AWS-DEVOPS

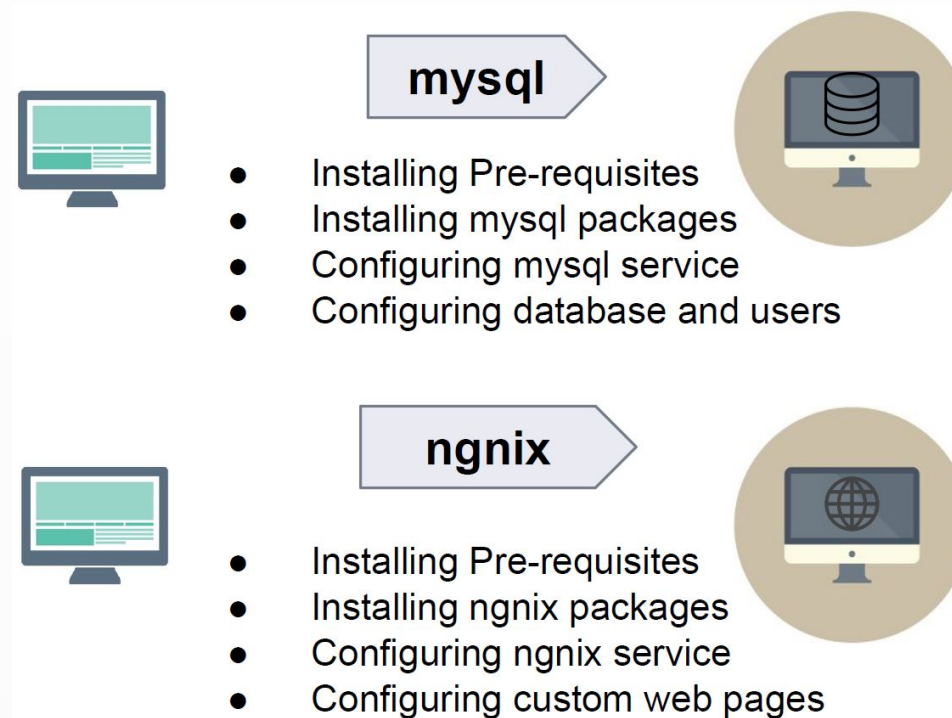|		
DATE	:	**18.03.2024**
DT/NT	:	**NT**
LESSON	:	**DEVOPS**
SUBJECT	:	**ANSIBLE-4**
		Ansible Roles
BATCH	:	**B 224**

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What is Ansible Role?

- Ansible **role** is an independent component which allows reuse of common configuration steps.
- It is used within playbook.

mysql

- Installing Pre-requisites
- Installing mysql packages
- Configuring mysql service
- Configuring database and users

ngnix

- Installing Pre-requisites
- Installing ngnix packages
- Configuring ngnix service
- Configuring custom web pages

What is Ansible Role?

playbook1.yml

```
- name: Install and Configure MySql
  hosts: db-serves
  tasks:
    - name: Install Pre-requisites
      yum: name=pre-req-packages state=present

    - name: Install MySql Packages
      yum: name= mysql state=present

    - name: Start MySql Service
      service: name=mysql state=started

    - name: Configure Database
      mysql_db: name=db1 state=present
```

playbook2.yml

```
- name: Install and Configure MySql
  hosts: db-server1...db-server100
  roles:
    - mysql
```

mysql

- Installing Pre-requisites
- Installing mysql packages
- Configuring mysql service
- Configuring database and users

MySql-Role

```
tasks:
  - name: Install Pre-requisites
    yum: name=pre-req-packages state=present

  - name: Install MySql Packages
    yum: name= mysql state=present

  - name: Start MySql Service
    service: name=mysql state=started

  - name: Configure Database
    mysql_db: name=db1 state=present
```
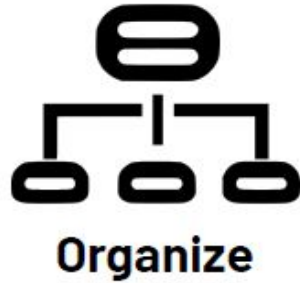
Re-use

What is Ansible Role?

