

THE SEVEN DEADLY SINS OF MICROSERVICES

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ContainerSolutions

DISCLAIMER

ANY RESEMBLANCE TO EXISTING PROJECTS
(WHETHER OVERRUNNING OR OVER-BUDGET)
IS PURELY COINCIDENTAL...



1. LUST - USING THE LATEST AND GREATEST TECH

PICK YOUR (TECHNICAL) BATTLES...

- AS DAN MCKINLEY SAYS, “CHOOSE BORING TECHNOLOGY”
 - OPTIMIZE GLOBALLY ACROSS ORGANISATION
- MATT RAIBLE’S COMPARISON FRAMEWORK
 - OBJECTIVITY(?)
 - DOCUMENT DECISIONS

Criteria	Struts 2	Spring MVC	Wicket	JSF 2	Tapestry	Stripes	GWT	Grails	Rails	Flex	Vaadin	Lift	Play
Developer Productivity	0.50	0.50	0.50	0.50	1.00	0.50	1.00	1.00	1.00	0.00	1.00	0.50	1.00
Developer Perception	0.50	1.00	1.00	0.00	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Learning Curve	1.00	1.00	0.50	0.50	0.50	1.00	1.00	1.00	1.00	1.00	1.00	0.50	1.00
Project Health	0.50	1.00	1.00	1.00	0.50	0.50	1.00	1.00	1.00	0.50	1.00	1.00	1.00
Developer Availability	0.50	1.00	0.50	1.00	1.00	0.50	1.00	0.50	1.00	1.00	0.50	0.00	0.50
Job Trends	1.00	1.00	0.50	0.50	0.50	0.50	1.00	0.00	1.00	1.00	1.00	0.00	0.50
Tooling	1.00	1.00	1.00	0.50	1.00	1.00	0.50	1.00	1.00	0.50	0.50	0.50	1.00
Components	0.00	0.00	1.00	1.00	1.00	0.00	0.50	0.50	0.50	1.00	1.00	0.00	0.00
Ajax	0.50	1.00	0.50	0.50	0.50	0.50	1.00	0.50	0.50	0.50	1.00	1.00	0.50
Plugins or Add-Ons	0.50	0.00	1.00	1.00	0.50	0.00	1.00	1.00	1.00	1.00	1.00	0.50	1.00
Scalability	1.00	1.00	0.50	0.50	0.50	1.00	1.00	0.50	0.50	0.50	0.50	0.50	1.00
Testing	1.00	1.00	0.50	0.50	1.00	1.00	0.50	1.00	1.00	0.00	0.50	0.50	1.00
i18n and t10n	1.00	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1.00	0.50	0.50	1.00	1.00
Validation	1.00	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.50	0.50
Multi-language Support (Groovy / Scala)	0.50	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Quality of Documentation/Tutorials	0.50	1.00	0.50	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Books Published	1.00	1.00	0.50	0.50	0.50	0.50	1.00	1.00	1.00	1.00	0.50	0.50	0.00
RESTful API (client and server)	0.50	1.00	0.50	0.50	0.50	0.50	0.50	1.00	1.00	0.50	0.50	0.50	0.50
Mobile / iPhone Support	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Degree of Risk	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.50	0.50
Totals	14.5	17	15	13.5	15	14	17	17	17.5	17	13.5	15.5	11.5



2. GLUTTONY - EXCESSIVE **COMMUNICATION** PROTOCOLS

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STANDARDIZE ACROSS THE ORGANIZATION

- CHOOSE **ONE** SYNCHRONOUS PROTOCOL
 - E.G. JSON OVER HTTP
- CHOOSE **ONE** ASYNCHRONOUS PROTOCOL
 - E.G. RABBITMQ

DON'T GOLD-PLATE, BUT KNOW YOUR OPTIONS: PROTOBUF, THRIFT, ZEROMQ, MQTT



3. GREED - ALL YOUR SERVICE ARE **BELONG TO US**

CONWAY WAS TELLING THE TRUTH... DEAL WITH IT!



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4. SLOTH - CREATING A **DISTRIBUTED MONOLITH**

CAN'T DEPLOY SERVICES INDEPENDENTLY?

- CHECK YOUR 'BOUNDED CONTEXTS'
- CONSUMER-DRIVEN CONTRACTS FTW
 - MARTIN FOWLER: [CDC - A SERVICE EVOLUTION PATTERN](#)

“CDC IS BDD FOR MICROSERVICES”

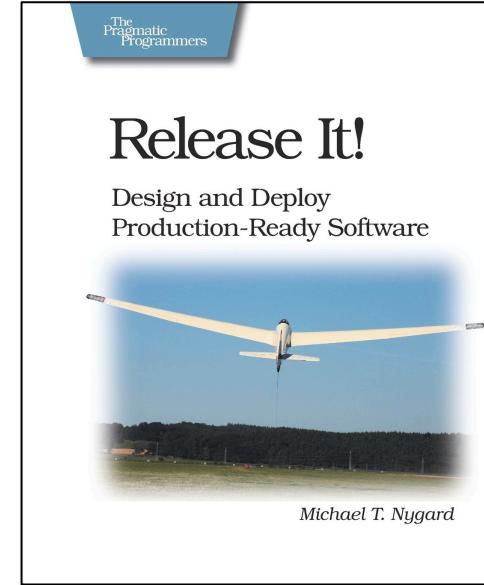


5. WRATH - BLOWING UP WHEN BAD THINGS HAPPEN

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BRING IN THE MONKEYS (OR MICHAEL NYGARD)





6. ENVY - THE SHARED SINGLE DOMAIN FALLACY

ONE MODEL TO RULE THEM ALL...

- ONE MODEL
 - BREAKS ENCAPSULATION
 - INTRODUCES COUPLING
- KNOW YOUR DDD
 - ENTITIES
 - VALUE OBJECTS
 - AGGREGATES AND ROOTS





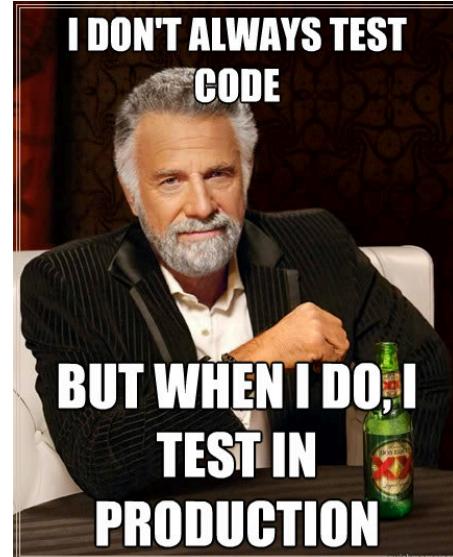
7. PRIDE - TESTING IN THE WORLD OF TRANSIENCE

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TESTING WITH MICROSERVICES IS DIFFICULT...

- INVEST IN YOUR **BUILD PIPELINE TESTING**
 - SERENITY BDD
 - WIREMOCK / SABOTEUR
 - JENKINS PERFORMANCE PLUGIN
- DO IT IN **PRODUCTION(?)**
 - NETFLIX
 - GILT



THANKS...

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(CREDIT TO TAREQ ABEDRABBO FOR INSPIRATION/GUIDANCE)