How to Install the DevNet Expert Candidate Workstation

To assist candidates in preparing for the DevNet Expert Lab Exam, Learning at Cisco has made available a VM image that matches the configuration of the candidate workstation (CWS) that is used during the exam. This virtual machine represents an engineer's development workstation and is already loaded with the software, libraries, and tools necessary to complete the exam.

You can see specific details about the tools and versions that are installed by reviewing the Cisco Certified DevNet Expert Equipment and Software List.

This brief guide illustrates how to install and use the VM image on a vCenter server.

Note: Credentials for the users are as follows:

- Expert user: This account represents the access and configuration that you will have during the exam.
  - `expert / 1234QWer!`
- Super-user (root): During the exam, candidates do *not* have access to the super-user account on the CWS.
  - `root / 1234QWer!`

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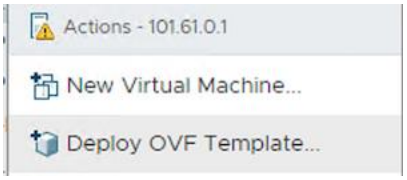
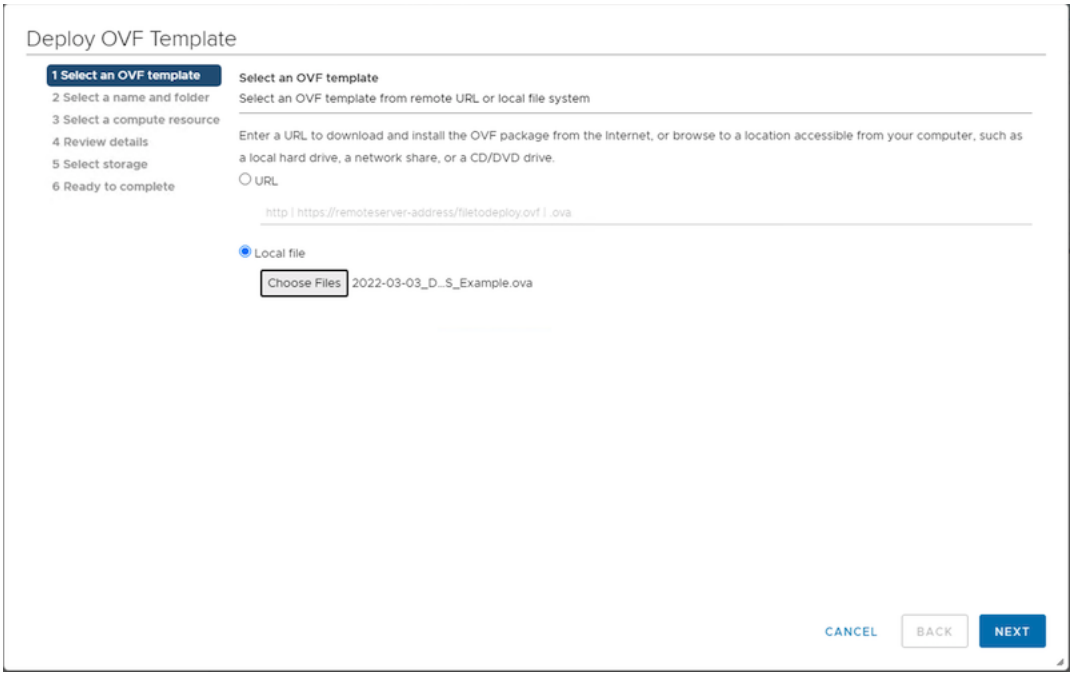
Task 1: Deploying the OVF in vCenter

