

let's move  
the **java** world

# Designing For Rapid Release

Sam Newman



Not Him



#GeeCON, 2012

@samnewman

# ThoughtWorks®

**#GeeCON, 2012**

**@samnewman**

Overview | My Work | Planning

Group by: Status

Rank cards

Ready for Development (8)

- Subscribe #86 to RSS feed
- Merge #85 contacts
- Export my contacts to iCal #84

shop.

Runs

add

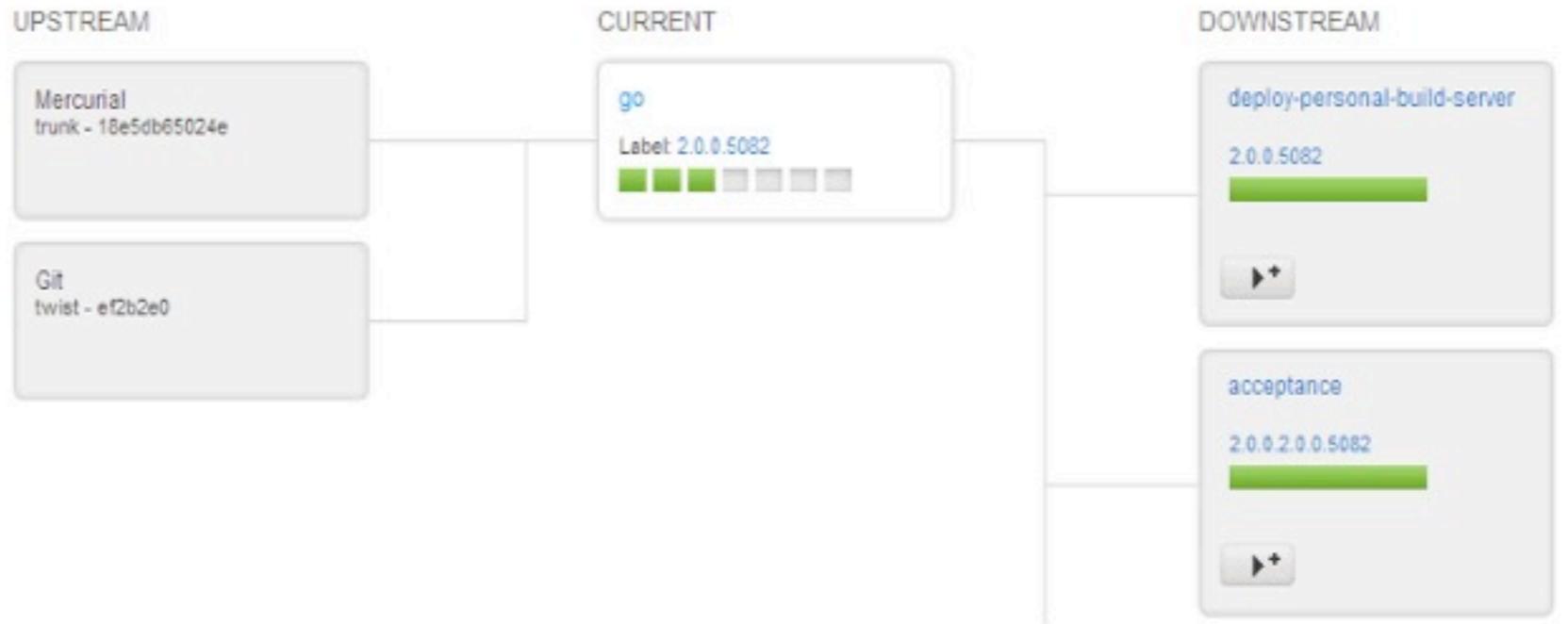
Debug your tests with real-time

# Pipelines » Go » 2.0.0.5082



Run: 1 of 1 ■ Passed | Triggered: by dave | Duration: 00:06:02

Overview | Pipeline Dependencies | Materials | Jobs | Tests

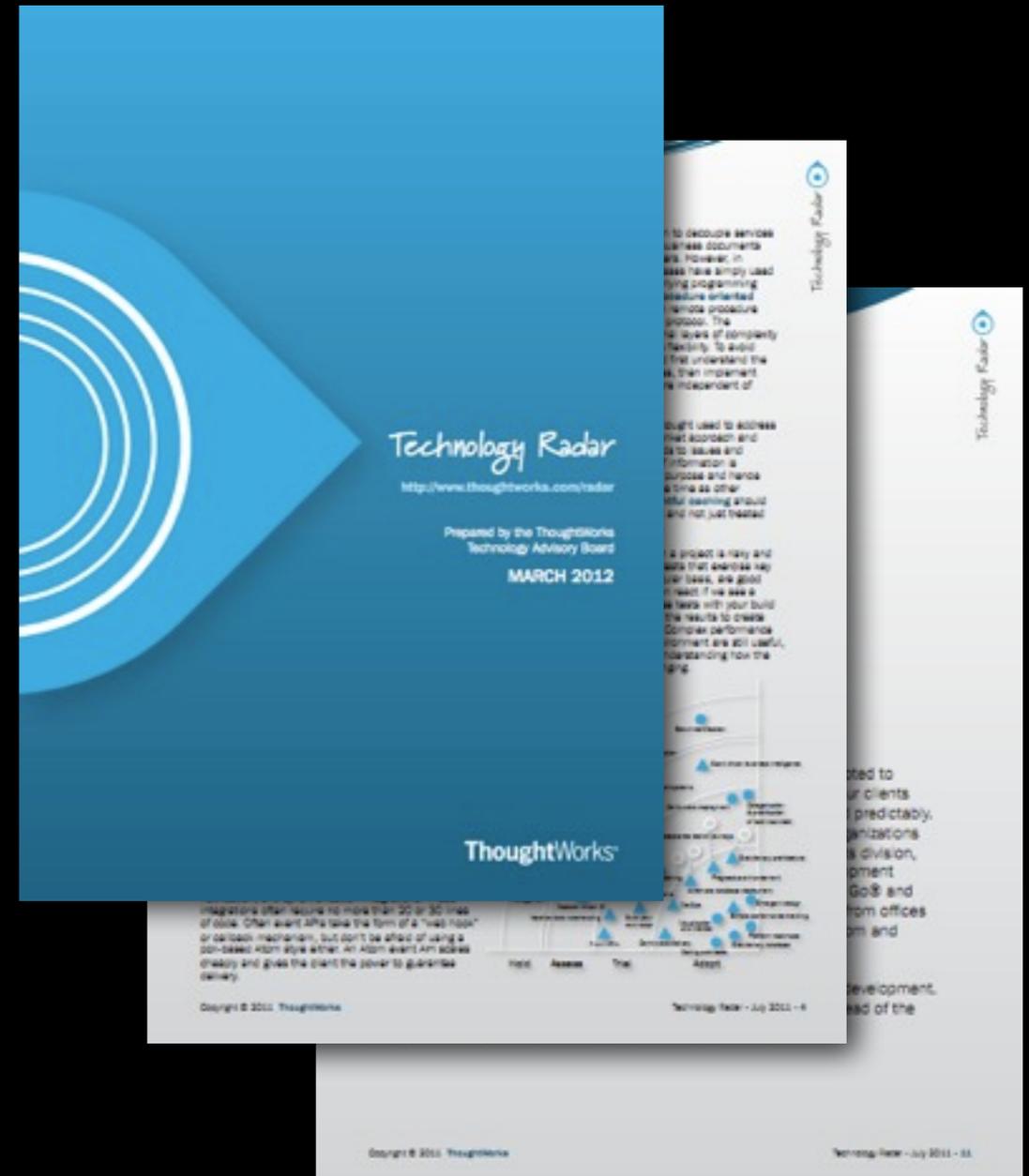


Reuse existing workflows and optimize your test suites with inline content-assist.

