

Background

- A small sized company. With about 70 employees (~30 developers and IT)
- The product is in the fitness area - a running applications for beginners. ●
- You have support for mobile (IOS and Android) and also a web dashboard.
- Mobile:
 - Login to your account
 - Variation of running programs with different levels.
 - GPS tracking of the course.
 - Start and Stop a run.
 - Calorie count based on body measurements and distance + speed.
 - Reminders to do next run.
 - Share progress with friends.
 - Choose your music playlist.
- Web dashboard:
 - Manage your account preferences
 - Historical graphs about users runs
 - Selected time frames, per each training program
 - Total number of KMs, time spent etc
 - Purchase advanced plans to allow you more advanced programs with live support from a real trainer
- Running fully on the cloud.
- Customers only in the United States at the moment.
- The main service is running on 2 virtual machines with 200GB RAM and 32 vCPUs
 - It's a 2 tier architecture
 - Server - Serves both web users and mobiles users on different ports of the server. Runs all the logic.
 - DB- A MySQL instance. Managed by the cloud provider. You only have access to run and execute queries (read/write). This is the only place where data is stored about the users, any kind of data - from the app, dashboard etc.
 - It is saved across different tables.
- Recently with more competitors in the market, you lose customers.
- Customer success team conducted phoned interview and realized the main reason customers leave is the instability of the product
 - They said the app is sometimes not responsive during a run - especially when they want to start or stop a run.
 - Some mentioned that their previous runs had disappeared from their dashboard.
 - When customer finishes a run, it takes more than 1 day until the data is available

in
his dashboard.

Requirements

- CEO defined the 3 main feedback as top priority and should be addressed. ○ The deadline for the resolution is **VERY SHORT - 1 MONTH**
- CTO invited you to a meeting to set expectations about the optimal solution within the short timeframe
- The CFO passed by the room and also requested the following:
 - Due to the high burn rate of the company funds.
 - Cloud account is around 7000\$ monthly
 - She wants to know:
 - Whats the break out of the charges - On data? On compute? On Network
 - How can we reduce the cost of total cloud account

The Task

Your task is to provide a recommendation paper based on the situation, that will allow the company to resolve all requirements within the time period.

The expected solution should include:

1. Assumptions and questions
2. Diagram of the current architecture (based on the assumptions)
3. Plan for 1 month to satisfy business need
4. Long term plan to solve all issues with a diagram.