

Due Date: May 2, 2022 @ 10:00 PM

Notes:

- In order to get a full credit, you must demo your work in the lab as a group otherwise you won't get credit.
- This is an individual assignment; however, you are highly encouraged to work with your groupmate to complete the assignment.

Submit:

- 1- Screenshot of your client and server communicating with each other.
- 2- The screenshot should show your client contacting the GCP VM through the public IP address.

Part 1:

You've been tasked with getting a Windows web server up and running on a Compute Engine instance. To accomplish this, you'll need to create the appropriate instance, use RDP to set up necessary software, and create a home page to test the server.

You'll need to accomplish the following steps to complete your task:

1. Create a Compute Engine VM instance.
2. Set your Windows password.
3. Access RDP.
4. Install the required IIS components.
5. Create an index.html page.
6. View the final page in a browser.

Working with Compute Engine Windows Instances

Create a Compute Engine VM instance.

1. From the main navigation, choose **Compute Engine > VMs**.
2. Click **Create**.
3. With *New VM instance* chosen from the options on the left, configure your instance:
 - *Name*: Provide a relevant name that can identify you using hyphens, like "cecs327-sec7-first name-last name- studentID".
 - *Region* Leave as-is
 - *Zone*: Leave as-is
 - *Machine type*: Leave as-is
 - *Boot disk*:
 - Click **Change**.

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- Select **Windows Server 2019 Datacenter, Server with Desktop Experience**.
- Click **Select**.
 - *Identity and API access*: Leave as-is
 - *Firewall*: **Allow HTTP traffic**
- 4. Click **Create**.

Set Windows password.

1. Once the instance is created, click the arrow next to **RDP** in the *Connect* column, and select **Set Windows password** from the dropdown.
2. In the dialog, confirm your username is correct, and click **Set**.
3. Copy the supplied password, and click **Close**.

Launch RDP window.

1. Launch the RDP window by using one of the following methods:
 - If you're on a Windows system, click **RDP**.
 - If you're on a Mac using Chrome in a standard window, first install the Chrome RDP extension, and then click **RDP**.
 - If you're on a Mac using another browser or incognito window, from the App Store, download and install the latest version of the Microsoft Remote Desktop app. Then, choose **Download the RDP file** from the RDP options and open the file.

Install IIS.

1. From the Windows Start menu, right-click on Windows Powershell, choose **More** and then **Run as administrator**.
2. In the PowerShell window, enter the following commands to set install IIS, starting with:

```
import-module servermanager
```

3. Set up the web server:

```
add-windowsfeature web-server -includeallsubfeature
```

4. Create the **index.html** page:

```
echo '<!doctype html><html><body><h1>Greetings from CECS327!</h1></body></html>' > C:\inetpub\wwwroot\index.html
```

Test your page.

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1. From the Compute Engine *VM instances* page, click the external IP link for the Windows VM instance.
2. Review the page in the browser.

Submit:

- 1- Screenshot of your VM that has a name of your full name and student ID.
- 2- Screenshot of your HTML page that has the public IP address.

Part 2:

1. Run the UDP server from the previous assignment in your new Google cloud windows machine.
2. Try to connect the UDP client from your local machine to the UDP server that runs on Google cloud.

Hint: you may need to add a firewall rule in GCP to allow the UDP traffic to pass.