

# ICA0002: IT Infrastructure Services

## Ansible Handlers

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# Types of applications

## Controlled by user

- Interaction via GUI actions or CLI commands

## Controlled by system

- Run in background
- Interaction via configuration files (input) and log files (output)
- Called 'daemons' in UNIX ('services' in Windows -- idea is the same)

# Daemons

- Apache HTTPd -- web server daemon ('d' stands for 'daemon')
- **syslogd** -- system logging daemon
- **sshd** (not **ssh**) -- SSH server daemon
- **mysqld** (not **mysql**) -- MySQL server daemon

## Common things:

- Name ends with 'd' to indicate that the application is daemon
- Daemon reads configuration file only once -- while starting
- **If the configuration is changed, daemon needs to be restarted\***

\* Some daemons can reload the configuration on system signal

# Example task: configure Nginx

- name: Nginx configuration  
  ansible.builtin.copy:  
    src: default.conf  
    dest: /etc/nginx/sites-enabled/default

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- name: Nginx configuration  
 ansible.builtin.copy:  
 src: default.conf  
 dest: **/etc/nginx/sites-enabled/default**

Problem: service needs to be restarted to apply the changed configuration

Reload would also work here but the idea is the same

# Example task: restart Nginx

- name: Restart Nginx
  - ansible.builtin.service:
    - name: nginx
    - state: restarted

# Example task: restart Nginx

```
- name: Restart Nginx
  ansible.builtin.service:
    name: nginx
    state: restarted
```

Problem: Nginx will be restarted on every Ansible run!

Can the tasks share the state  
with each other?



# Ansible handlers

'Special' tasks that are **not** run by default

Handlers are called (notified) **by name** by other tasks

- If notified multiple times -- still run once
- Run in the order they are **defined** -- not the order they are notified
- Run after all tasks **in all roles** are completed

More:

[https://docs.ansible.com/ansible/latest/user\\_guide/playbooks\\_handlers.html](https://docs.ansible.com/ansible/latest/user_guide/playbooks_handlers.html)

# Ansible handlers have the same syntax as tasks

- name: Nginx configuration ← 'Regular' task  
  ansible.builtin.copy:  
    src: default.conf  
    dest: /etc/nginx/sites-enabled/default  
  **notify: Restart Nginx**
- name: **Restart Nginx** ← Handler  
  ansible.builtin.service:  
    name: nginx  
    state: restarted

# Ansible handlers are defined in their own file

```
roles/  
  my_role/  
    files/  
      ...  
      handlers/  
        main.yaml  
    tasks/  
      main.yaml
```

Demo!

Questions?