

ACIT 4640 Assignment 4
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1. Ansible tags.

- I put three tags in webserver.yml.
 - `copy_files` which is all copy file command.
 - `service_related` which is tasks related to service, such as `systemctl`.
 - `nodejs_setup` which related to installing Node.js on the servers.
- To run each tag group, I could use following commands.
 - `ansible-playbook webserver.yml --tags "copy_files"`
 - `ansible-playbook webserver.yml --tags "service_related"`
 - `ansible-playbook webserver.yml --tags "nodejs_setup"`

2. Ansible roles.

- I break ansible to three different roles.
 - **Webserver:** this role takes care of installing, configuring, and managing the Nginx web server.
 - **Node:** this role handles the installation, configuration, and management of Node.js and its related dependencies.
 - **App:** this role is responsible for deploying the application, copying necessary files, and managing the application's service.
- The reason I break up it because I could focus on a specific aspect of the server setup, and it is easier to maintain and extend in the future.

3. Terraform.

- I break terraform to five different paryts.
 - **Network:** Handles networking resources like VPCs, subnets, and security groups.
 - **Variables:** Contains variable declarations used across the Terraform configuration.
 - **Instance:** Focuses on creating and managing EC2 instances and related resources.
 - **Database:** Manages database resources like RDS instances and database subnets.
 - **Output:** Contains output variables to provide information about the created infrastructure.