

Instructions for IS27 – Platform Administrator position

1) Application Deployment

Create a deployment manifest for deploying a working application to either an OpenShift or Kubernetes environment as per the requirements below:

- The application must have at least 2 components - a database and a backend/front-end
- The components should be configured to communicate between themselves
- The application code must be contained within a GitHub repo
- Each component should be setup for High Availability (HA)
- All deployment steps and configuration for the components must be done “as code” and include steps for deploying and configuring the components, testing the success of the deployment and rolling back the deployment.

You don’t need to create your own app, use any existing open source repo (e.g. on GitHub) instead.

Note: If you move on to the interview stage of the competition, you will be asked to set up a running version of the application with an accessible endpoint (could be password protected) a day before the interview and to deliver a short presentation (5-10 minutes) describing your decisions and thought process for designing the application’s deployment and configuration approach.

2) Operational Plan Development

Create an operational plan - in a free text format or as an automated script or playbook (additional points) - to create, test and restore a backup for the application’s database component. Explain why you chose this approach.

3) Bonus Round:

The "bonus round" offers an opportunity to score additional points but is not required to pass the test.

- Add one or more additional component(s) to the application
OR
- Create an operation plan - in a free text format or as an automated script or playbook (additional points) - with steps to create a CI/CD pipeline to build and deploy the application
OR
Describe an approach to upgrading the running application’s components. Include considerations for how to minimize the impact of the upgrade on the application users.
- List security considerations that could be added to the application to help secure its components and protect data in the database.

What to submit

- A link to a publicly accessible cloud source control repository (e.g. GitHub) with the complete application's source code, including the deployment manifest, operational plans, automation playbooks, etc.
- A link to the running version of the application accessible on the web (if available)

In order to move forward to an interview, you must pass a minimum of **two** of the following categories:

- Application Deployment
- Operation Plan Development

Take notes of your decisions, observations, and assumptions.