ANSIBLE

Ansible Templates

- Templates will copies the source file to the target hosts destination.

- While the template module gets executed it will read the template file and change all the variables to its value and copy the file to the target host.

- Template file ends with .j2 extension which stands for Jinja2 templates.

Ansible Templates

Ex-1:

```
# mkdir templates
# vi templates/file.j2
 <html>
<h1> Hello! Sathya Tech  </h1>
<h1> GoodDay {{ username }} </h1>
</html>
```

Ansible Templates

```
# vi playbooks/pb1.yml
- hosts: ubnt
  vars:
    - username: satish
    - file_path: /var/www/html/
  tasks:
    - name: Copy Site Files
      template:
          src=templates/file.j2
          dest={{file_path}}/index.html mode=0777
```

We use template module to copy the template file and the variable used in template

Ansible Templates

Ex-2: To change Tomcat port

vi templates/demo.j2

.....

<Connector port="{{myport}}"
protocol="HTTP/1.1"

.....

(server.xml content)

Ansible Templates

```
# vi playbooks/pb1.yml
---
- hosts: web
  become: true
  vars:
   - myport: 9090
   - file_path: /etc/tomcat7/
  tasks:
   - name: to update packages
     apt: update_cache=yes

   - name: to install java
     apt: name=openjdk-7-jdk  state=latest
```

Ansible Templates

```
- name: to install tomcat
    apt: name=tomcat7 state=latest

  - name: to change tomcat port
    template:
      src=templates/demo.j2
      dest={{file_path}}/server.xml
    notify:
      - restart tomcat

 handlers:
  - name: restart tomcat
    service: name=tomcat7 state=restarted
```

