

Client Server Model - Technology Walkthrough

July 7, 2017



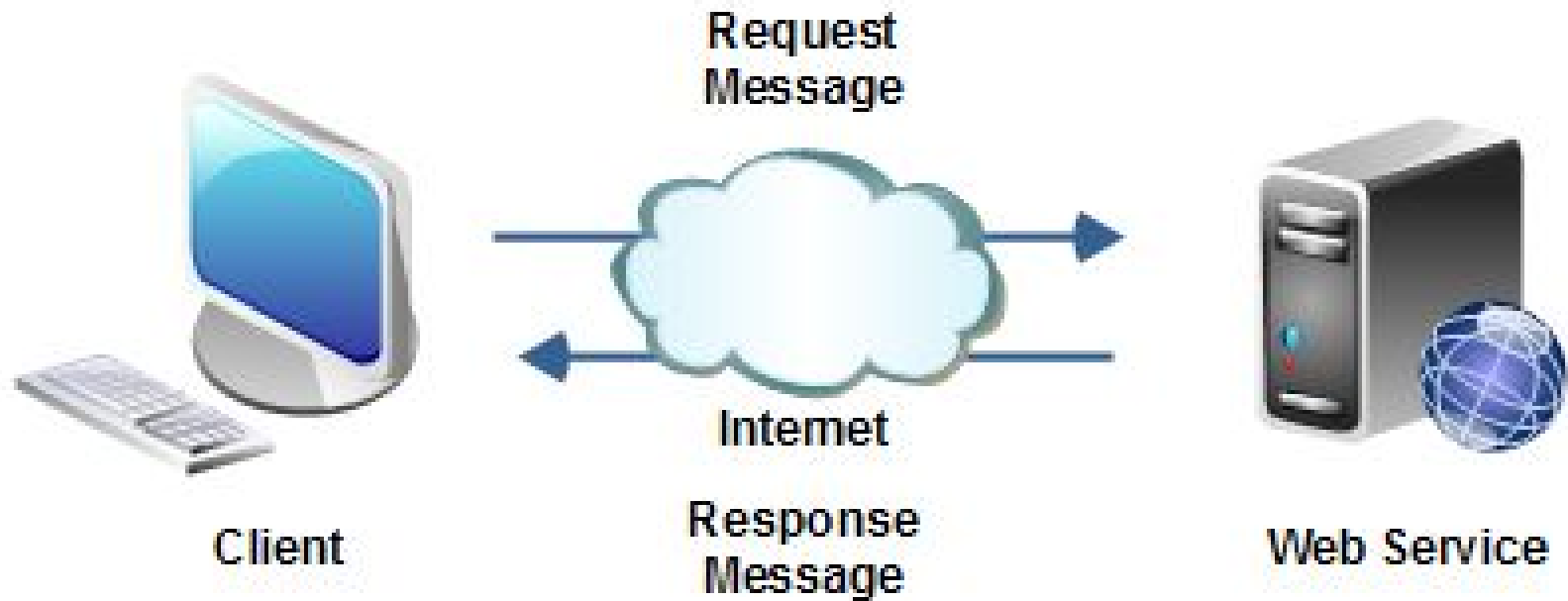
Urban Ladder

Let's Create



Client Server Architecture

Request response flow





Building First Web App

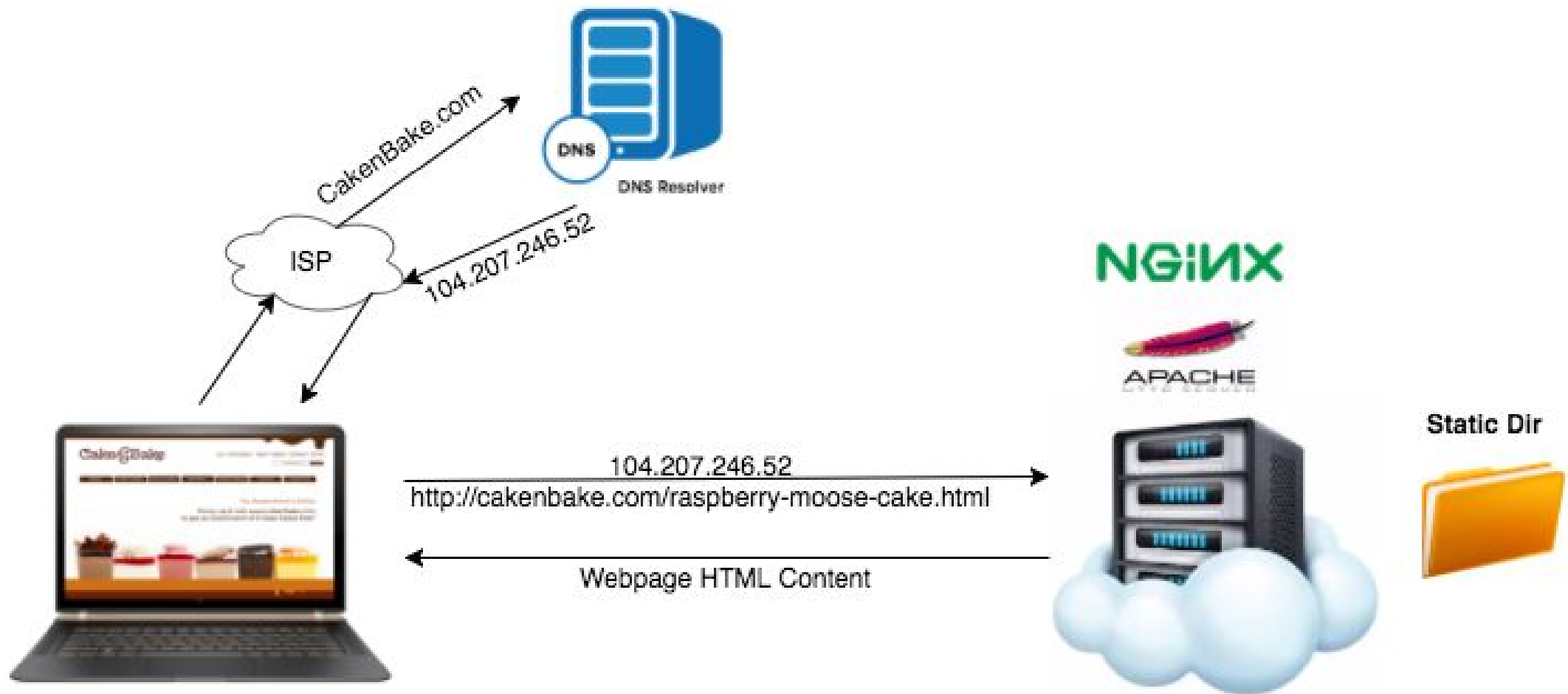
Bob's Cake business



Popular among his friends for baking cakes

- ❑ Wants to share his recipes
