Ecosystem SRE interview assignment

Assignment

You are responsible for operating an application developed by one of the vendors: https://artifacthub.io/packages/helm/seccurecodebox/juice-shop
You need to deploy the application in a Kubernetes cluster which can be shared with other teams for their own services. The application will be used by clients expecting 99.95%. availability.

Requirements:

- DNS name
- HTTPS (a valid certificate is a plus)
- Highly available (there is no single point of failure)
- Horizontally scalable
- Protected from the common web threats (e.g. OWASP top 10)
- A dashboard with important indicators: e.g. # of req/sec, latency, error rate
- Other applications in the cluster are protected from issues with your application (performance, security)

Do not be scared - the list is not all must haves. You are free to pick whatever items you like and can fit into the timeframe you plan to dedicate for the assignment. We would recommend you to spend between 3 and 6 hours on it.

Deliverables

- an archive or a public repo on GitHub/GitLab with the code, configuration and README.md
- deployment instructions, so we can deploy it into an empty cluster
- motivation for the choices you've made
- (optional) ideas for the items you skipped

Recommended tools: kind or minikube, Helm, Nginx ingress controller, Prometheus, Grafana, Letsencrypt.org

But you are free to use whatever tool you are most comfortable with. If you do not know/like helm, you can always generate a plain yaml with:

```
helm repo add seccurecodebox https://charts.securecodebox.io
helm template my-juice-shop seccurecodebox/juice-shop > my-juice-shop.yaml
```

You'll have to install Helm though:
https://helm.sh/docs/intro/install/#through-package-managers

Evaluation

These are the criteria that we will use to evaluate your work:

- Knowledge of application deployment and operations with Kubernetes
- Knowledge of cloud-native concepts
- Organization and prioritization skills
- Communication and writing skills