As a DevOps engineer, your tasks can vary widely depending on your organization's needs and the specific projects you're working on. However, here are some common tasks that DevOps engineers often perform, along with corresponding Ansible tasks:

1. \*\*Provisioning Infrastructure\*\*:

- Ansible can be used to automate the provisioning of infrastructure across different cloud providers or on-premises environments.

- Tasks may include creating virtual machines, setting up networking, configuring storage, and installing necessary software.

- Example Ansible tasks:

- Provision EC2 instances on AWS.

- Create virtual machines on VMware or OpenStack.

- Configure networking components such as subnets and security groups.

2. \*\*Configuration Management\*\*:

- Ansible is widely used for configuration management to ensure consistency across servers and environments.

- Tasks involve managing configuration files, installing software packages, and maintaining system settings.

- Example Ansible tasks:

- Install and configure web servers like Apache or Nginx.

- Set up database servers such as MySQL or PostgreSQL.

- Manage system configurations like SSH settings or firewall rules.

3. \*\*Continuous Integration/Continuous Deployment (CI/CD)\*\*:

- Ansible can automate various stages of the CI/CD pipeline, including building, testing, and deploying applications.

- Tasks may involve setting up build servers, configuring CI/CD tools, and orchestrating deployment pipelines.

- Example Ansible tasks:

- Configure Jenkins or GitLab CI for automated builds.

- Deploy applications to testing, staging, and production environments.

- Integrate with container orchestration platforms like Kubernetes for deploying containerized applications.

4. \*\*Monitoring and Logging\*\*:

- Ansible can be used to automate the setup and configuration of monitoring and logging solutions to ensure the health and performance of systems.

- Tasks may include installing monitoring agents, configuring alerts, and integrating with logging services.

- Example Ansible tasks:

- Install and configure Prometheus for monitoring.

- Set up Grafana dashboards for visualization.

- Deploy ELK Stack (Elasticsearch, Logstash, Kibana) for log aggregation and analysis.

5. \*\*Security and Compliance\*\*:

- Ansible can help enforce security policies and ensure compliance with regulatory requirements through automation.

- Tasks may involve applying security patches, configuring firewalls, and implementing access controls.

- Example Ansible tasks:

- Automate security hardening of servers using Ansible roles.

- Apply OS patches and updates across a fleet of servers.

- Implement role-based access controls (RBAC) using Ansible Vault.

6. \*\*Backup and Disaster Recovery\*\*:

- Ansible can automate backup and recovery processes to ensure data integrity and minimize downtime in case of failures.

- Tasks may include scheduling backups, replicating data, and restoring systems from backups.

- Example Ansible tasks:

- Set up automated backups of databases and file systems.

- Configure replication between primary and secondary data centers.

- Automate disaster recovery procedures for critical services.

These are just a few examples of how Ansible can be used to automate various tasks performed by DevOps engineers. The specific tasks you'll work on will depend on your organization's requirements, infrastructure, and workflows.