# TECHNOLOGY RADAR

twice yearly report from the  
technical advisory board (TAB)

Highly opinionated, reflecting the views of the  
members of the TAB



<http://www.thoughtworks.com/radar>

**We're hiring...**

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Why is rapid release  
important?

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Scaling

Performance

Compliance

Durability

What criteria influence  
design?

Geographical

Technology

What about making it  
easy to release?

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Make it quick to make a change

Make it quick to deploy the  
change

Reduce the risk of releasing

# MusikShop v2

v23

v2

v9

v14

MusikShop

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The Same Change...

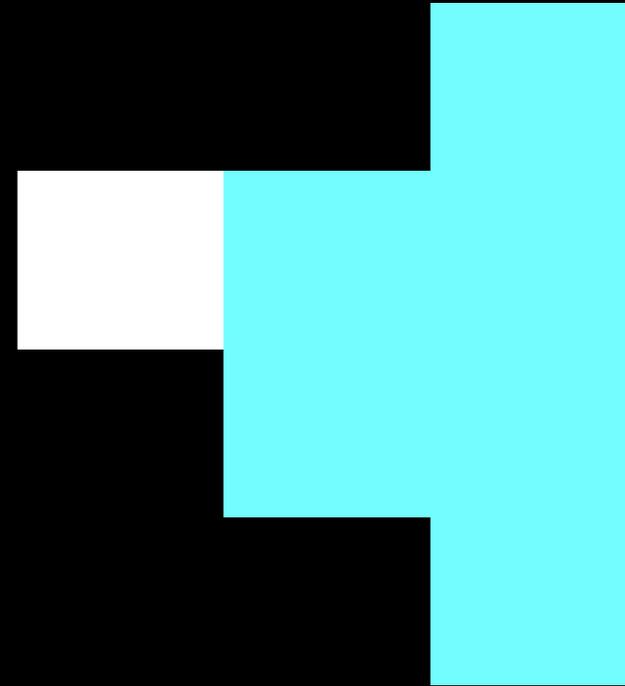


...resulting in very different  
deployments



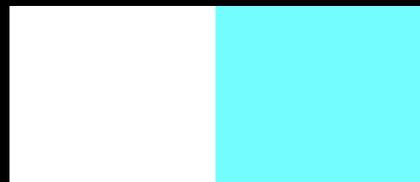
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Each release is a rollback point

and a data gathering point



...

and a release process practiced often is more likely to work and to be efficient

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**Small, Incremental  
Releases FTW!**

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So how do we design  
our systems to allow  
for small changes?

# MusikShop

Rekomend  
Lib

Invoice  
Creation

...

