

# Final Deliverable

## Video 1

Oracle VM VirtualBox Manager

File Machine Help

Tools

ubuntu\_cis106 (Snapshot 1 - Lab 5 completed)  
Powered Off

ubuntu\_cis106(2) (Snapshot 1 - Lab 6 completed)  
Powered Off

Ubuntu\_server\_22.04 (Snapshot 1 - Server Install)  
Powered Off

New Settings Discard Start

Operating System: Ubuntu (64-bit)

**System**

Base Memory: 1024 MB  
Boot Order: Floppy, Optical, Hard Disk  
Acceleration: VT-x/AMD-V, Nested Paging, KVM Paravirtualization

**Display**

Video Memory: 16 MB  
Graphics Controller: VMSVGA  
Remote Desktop Server: Disabled  
Recording: Disabled

**Storage**

Controller: IDE  
IDE Primary Device 0: [Optical Drive] Empty  
IDE Secondary Device 0: [Optical Drive] Empty  
Controller: SATA  
SATA Port 0: Ubuntu\_server\_22.04.vdi (Normal, 10.00 GB)

**Audio**

Host Driver: Windows DirectSound  
Controller: ICH AC97

**Network**

Adapter 1: Intel PRO/1000 MT Desktop (NAT)

**USB**

USB Controller: OHCI  
Device Filters: 0 (0 active)

**Shared folders**

None

**Description**

Hostname: webserver  
Username: webmaster  
Password: pccc123\$

```
[ 25.570693] cloud-init[1266]: 2022-12-19 20:46:24,811 - cc_final_message.py[WARNING]: Used fallback
ck datasource
webmaster
Password:

Login incorrect
webserver login: webmaster
Password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-56-generic x86_64)

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

System information as of Mon Dec 19 08:47:19 PM UTC 2022

System load:  0.4140625      Processes:            103
Usage of /:   50.3% of 8.02GB Users logged in:      0
Memory usage: 21%           IPv4 address for enp0s3: 10.0.2.15
Swap usage:   0%

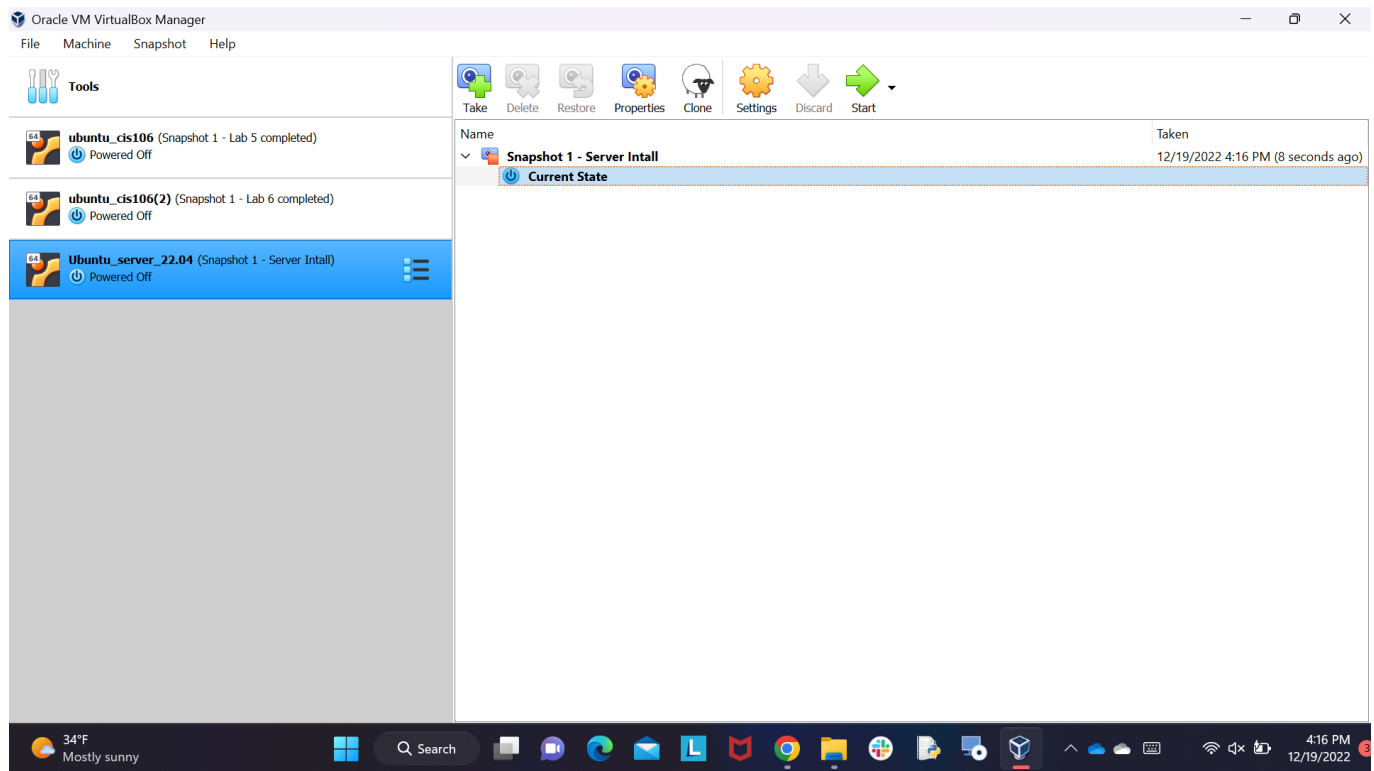
55 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

webmaster@webserver:~$ _
```