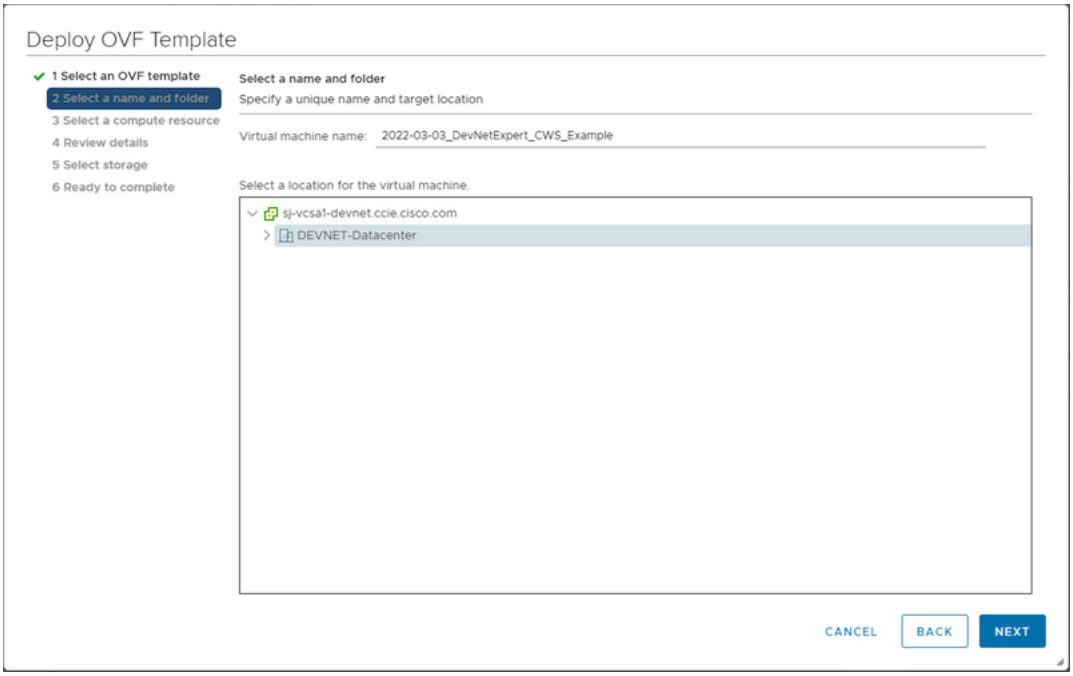
1. Download the candidate workstation OVA template.
2. From vCenter, choose the **Deploy OVF Template** option.



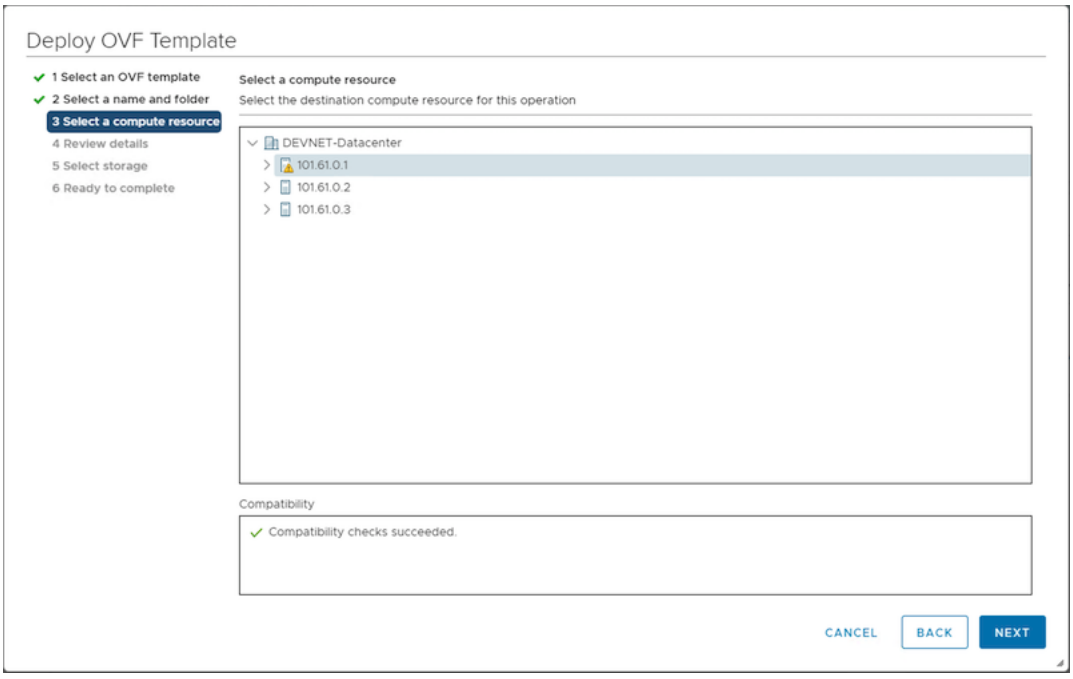
3. Click the **Local file** option and the **Choose Files** button. Locate the downloaded OVA file in the file browser that opens, select it, and click **Next**.



