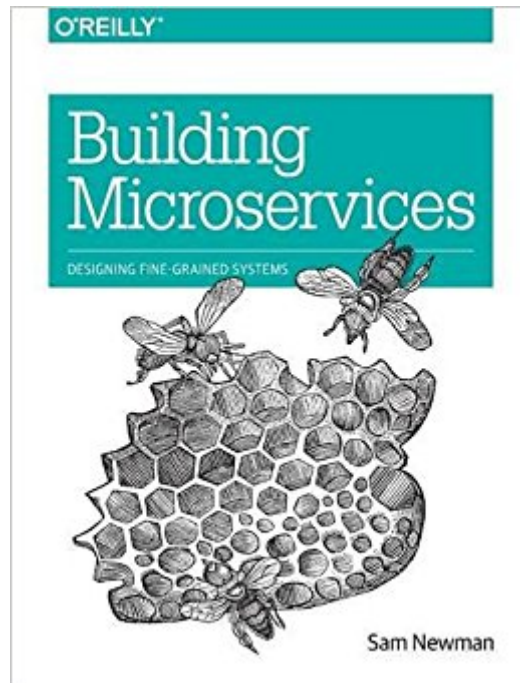# The book was found

Building Microservices

Synopsis

Distributed systems have become more fine-grained in the past 10 years, shifting from code-heavy monolithic applications to smaller, self-contained microservices. But developing these systems brings its own set of headaches. With lots of examples and practical advice, this book takes a holistic view of the topics that system architects and administrators must consider when building, managing, and evolving microservice architectures.Microservice technologies are moving quickly. Author Sam Newman provides you with a firm grounding in the concepts while diving into current solutions for modeling, integrating, testing, deploying, and monitoring your own autonomous services. Youâ ™ll follow a fictional company throughout the book to learn how building a microservice architecture affects a single domain.Discover how microservices allow you to align your system design with your organizationâ ™s goalsLearn options for integrating a service with the rest of your systemTake an incremental approach when splitting monolithic codebasesDeploy individual microservices through continuous integrationExamine the complexities of testing and monitoring distributed servicesManage security with user-to-service and service-to-service modelsUnderstand the challenges of scaling microservice architectures

Book Information

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Customer Reviews

View larger   What Are Microservices?   Microservices are small, autonomous services that work together. Letâ¢Â Â™s break that definition down a bit and consider the characteristics that make microservices different.   The benefits of microservices are many and varied. Many of these benefits

can be laid at the door of any distributed system. Microservices, however, tend to achieve these benefits to a greater degree primarily due to how far they take the concepts behind distributed systems and service-oriented architecture.   Key benefits include: Technology Heterogeneity   Resilience   Scaling   Ease of Deployment   Organizational Alignment   Composability   Optimizing for Replaceability.

My context: I helped build a system with a Rails "middle end" that talked to about eight microservices, and then moved that from Heroku to AWS. So I'm not a novice, but I still have a lot to learn. This book is nicely targeted at people like me. In fact, throughout I was thinking "I'll use this as a checklist next time I'm building a system" and then I was pleased to discover that the final, summary chapter is essentially that checklist.My only negative comments are these:* The writing up until chapter 4 seemed somewhat dry, then picked up its pace and became more conversational. However, the earlier chapters' topics are important (and used throughout the book), so don't skip them.* There's some jargon in the text that's unexplained. Most of it I already knew or could puzzle out, but I'm still curious what a "full-fat virtual machine" is. A glossary would have been nice.* There are a good number of useful references (with and without URLs) that I hope to check out someday. That would be easier if there were a comprehensive list of references at the end.Note: I'm not a fan of code- or diagram-heavy technical books on reading devices, but if I were doing it again, I'd buy the kindle version.

