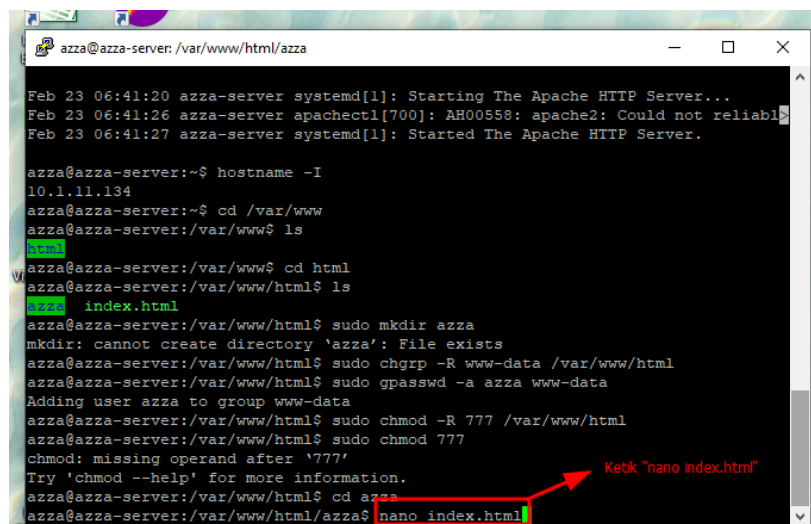
```
azza@azza-server: /var/www/html
Active: active (running) since Thu 2023-02-23 06:41:27 UTC; 40min ago
Docs: https://httpd.apache.org/docs/2.4/
Main PID: 785 (apache2)
Tasks: 55 (limit: 1829)
Memory: 7.8M
CPU: 647ms
CGroup: /system.slice/apache2.service
├─785 /usr/sbin/apache2 -k start
├─786 /usr/sbin/apache2 -k start
└─787 /usr/sbin/apache2 -k start

Feb 23 06:41:20 azza-server systemd[1]: Starting The Apache HTTP Server...
Feb 23 06:41:26 azza-server apachectl[700]: AH00558: apache2: Could not reliably
Feb 23 06:41:27 azza-server systemd[1]: Started The Apache HTTP Server.

azza@azza-server:~$ hostname -I
10.1.11.134
azza@azza-server:~$ cd /var/www
azza@azza-server:/var/www$ ls
html
azza@azza-server:/var/www$ cd html
azza@azza-server:/var/www/html$ ls
index.html
azza@azza-server:/var/www/html$
```

Gambar 12

Berdasarkan gambar 12 kita diberitahu untuk mengakses var / war serta html pada Ubuntu server.

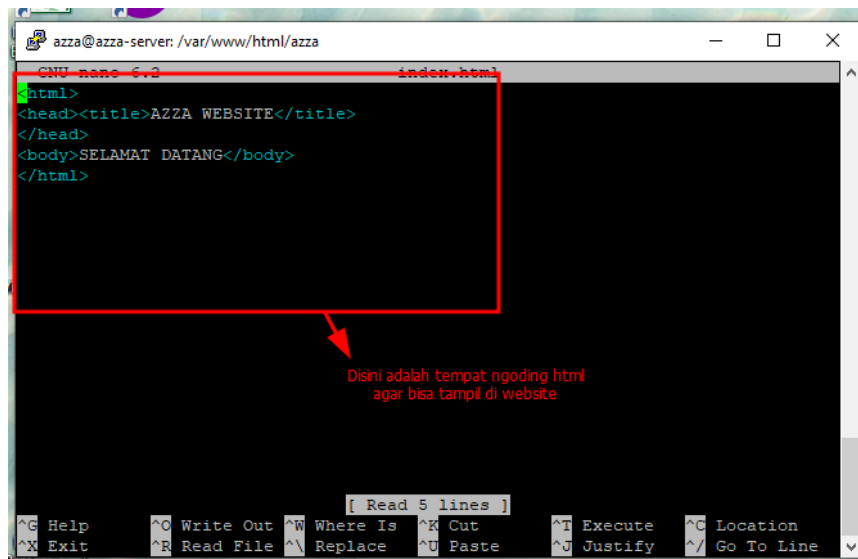


```
Feb 23 06:41:20 azza-server systemd[1]: Starting The Apache HTTP Server...
Feb 23 06:41:26 azza-server apachectl[700]: AH00558: apache2: Could not reliably
Feb 23 06:41:27 azza-server systemd[1]: Started The Apache HTTP Server.

azza@azza-server:~$ hostname -I
10.1.11.134
azza@azza-server:~$ cd /var/www
azza@azza-server:/var/www$ ls
html
azza@azza-server:/var/www$ cd html
azza@azza-server:/var/www/html$ ls
index.html
azza@azza-server:/var/www/html$ sudo mkdir azza
mkdir: cannot create directory 'azza': File exists
azza@azza-server:/var/www/html$ sudo chgrp -R www-data /var/www/html
azza@azza-server:/var/www/html$ sudo gpasswd -a azza www-data
Adding user azza to group www-data
azza@azza-server:/var/www/html$ sudo chmod -R 777 /var/www/html
azza@azza-server:/var/www/html$ sudo chmod 777
chmod: missing operand after '777'
Try 'chmod --help' for more information.
azza@azza-server:/var/www/html$ cd azza
azza@azza-server:/var/www/html/azza$ nano index.html
```

Gambar 13

Pada gambar 13 ini dapat dilihat bahwa kita harus masuk ke gnu nano agar bisa mengedit isi dari html.



```
azza@azza-server: /var/www/html/azza
GNU nano 6.3 index.html
html>
<head><title>AZZA WEBSITE</title>
</head>
<body>SELAMAT DATANG</body>
</html>
```

Disini adalah tempat ngoding html  
agar bisa tampil di website

Gambar 14

Gambar 14 ini adalah tampilan dimana kita bisa mengubah, mengedit html yang akan tampil di Web kita nanti.



Gambar 15

Dan pada gambar 15 inilah hasil html yang sudah kita buat akan muncul dalam bentuk web.



## **V. Kesimpulan**

Syarat utama agar PuTTY dapat digunakan untuk mengakses server secara remote adalah server harus tersambung ke dalam jaringan internet. Ketika Anda menggunakan aplikasi ini, Anda akan dihadapkan dengan interface berupa command line text layaknya sebuah command prompt. Oleh karena itu, untuk mengoperasikan PuTTY, paling tidak Anda perlu menguasai dasar SSH. Jika Anda tidak terlalu memahaminya, ada aplikasi lain yang dapat digunakan untuk mendukung PuTTY untuk melakukan transfer file. Apache adalah salah satu aplikasi web server yang berfungsi sebagai jembatan antara web browser dan web server, sehingga script aplikasi website Anda dapat diakses secara online. Aplikasi control panel populer seperti cPanel dan Plesk secara default menggunakan Apache untuk menjalankan service web server.