

Q3: Which are the top DevOps tools you have you worked on? Please describe how do they all work together. Including practical examples.

Answer:

- 1) Azure DevOPS CI/CD
- 2) Kubernetes/Docker
- 3) HELM Charts
- 4) Ansible
- 5) Jenkins
- 6) IBM UCD

Azure DEVOPS CI/CD, Its Dev ops CI/CD process provided by Azure.

In CI build pipeline run the following

- 1) Build process
- 2) Run the Unit tests
- 3) Run the quality gates using SONAR Qube
- 4) Run the static security scans using Quality express ( Vulnerabilities)
- 5) Generate the docker image if the build is from master branch

In CD:

- 1) Change the Kubernetes configuration run time
- 2) Creating the Kubernetes secrets in the environment variables.
- 3) Deploy the Image in respective environment
- 4) if its integration env, run the integration test cases

There were approvals required in staging and production staging.

Note: Separately implemented the infrastructure pipeline to prepare environment

HELM charts are useful for managing Kubernetes configuration in easy way.

Using Ansible is at the IOT device side, several Automation work flows like deploy OS patch and then deploy different modules like iotedg, edgehub, ion to be deployed, these automation orchestration is simplified using Ansible.

Jenkin and IBM UCD, I used 3Yrs back for several years, Jenkins as CI tool. Where as IBM UCD as CD tool.