

FINAL COURSE PROJECT

CEIS-114 Introduction to Digital Devices
September 2022 Session

John O'Leary

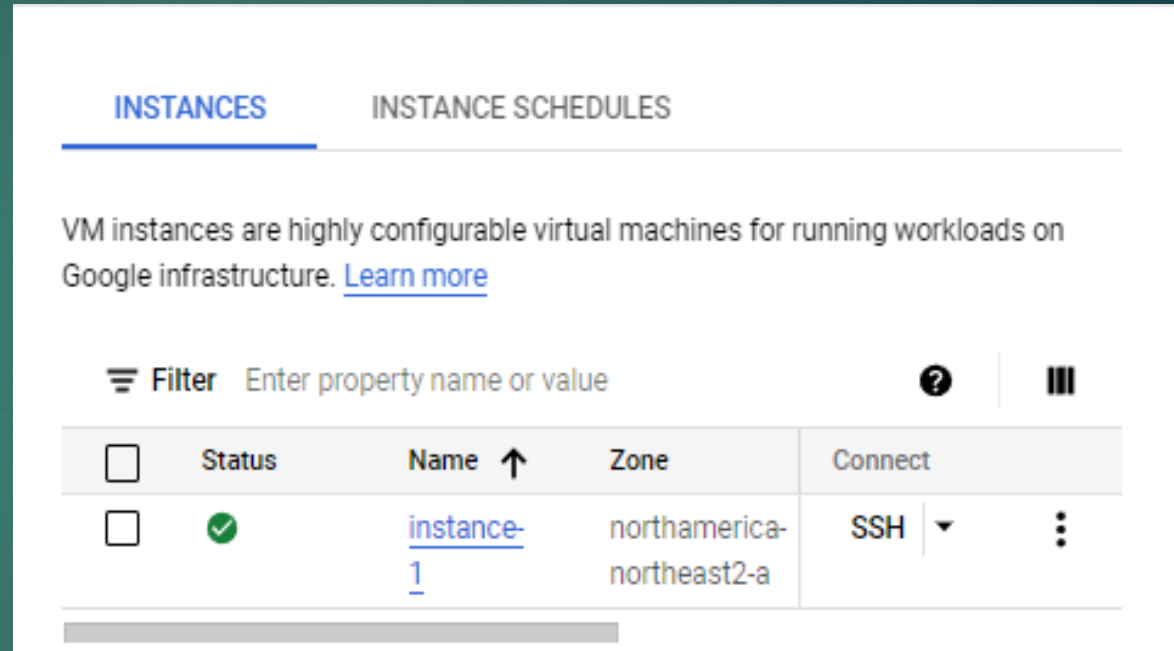


This assignment will include three screen captures depicting the steps taken to create a virtual machine instance.

- ▶ **Screen Capture #1 depicting the Developers Console to show the creation of a New Project.**
- ▶ **Screen Capture #2 depicting the successful creation of the VM instance including the external IP address assigned to the VM instance.**
- ▶ **Screen Capture #3 depicting the successful SSH remote access to the VM from a browser. Opens the instance into an Ubuntu Version 22.04.1 LTS session.**

Screen Capture # 1

DEVELOPERS
CONSOLE TO SHOW
THE CREATION OF A
NEW PROJECT.



The screenshot displays the Google Cloud Platform console interface for VM instances. At the top, there are two tabs: "INSTANCES" (which is selected and underlined) and "INSTANCE SCHEDULES". Below the tabs, a text block explains that VM instances are highly configurable virtual machines for running workloads on Google infrastructure, with a link to "Learn more". A filter bar is present with the text "Filter Enter property name or value" and a search icon. Below the filter bar is a table with the following columns: "Status", "Name", "Zone", and "Connect". The table contains one row with a green checkmark in the Status column, the name "instance-1" in the Name column, the zone "northamerica-northeast2-a" in the Zone column, and "SSH" in the Connect column. A vertical ellipsis menu icon is visible to the right of the SSH text.

INSTANCES INSTANCE SCHEDULES

VM instances are highly configurable virtual machines for running workloads on Google infrastructure. [Learn more](#)

Filter Enter property name or value

<input type="checkbox"/>	Status	Name ↑	Zone	Connect
<input type="checkbox"/>	✓	instance-1	northamerica-northeast2-a	SSH ▾ ⋮

Screen Capture # 2

Depiction of the successful creation of a VM instance with the external IP address evident.

console.cloud.google.com/compute/instancesAdd?project=optimum-reactor-365502

Free trial status: \$300.00 credit and 91 days remaining - with a full account, you'll get unlimited access to all of Google Cloud Platform.