Organize

Re-use

mysql

- Installing Pre-requisites
- Installing mysql packages
- Configuring mysql service
- Configuring database and users

MySql-Role

tasks

```
tasks:
  - name: Install Pre-requisites
    yum: name=pre-req-packages state=present

  - name: Install MySql Packages
    yum: name= mysql state=present

  - name: Start MySql Service
    service: name=mysql state=started

  - name: Configure Database
    mysql_db: name=db1 state=present
```
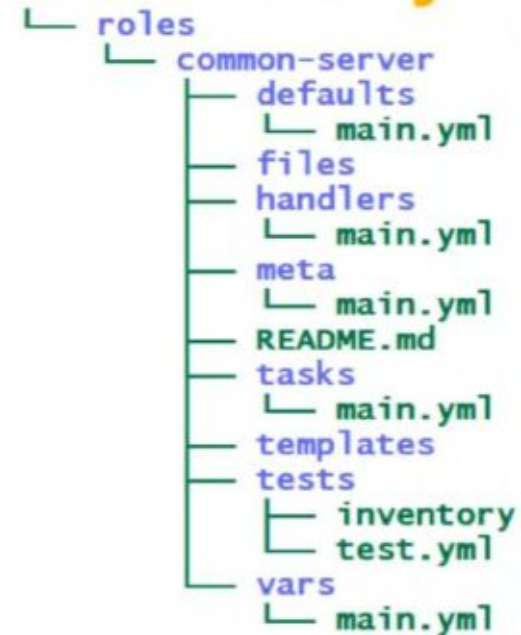
vars

```
mysql_packages:
    - mysql
    - mysql-server
db_config:
    db_name: db1
```

defaults

```
mysql_user_name: root
mysql_user_password: abcd
```

handlers

templates

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What is Ansible Role?

Roles Directory Structure:

✔ **Tasks:** Contains the main list of tasks to be executed by the role.

✔ **Handlers:** Contains handlers, which are tasks that only run when notified by another task.

✔ **Defaults:** Contains default variables for the role.

✔ **Vars:** Contains variables that are more likely to be changed.

✔ **Files:** Contains static files which can be deployed via this role.

✔ **Templates:** Contains templates which can be deployed via this role.

✔ **Meta:** Contains metadata about the role, such as dependencies.
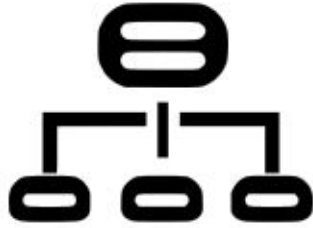
```
├── roles
│   └── nginx
│       ├── defaults
│       ├── files
│       ├── handlers
│       ├── meta
│       ├── tasks
│       ├── templates
│       └── vars
```

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What is Ansible Role?

Share **Organize** **Re-use**

mysql

- Installing Pre-requisites
- Installing mysql packages
- Configuring mysql service
- Configuring database and users

```
$ ansible-galaxy init mysql
```

```
/etc/ansible/ansible.cfg
```

```
roles_path = /etc/ansible/roles
```

