QUESTION 1

Machine list

Zeus (FE-75-2B-2D-A9-61) = 192.168.x.2 = Ubuntu 20.04 w/ GUI (2GB)

Hades (BE-F1-79-D7-0F-28) = 192.168.x.3 = Ubuntu 20.04 (1GB)

Poseidon (BE-7D-68-B3-72-7C) = 192.168.x.4 = Windows 2016 Server (4GB)

Apollo (DA-9B-E1-27-98-13) = 192.168.x.5 = Ubuntu 20.04 (1GB)

You will create a tar.bz2 file named wvulogin.tar.bz2. Replace wvulogin with your wvulogin name. All files should untar into a directory named wvulogin/. For each machine there should be a subdirectory for that machine name. For example, files for zeus would be located at wvulogin/zeus.

You must install the machines in the following order. Poseidon, Zeus, Hades, Apollo. All ansible scripts must be run from zeus and use ssh.

Sanity Checks [4/4]

[2/2] PDFs are PDFs

[2/2] Correct Directory structure used

Zeus [18/18]

[2/2] Fully automated install (Install Poseidon first). Provide a screenshot of the fully automated install in progress

In screenshots.pdf

[2/2] Install ansible. Provide a screenshot of CLI command to install ansible.

In screenshots.pdf

[2/2] Add a gui environment. Provide a screenshot of the GUI environment.

In screenshots.pdf

[2/2] Add cybe466grader account and set a password. Provide ansible code.

```
  - name: Add cybe46grader
    user:
      name: cybe466grader
      password: '$6$r9ATy2aj$KIvT4YCKZlRKJSiWnF4NMsXmOizBXC1P11.JwyCeXrcYh3fBdluh
i.p2JFy2rvVjzpiTD9jaNHR.p4RQd.NMm.'
      groups:
        - sudo
      state: present
      shell: /bin/bash
```

[2/2] Give cybe466grader account administrative privileges. Provide ansible code

```
groups:
        - sudo
      state: present
      shell: /bin/bash
```

[2/2] Change loud password. Provide ansible code.

```
- name: Change user password
    user:
      name: loud
      update_password: always
      password: '$6$mO.q/2M1NUb$bU0zPRwih56kU00QjtiFSLO9uMoqQa6YedJutY0NjUYWPJ6wq
GzYh6/GOsAVYyRauh.Zyi6xVlweLzxAAmIg51'
```

[4/4] Proper documentation on how to run ansible code. Provide at least one screenshot of something executing with description.

In screenshots.pdf and readme.pdf

[2/2] Screenshot of web browser showing URL on windows server where the user-data file exists.

In screenshots.pdf

What to submit?

zeus/ansible = All ansible code

zeus/README.pdf = Documentation on how to run ansible code

zeus/screenshot.pdf = All screenshots in a single PDF w/ description

Hades [26/26]

[2/2] Fully automated install (Install Poseidon first). Provide a screenshot of the fully automated install in progress

In screenshots.pdf

[2/2] Configure hostname. Provide full ansible code

```
  - name: Set the hostname
    hostname:
      name: hades
```

[2/2] Change loud account password. Provide full ansible code.

```
  - name: Change user password
    user:
      name: loud
      update_password: always
      password: '$6$mO.q/2M1NUb$bU0zPRwih56kU00QjtiFSLO9uMoqQa6YedJutY0NjUYWPJ6wq
GzYh6/GOsAVYyRauh.Zyi6xVlweLzxAAmIg51'
```

[4/4] Configure a virtual host for www. Make the document root be /srv/www-data/www. Provide full ansible code.

```
  - name: Install apache
    apt: name=apache2 update_cache=yes state=latest

  - name: Create document root
    file:
      path: "/srv/www-data/www"
      state: directory
      owner: "loud"
      mode: '0755'

  - name: Copy www config file
    copy:
      src: "www.wag0004.internal.conf"
```

```
    dest: "/etc/apache2/sites-available/www.wag0004.internal.conf"

- name: Enable http site
  shell: /usr/sbin/a2ensite www.wag0004.internal
```

[4/4] Enable https. Make it use the same document root as the www virtual host. Provide full ansible code.

```
- name: Copy https config file
  copy:
    src: "default-ssl.conf"
    dest: "/etc/apache2/sites-available/default-ssl.conf"

- name: Copy apache2.conf file
  copy:
    src: "apache2.conf"
    dest: "/etc/apache2/apache2.conf"

- name: enabled ssl
  apache2_module: name=ssl state=present

- name: Enable https site
  shell: /usr/sbin/a2ensite default-ssl
  notify: Reload Apache
```