- ❑ Take orders

Cake&Bake architecture



Challenges Bob is facing



www.bakencake.com

**More web traffic,
More customers**



Data analysis



More outlets



More orders



Extended catalog

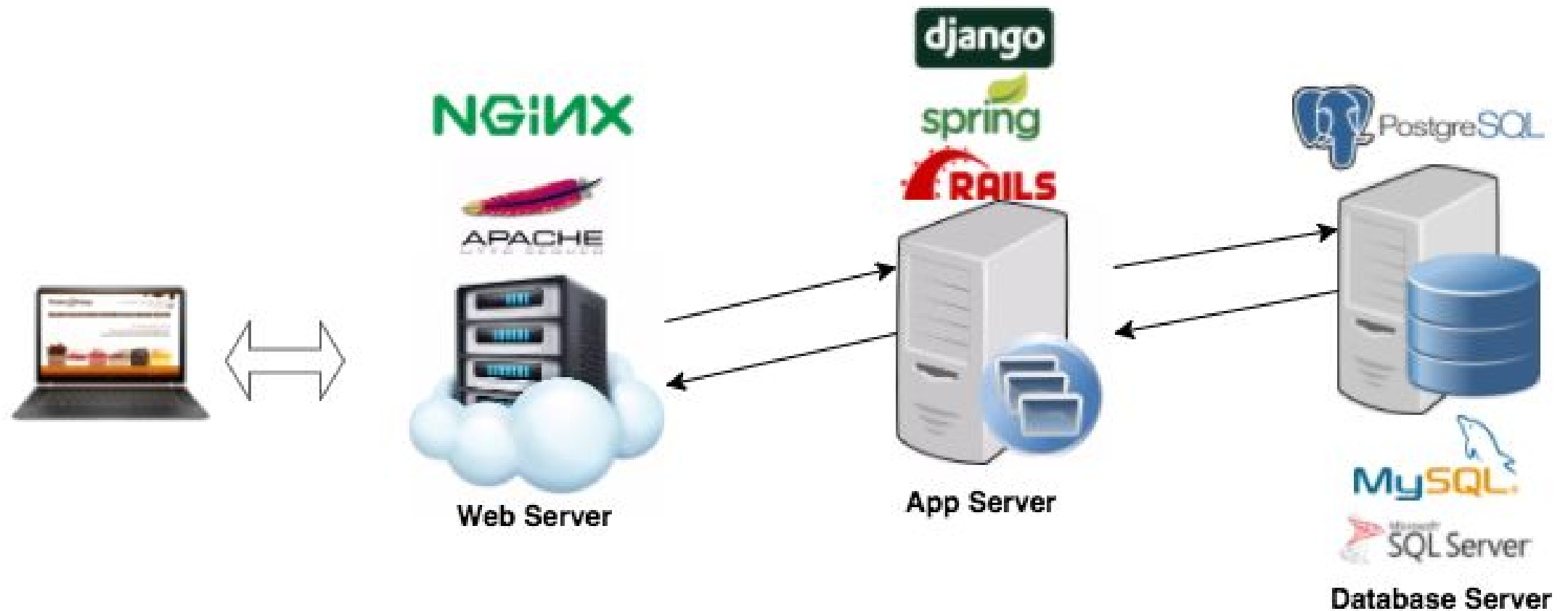
Common technologies in use



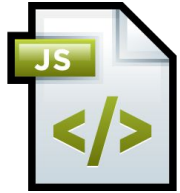
How can technology cater to his demands?