String Utils

Small units - easier to  
reason about

Fast CI turnaround  
cycles

MusikShop v1

Rekomend  
Lib v134

MusikShop v2

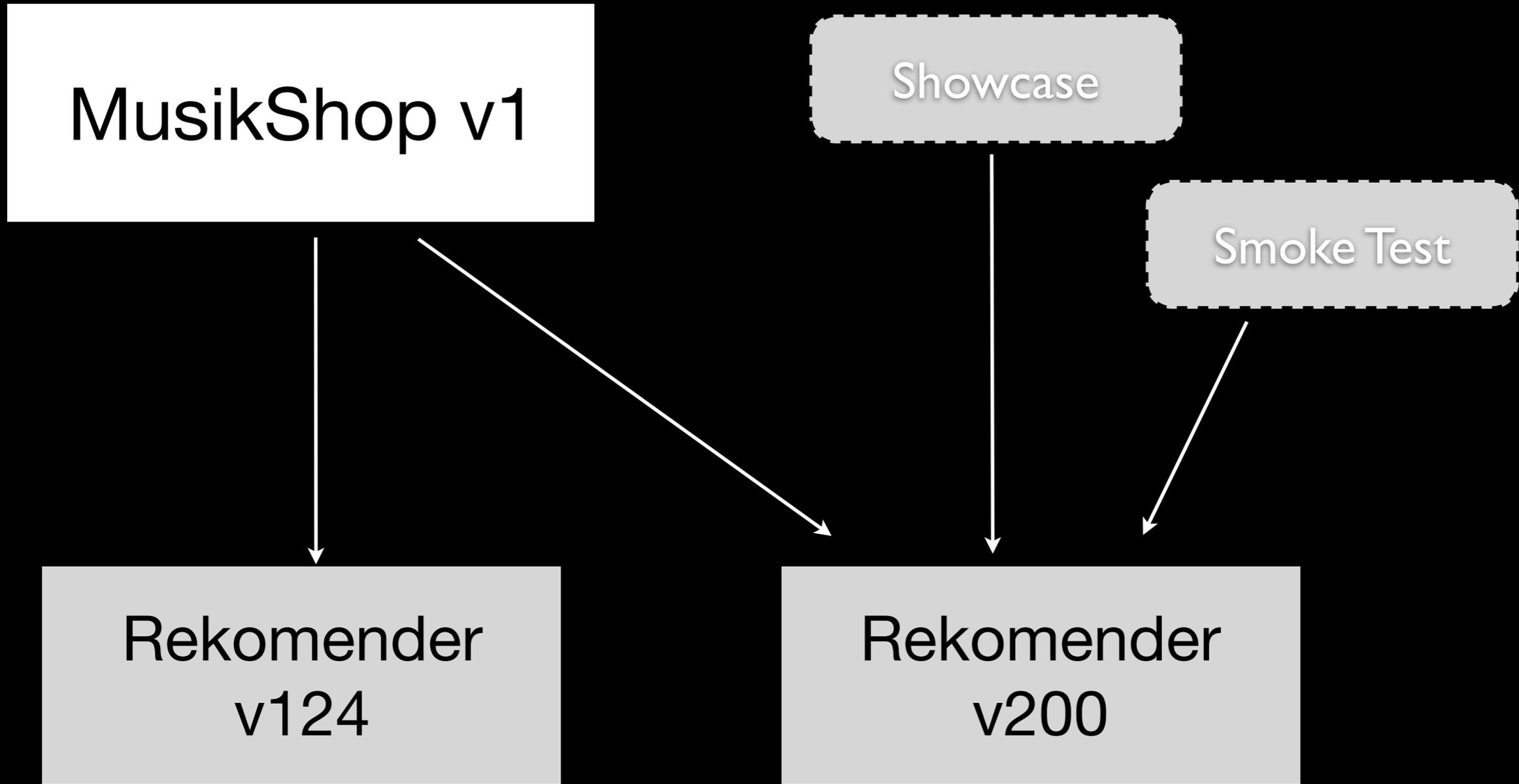
Rekomend  
Lib v200

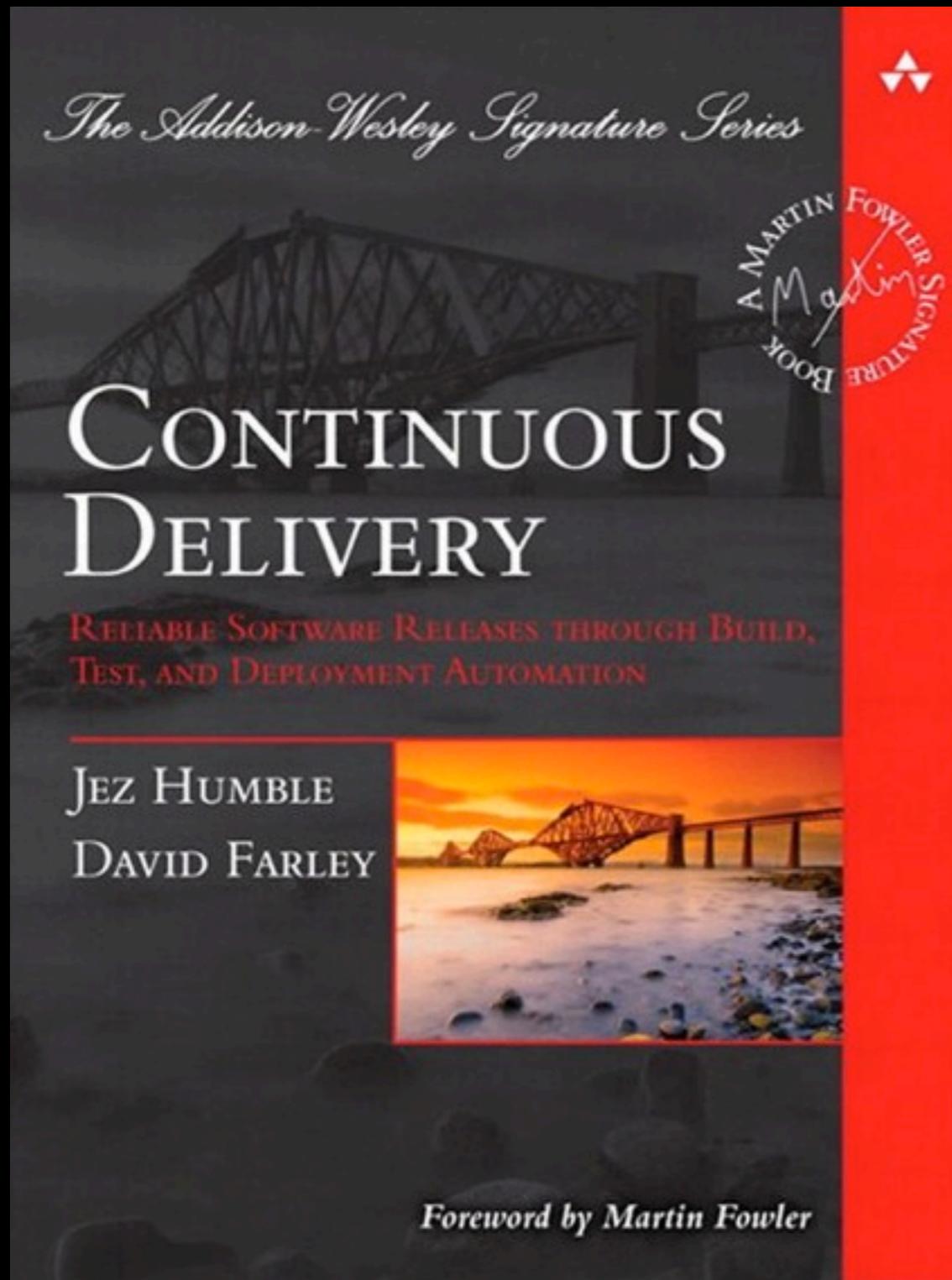
Change to a statically linked library =  
new deployment of the application

MusikShop v1

Rekomender  
v124

Rekomender  
v200





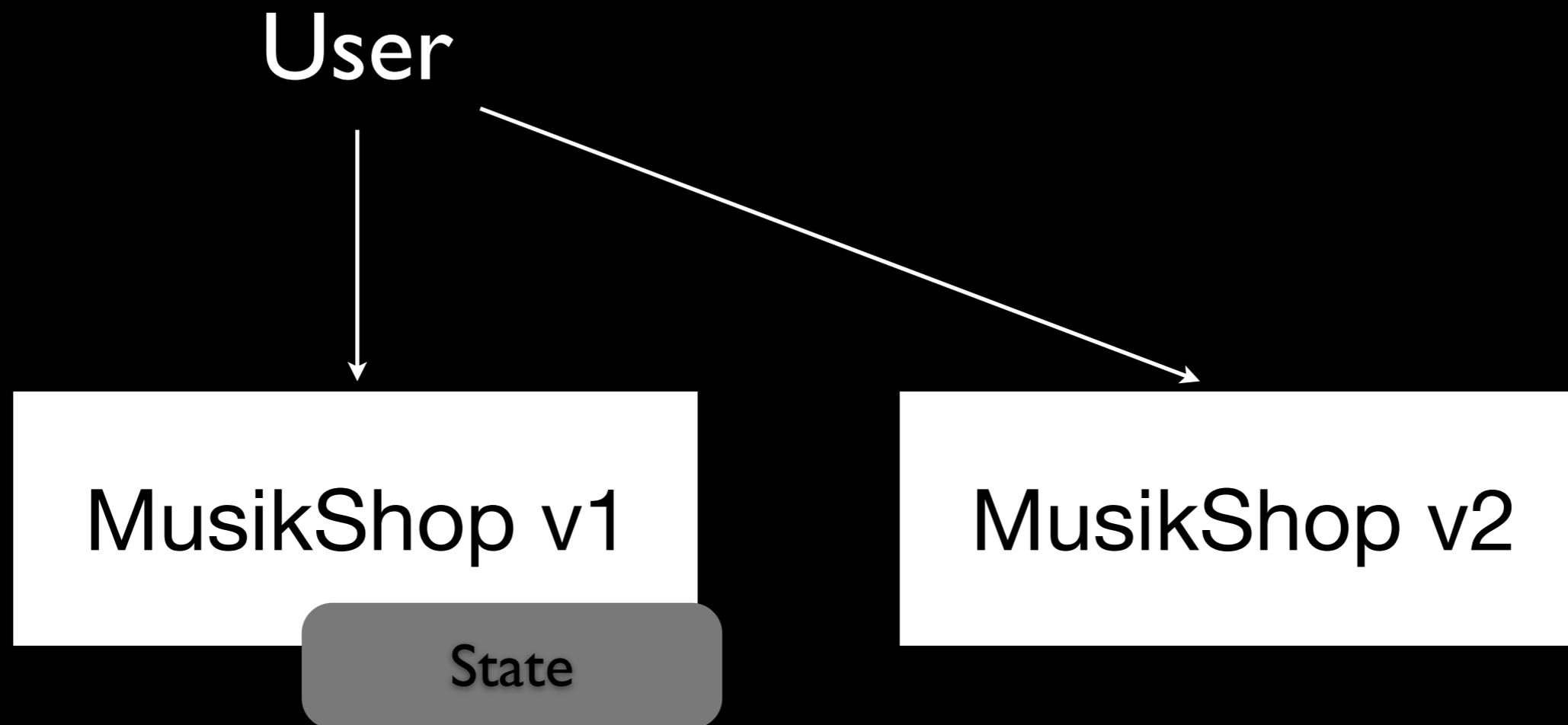
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**@samnewman**

