Distrivia: A Distributed Trivia Game

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Project Motivation

Our motivation for this project was to build a system that would allow people to compete across multiple platforms reliably. High availability was a major concern for us, as it enables people to compete at all times. This form of trivia is a multi player social game. It takes advantage of a number of different platforms so that users can feel free to play on any device they prefer. The web client ensures that almost any device will be able to connect and play. Designing it on mobile platforms allows us to take advantage of the specific platform and lets people easily play on the go.

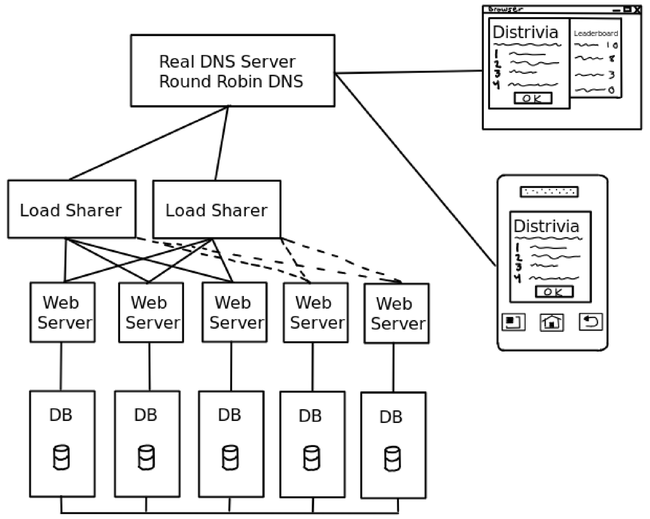
Lessons Learned

- You will always be balancing between Durability, Performance, and Availability.
- Consistent deployment of system code across all servers and hot spares is key to being able to debug the system.
- Developing a consistent API before starting development is invaluable to reducing wasted man hours.

Future Work

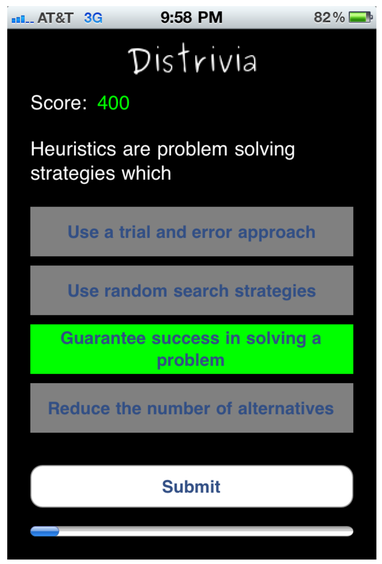
- Blackberry, iPad, Android tablet and Palm clients.
- Categorized questions, so you can play your strengths or weaknesses.
- Allowing users to add custom questions and answers.
- Private local games over bluetooth or local WiFi.

Design

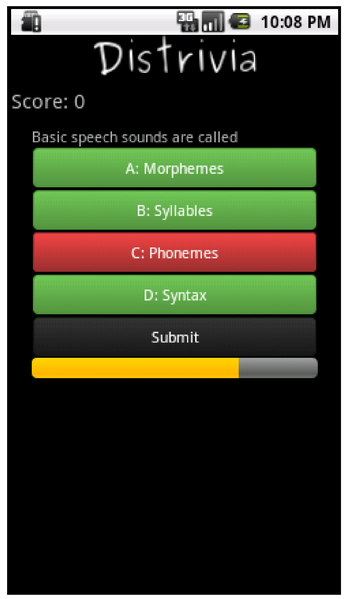


- Round Robin DNS
- Two Load Sharers
- Three front end node
- Two hot spares
- Riak on each server
- Webapp on each server

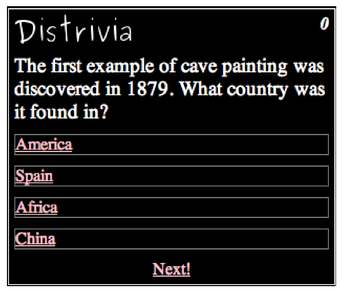
Implementation



iPhone Client



Android Client



Web Client

Architecture

amazon web services™
android
Flask
web development, one drop at a time
iOS
riak
python
Tornado
NGINX