[2/2] Add cybe466grader account and set a password. Provide full ansible code.

```
- name: Add cybe46grader
  user:
    name: cybe466grader
    password: '$6$r9ATy2aj$KIvT4YCKZlRKJSiWnF4NMsXmOizBXC1P11.JwyCeXrcYh3fBdluh
i.p2JFy2rvVjzpiTD9jaNHR.p4RQd.NMm.'
    groups:
      - sudo
    state: present
    shell: /bin/bash
```

[2/2] cybe466grader password. Provide full ansible code.

```
  - name: Add cybe46grader
    user:
      name: cybe466grader
      password: '$6$r9ATy2aj$KIvT4YCKZlRKJSiWnF4NMsXmOizBXC1P11.JwyCeXrcYh3fBdluh
i.p2JFy2rvVjzpiTD9jaNHR.p4RQd.NMm.'
      groups:
        - sudo
      state: present
      shell: /bin/bash
```

[2/2] Give cybe466grader account administrative privileges. Provide full ansible code.

```
  - name: Add cybe46grader
    user:
      name: cybe466grader
      password: '$6$r9ATy2aj$KIvT4YCKZlRKJSiWnF4NMsXmOizBXC1P11.JwyCeXrcYh3fBdluh
i.p2JFy2rvVjzpiTD9jaNHR.p4RQd.NMm.'
      groups:
        - sudo
      state: present
      shell: /bin/bash
```

[2/2] Add user account named dbremoteuser. Provide full ansible code.

```
  - name: Add dbremoteuser
    user:
      name: dbremoteuser
      password: '$6$DRV8qmcvWOwC$UT8Y3dCYLAcJ0u.8xJ.jPdAMD7p2XqQv8Zcfhm7K86yCIwuM
1fAmj6kSKpOtxExIhqOVmqvQqS9nBGFtNFEGT0'
      state: present
      shell: /bin/bash
```

[4/4] Proper documentation on how to run ansible code. Provide at least one screenshot of something executing with description.

In screenshots.pdf and readme.pdf

What to submit

hades/ansible = All ansible code

hades/README.pdf = Documentation on how to run ansible code

hades/screenshot.pdf = All screenshots in a single PDF w/ description

Poseidon [28/28]

Machine list

Zeus (FE-75-2B-2D-A9-61) = 192.168.x.2 = Ubuntu 20.04 w/ GUI (2GB)

Hades (BE-F1-79-D7-0F-28) = 192.168.x.3 = Ubuntu 20.04 (1GB)

Poseidon (BE-7D-68-B3-72-7C) = 192.168.x.4 = Windows 2016 Server (4GB)

Apollo (DA-9B-E1-27-98-13) = 192.168.x.5 = Ubuntu 20.04 (1GB)

[2/2] Install Windows 2016 Server Core. Provide screenshot of install with correct IP and hostname logged in as local administrator

[2/2] Add correct dhcp reservation for hades. Powershell.

Add-DHCPServerReservation -ScopeID 192.168.100.0 -IPAddress 192.168.100.3 -ClientID "BE-F1-79-D7-0F-28" -Description "Hades"

[2/2] Add correct dhcp reservation for zeus. Powershell.

Add-DHCPServerReservation -ScopeID 192.168.100.0 -IPAddress 192.168.100.2 -ClientID "FE-75-2B-2D-A9-61" -Description "Zeus"

[2/2] Add correct dhcp reservation for apollo. Powershell.

Add-DHCPServerReservation -ScopeID 192.168.100.0 -IPAddress 192.168.100.5 -ClientID "DA-9B-E1-27-98-13" -Description "Apollo"

[2/2] Add correct A record for zeus. Powershell.

Add-DNSServerResourceRecordA -Name “zeus” -ZoneName “wag0004.internal” -IPAddress “192.168.100.2” -TimeToLive 01:00:00

[2/2] Add correct A record for hades. Powershell.

Add-DNSServerResourceRecordA -Name “hades” -ZoneName “wag0004.internal” -IPAddress “192.168.100.3” -TimeToLive 01:00:00

[2/2] Add correct A record for poseidon. Powershell.

Add-DNSServerResourceRecordA -Name “poseidon” -ZoneName “wag0004.internal” -IPAddress “192.168.100.4” -TimeToLive 01:00:00

[2/2] Add correct A record for apollo. Powershell.

Add-DNSServerResourceRecordA -Name “apollo” -ZoneName “wag0004.internal” -IPAddress “192.168.100.5” -TimeToLive 01:00:00

[2/2] Add a CNAME for www that points to hades. Powershell.