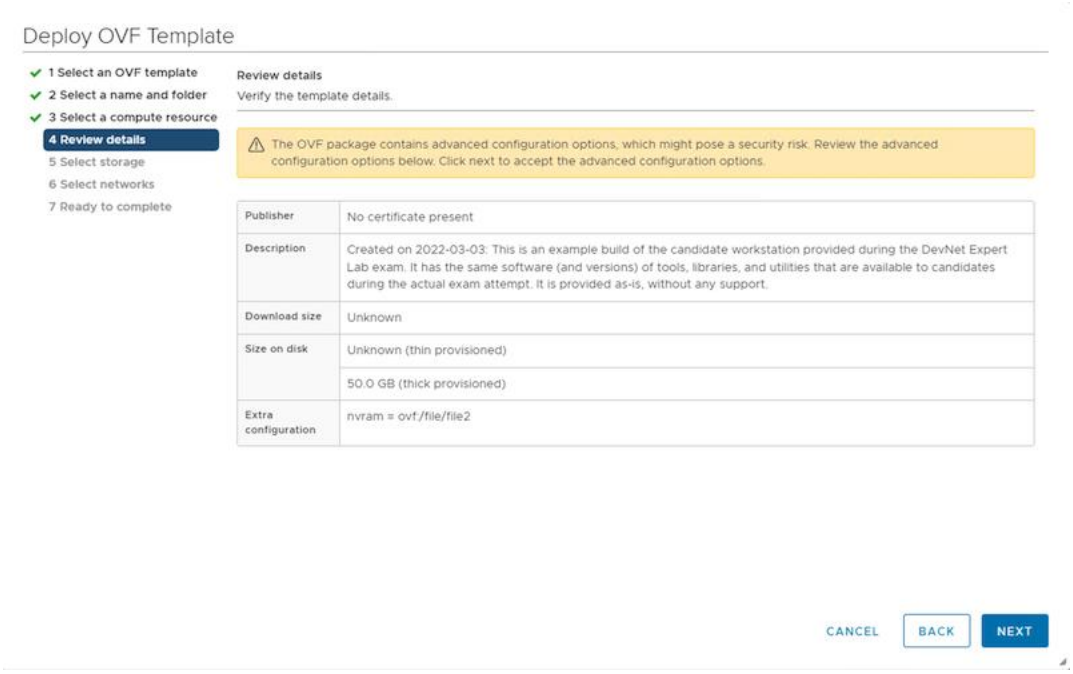
4. Enter a name for your new VM or keep the default name, and click **Next**.



