

Name: Ho Yin Dominic Leung

Job Title: DevOps Specialist (Req 112703)

Answer 3:

The approach is to create a new testing (staging) environment with a new namespace in OpenShift. Ensure it is as similar with the production environment as possible. The following summarizes the implementation steps:

1. Provision with a new namespace in OpenShift for the testing (staging) environment
2. Setup and create a new testing database and tables in the staging environment base on the same database definition from production
3. Setup and configure testing database access and credentials
4. Export data from production database and import into testing database. Depends on the testing purpose and usage for the staging environment, the number of records to be exported can be different. For efficient storage and cost purpose, suggest only a subset of production data to be exported for the API testing. However, if the staging environment serves both the functional and performance testing, a full set of production data should be migrated over.
5. In the GitHub code repository, create and store the testing database secret credential and other related environment configuration for the staging environment. Define a new staging profile for CI / CD process where different database credentials (productions vs staging) are properly substituted while building the docker image for deployment into OpenShift environment
6. Test database connectivity by manual end-to-end testing in the new staging environment