RHCE Practice Exam 1

To perform the tasks in this RHCE practice exam, you need three virtual machines that meet the following requirements:

- CentOS or RHEL 8 installed with the Minimal Installation pattern.
- A 5 GB second disk that is available but not used for anything. In this sample exam, we will assume that the name of the disk is /dev/sdb. Change accordingly if your disk is using a different name.

Once you're set on the requirements, do the following:

1. Install an Ansible Managed environment applying the following steps:

- Create an Ansible control node and two managed nodes: server1.example.com and server2.example.com. Ensure on these servers that the user "ansible" exists to perform management tasks.
- Create a project directory with the name exam-a, and in this project directory, create an inventory file to define the managed servers. Also, create a configuration file to automatically use that inventory file.
- Run ad-hoc commands to set up all the required elements on the managed servers.

2. Create playbooks to set up an http server, an http client, and a site playbook to run these playbooks according to the following requirements:

- Configure the inventory file, such that server1.example.com is part of the group webservers, and server2.example.com is part of the group webclients.
- Ensure that the webclient.yml playbook installs the curl package. From the webserver.yml playbook, you need to install the httpd.conf web server.
- Create a variables file that is called from both playbooks and is stored in the vars directory. In this file, the following variables must be set:
  - web_client   curl
  - web_server   httpd
  - web_config_file   /etc/httpd/conf/httpd.conf
- Create a template file in templates/httpd.j2 and use the template module to deploy this template to the location that is defined by the web_config_file variable. No specific modifications are required in the template file.
- Configure a handler that restarts the web server after successfully copying over the template.
- Also, from the webclient.yml playbook, do the following:
  - Install the web_server, using the variables you have defined.
  - Open a port in the firewalld firewall to allow access to the web server.
- In your project directory, create a site.yml file that includes webclient.yml and webserver.yml.

3. Convert the playbook that you have created in the previous task into an Ansible role. You will create a new playbook that calls this role in the next task. Create the role in the http project directory.

4. In the http project directory, create a playbook that activates the role and sets up storage according to the following requirements:

- Run the parted command to set up the second disk with a partition. The command **parted --script /dev/sdb mklabel gpt mkpart primary 1MiB 100%** will do this for you.
- Mount the new partition on the directory /web.
- Set the SELinux type to httpd_sys_content_t on the /web directory.
- Ensure that the file /web/index.html is created and shows the text "welcome to my custom web server".
- Use variables to refer to some items:
    - Web_dir is set to /web
    - Selinux_type is set to httpd_sys_content_t
    - Web_file points to /web/index.html