What can stop blue/  
green deployments?

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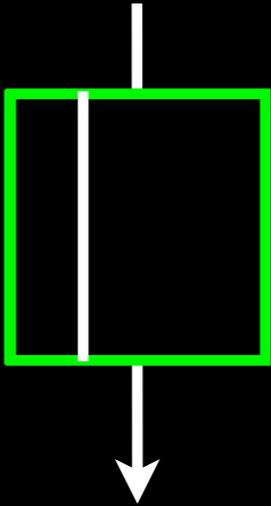
Avoid stateful services

# Expensive Hardware!

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MusikShop v1



Rekomender  
v200

[www.MusikShop](http://www.MusikShop)

Queens Of The  
Stone Age

Take That

Snoop Dogg

We Can't Rekomend  
Right Now!

Smoke Test

# Manual Circuit Breaker

The  
Pragmatic  
Programmers

# Release It!

Design and Deploy  
Production-Ready Software

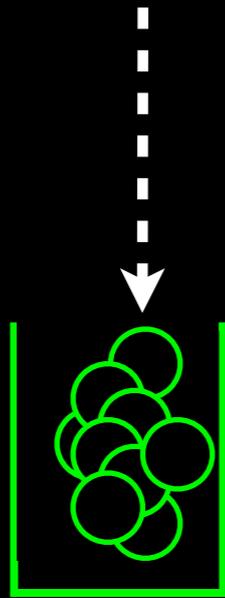


*Michael T. Nygard*

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MusikShop v1



Rekomender  
v200

[www.MusikShop](http://www.MusikShop)

Queens Of The  
Stone Age

Take That

Snoop Dogg

Waiting...

# Async Behaviour

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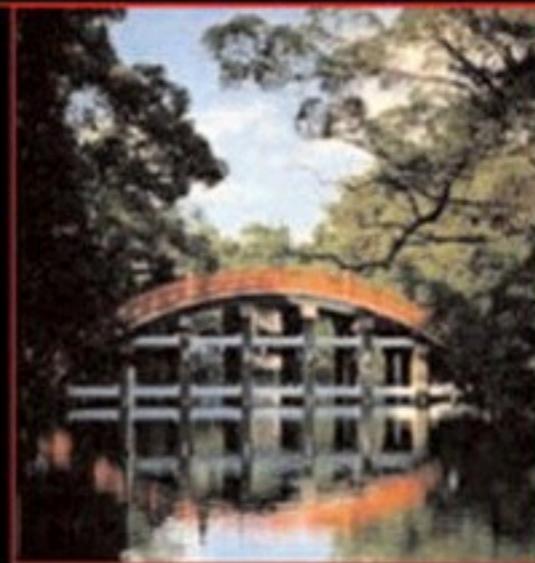
@samnewman