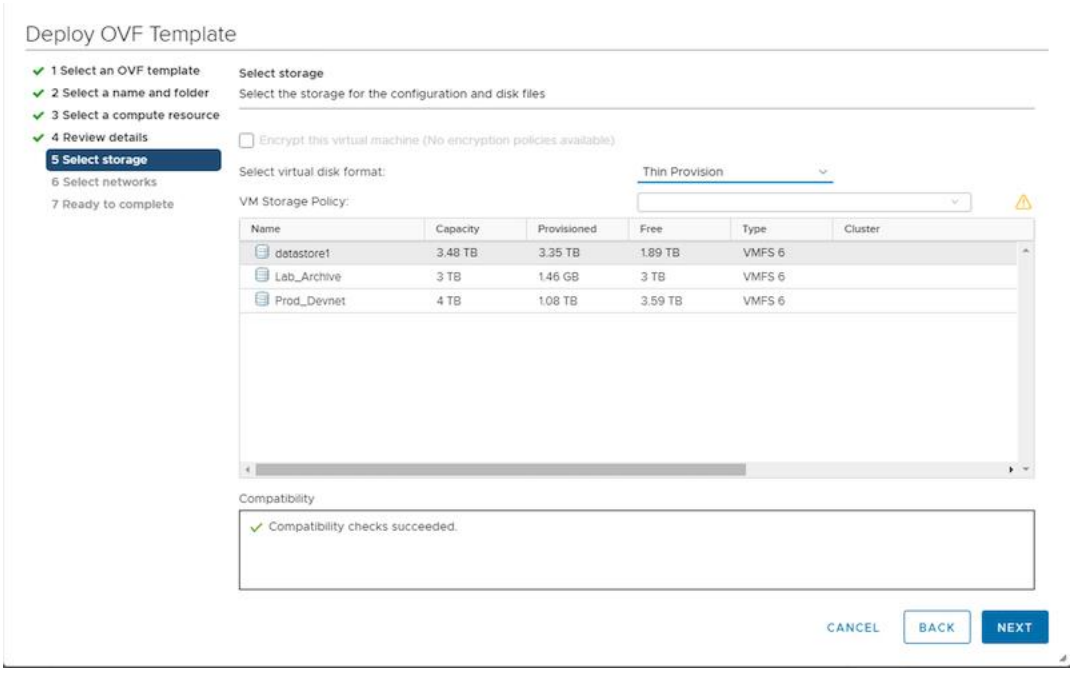
5. From your vCenter environment, choose a host on which to deploy the new VM, and click **Next**.



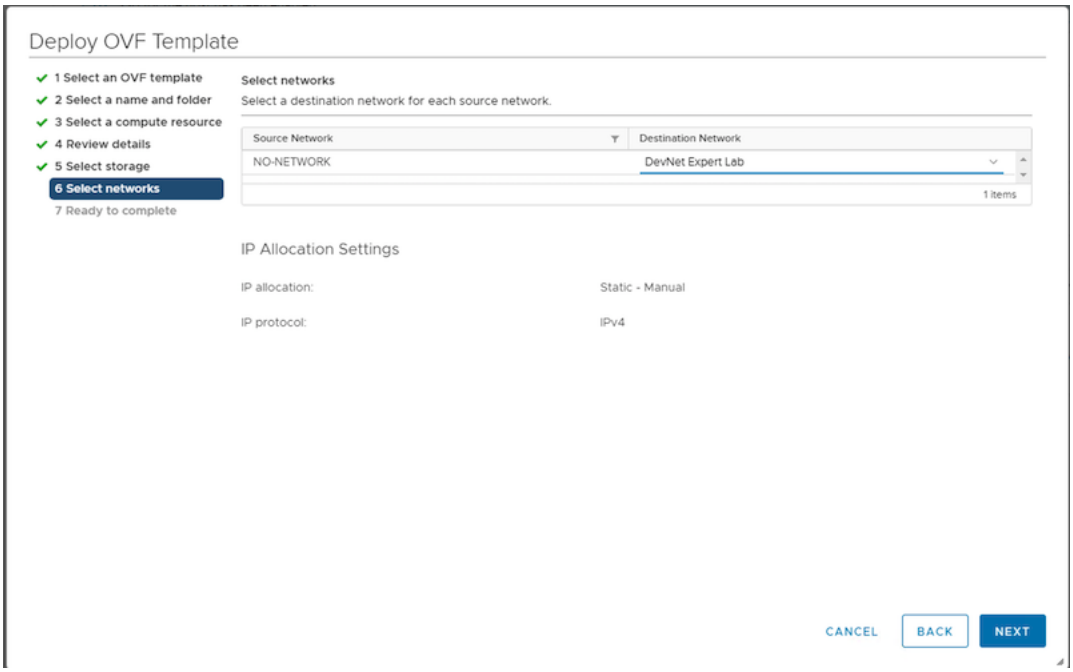
6. Review the details that are displayed and click **Next**.



7. Choose a data store on which to deploy the VM. Optionally, change the virtual disk format. "Thin Provision" should be sufficient for lab use. Click **Next**.