I had to create a separate vm (Ubuntu\_22.04). In there, I created my username (webmaster) and hostname (webserver). The first image shows the specs of the new vm.

## Video 2

Ubuntu\_server\_22.04 (Snapshot 1 - Server Install) [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

```

Enabling module alias.
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ure (0.08-1+build1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
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.
webmaster@webserver:~$

```

Right Ctrl

34°F  
Mostly sunny



Search



```

webmaster@webserver:~$ sudo ufw status
Status: active

```

To	Action	From
---	-----	----
Apache	ALLOW	Anywhere
Apache (v6)	ALLOW	Anywhere (v6)

```

webmaster@webserver:~$ sudo systemctl status apache2 --no-pager

```

```

• apache2.service - The Apache HTTP Server
  Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
  Active: active (running) since Mon 2022-12-19 21:58:30 UTC; 3min 36s ago
  Docs: https://httpd.apache.org/docs/2.4/
  Process: 610 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
  Main PID: 682 (apache2)
  Tasks: 55 (limit: 1030)
  Memory: 7.9M
  CPU: 142ms
  CGroup: /system.slice/apache2.service
          └─682 /usr/sbin/apache2 -k start
            └─684 /usr/sbin/apache2 -k start
              └─685 /usr/sbin/apache2 -k start

```

```

Dec 19 21:58:29 webserver systemd[1]: Starting The Apache HTTP Server...

```

```

Dec 19 21:58:30 webserver apachectl[669]: AH00558: apache2: Could not reliably determine the ...essage

```

```

Dec 19 21:58:30 webserver systemd[1]: Started The Apache HTTP Server.

```

```


Hint: Some lines were ellipsized, use -l to show in full.

```

```

webmaster@webserver:~$

```



# Ubuntu

## Apache2 Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

FileMachineSnapshotHelp

Tools

ubuntu\_cis106(2) (Snapshot 2 - SSH setup)  
Running

Ubuntu\_server\_22.04 (Snapshot 4 - Enabled virtual hosts)  
Running

TakeDeleteRestorePropertiesCloneSettingsDiscardShow

Name	Taken
Snapshot 1 - Lab 6 completed	11/3/2022 4:11 PM
Snapshot 2 - SSH setup	12/19/2022 7:17 PM (1 day ago)
Current State (changed)	

Tools

ubuntu\_cis106(2) (Snapshot 2 - SSH setup)  
Running

Ubuntu\_server\_22.04 (Snapshot 4 - Enabled virtual hosts)  
Running

TakeDeleteRestorePropertiesCloneSettingsDiscardShow

Name	Taken
Snapshot 1 - Server Install	12/19/2022 4:16 PM (1 day ago)
Snapshot 2 - Apache Installed	12/19/2022 5:15 PM (1 day ago)
Snapshot 3 - SSH setup	12/19/2022 7:17 PM (1 day ago)
Snapshot 4 - Enabled virtual hosts	12/20/2022 5:27 PM (22 hours ago)
Current State (changed)	

In the first image, I have successfully installed Apache with the command: `sudo apt install apache2 -y`. In the second and third image, you can see that Apache is up and running. In the last image, I took a snapshot of my vm to save my progress of installing Apache.

