Appoena - observability engineering

Host:

1. implement Datadog agent on your desktop (or any machine)
    a. configure apm
    b. configure log collection
    c. configure metrics collection

2. install Apache and RabbitMQ, and integrate these middlewares with Datadog (trial account lasts 15 days)

3. present the standard Dashboard of these middlewares

K8S:

1. implement an infrastructure (local - with 3 machines) kubernetes (k8s) - suggestion: use kind (https://kind.sigs.k8s.io/)

2. integrate this cluster with a Datadog account (trial account lasts 15 days)

3. deploy the applications: java, .net, python contained in the following repository: https://github.com/appoena/datadogpoweruser/tree/main/apm

4. instrument these applications to collect and correlate metrics, logs and traces

Alarmistic:

1. Develop a monitor that triggers an alarm when a pod exceeds the 75% memory usage limit. This monitor should trigger a notification via email.

2. Develop a monitor that triggers an alarm when a pod goes into crash loop backoff state. This monitor should trigger a notification via email.

Dashboards:

1. Develop a dashboard that allows you to quickly identify errors that are occurring in an application (use logs, metrics and traces)
    a. present error rate
    b. present errors with greater occurrence

General:

Present in Datadog what was done in addition to the errors/problems/solutions applied to them.

Perform this process within 3 days.