

DevOps-Engineer Tasks

Tasks:

1. Containerization:

- Create Docker configurations for each component of the application (front-end, back-end, database). Ensure these configurations are optimized for performance and security.

2. Database Configuration:

- Implement a replication strategy for the database to ensure data redundancy and high availability.

3. GitLab Integration:

- Set up a GitLab instance to manage the repository and to automate the CI/CD processes.

4. Docker Registry and GitLab Runner:

- Establish a private Docker registry in GitLab to manage the storage and retrieval of your Docker images.
- Configure GitLab Runner to automate pipelines, which include building, pushing, and deploying processes.

5. CI/CD Pipeline Configuration:

- Design and configure two separate pipelines:
 - A development pipeline triggered by commits to the `develop` branch, facilitating integration testing and staging deployments.
 - A production pipeline triggered by commits to the `master` branch, managing production deployments.

6. Backup Strategy:

- Develop and implement a backup strategy for the application's data and configurations to ensure resilience against data loss.

7. Monitoring and Alerting:

- Implement Prometheus for monitoring the performance of the application.
- Set up Grafana for visualizing monitoring data.
- Integrate alerting through Telegram to notify of critical incidents or performance degradation.

8. VPN Configuration:

- Install and configure a VPN server to ensure secure access to internal networks and servers.

9- Kubernetes:

Write a Kubernetes manifest that run 3 nginx pods and do a memory limitation of 512MB and if the CPU usage goes more than 30% increase number of pods to 5. The image should always pull from our registry.