Project pitch- Kwetter

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Project description

Kwetter is a social-media platform, where people can post tweets, which may contain photos, videos, links, and text. These messages are posted to your profile, sent to your followers, and are searchable on Twitter search.

(Functional requirements are going to be the same as the ones proposed in the example case description)

Challenges

When building a social-media platform, you always have to plan ahead in the sense that the application should be able to handle large loads of requests as the user-base grows and the delays in services like tweeting and messaging should be minimal, persistency will also be key since there have to be no loss of user-related information in a social-media application. Meaning that you are going to have to deal with a lot of architectural challenges, which should be a fitting challenge regarding Enterprise Software Development.

Non-functional requirements

Availability - The users should be able to send tweets and should be able to see other users' tweets on their home timeline without any downtime.

Scalability - The system should be scalable with the increasing load. The load increases with:

- increasing users
- increasing tweets

Reliability – The system should be highly available. User data such as user info, tweets, likes and following should never be lost.

Security – The software should be secured by design. Best security practices should be followed through out the entire development process.

Portability – The software should be easily portable to a new system, therefore containerization should be present.

Technologies

Next.js – Front-end

Express – Back-end

Kubernetes Cluster (on Azure) – Hosting Environment

K6 – Cloud-Base Load Testing

MongoDB – Database

Redis – Caching service

RabbitMQ – Messaging broker

Architecture