Ansible

Automation

How to solve these challenges:

- To be consistent with the filenames and paths run the commands on Ubuntu
- Write your solution **in a terminal or in a shell script** and **test it.**
- If your solution is not correct, then try to understand the error messages, watch the video again, rewrite the solution, and test it again. Repeat this step until you get the correct solution.
- **Save** the solution in a file for future reference or recap.
- To solve these challenges you need more Linux VMs. One of the easiest ways is to use Linux VMs in the DigitalOcean cloud. You can create one or more droplets (the DigitalOcean name for VM) with a running Linux distro in seconds.
- Use my referral link below to create your account on DigitalOcean and you'll get $100 in credit over 60 days: https://m.do.co/c/f1d4debf213f

Challenge #1

- Create 4 Linux VMs. One will be the Ansible control node and the other 3 the managed nodes.
- Check that the control node can access the managed nodes using SSH.
- Install Ansible on the control machine.
- Create an inventory file that contains the managed nodes and gather them in a group called servers.
- Test Ansible SSH authentication using the **ansible** command and the **ping** module.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #2

- Consider the inventory file from the previous lecture.
- Add behavioral inventory parameters for the username, password, and SSH port.
- Run the **ansible** command without **-u user -k** to check that it uses the parameters from the inventory file.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #3

- Consider the inventory file from the previous challenge.
- Using the Ansible **shell** module and a Linux command, display the IP address of the default gateway of each managed node.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #4

- Consider the solution of the previous challenge.
- Change the solution so that it redirects to a file the IP address (and ONLY the IP) of the default gateway of each managed node.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #5

- Using the Ansible **shell** module and a Linux command, display the CPU on each managed node.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #6

- Using the Ansible **shell** module, create on each managed node a new user called *toor* that belongs to the *sudo* group. Run the command that creates the user as root.
- Display the last created user on each managed node.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #7

- On Ansible control node, create a shell script that synchronizes (mirrors) the /etc directory to /root/etc-backup
- Using Ansible and the **script** module, run the script on each managed node.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #8

- Using Ansible and the **apt** module, install the **nginx** web server on each managed node.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #9

- Using Ansible and the **apt** module, upgrade all packages to their latest versions on each managed node

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #10

- Using Ansible and the **service** module, restart SSH on all managed nodes.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #11

- Using Ansible and the **service** module, set **nginx** to start on boot on all nodes.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #12

- Using Ansible and the **group** module, create a group called **managers** on all nodes.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #13

- Using Ansible and the **user** module, create a user called **toor** on all nodes.
- Add the user to the sudo and managers groups.

Are you stuck? Do you want to see the solution to this challenge? Click here.