Monolithic vs Microservices Architectures

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Motivation
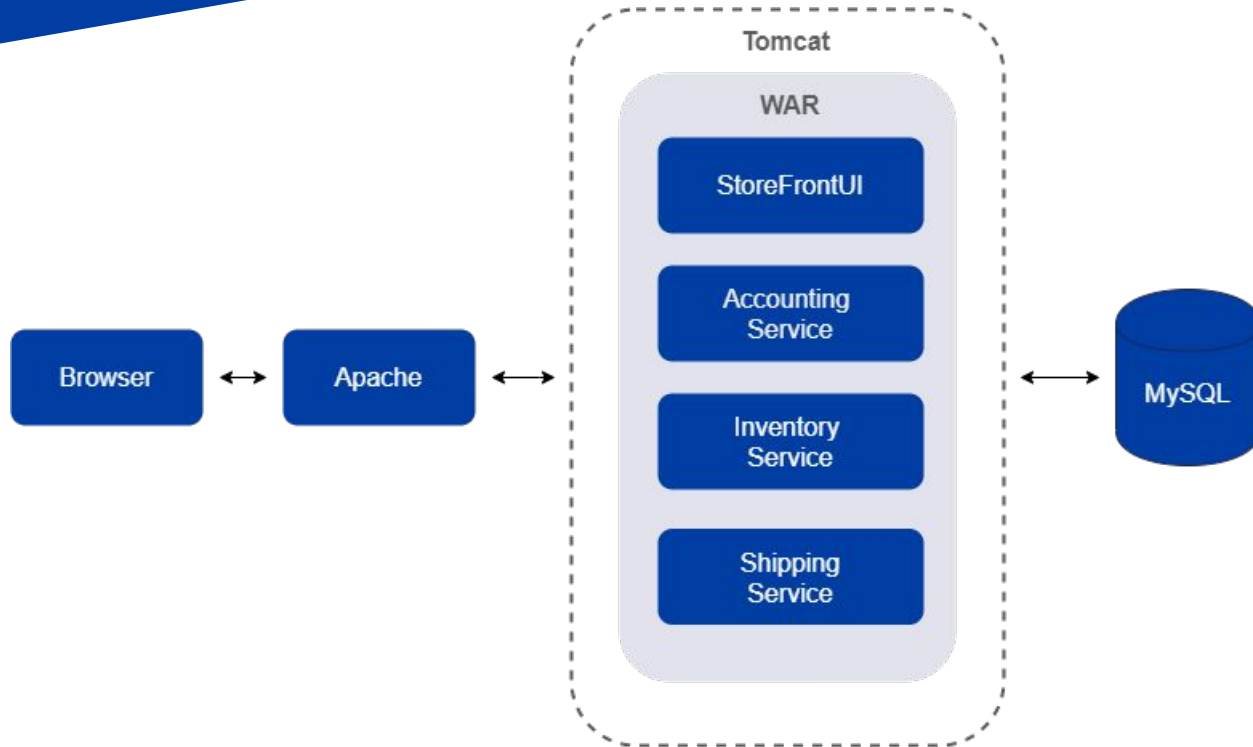
Source:https://www.cecan.ac.uk/events/13th-september-london-cecan-event-policy-evaluation-for-a-complex-world

Source:https://dzone.com/articles/visualizing-dependencies-with-ndepend
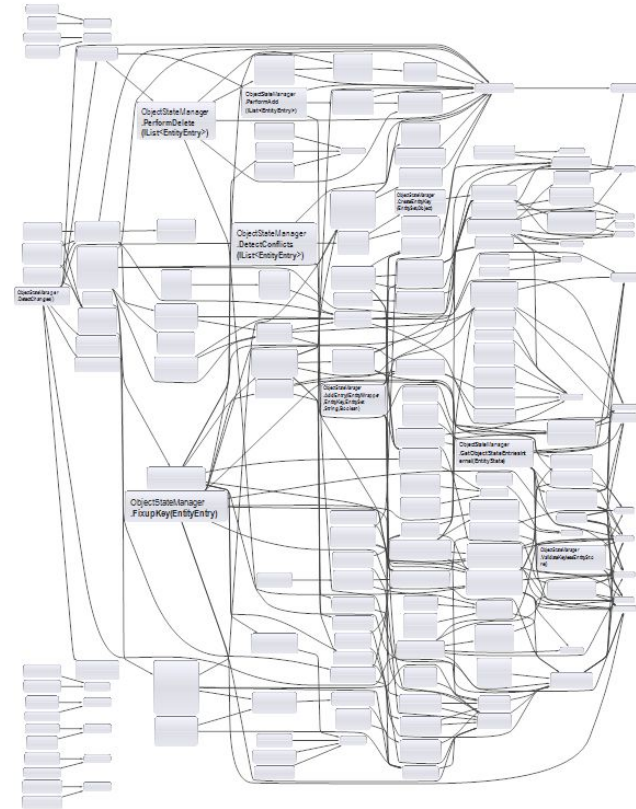
Monolithic Architecture

What is it?

