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# Red Hat Enterprise Linux Automation with Ansible

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# Guided Exercise: Deploying Custom Files with Jinja2 Templates



In this exercise, you will create a simple template file that your playbook will use to install a customized Message of the Day file on each managed host.

## Outcomes

You should be able to:

- Build a template file.
- Use the template file in a playbook.

Log in to workstation as student using student as the password.

On workstation, run the `lab file-template start` command. This script ensures that Ansible is installed on workstation, creates the `/home/student/file-template` directory, and downloads the `ansible.cfg` file into that directory.

```
[student@workstation ~]$ lab file-template start
```

## NOTE

All the files used during this exercise are available for reference on workstation in the `/home/student/file-template/files` directory.

## Procedure 5.2. Instructions

1. On workstation, navigate to the `/home/student/file-template` working directory. Review the `inventory` file in the current working directory. This file configures two groups: `webservers` and `workstations`. The `servera.lab.example.com` system is in the `webservers` group, and the `workstation.lab.example.com` system is in the `workstations` group.

- 1.1. Navigate to the `/home/student/file-template` working directory.

```
[student@workstation ~]$ cd ~/file-template  
[student@workstation file-template]$
```

- 1.2. Display the content of the `inventory` file.

```
[webservers]
servera.lab.example.com

[workstations]
workstation.lab.example.com
```

2. Create a template for the Message of the Day and include it in the `motd.j2` file in the current working directory. Include the following variables and facts in the template:

- `ansible_facts['fqdn']`, to insert the FQDN of the managed host.
- `ansible_facts['distribution']` and `ansible_facts['distribution_version']`, to provide distribution information.
- `system_owner`, for the system owner's email. This variable needs to be defined with an appropriate value in the `vars` section of the playbook template.

```
This is the system {{ ansible_facts['fqdn'] }}.
This is a {{ ansible_facts['distribution'] }} version {{ ansible_facts['distribution_version'] }} system.
Only use this system with permission.
Please report issues to: {{ system_owner }}.
```

3. Create a playbook file named `motd.yml` in the current working directory. Define the `system_owner` variable in the `vars` section, and include a task for the `template` module that maps the `motd.j2` Jinja2 template to the remote file `/etc/motd` on the managed hosts. Set the owner and group to `root`, and the mode to `0644`.

```
---
- name: configure SOE
  hosts: all
  remote_user: devops
  become: true
  vars:
    - system_owner: clyde@example.com
  tasks:
    - name: configure /etc/motd
      template:
        src: motd.j2
        dest: /etc/motd
        owner: root
        group: root
        mode: 0644
```

4. Before running the playbook, use the `ansible-playbook --syntax-check` command to verify the syntax. If it reports any errors, correct them before moving to the next step. You should see output similar to the following:

```
[student@workstation file-template]$ ansible-playbook --syntax-check motd.yml

playbook: motd.yml
```

5. Run the `motd.yml` playbook.

```
[student@workstation file-template]$ ansible-playbook motd.yml
PLAY [all] *****

TASK [Gathering Facts] *****
ok: [servera.lab.example.com]
ok: [workstation.lab.example.com]

TASK [template] *****
changed: [servera.lab.example.com]
changed: [workstation.lab.example.com]

PLAY RECAP *****
servera.lab.example.com      : ok=2    changed=1    unreachable=0    failed=0
workstation.lab.example.com  : ok=2    changed=1    unreachable=0    failed=0
```

6. Log in to `servera.lab.example.com` as the `devops` user to verify that the MOTD is correctly displayed when logged in. Log off when you have finished.

```
[student@workstation file-template]$ ssh devops@servera.lab.example.com
This is the system servera.lab.example.com.
This is a RedHat version 8.4 system.
Only use this system with permission.
Please report issues to: clyde@example.com.
...output omitted...
[devops@servera ~]# exit
Connection to servera.lab.example.com closed.
```

## Finish

Run the `lab file-template finish` command to clean up after the exercise.

```
[student@workstation ~]$ lab file-template finish
```

This concludes the guided exercise.

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