Video 3

```

* Support:      https://ubuntu.com/advantage

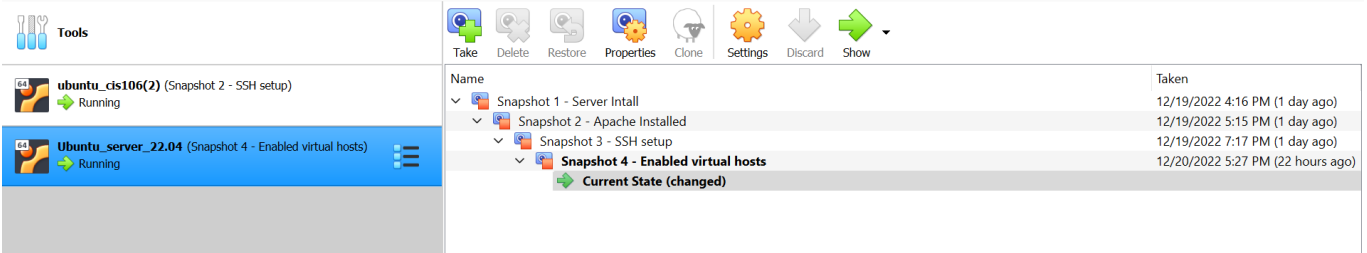
System information as of Mon Dec 19 11:55:01 PM UTC 2022

System load:  0.0029296875      Processes:           106
Usage of /:   53.3% of 8.02GB   Users logged in:     1
Memory usage: 24%              IPv4 address for enp0s3: 192.168.1.125
Swap usage:   0%

0 updates can be applied immediately.

Last login: Mon Dec 19 23:53:09 2022 from 192.168.1.126
webmaster@webserver:~$ shutdown now
Failed to set wall message, ignoring: Interactive authentication required.
Failed to power off system via logind: Interactive authentication required.
Failed to open initctl fifo: Permission denied
Failed to talk to init daemon.
webmaster@webserver:~$ sudo shutdown now
[sudo] password for webmaster:
webmaster@webserver:~$ Connection to 192.168.1.125 closed by remote host.
Connection to 192.168.1.125 closed.
sgilmore@cis106:~$

```



Name	Taken
Snapshot 1 - Server Intall	12/19/2022 4:16 PM (1 day ago)
Snapshot 2 - Apache Installed	12/19/2022 5:15 PM (1 day ago)
Snapshot 3 - SSH setup	12/19/2022 7:17 PM (1 day ago)
Snapshot 4 - Enabled virtual hosts	12/20/2022 5:27 PM (22 hours ago)
Current State (changed)	

I set up SSH between two of my vms (my regular one and the one I used to set up my user and hostname). I can now work on my website from my regular vm. However, for some reason, I still needed to use my ip to switch between servers. But personally, I don't mind copying and pasting my ip. And like always, I save my progress with a snapshot.

## Video 4

```

home > sgilmore > < index.html > < html > < body.d-flex.vw-100.vh-100.align-items-center.justify-content-center
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <!-- Required meta tags -->
5  <meta charset="utf-8" />
6  <meta name="viewport" content="width=device-width, initial-scale=1" />
7
8  <!-- Bootstrap CSS -->
9  <!-- https://cdnjs.com/libraries/twitter-bootstrap/5.0.0-beta1 -->
10 <link
11   rel="stylesheet"
12   href="https://cdnjs.cloudflare.com/ajax/libs/twitter-bootstrap/5.0.0-beta1/css/bootstrap.min.css"
13 />

```

```

webmaster@webserver: ~
sgilmore@cis106:~$ ssh webmaster@192.168.1.125
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-56-generic x86_64)

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

System information as of Tue Dec 20 10:01:39 PM UTC 2022

System load:  0.91796875      Processes:    109
Usage of /:   53.3% of 8.02GB  Users logged in: 0
Memory usage: 22%            IPv4 address for enp0s3: 192.168.1.125
Swap usage:   0%

0 updates can be applied immediately.

Last login: Mon Dec 19 23:55:01 2022 from 192.168.1.126
webmaster@webserver:~$ sudo mkdir /var/www/websitefinal
[sudo] password for webmaster:
webmaster@webserver:~$ sudo chown -R $USER:$USER /var/www/websitefinal
webmaster@webserver:~$ sudo chmod -R 755 /var/www/websitefinal
webmaster@webserver:~$ sudo nano /var/www/websitefinal/index.html
webmaster@webserver:~$ sudo nano /etc/apache2/sites-available/websitefinal.conf
ERROR: Site website does not exist!
webmaster@webserver:~$ sudo a2ensite websitefinal.conf
Enabling site websitefinal.
To activate the new configuration, you need to run:
  systemctl reload apache2
webmaster@webserver:~$ sudo a2dissite 000-default.conf
Site 000-default disabled.
To activate the new configuration, you need to run:
  systemctl reload apache2
webmaster@webserver:~$ sudo systemctl restart apache2
webmaster@webserver:~$ sudo apache2ctl configtest
AH00558: apache2: Could not reliably determine the server's fully qualified domain
name, using 127.0.1.1. Set the 'ServerName' directive globally to suppress this m

```

I followed the final steps to host my website on Ubuntu. I enabled the virtual hosts, so that every time I search up my ip address, my website pops up in the sample format.

## Video 5



As a web dev major, I decided to take it upon myself to mess with HTML and CSS. The site may not be perfect,

but I do like the outcome. Unfortunately, I couldn't get the image to show despite curling the image in my Ubuntu server. Either way, I still like how it turned out and the last image will show what the site would have looked like with the image.

My website link "192.168.1.125"