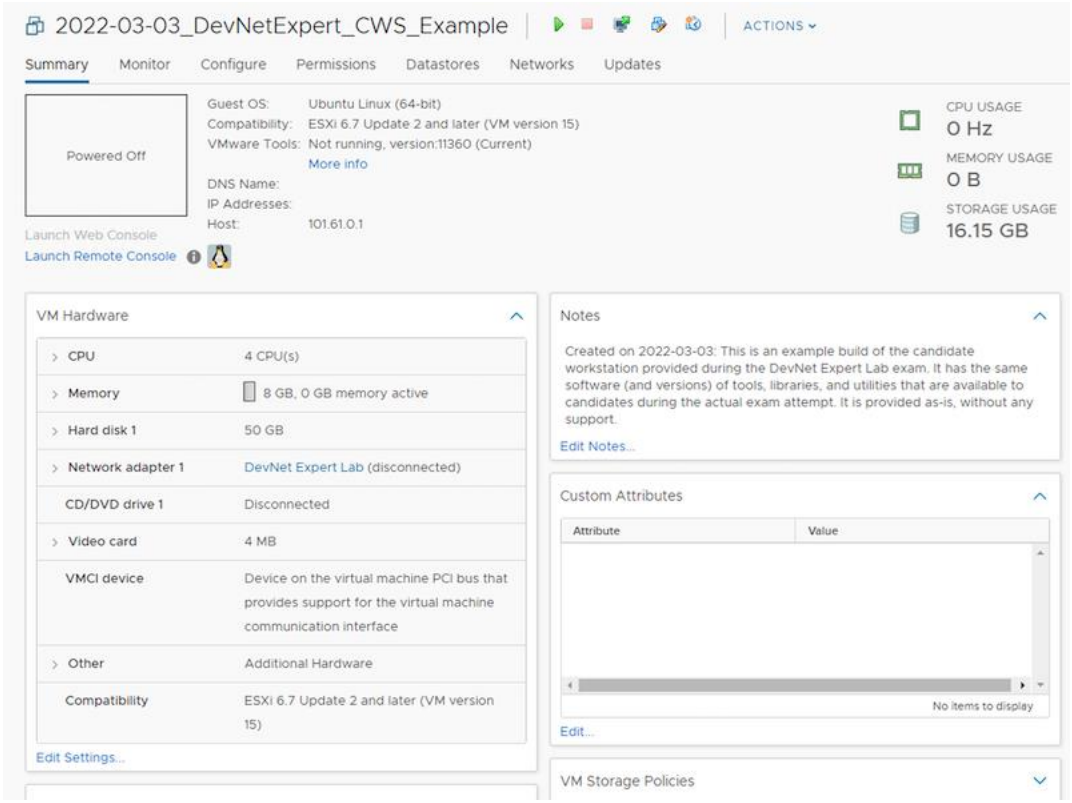
8. Map the network adapter to the port group that your lab VM should be added to, and click **Next**.



Note: The CWS has DHCP configured on the network interface. See Task 2 for how to configure a static IP address.

