DISTRIBUTED SERVICES: FROM THE TRENCHES

Prem Chandrasekaran

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About Me

premanandc

BARCLAYS

ThoughtWorks®

Working with containers since 1997 ;-)
ACT I: SETUP
Recognize Me?
HMHS Britannic

Also... WRECKED!
SO... WHAT HAPPENED?
ISOLATION == VALUE!
ACT II: CONFRONTATION
The Mighty Monolith
Independent Service Extracted
Service Extraction - Contd.
Service Extraction - Contd.
Service Extraction - Contd.
Inter-Service Dependencies
Enter Event Bus
UI Orchestration
Enter API Gateway
What About Integration?

- EVENT BUS
- API GATEWAY
- UI
- UI
- UI
- GATEWAY
- GATEWAY
- GATEWAY
- Legacy Systems
- Partner Systems
- Vendor Systems
- Legacy Systems
- Partner Systems
- Vendor Systems
CQRS - Did you mean Cars?
Finally… We Have Arrived!!?!
ACT III: RESOLUTION...?
1. DDD - SUBDOMAINS & BOUNDED CONTEXTS

Do we need to make it even more complex...?
2. DDD - AGGREGATE ROOT

The root of all evil...? 😈
3. ENCAPSULATION
Should I hand you my wallet...? 😈
4. EVENTUAL CONSISTENCY

Please hold... Your call is important to us... 😈
5. CQRS

Can we just stick to talking about cars instead...?
Why?
- Difference in volume - Commands vs. Queries
- Much Stronger Encapsulation
- Complicated business logic

Stay Away If...
- You are not the System of Record
- Business logic is too simple

#2. CQRS
Command Query Responsibility Segregation
6. EVENT SOURCING

Just give me back my trusty RDBMS please...now
7. ORCHESTRATION OR CHOREOGRAPHY?

The never-ending saga... 😈
8. INDEPENDENT DEPLOYMENT PIPELINES

Is your future in your own hands...? 🧟‍♀️
8. INDEPENDENT DEPLOYMENT PIPELINES

Is your future in your own hands...?
9. TESTING PRACTICE
I don’t always test my code… but when I do… 😈

https://www.mountaingoatsoftware.com/blog/the-forgotten-layer-of-the-test-automation-pyramid
10. CONSUMER-DRIVEN CONTRACT TESTING

The customer is always right in control... 😈
11. VERSIONING

To do or not to do... that... is the question 😈
12. OBSERVABILITY

I can still see you...

By Andrew Z. Colvin - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=13251597
Otherwise…
AGAIN…. WHAT'S THE POINT?
First Law of Distributed Object Design: "don't distribute your objects"
- Martin Fowler

THANK YOU!
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Effective enterprise architecture

Who is this presentation for?
- Architects of all stripes, tech leads, senior developers, and managers

Prerequisite knowledge
- Experience as a senior developer or architect working on software projects

What you’ll learn
- Learn a holistic approach to architecture that explains how to bring business architecture, information architecture, data architecture, application architecture (software), and infrastructure architecture together into a comprehensive design. You'll also learn how to incorporate design thinking principles and work effectively with Agile teams.

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