*The Addison-Wesley Signature Series*

# ENTERPRISE INTEGRATION PATTERNS

DESIGNING, BUILDING, AND  
DEPLOYING MESSAGING SOLUTIONS

GREGOR HOHPE  
BOBBY WOOLF



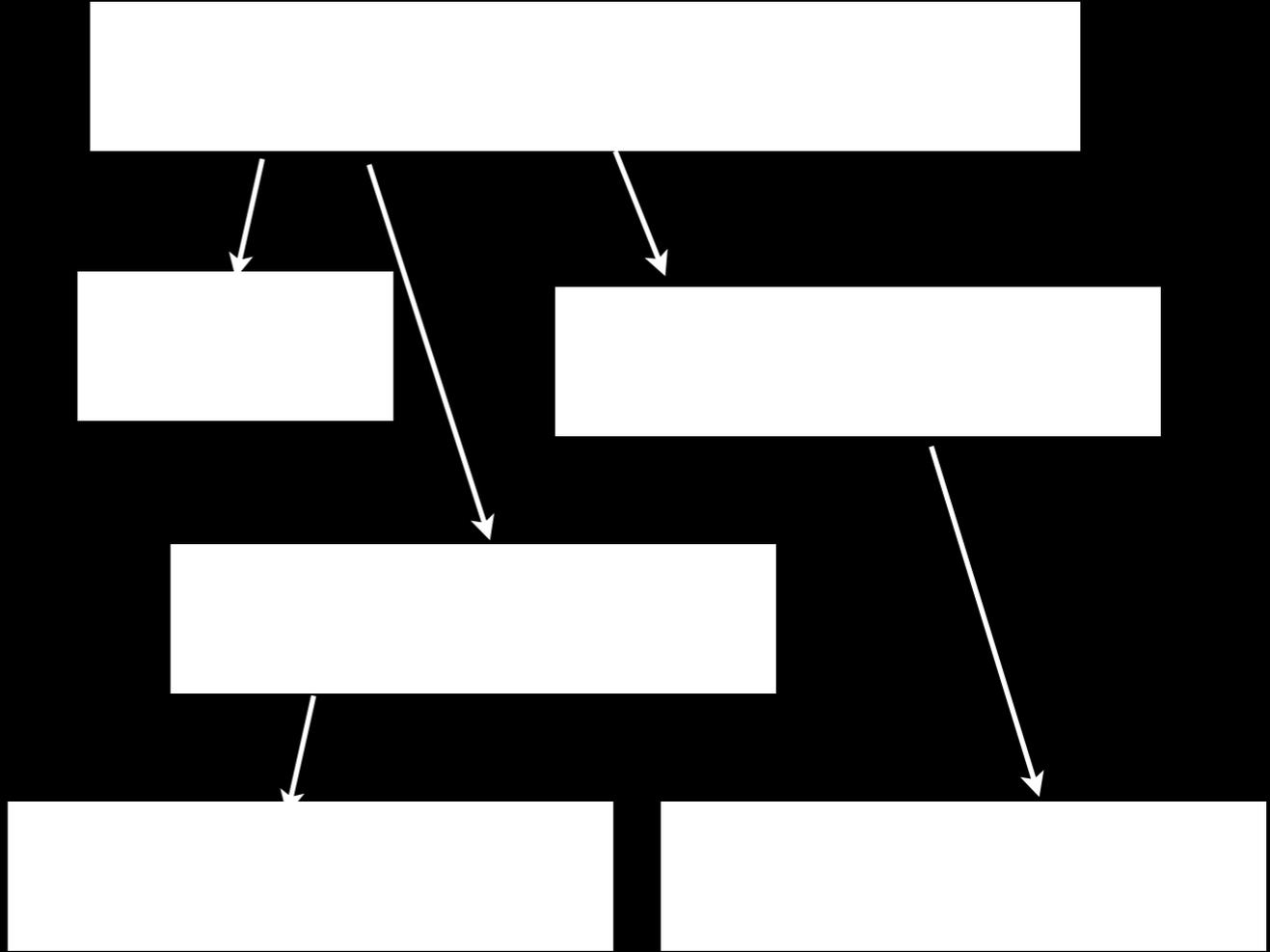
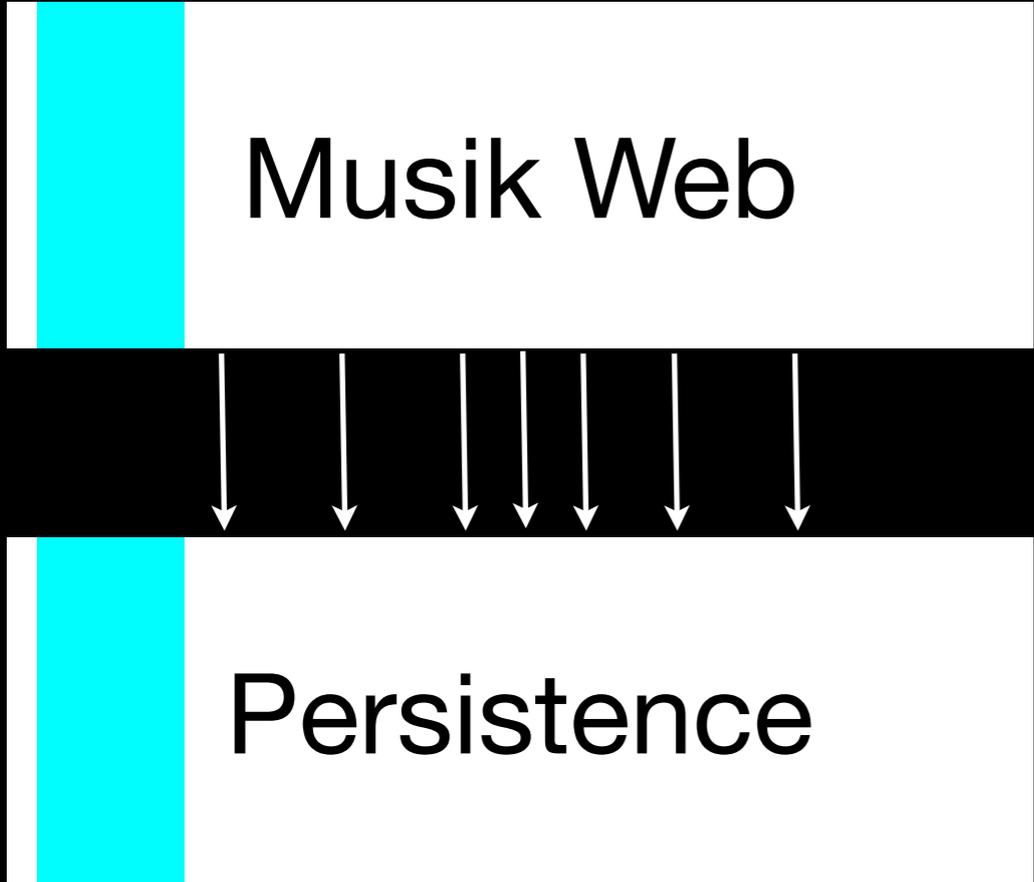
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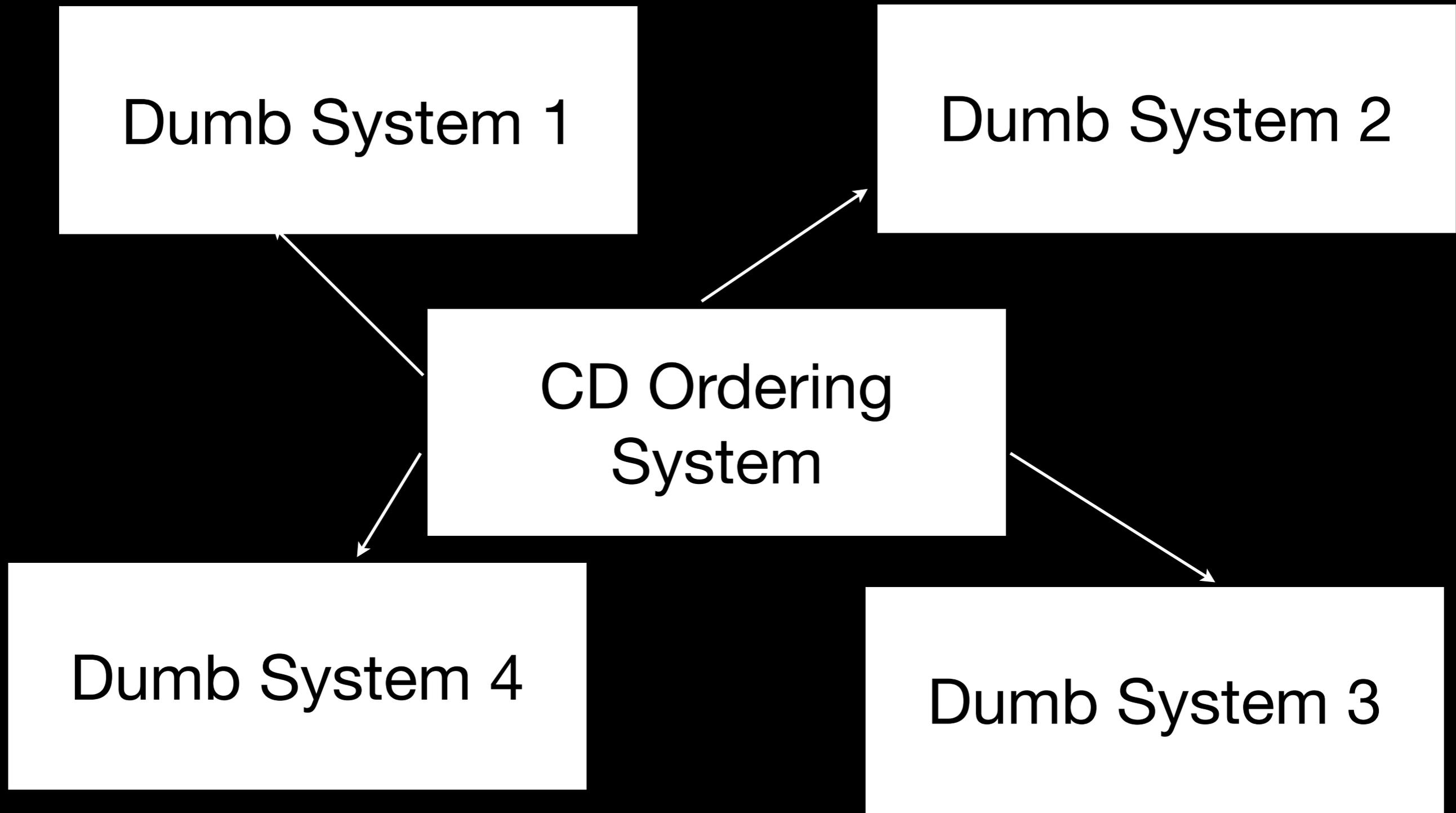
# Things to watch for...