Add-DNSServerResourceRecordCName -HostNameAlias hades.wag0004.internal -Name www -ZoneName wag0004.internal

[2/2] Install IIS and configure for doing automated linux installations. Powershell.

Install-WindowsFeature -Name Web-Server -IncludeManagementTools

[2/2] Add cybe466grader account and set a password. Powershell.

```
#Add cybe466grader account
Write-Output "Enter a new password:"
$Password = Read-Host -AsSecureString
New-LocalUser "cybe466grader" -Password $Password
```

```
Set-LocalUser -Name "cybe466grader" -PasswordNeverExpires $true
```

[2/2] Give cybe466grader account admin privileges. Powershell.

```
Add-LocalGroupMember -Group "Administrators" -Member "cybe466grader"
```

[4/4] Proper documentation on how to run powershell scripts. Provide at least one screenshot of something executing with description.

In screenshots.pdf and readme.pdf

What to submit

poseidon/powershell = All powershell code

poseidon/README.pdf = Documentation on how to run powershell scripts

posiedon/screenshot.pdf = All screenshots in a single PDF w/ description

Apollo [24/24]

[2/2] Install Ubuntu 20.04 on apollo. (Install Poseidon first). Provide screenshot of fully automated install.

In screenshots.pdf

[2/2] Configure hostname. Provide full ansible code

```
  tasks:
  - name: Set the hostname
    hostname:
      name: apollo
```

[2/2] Change loud account password. Provide full ansible code.

```
  - name: Change user password
    user:
      name: loud
      update_password: always
      password: '$6$mO.q/2M1NUb$bU0zPRwih56kU00QjtiFSLO9uMoqQa6YedJutY0NjUYWPJ6wq
GzYh6/GOsAVYyRauh.Zyi6xVlweLzxAAmIg51'
```

[2/2] Add a user account named dbuser to the system. Ansible

```
  - name: Add dbuser
    user:
      name: dbuser
      password: '$6$v/k7N3Lnk2Kl$BtVVPtwN708qMtmAgbR4M.BqXjBWy4QKmOqibQXHt9S54/dz
KiZ5JmXAyuw82u3KQpNJXJ4eDC790RurZKK2g.'
      state: present
      shell: /bin/bash
```

[2/2] Install mariadb. Ansible

```
  - name: Install mariadb
    apt: name=mariadb-server update_cache=yes state=latest

  - name: start mariadb
    service:
      name: mariadb
```

```
    enabled: true
    state: started

- name: Install pymysql
  apt: name=python3-pymysql update_cache=yes state=latest
```

[2/2] Create a database named dbuserdatabase. Ansible

```
- name: Create dbuserdatabase
  mysql_db:
    login_unix_socket: /var/run/mysqld/mysqld.sock
    name: dbuserdatabase
    state: present
```

[2/2] Give access to dbuserdatabase to dbuser on apollo from localhost. Ansible

```
- name: Database user dbuser
  community.mysql.mysql_user:
    login_unix_socket: /var/run/mysqld/mysqld.sock
    name: dbuser
    password: dbuser
    priv: '*.*:ALL,GRANT'
    state: present
```

[2/2] Add a cybe466grader account. Ansible

```
- name: Add cybe46grader
  user:
    name: cybe466grader
    password: '$6$r9ATy2aj$KIvT4YCKZlRKJSiWnF4NMsXmOizBXC1P11.JwyCeXrcYh3fBdluh
i.p2JFy2rvVjzpiTD9jaNHR.p4RQd.NMm.'
    groups:
      - sudo
    state: present
    shell: /bin/bash
```

[2/2] cybe466grader password. Ansible

```
  - name: Add cybe46grader
    user:
      name: cybe466grader
      password: '$6$r9ATy2aj$KIvT4YCKZlRKJSiWnF4NMsXmOizBXC1P11.JwyCeXrcYh3fBdluh
i.p2JFy2rvVjzpiTD9jaNHR.p4RQd.NMm.'
      groups:
        - sudo
      state: present
      shell: /bin/bash
```

[2/2] Give cybe466grader account administrative privileges. Ansible.

```
  - name: Add cybe46grader
    user:
      name: cybe466grader
      password: '$6$r9ATy2aj$KIvT4YCKZlRKJSiWnF4NMsXmOizBXC1P11.JwyCeXrcYh3fBdluh
i.p2JFy2rvVjzpiTD9jaNHR.p4RQd.NMm.'
      groups:
        - sudo
      state: present
      shell: /bin/bash
```

[4/4] Documentation on how to run ansible code.

In readme.pdf

What to submit

apollo/ansible = All ansible code

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