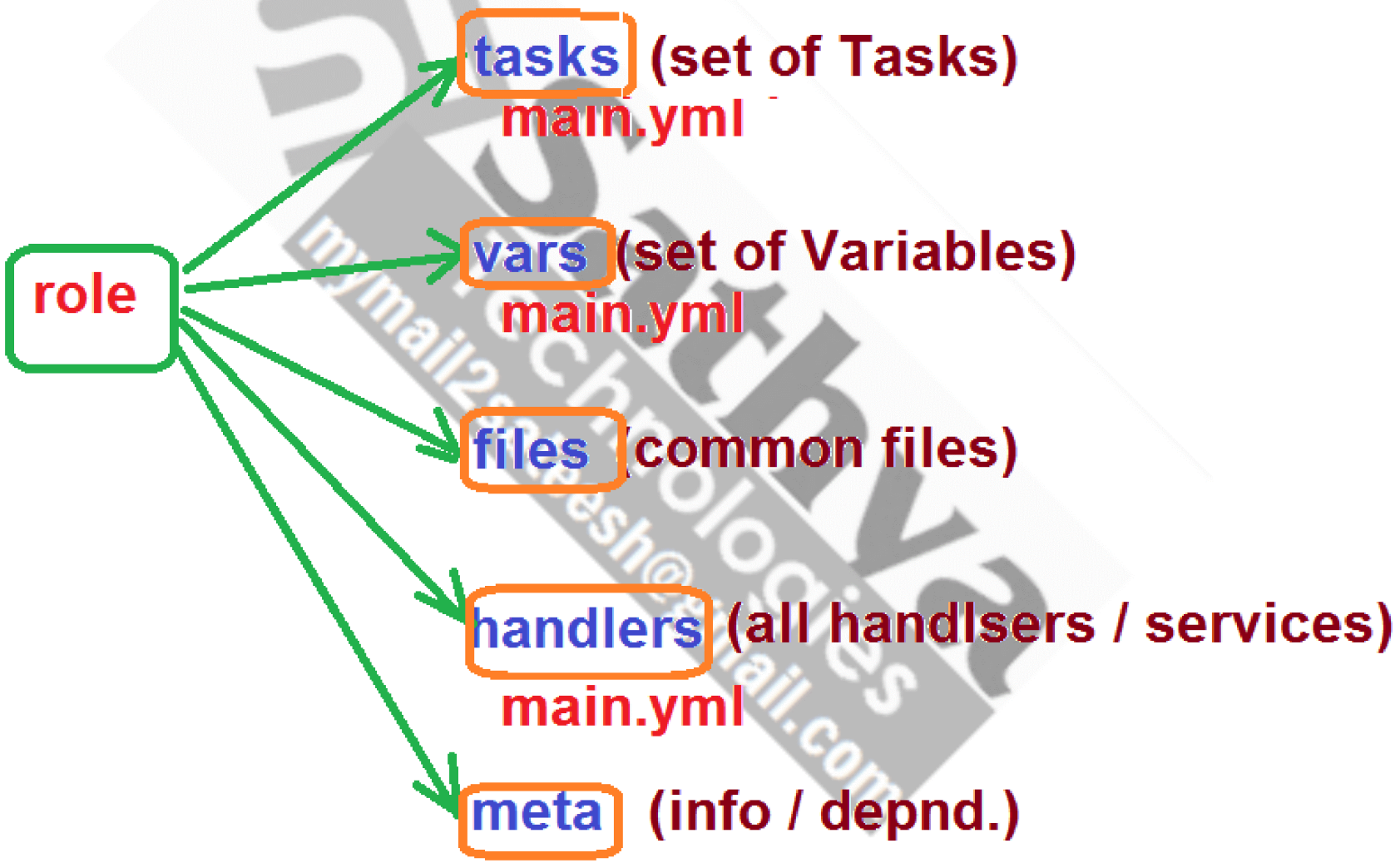
Ansible role

- The Ansible roles is the organized way to perform the tasks in different playbooks according their functionality in a directory structure way.
- Roles allow you to call a set of variables, tasks, and handlers by simply specifying a defined role.
- In role inside every directory we have the main.yml file

Ansible Role directory structure

- **tasks** : a series of tasks are defined here
- **handlers:** all handlers are defined here
- **vars :** all the variables are defined here
- **files :** all the files will place inside this dir
- **meta:** It is used to declare role dependences and info. about a role

common role directory structure



common role directory structure

```
root@ans-masr:~/playbooks# tree roles/
roles/
└── myrole
    ├── files
    │   ├── index.html
    │   └── sample.war
    ├── handlers
    │   └── main.yml
    ├── meta
    ├── tasks
    │   ├── deploy_app.yml
    │   ├── main.yml
    │   └── pack_install.yml
    └── vars
        └── main.yml
```

```
#cat playbooks/pb1.yml
   - hosts: ubnt
     remote_user : root
     roles:
       - myrole
#cd playbooks
# mkdir –p
   roles/myrole/{files,handlers,tasks,vars,meta}
#vi roles/myrole/tasks/main.yml
 - include: pack_install.yml
 - include: deploy_app.yml
```

#vi roles/myrole/tasks/pack_install.yml

```
- name: install {{pack1}}
   apt: name={{pack1}} state=latest
   when: ansible_distribution=='Ubuntu'
   notify:
     - start apache2

 - name: install {{pack2}}
   apt: name={{pack2}}  state=latest
   when: ansible_distribution=='Ubuntu'
   notify:
     - start tomcat
```

```
- name: install {{pack3}}
  apt: name={{pack3}} state=latest
  when: ansible_distribution=='Ubuntu'
  notify:
    - start mysql
```

vi /playbooks/roles/myrole/tasks# vi deploy_app.yml

```
- name: to deploy index.html
  copy:
    src=index.html
    dest=/var/www/html/index.html

- name: to deploy sample.war
  copy:
    src=sample.war
    dest=/var/lib/tomcat7/webapps/sample.war
```

#vi roles/myrole/handlers/main.yml

```
- name: start apache
    service: name=apache2 state=started

  - name: start tomcat
    service: name=tomcat7 state=started

  - name: start mysql
    service: name=mysql state=started
```

#vi roles/myrole/vars/main.yml

```
   pack1: apache2
   pack2: tomcat7
   pack3: mysql-server
```

#vi roles/myrole/files/index.html

<h1> Hello from ansible Role </h1>

#playbooks/roles/myrole/files# ls

index.html sample.war

#ansible-playbook playbooks/myrole.yml --syntax-check

#ansible-playbook playbooks/myrole.yml