playbook2.yml
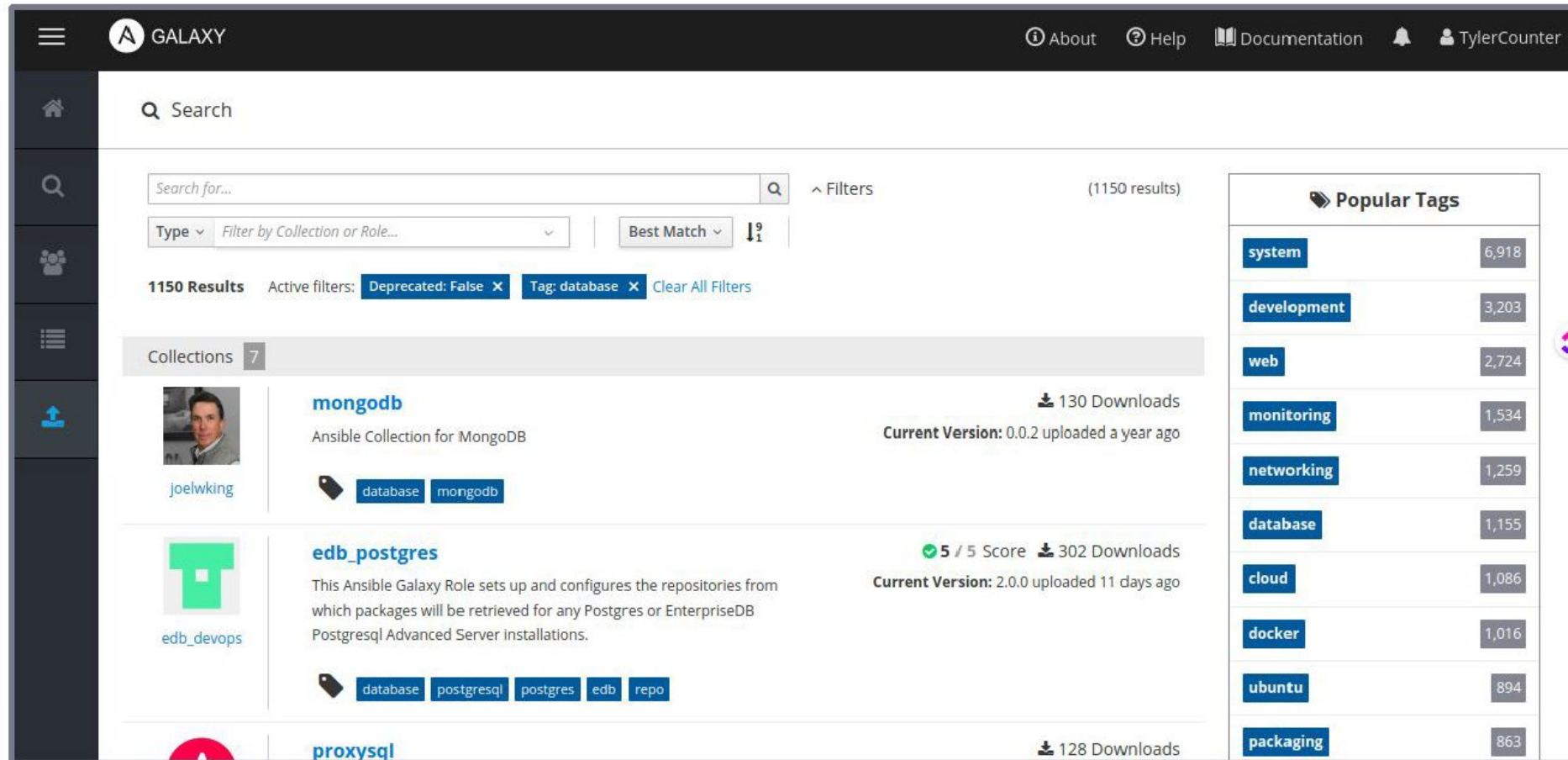
```
- name: Install and Configure MySql
  hosts: db-server1...db-server100
  roles:
    - mysql
```

Roles: Directory Structure

```
└── roles
    └── common-server
        ├── defaults
        │   └── main.yml
        ├── files
        ├── handlers
        │   └── main.yml
        ├── meta
        │   └── main.yml
        ├── README.md
        ├── tasks
        │   └── main.yml
        ├── templates
        ├── tests
        │   ├── inventory
        │   └── test.yml
        └── vars
            └── main.yml
```

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Find Roles & Ansible Galaxy

Ansible Galaxy is a repository for Ansible Roles that are available to drop directly into your Playbooks to streamline your automation projects.