9. Click **Finish** to complete the installation.

10. Verify that your new VM is listed in vCenter.

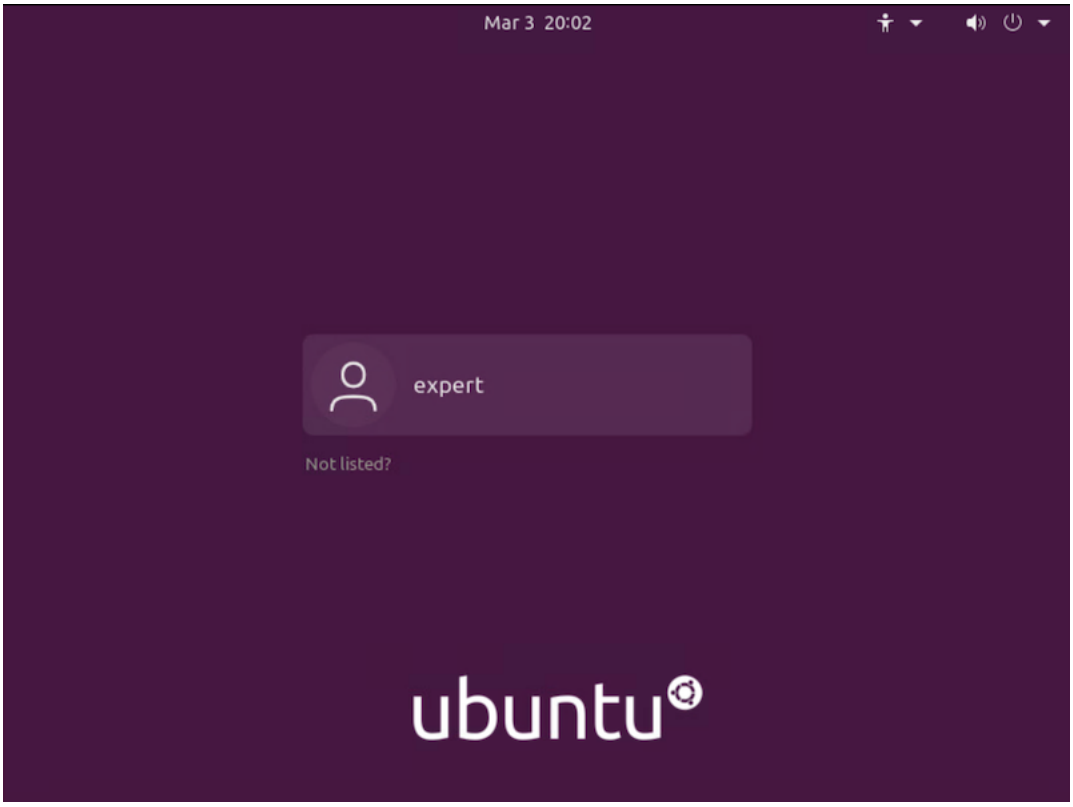


11. Power on your new VM.

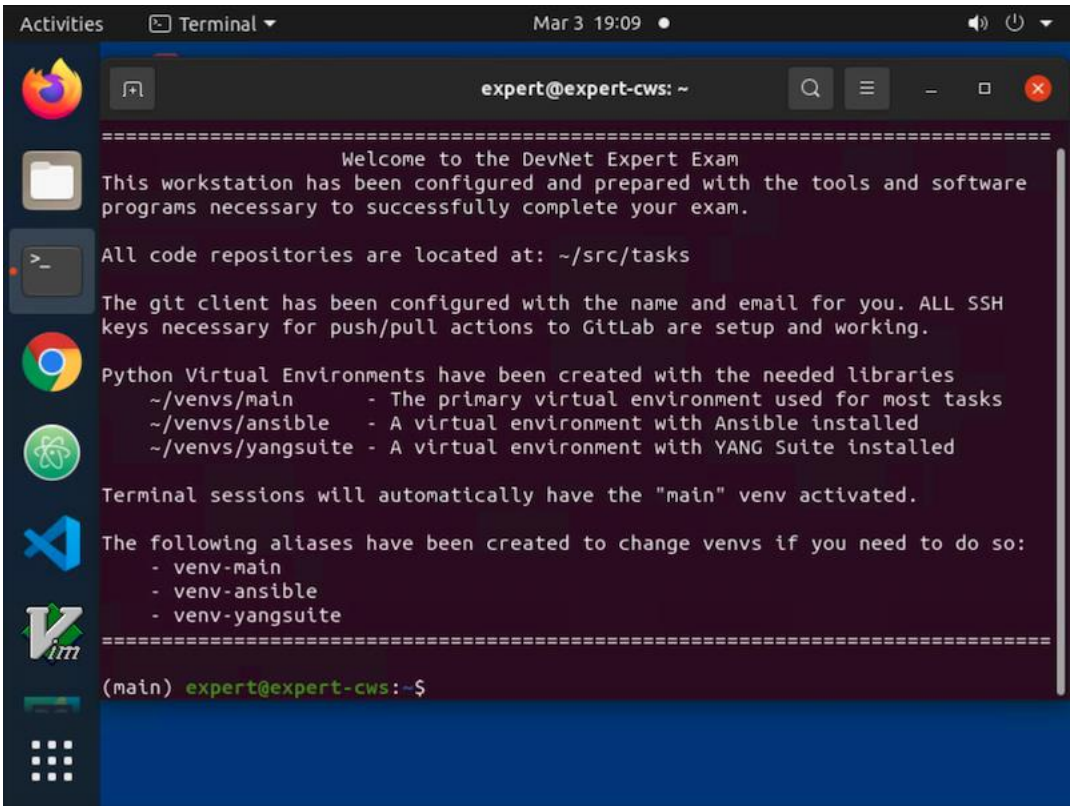
Task 2: Accessing the CWS and Checking Network Configuration

