Red Hat
Ansible Automation
Platform

Bank United
Ansible Lunch and Learn

A quick introduction to writing playbooks

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Overview

- What are the playbooks we'll be looking at
- Ensuring variables are set
- Templating files
- Modifying files
- Using handlers
- Tying it all together with Tower

▸ Two basic playbooks

· Configure host for Ansible

· Configure host to the environment baseline

▸ Custom roles are used for specific components

· Network time

· Banner/MOTD messages

▸ Available for download at:

· https://github.com/red-tux/ansible_lunch_and_learn

Source:
https://github.com/red-tux/ansible_lunch_and_learn

Configure host for Ansible

```
---

- name: Configure new host for Ansible

  hosts: all
```

Source:
https://github.com/red-tux/ansible_lunch_and_learn

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Configure host for Ansible (tasks 1)

```
tasks:
    -  name: Create Ansible User
       user:
          name: ansible
          password: '!'
          groups: wheel


    - name: Add SSH key for Ansible User
      authorized_key:
         user: ansible
         manage_dir: yes
         key: 'ssh-rsa AAAA….YFRT Ansible SSH Key'
```

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Configure host for Ansible (tasks 2)
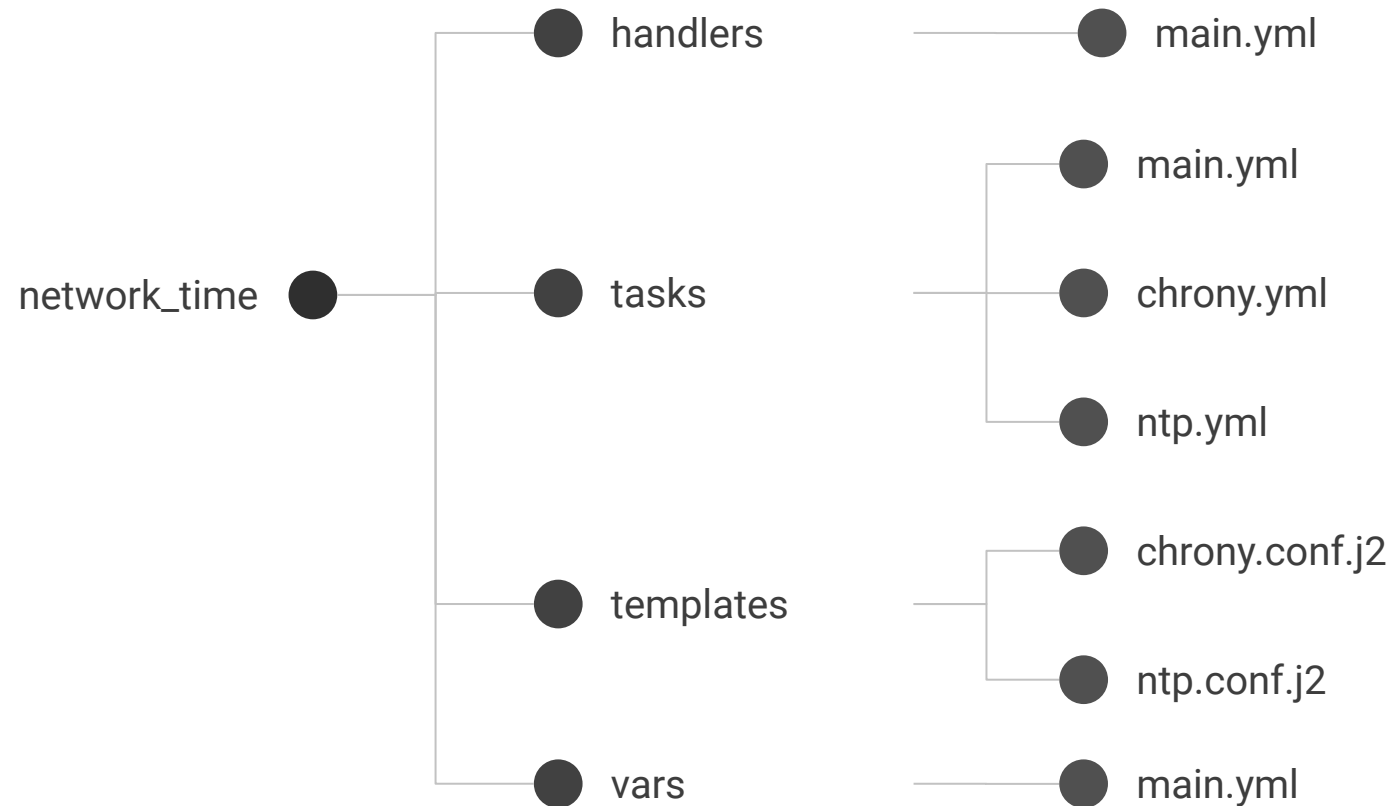
```
- name: Create Ansible sudo rule
  copy:
    src: files/ansible.sudo
    dest: /etc/sudoers.d/ansible
    owner: root
    group: root
    mode: 440
```

```
ansible          ALL=(ALL)        NOPASSWD: ALL
```

