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DevOps Courses by IBM on Coursera

Course 1: Introduction to DevOps

21.11.2022:

1.1. Course Introduction

→ DevOps is practice of Engineers working together through full SLDC, in a rapid and continuous manner. This is the heart of the DevOps Culture.

1.2. Business Case for DevOps

- Since the Year 2000 52% of Fortune 500 Companies are gone due to disruption.
- If it takes a bank 6 months to deploy updates to software a lot of customers might get lost.
- Speed is very important in CI/CD
- Uber disrupted Taxi industry with Open Source Software.



A ridesharing service is 40% cheaper than a regular cab for a 5-mile trip into Los Angeles

\$\$\$ Ridesharing

\$\$\$\$\$ Taxi

-
- Netflix disrupted Blockbuster
- Technology enables innovation, doesn't drive it by itself.

1.3. DevOps Adoption

- fail fast, roll back quickly
- A/B testing
- Microservices are usable and recommended for this
- January 2011 Etsy deploys every ~25min, in 1 month they:

- • Code committed by 76 people
→ a total of 517 times

2016 DevOps Enterprise Summit

Ticketmaster - 98% reduction in MTTR

Nordstrom - 20% shorter lead time

Target - Full Stack Deploy three months to minutes

USAA - Release from 28 days to 7 days

ING - 500 application teams doing DevOps

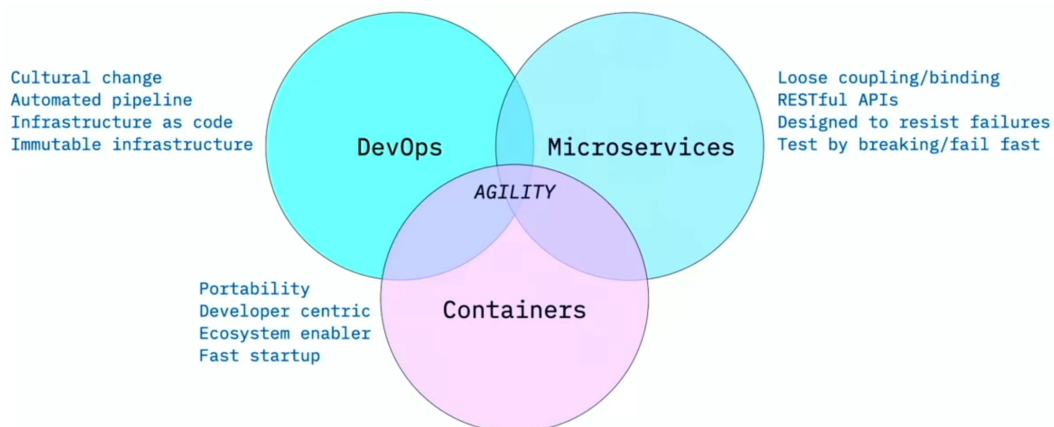
- 2016: **CSG** - From 200 incidents per release to 18

1.4. Definition of DevOps

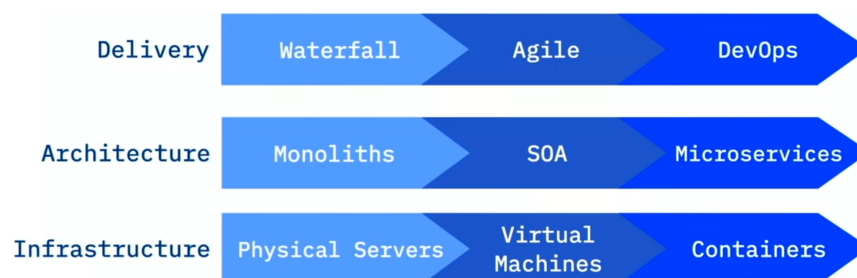
- “Development Operation is an extension of agile development that aims to enhance the process of software delivery as a whole” - Patrick Debois, 2009
- DevOps is Devs and Ops working together in full SLDC following agile principles
- DevOps requires a new application design, leveraging automation for microservices and a defined programmable platform to deploy on to.

1.5. Essential Characteristics of DevOps

- Be agile, move in market with minimum risk and maximum velocity, gain valuable insights
- Three Pillars of Agility:



- Application evolution:



1.6. Activity: Identify Categories in Application Evolution

Match categories and Application Evolution steps

Correct!

You have made the right matches.

Waterfall > Agile > DevOps: Waterfall, Agile, and DevOps are methods for software development and delivery.

Monoliths > SOA > Microservices: Monoliths, SOA, and Microservices are architecture: ways that software is built.

Physical Services > VMS > Containers: Physical Services, VMS, and Containers are used to create infrastructure: basic services such as communication and storage.

Continue

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1.7. Practice Quiz: Introduction To DevOps: Practice Quiz 1

✔ **Congratulations! You passed!**

→ Grade received **100%** To pass 70% or higher

1.8. Leading Up to DevOps