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
  copy:
    src: default.conf
    dest: /etc/nginx/sites-enabled/default
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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
  service:
    name: nginx
    state: restarted
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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_intro.html

Ansible handlers have the same syntax as tasks

```
- name: Nginx configuration              ← 'Regular' task
  copy:
     src: default.conf
     dest: /etc/nginx/sites-enabled/default
  notify: Restart Nginx


- name: Restart Nginx                    ← Handler
  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?