ICA0002: IT Infrastructure Services

Ansible Handlers

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Types of applications

Controlled by the user

- Interaction via GUI actions or CLI commands

Controlled by the 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 usually 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, or periodically

Example task: configure Nginx

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

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ansible.builtin.copy:
  src: default.conf
  dest: /etc/nginx/sites-enabled/default
```

Problem: Nginx 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
```

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

Problem: Nginx will be restarted on every Ansible run!

Don't use this task on this course!

You will NOT pass the exam with this or similar Ansible task in your code!

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/playbook_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
```