<u>Concept:</u> All modules exist and are developed in one **<u>GIANT</u>** application.
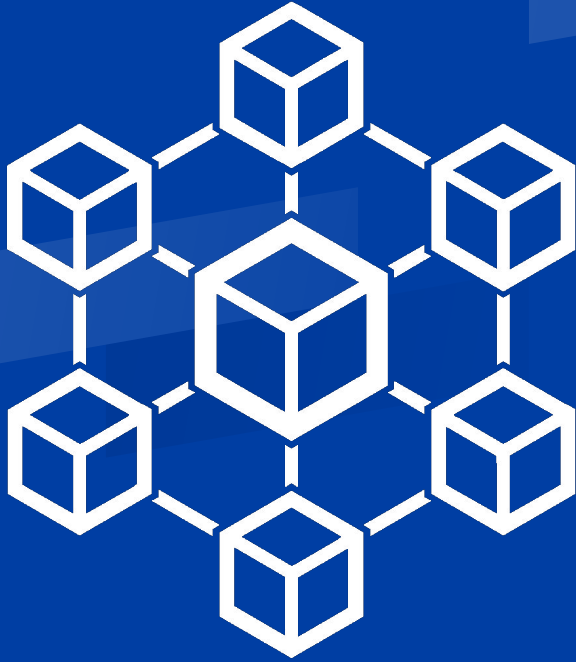
Use Case

Benefits

- Develop: All-in-one app.
- Test: All-in-one app.
- Deploy: All-in-one app.
- Scale: One app, multiple instances.

Drawbacks

- Complex software.
- Inefficient use of teams.
- Large startup.
- Bug propagation when scaling.
- Difficult continuous deployment
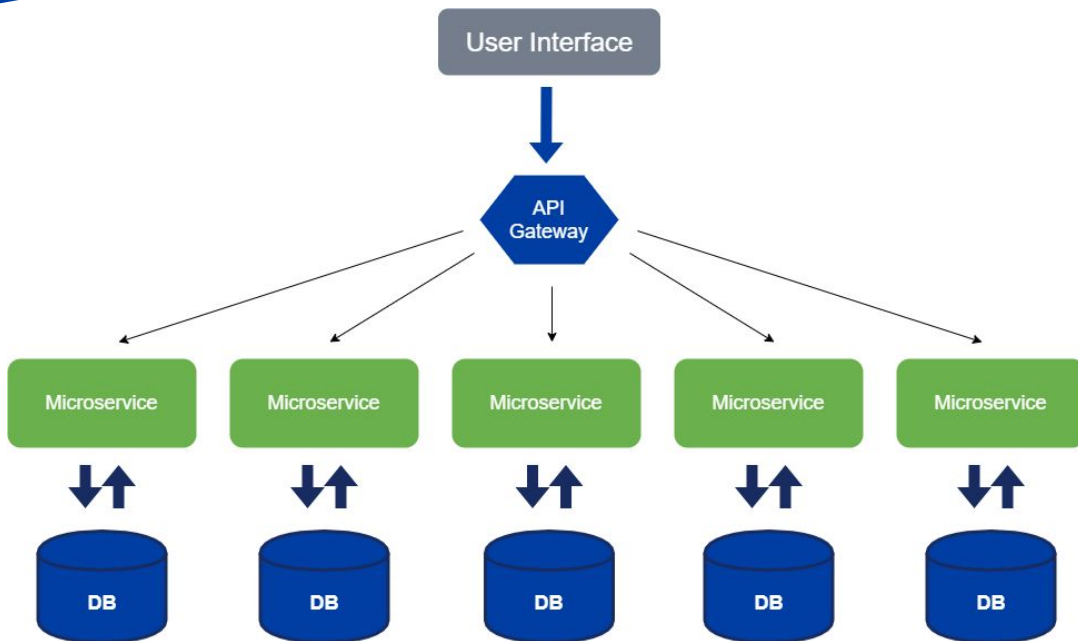- Hard to adopt new tech.

Microservice Architecture

What is it?

Concept: Split your application into smaller, interconnected services

Microservice Architecture

Benefits & Drawbacks

Benefits

- Improved fault isolation
- Deployed independently
- Scales independently

Drawbacks

- More services equals more resources
- Testing can be difficult
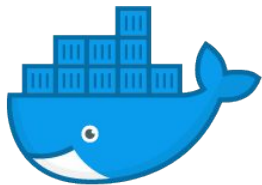- Deployment can be challenging

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Wait for it! Here it comes!

Tools

DevOps Tools

I knew it!

Examples

Take-Home Message

- Small companies/apps - Monolithic
- Large companies/apps - Microservices

Thank you for listening!
Any questions?

References

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