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Baseline Configuration

```
---
- name: Configure baseline configurations for host
  hosts: all
  become: true

  roles:
    - network_time
    - motd
```

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Network Time Role Directory Structure

```
network_time ─┬─ handlers ──── main.yml
              │
              ├─ tasks ──┬─ main.yml
              │          ├─ chrony.yml
              │          └─ ntp.yml
              │
              ├─ templates ──┬─ chrony.conf.j2
              │              └─ ntp.conf.j2
              │
              └─ vars ──── main.yml
```

Source:
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Network Time Role (Main Task 1)

```
---
- name: Ensure required variables are defined
  fail:
    msg: "Variable '{{ item }}' is not defined"
  when: vars[item] is undefined
  loop: "{{ required_vars }}"


- name: Gather package facts
  package_facts:
    manager: auto
```

Source:
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Network Time Role (Main Task 2)

```
- name: Include Chrony tasks

  include:  chrony.yml

  when: "'chrony' in ansible_facts.packages"


- name: Include NTP tasks

  include:  ntp.yml

  when: "'ntp' in ansible_facts.packages"
```

Source:
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Network Time Role (Chrony Tasks)

```
---
- name: Push chrony config file
  template:
    src:  chrony.conf.j2
    dest: /etc/chrony.conf
  notify: Restart Chrony
```

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Network Time Role (Chrony Template, abridged)

```
{% for i in timeservers %}
server {{ i }} iburst
{% endfor %}


driftfile /var/lib/chrony/drift


makestep 1.0 3


rtcsync


logdir /var/log/chrony
```

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Network Time Role (Handlers)

```
---
- name: Restart Chrony
  service:
    name: chronyd
    enabled: yes
    state: restarted


- name: Restart NTP
  service:
    name: ntpd
    enabled: yes
    state: restarted
```

Source:
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Motd Role, highlighted task

```
- name: Configure sshd to display /etc/issue
  lineinfile:
    backup: yes
    line: Banner /etc/issue
    path: /etc/ssh/sshd_config
    state: present
  notify: Restart sshd
```

Source:
https://github.com/red-tux/ansible_lunch_and_learn

Motd Role, motd.j2 template

```
This host is managed by Ansible.

This host is in the following Ansible Groups:
{{ group_names | join(', ') }}


Last Ansible run: {{ ansible_date_time.iso8601 }}
```

Source:
https://github.com/red-tux/ansible_lunch_and_learn

Sample Output

```
[nelsonab@lenny-mclean-red-tux-net ~]$ ssh root@ansible-test.lab
**********************************************************************
*                                                                    *
* This system is for the use of authorized users only.  Usage of    *
* this system may be monitored and recorded by system personnel.    *
*                                                                    *
* Anyone using this system expressly consents to such monitoring    *
* and is advised that if such monitoring reveals possible           *
* evidence of criminal activity, system personnel may provide the   *
* evidence from such monitoring to law enforcement officials.       *
*                                                                    *
**********************************************************************
root@ansible-test.lab's password:
Last login: Wed Mar 11 08:59:10 2020 from lenny.mclean.red-tux.net
This host is managed by Ansible.

This host is in the following Ansible Groups:
group1, lab_systems

Last Ansible run: 2020-03-11T13:00:04Z

[root@ansible-test ~]#
```

Source:
https://github.com/red-tux/ansible_lunch_and_learn

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