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# The Trifle



# The Spider



*“A set of capabilities on  
an endpoint”*

Shopping Cart

Catalog

View Latest  
Releases

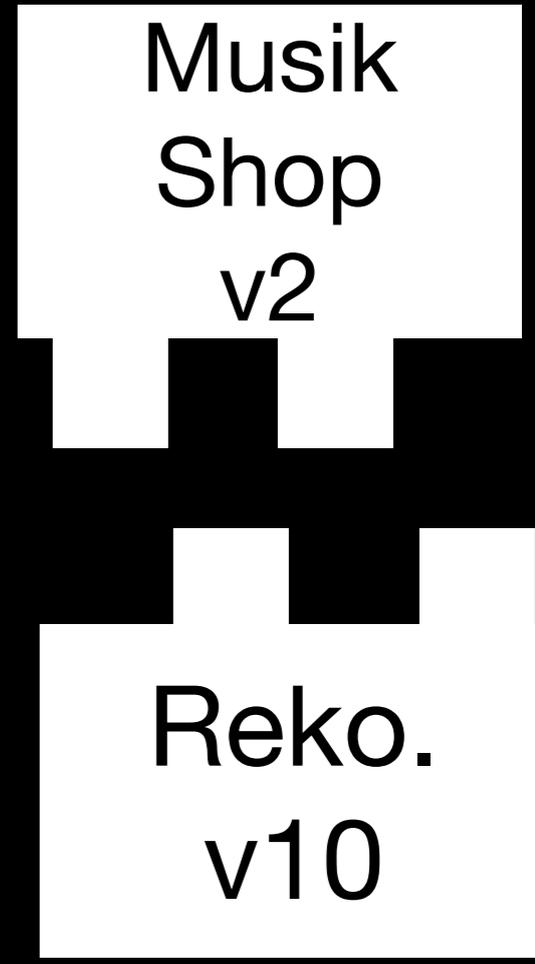
Checkout

Music Library

# Model Services Based On Your Business Domain

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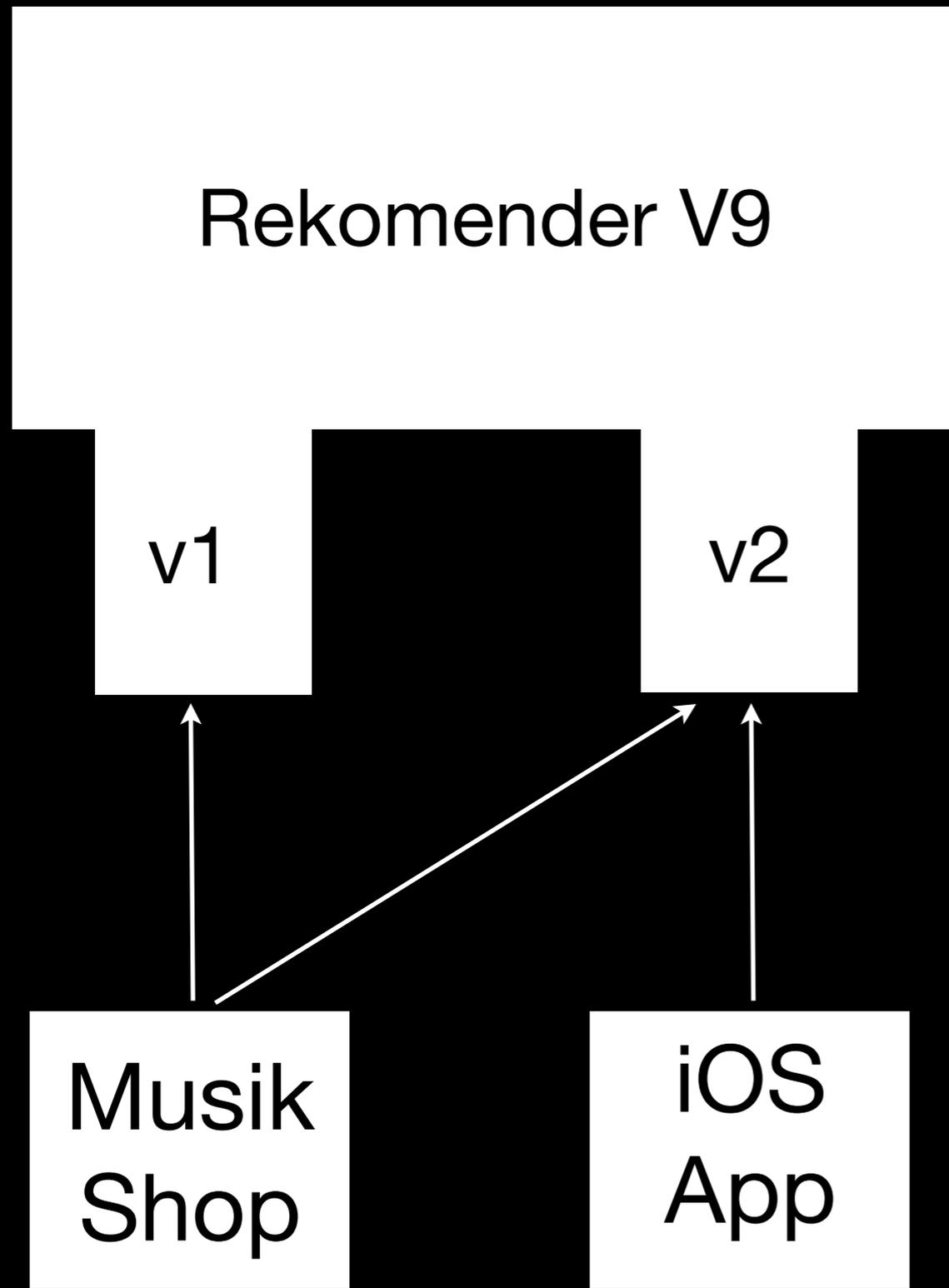
**@samnewman**



Internal  
Change

Expansion

Interface  
Change



Non-breaking expansion is to be preferred - but if you can't...