What can be the best solution?

Cake&Bake New Architecture



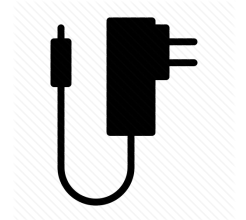
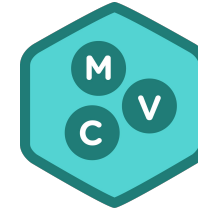
Terminologies



Language



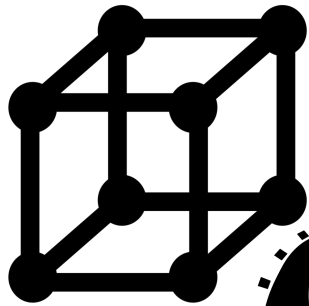
Pattern



Spring



APACHE



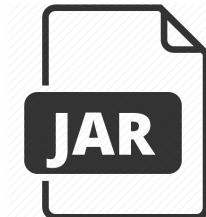
RAILS



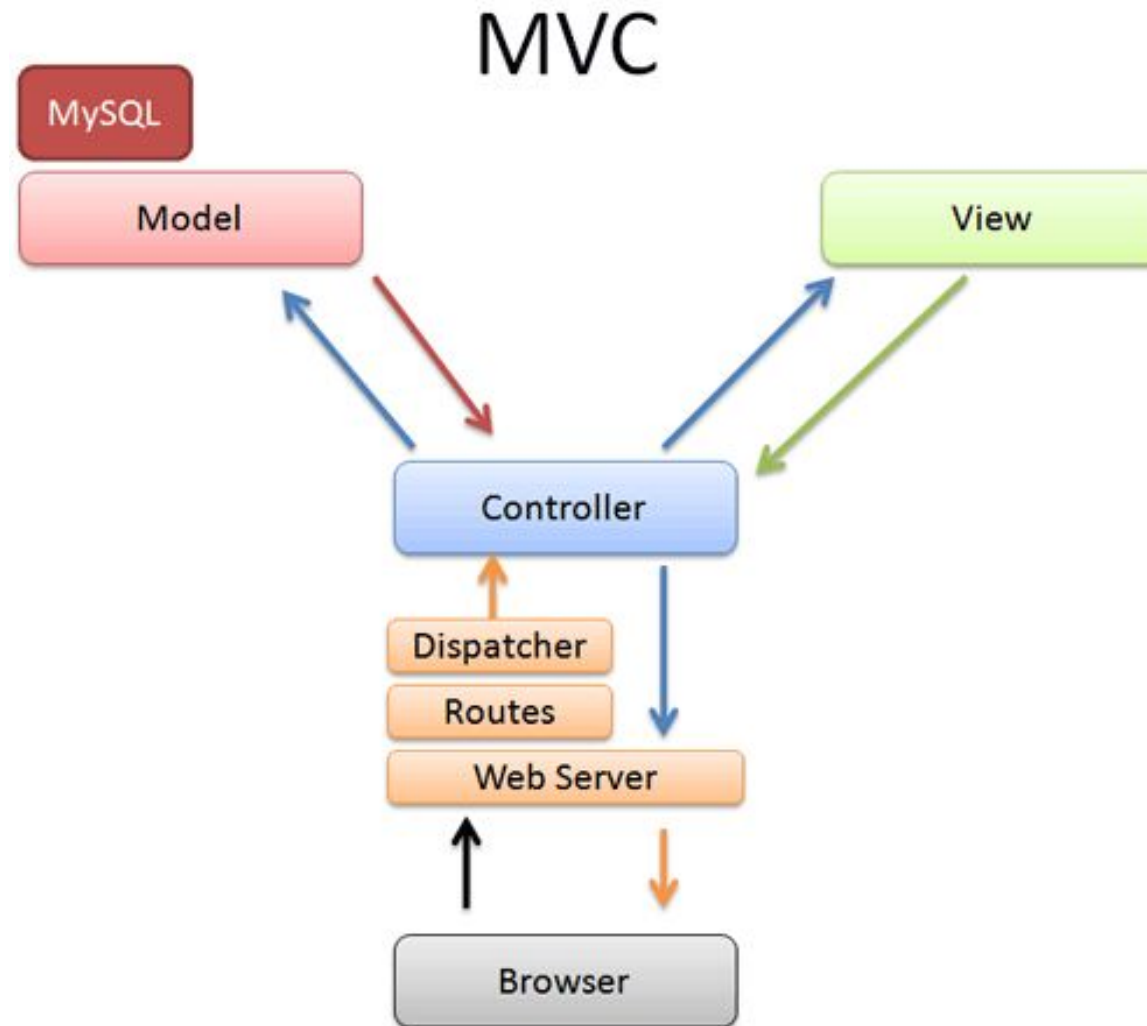
Framework



Library



Example pattern

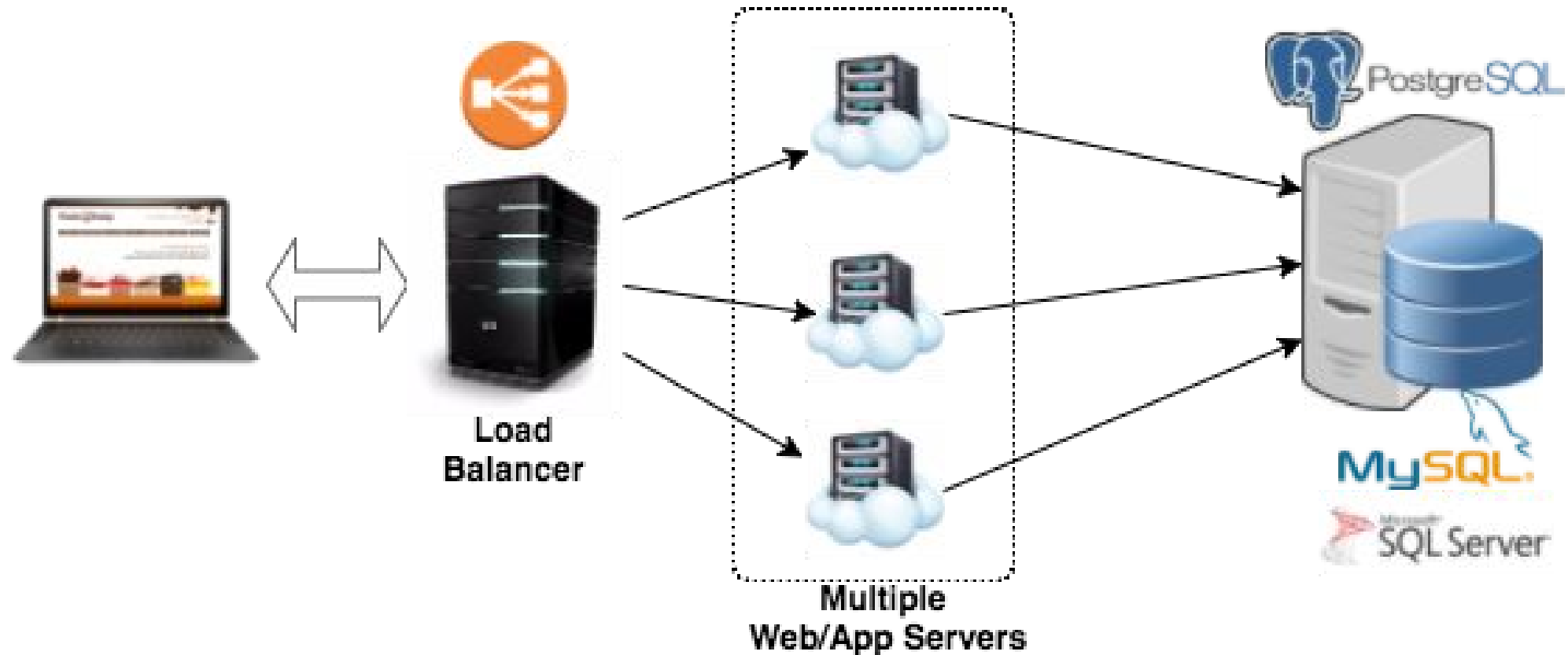


Scaling Cake&Bake