When you start your VM, it is on whatever network segment you assigned it to during deployment. If DHCP is configured on this network segment, the VM requests and uses an IP address. If you require (or would like) a static IP assignment, you can configure it by following these steps.

1. Open a connection to the console for the VM using vCenter Web Console or another utility. Choose the **`expert`** user from the menu and login. The password for the `expert` user is **`1234QWer!`**.



2. The desktop is displayed. Chrome and the terminal start automatically. Close Chrome.
   Note: The default homepage configured for Chrome and Firefox is a documentation page available during the exam. This site will likely not load in your local environment.



3. You can check the current configuration by running `ip add show dev ens160`.

4. The CWS uses `netplan` for network configuration. You can change the network configuration from DHCP -> Static by editing the file `/etc/netplan/00-cws-dhcp-config.yaml`.

   Note: You must log in to the machine as `root` to make this change. `root` is not enabled for GUI login, but you can use `ssh root@localhost` from the terminal.

5. The contents of the file will look like the following. An example static IP configuration is provided but commented out.

```
# Configure ens160 for DHCP
network:
    version: 2
    renderer: networkd
    ethernets:
        ens160:
            dhcp4: true

# Reference: Configuring Static IP address
# network:
#     version: 2
#     renderer: networkd
#     ethernets:
#         ens160:
#             addresses:
#                 - 10.10.10.2/24
#             nameservers:
#                 search: [mydomain, otherdomain]
#                 addresses: [10.10.10.1, 1.1.1.1]
#             routes:
#                 - to: default
#                   via: 10.10.10.1
```

Make the changes required and save the file.

6. Apply the changes to `netplan` by running `netplan apply`.

Task 3: Using Your CWS to Study and Prepare

Now that you have installed and set up your CWS for your lab, you can begin using it in your studies. While you can continue to use the Web GUI from vCenter, that doesn't offer the best experience. Two other options available are remote desktop (RDP) and ssh access.

Option 1: RDP Access

The CWS has Remote Desktop Protocol (RDP) enabled and set up. Connect to your system using your favorite RDP client and log in as `expert`.

The desktop experience from this example of CWS is set up to mirror the candidate experience during the real exam. That way, you can become familiar with the installed IDEs and tools like VS Code, Postman, and so on.

Option 2: SSH Access

If you'd prefer to work from the terminal, you can leverage ssh to connect to your CWS and work from there using command-line tools like `vim`.

Note: Installing Cisco NSO onto the CWS

Cisco NSO is a part of the DevNet Expert blueprint and is installed on the **CWS** that is used during the exam. It is *not* installed on the sample CWS that is published for studying.

However, Cisco has made the software for NSO freely available on Cisco DevNet for nonproduction use, including studying for certifications. Visit the page Getting NSO on Cisco DevNet to download the required files and review the installation guide.

> *A file named `INSTALL_NSO_README` exists on the CWS in the directory `~/nso` with this same information. During the exam, candidates will find that NSO has been "locally installed" on the CWS in this same directory.*

Note: Using YANG Suite

YANG Suite has been predeployed, and the server is running by default. To connect to it, open the browser of your choice and go to http://localhost:8480. You might need to initially accept the EULA. The login to YANG Suite is the username **expert** with the password **1234QWer!**.