Consider maintaining multiple service endpoints

Service A

Shared Lib v2

Beware of shared  
serialization protocols

WSDL-binding  
JAXB  
Java Serialization

Service B

Shared Lib v1

# RFC 761

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# Postel's Law:

“Be conservative in what you do, be liberal in what you expect”

# MusikShop



# Rekomender

```
26
27 def asHtml(): Node = {
28   <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
29     <head>
30       <link rel="stylesheet" href="/static/common.css" type="text/css" />
31       <link rel="stylesheet" href={ cssForDisplayType } type="text/css" />
32       <meta http-equiv="refresh" content="30" />
33     </head>
34     <body>
35       { content(builds) }
36     </body>
37   </html>
38 }
39
40 private def content(builds: list[Build]): Elem = {
41   displayType match {
42     case "single" => <div> { builds.map(build => asTable(build)) } </div>
43     case "smart" => {
44       if (builds.length == 1) {
45         <div> { builds.map(build => asTable(build)) } </div>
46       } else {
47         <ul class="builds">{ builds.map(build => buildToHtml(build)) }</ul>
48       }
49     }
50     case _ => <ul class="builds">{ builds.map(build => buildToHtml(build)) }</ul>
51   }
52 }
53
54 private def asTable(build: Build): Elem = {
55   <table class="{ build " + build.getStatus.name.toLowerCase }>
56     <tr valign="middle" align="center">
57       <td>{ linkToBuild(build) }</td>
58     </tr>
59   </table>
60 }
61 }
```



Pipelines » Go » 2.0.0.5082

dev dist smoke-trefox dist-all dist-ssl

Run: 1 of 1 ■ Passed | Triggered: by dave | Duration: 00:06:02

Overview Pipeline Dependencies Materials Jobs Tests

UPSTREAM CURRENT DOWNSTREAM

Mercurial  
trunk - 16e5db65024e

Git  
twist - e12b2e0

go  
Label 2.0.0.5082

deploy-personal-build-server  
2.0.0.5082

acceptance  
2.0.0.2.0.5082

# Consumer Driven Contracts

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# DATABASES!

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**DATA IS COOL**

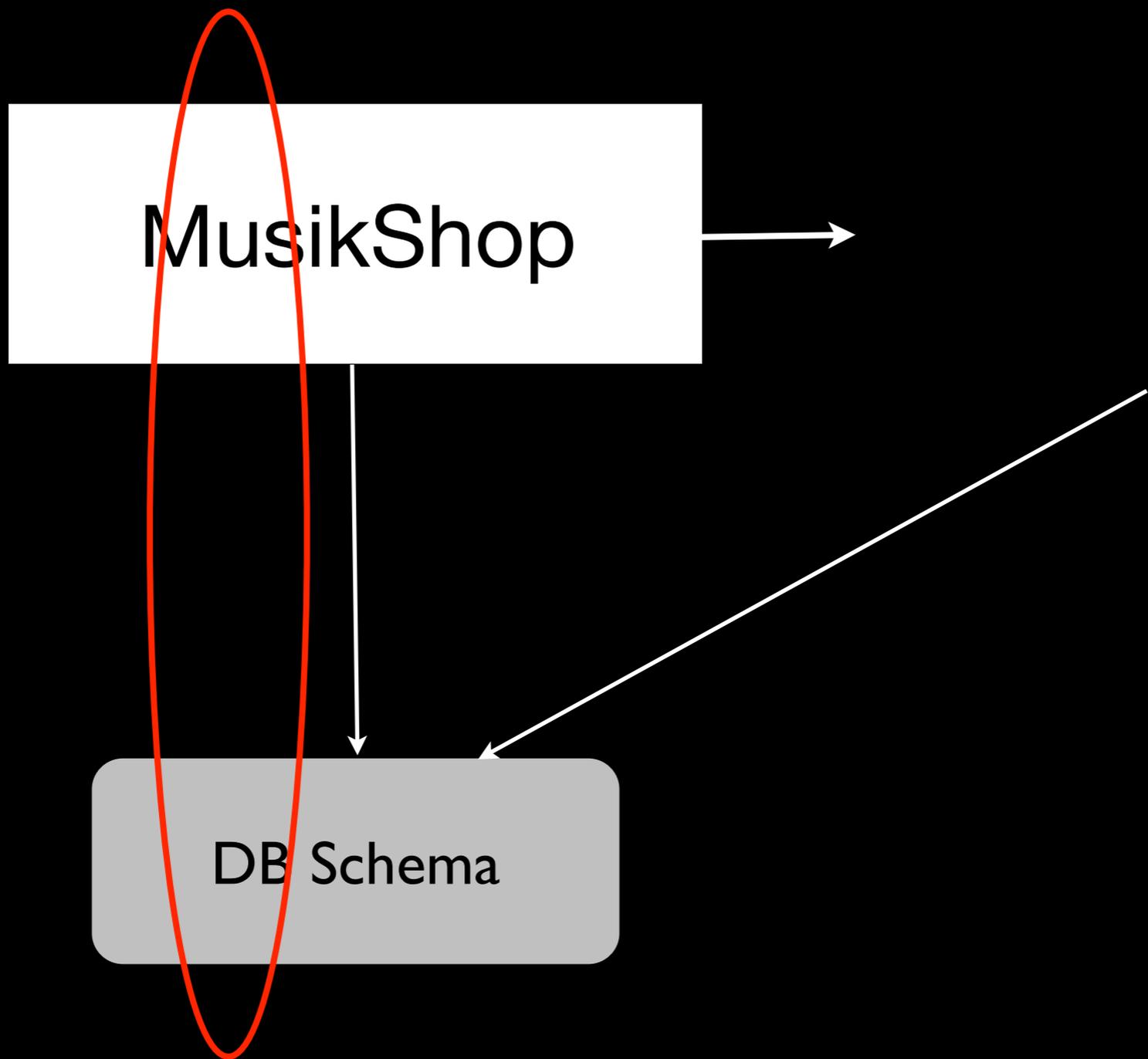
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**@samnewman**