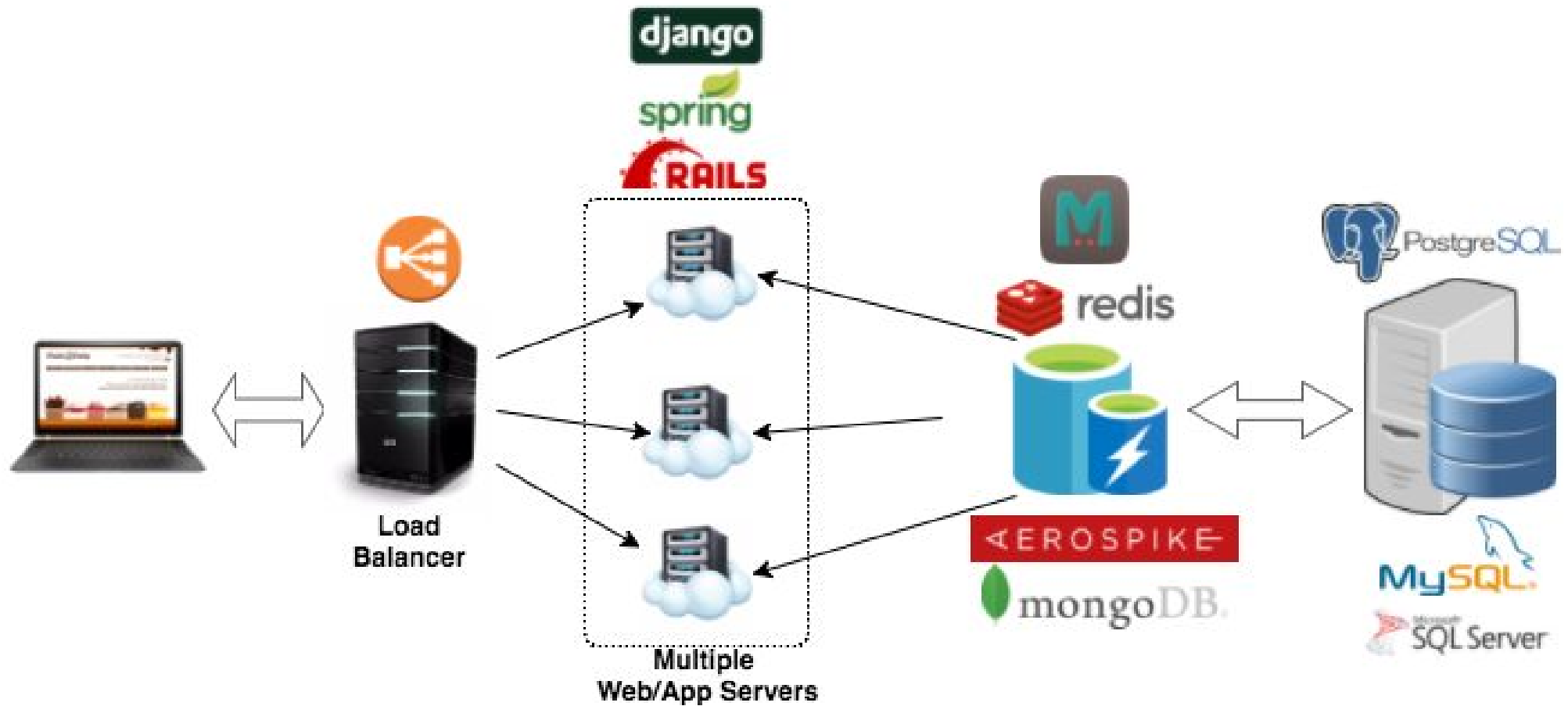
Bob wants to make his site.

- ❑ Available for large traffic.
- ❑ Improve availability.
- ❑ Web page load time to reduce.
- ❑ Fast search for customers.
- ❑ Send notification after order is placed.