Find Roles & Ansible Galaxy

Use Roles


```
$ ansible-galaxy install geerlingguy.mysql
```

```
ercan@ubuntu:~/Desktop/ansibles ansible-galaxy install geerlingguy.mysql
- downloading role 'mysql', owned by geerlingguy
- downloading role from https://github.com/geerlingguy/ansible-role-mysql/archive/3.3.0.tar.gz
- extracting geerlingguy.mysql to /home/ercan/.ansible/roles/geerlingguy.mysql
- geerlingguy.mysql (3.3.0) was installed successfully
```

playbook.yml

```
- name: Install and Configure MySql
  hosts: db-server
  roles:
    - geerlingguy.mysql
```

```
- name: Install and Configure MySql
  hosts: db-server
  roles:
    - role: geerlingguy.mysql
      become: yes
      vars:
        mysql_user_name: db-user
```
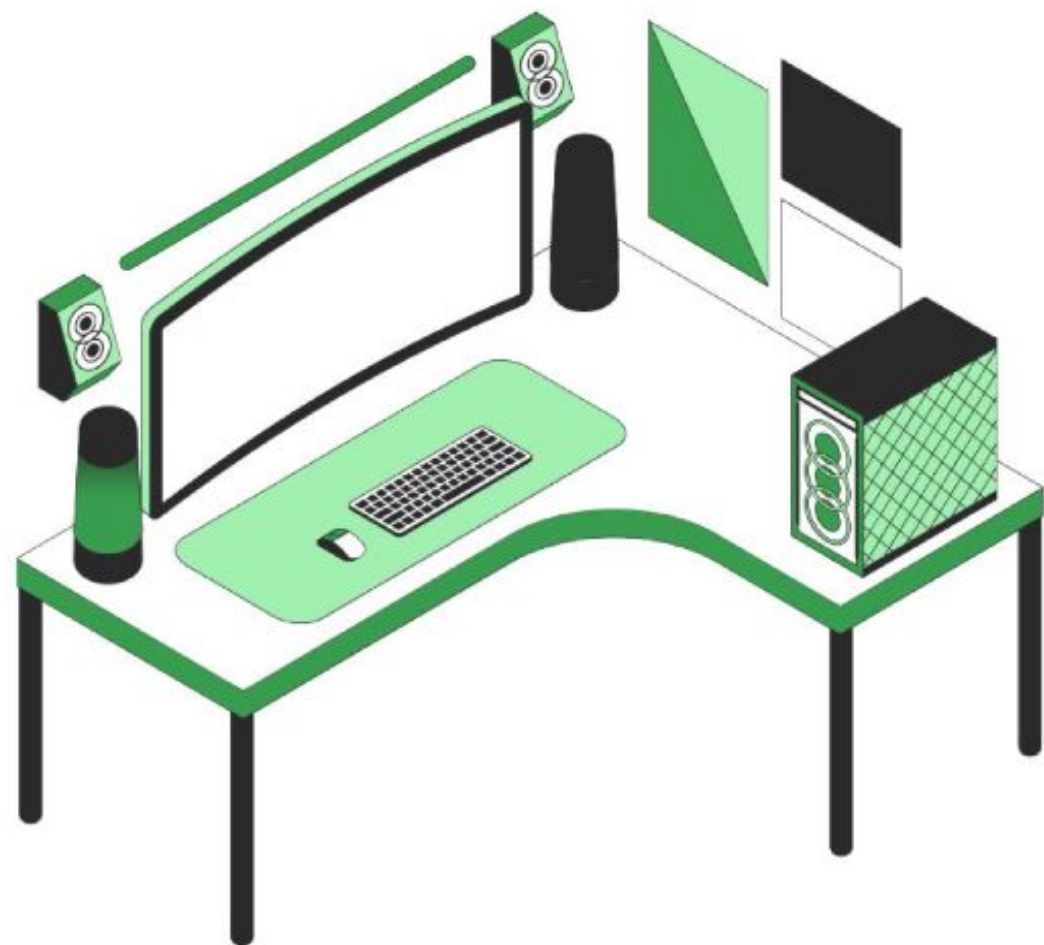
Do you have any questions?

Send it to us! We hope you learned something new.