

Project: Containerized application with Google Kubernetes Engine

Develop a distributed account management system consisting of the following applications:

1. Client application (back end)
 - Requests transactions regarding an account (deposit/withdrawal) to an associated account manager application (see below)
 - Issues transaction requests at random times with randomly generated amounts (positive for deposit, negative for withdrawal)
 - Runs in its own container
 - At least 2 client containers in the same pod

2. Account manager application (back end)
 - Performs transactions for one account as requested by client applications from the same pod
 - Maintains the account balance
 - During a run logs all transactions with time stamps
 - Runs on the same pod as the client applications for that account

3. Accounts Monitor application (front end)
 - Monitors multiple accounts on the same cluster
 - Maintains a summary of accounts with current balance for each account
 - Provides the user with various information about the accounts, including current balance and transaction logs

Project Deliverables:

- Application code
- Documentation for deploying the applications on GKE, listing all steps with screenshots of Google Cloud Console, Cloud Shell Terminal, Cloud Shell commands (describe what each step and shell command does).
- Configuration files (Yaml, Json).
- Screenshots from runs or output files (account summary, transaction logs).