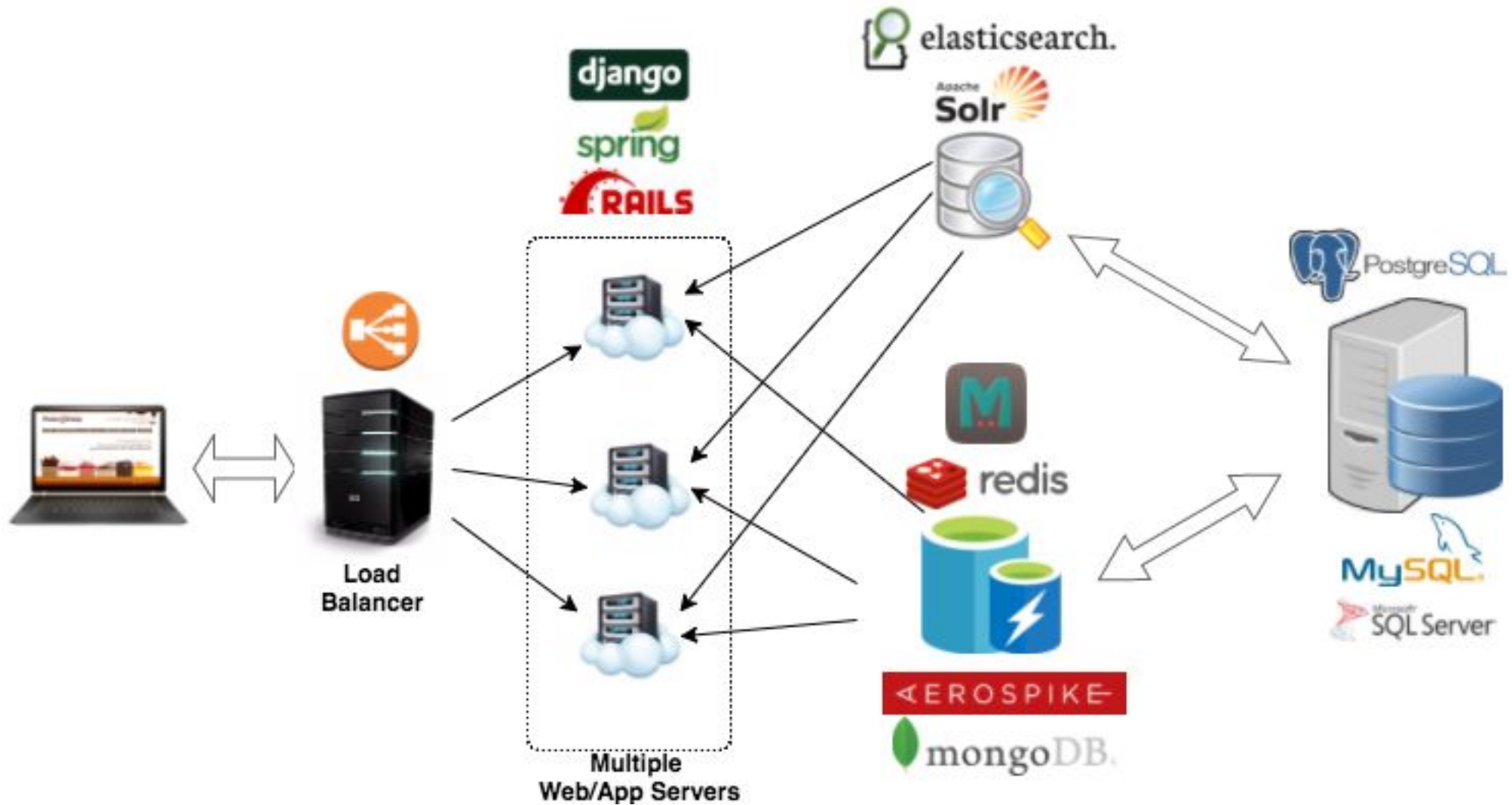
Scaling Cake&Bake



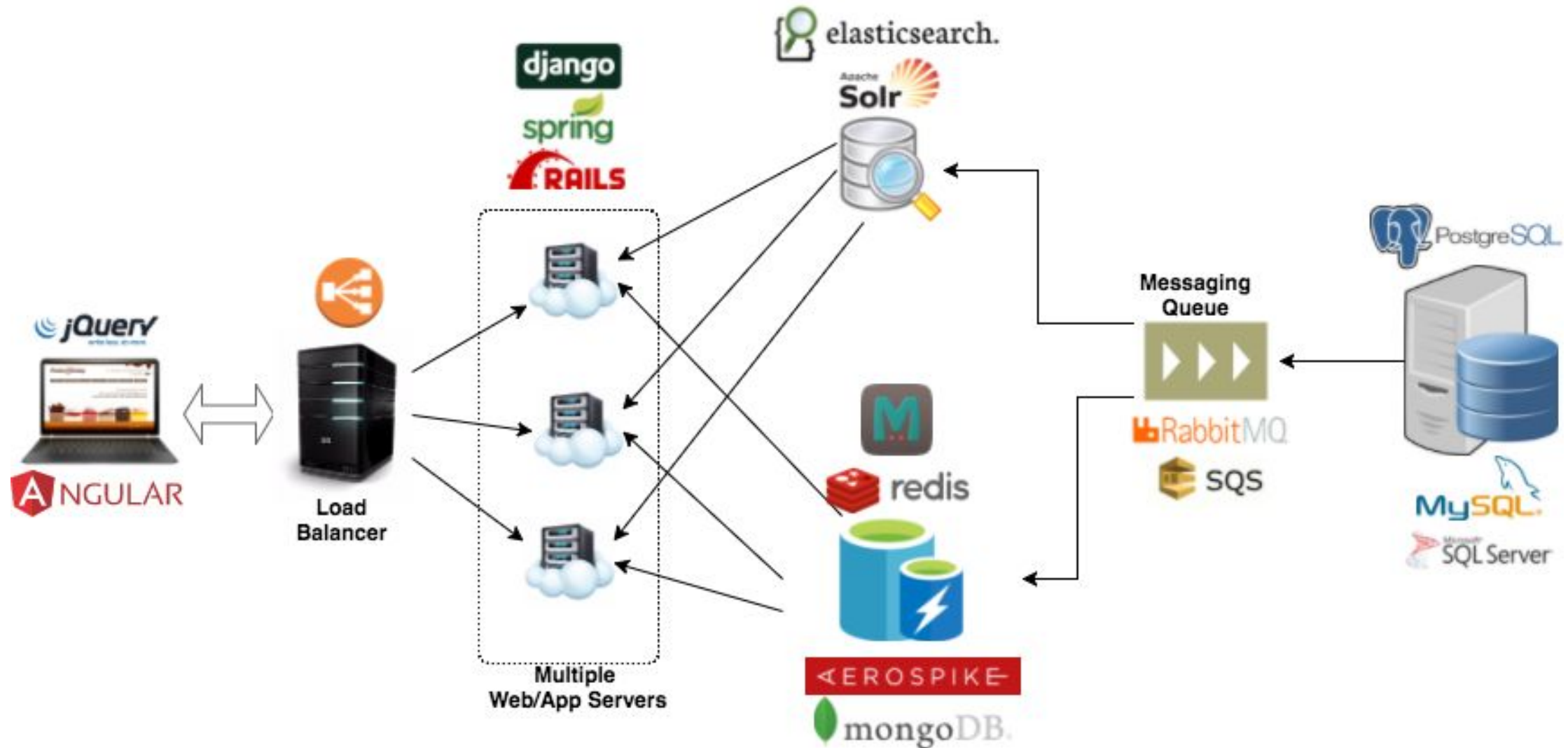
Scaling Cake&Bake



Scaling Cake&Bake



Scaling Cake&Bake

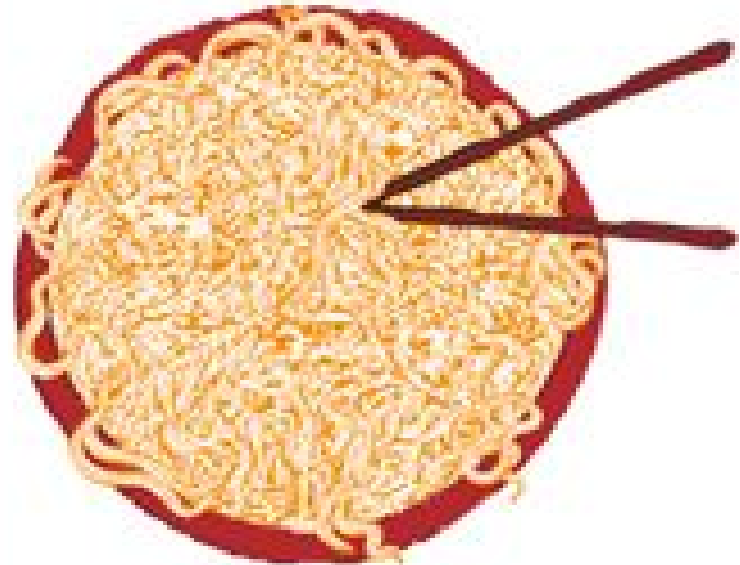


Challenges with monolith system

Bob's current system architecture is like spaghetti!

- Power Centralization