Google Cloud My First Project Search Products, resources, docs (/)

Create an instance

To create a VM instance, select one of the options:

- New VM instance**
Create a single VM instance from scratch
- New VM instance from template
Create a single VM instance from an existing template
- New VM instance from machine image
Create a single VM instance from an existing machine image
- Marketplace
Deploy a ready-to-go solution onto a VM instance

Name *
instance-1

Labels ?
[+ ADD LABELS](#)

Region *
northamerica-northeast2 (T... ?
Region is permanent

Zone *
northamerica-northeast2-a ?
Zone is permanent

Machine configuration

Machine family

GENERAL-PURPOSE COMPUTE-OPTIMIZED MEMORY-OPTIMIZED GPU

Machine types for common workloads, optimized for cost and flexibility

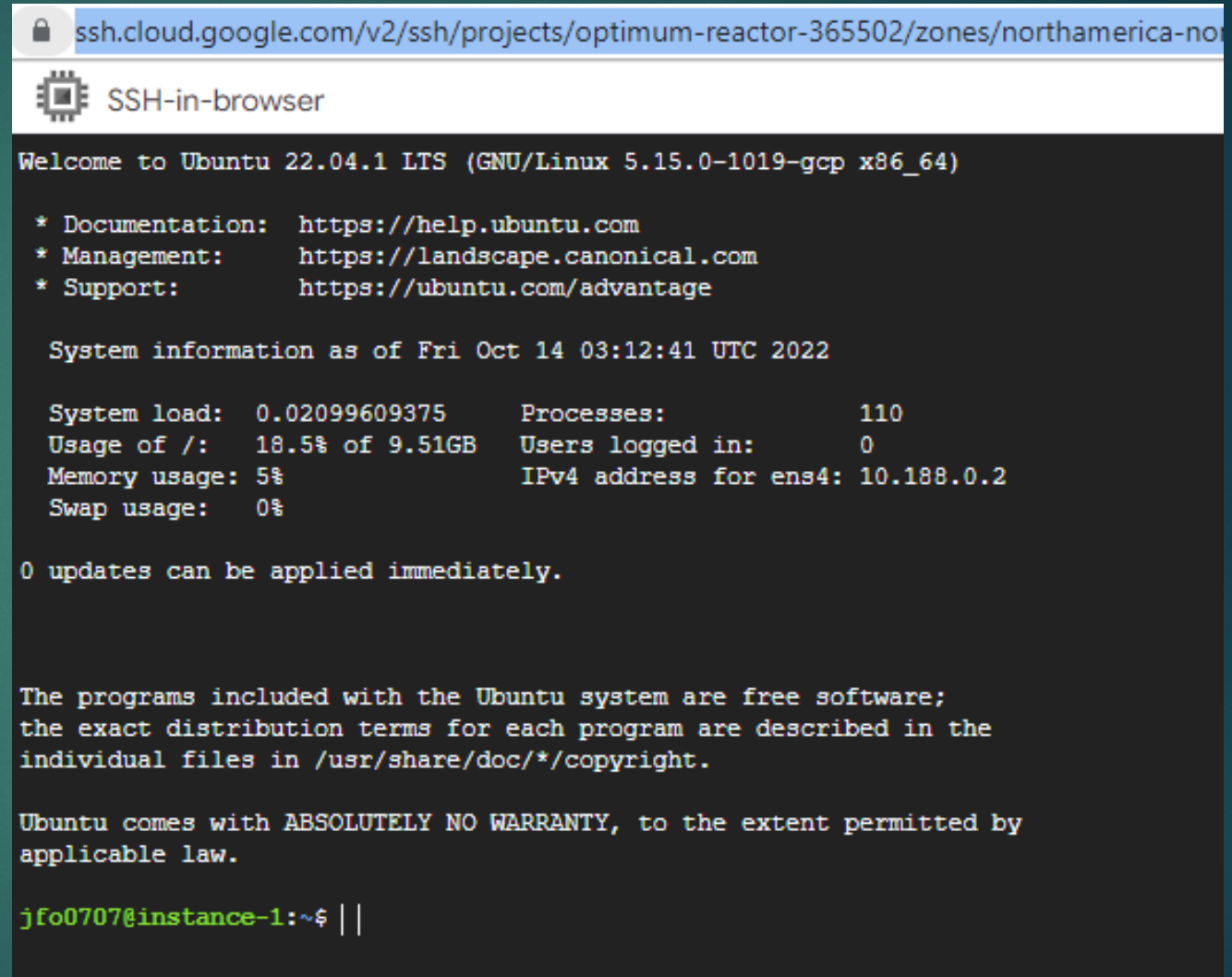
Series
E2
CPU platform selection based on availability

Machine type
e2-medium (2 vCPU, 4 GB memory)

	vCPU	Memory
	1-2 vCPU (1 shared core)	4 GB

Screen Capture #3

Depiction of the
successful SSH
remote access to the
VM from a Google
browser.



```
ssh.cloud.google.com/v2/ssh/projects/optimum-reactor-365502/zones/northamerica-no
SSH-in-browser
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1019-gcp x86_64)

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

System information as of Fri Oct 14 03:12:41 UTC 2022

System load:  0.02099609375      Processes:            110
Usage of /:   18.5% of 9.51GB     Users logged in:     0
Memory usage: 5%                IPv4 address for ens4: 10.188.0.2
Swap usage:  0%

0 updates can be applied immediately.

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.

jfo0707@instance-1:~$ | |
```

Conclusion

This final project presents a simple and efficient way to create a virtual machine at no cost. The use of virtual machines is becoming more widely used in almost every type of setting. It is especially useful in an educational setting, as it provides students access to and experience using a variety of operating systems.

I found this entire course to be very informative and valuable to my aspirations in the IT field. Professor Duclos is a wonderful teacher and was always accessible for any concerns students might have. And he made the live lectures both informative and entertaining with his great sense of humor. I really enjoyed this course.

