

## Lab: Implementing Handlers

### Introduction:

Handlers are just like normal tasks in an Ansible playbook but they run only when if the Task contains a “notify” directive. It also indicates that it changed something.

### Objectives:

- Configuration of sshd service

### 1. Configuration of sshd service

1.1 In this lab we will implement handlers in playbooks.

1.2 Let's append a line in our `sshd_config` file using the `lineinfile` module.

```
# ansible eoc-node2 --become -m lineinfile --\
args='dest=/etc/ssh/sshd_config line="PermitRootLogin yes"'
```

### Output:

```
[admin@eoc-controller ~]$ ansible eoc-node2 --become -m lineinfile --args='dest=/etc/ssh/
/sshd_config line="PermitRootLogin yes"'
eoc-node2 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/libexec/platform-python"
  },
  "backup": "",
  "changed": false,
  "msg": ""
}
```

1.3 Let's view the configuration file of `sshd service` on `eoc-node2`

```
# ansible eoc-node2 -m command -a "grep '^PermitRootLogin'
/etc/ssh/sshd_config" -b --ask-become-pass
```

### Output:

```
[admin@eoc-controller ~]$ ansible eoc-node2 -m command -a "grep '^PermitRootLogin' /etc/ssh/s
shd_config" -b --ask-become-pass
BECOME password:
eoc-node2 | CHANGED | rc=0 >>
PermitRootLogin yes
```

**Note:** Press **enter**

**Note:** By using handlers let's change `PermitRootLogin` to **no**

1.4 Let's create a Playbook `demo-handlers.yml` that `[sshd]` is restarted after editing `[sshd_config]`.

```
1 ---
2 - hosts: eoc-node2
3   handlers:
4     - name: restart sshd
5       service:
6   tasks:
7     - lineinfile:
8       path: /etc/ssh/sshd_config
9       regexp: '^PermitRootLogin'
10      line: 'PermitRootLogin no'
11      notify: restart sshd
12      tags: Edit_sshd_config
```

1.5 Let's view the **demo-handlers.yml** manifest file

```
# cat -n demo-handlers.yml
```

Output:

```
[admin@eoc-controller ~]$ cat -n demo-handlers.yml
1 ---
2 - hosts: eoc-node2
3   handlers:
4     - name: restart sshd
5       service:
6   tasks:
7     - lineinfile:
8       path: /etc/ssh/sshd_config
9       regexp: '^PermitRootLogin'
10      line: 'PermitRootLogin no'
11      notify: restart sshd
12      tags: Edit_sshd_config
```

1.6 Let's verify the syntax of **demo-handlers.yml** is correct or not by executing below command

```
# ansible-playbook --syntax-check demo-handlers.yml
```

Output:

```
[admin@eoc-controller ~]$ ansible-playbook --syntax-check demo-handlers.yml
playbook: demo-handlers.yml
```

1.7 Let's run the playbook **demo-handlers.yml** by executing below command.

```
# ansible-playbook demo-handlers.yml
```

**Output:**

```
[admin@eoc-controller ~]$ ansible-playbook demo-handlers.yml

PLAY [eoc-node2] *****

TASK [Gathering Facts] *****
ok: [eoc-node2]

TASK [lineinfile] *****
changed: [eoc-node2]

RUNNING HANDLER [restart sshd] *****
ok: [eoc-node2]

PLAY RECAP *****
eoc-node2          : ok=3    changed=1    unreachable=0    failed=0    skipped=0    r
escued=0    ignored=0
```

1.8 Let's verify the status now by executing below command.

```
# ansible eoc-node2 -m command -a "grep '^PermitRootLogin'
/etc/ssh/sshd_config" -b --ask-become-pass
```

**Output:**

```
[admin@eoc-controller ~]$ ansible eoc-node2 -m command -a "grep '^PermitRootLogin' /etc/ssh/s
shd_config" -b --ask-become-pass
BECOME password:
eoc-node2 | CHANGED | rc=0 >>
PermitRootLogin no
```