- Maintenance
- Agility
- Scalability
- Availability (ability to deal with downtime)

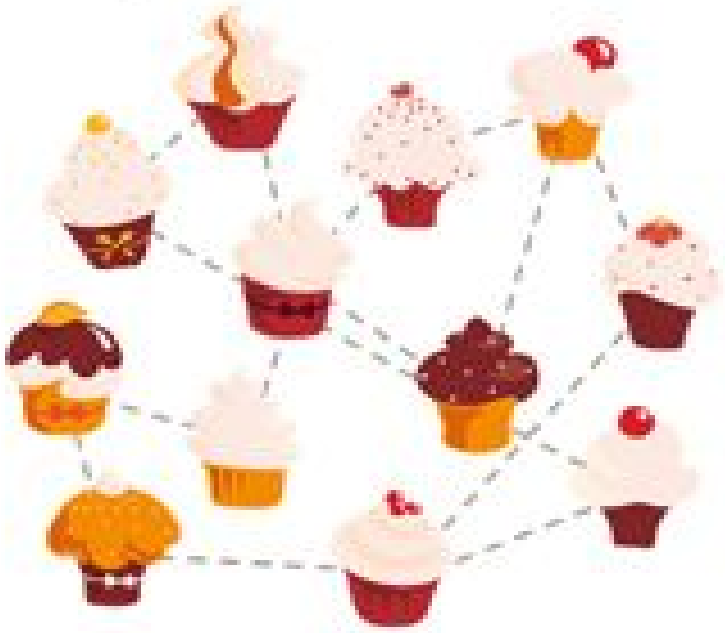
Pre-SOA (monolithic)
Tight coupling



For a monolith to change, all must agree on each change. Each change has unanticipated effects requiring careful testing beforehand.