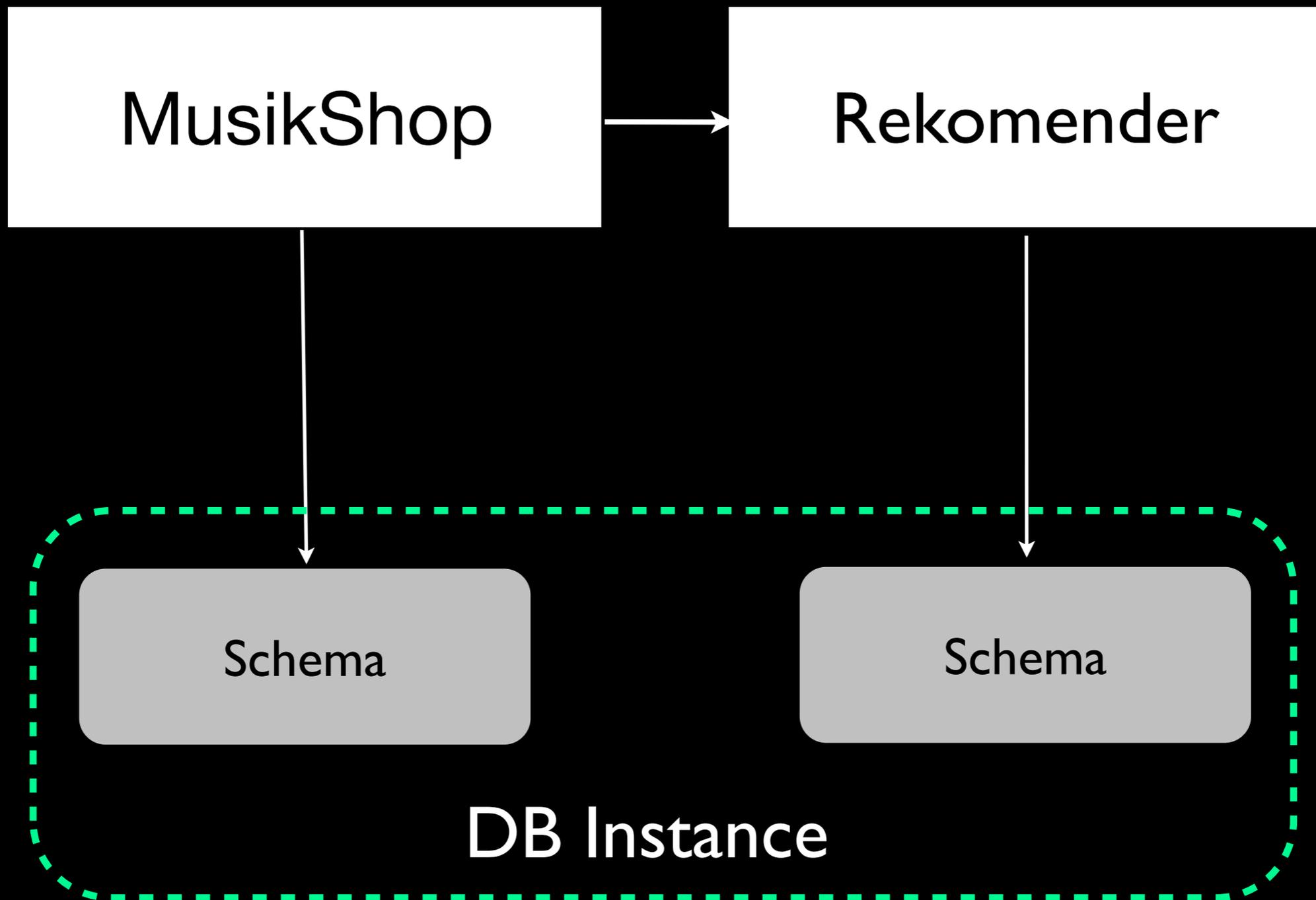
**DATABASES ARE EVIL**

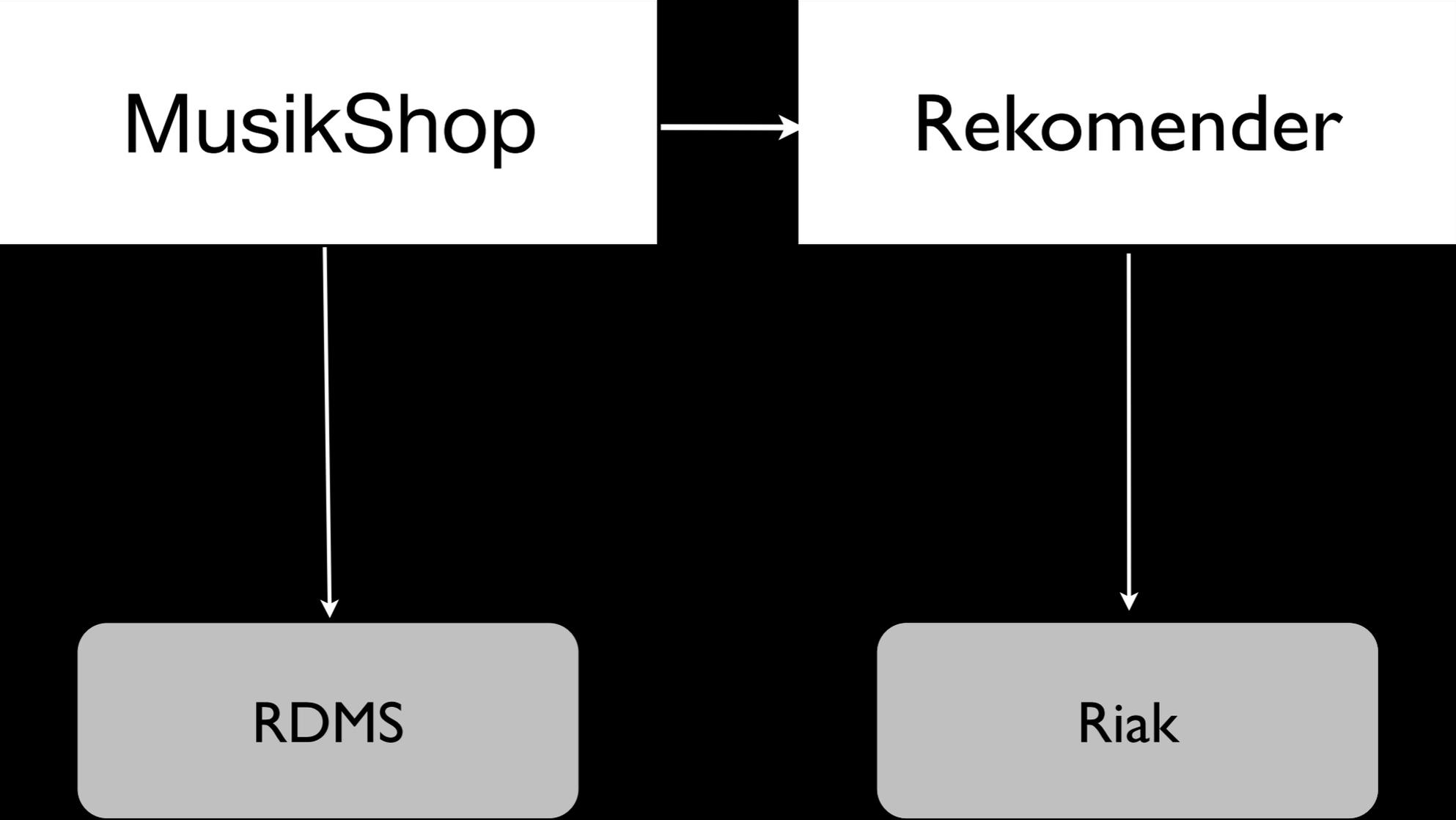
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# Each service owns its own data





Rekomender

Release 2:  
Read from Riak

Release 1:  
Dual Write

Release 3:  
Retire RDMS

RDBMS

MusikShop

Dark Launching!

Rekomender

AceSuggest

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# Decompose Your Systems

## Model Your Domain

## Get Interfaces Right

## Seperate Deployment From Release

# Questions?

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the **java world**

# Thanks!

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