Microservices

Microservices
Decoupled

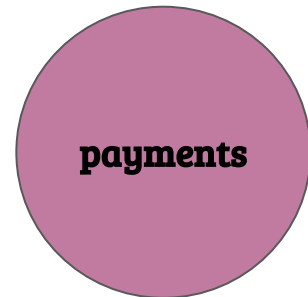
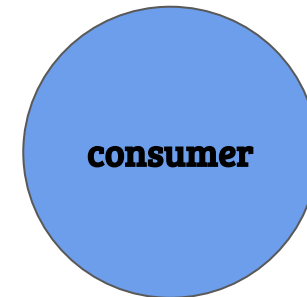
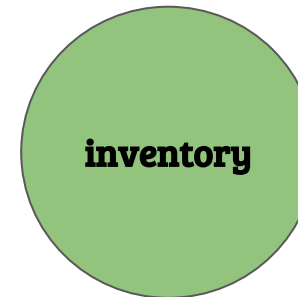
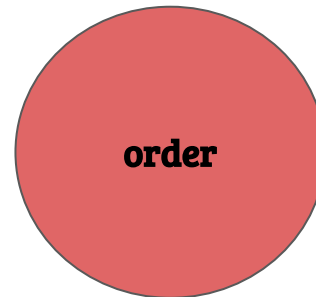


Developers can create and activate new microservices without prior coordination with others. Their adherence to MSA principles makes continuous delivery of new or modified services possible.

Next steps ...

What Bob can achieve?

- Relatively small and manageable
- Deployment ease
- Easier to scale development
- Improved fault isolation
- Eliminates any long-term commitment to a technology stack

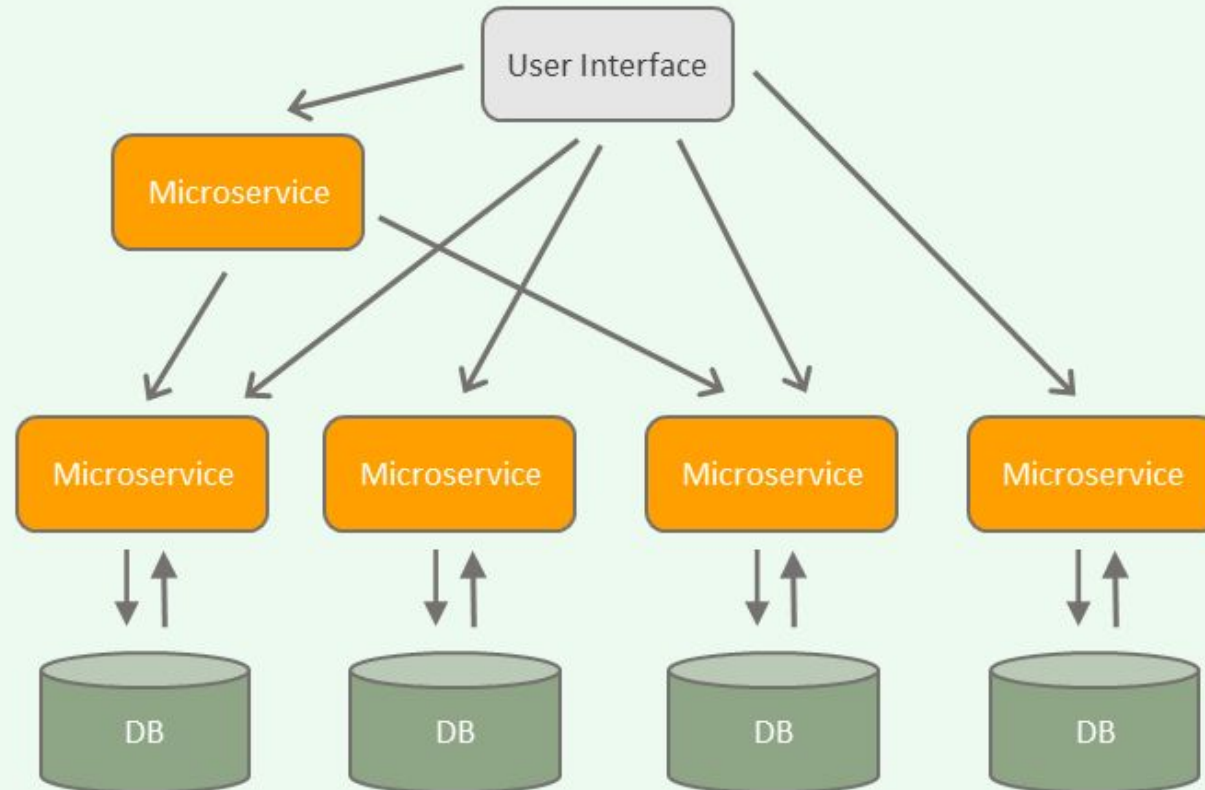


Monolith Vs Microservices

MONOLITHIC ARCHITECTURE



MICROSERVICES ARCHITECTURE



Microservice references

- <https://medium.com/netflix-techblog/netflix-conductor-a-microservices-orchestrator-2e8d4771bf40>
- <https://www.slideshare.net/gjuljo/microservices-architectures-become-a-unicorn-like-netflix-twitter-and-hailo>
- <https://apigee.com/about/blog/developer/microservices-amazon>
- <https://www.nginx.com/blog/microservices-at-netflix-architectural-best-practices/>



Questions ?