This book is an amagelmation of the best practices for build large, scalable system. Topics range from: design patterns, API design, continus integration, continus delivery, testing, automation, virtualized environment and containers, monitor, security, database and CAP theorem.All of the concepts are covered (not the implementations). When more details are required, the author recommends other (well known) books for references. As for software/tools, a few interesting ones are recommened, and it is up to the reader to investigate more details - Understandable as the software landscape changes rapidly.Recommended reading for architect, engineer and DevOps!

I found the title misleading... This is not a book about some new architectural concept or in-depth analysis regarding latest trends in Web Services. The book is an enumeration of good architectural practices with little value for the hands-on professional. (Little value not because they should be ignored, but because hands-on professional already masters them!) Very readable, with a good flow, the book covers high level concepts like: avoid tied couple components, event base systems,

synchronous vs. asynchronous... and later goes on to common software practices such as: versioning, logging, deployment, continuous code integration, authentication and authorization... I see the book as a good material for a student starting in this field or managers trying to grasp these concepts. But I can only infer this was not the intended targeted audience.

As explained in the preface to this book, "microservices" are small, autonomous services that work together, each of which is focused on doing one thing well. While the topic of microservices is fast-moving, the term itself is new even though the idea is not. Be aware at the outset that some other reviewers here did not pay attention to the philosophy used for this book. Newman indicates that, due to the fast pace of change in this space, he tried to focus this book "on ideas more than specific technologies, knowing that implementation details always change faster than the thoughts behind them" and he fully expects that "in a few years from now we'll have learned even more about where microservices fit, and how to use them well".After covering an introduction to microservices, including some key benefits and downsides, Newman discusses the architect in the context of microservices, followed by modeling microservices, integrating microservices, splitting monolithic systems, designing systems, and scaling microservices, as well as deployment, testing, monitoring, and security. The most heavily weighted chapters are the ones on integrating microservices and scaling microservices, which consume about 32% of the text, followed by the chapters on splitting monolithic systems, deployment, and testing, which together consume about 31% of the text. While I personally would have liked to have seen the development lifecycle chapters at the end of the book, the reader can simply read these last.The "Microservices and SOA" sidebar of Martin Fowler's "Microservices" article indicates that the "common manifestation of SOA has led some microservice advocates to reject the SOA label entirely" and "others [to] consider microservices to be one form of SOA, perhaps service orientation done right", but "the fact that SOA means such different things means it's valuable to have a term that more crisply defines this architectural style". Newman instead clarifies the microservice approach by explaining it "as a specific approach for SOA in the same way that XP or Scrum are specific approaches for Agile software development", which "has emerged from real-world use, taking our better understanding of systems and architecture to do SOA well".The author also wisely points out that "microservices are no free lunch or silver bullet, and make for a bad choice as a golden hammer. They have all the associated complexities of distributed systems,and while we have learned a lot about how to manage distributed systems well (which we'll discuss throughout the book), it is still hard. If you're coming from a monolithic system point of view, you'll have to get much better at handling deployment, testing, and monitoring to

unlock the benefits we've covered so far. You'll also need to think differently about how you scale your systems and ensure that they are resilient. Don't also be surprised if things like distributed transactions or CAP theorem start giving you headaches, either!"As a consultant architect, I especially appreciated Chapter 2 ("The Evolutionary Architect"), because of the sections entitled "An Evolutionary Vision for the Architect" and "Governance Through Code", Chapter 4 ("Integration"), because of the summary that the author provides on integration technologies in the context of microservices, Chapter 5 ("Splitting the Monolith"), because it appeals to my recurring project role as data architect, and Chapter 11 ("Microservices at Scale"), because of the summary it provides with regard to what happens when microservice architectures grow from simpler, more humble beginnings to something more complex in the long-term.That said, I do agree with other reviewers of this book that there is some overlap between the content provided by the author and what is available elsewhere, although my only real qualms relate to the development lifecycle chapters, which probably would have been better placed in appendixes at the back of the text or minimally as concluding chapters. And while the author does point out example by example throughout his discussions, a bulk of these examples are either text descriptions or explained via high-level diagrams, and it would have been helpful if real-world examples were provided at a lower-level technical level of detail, even if, as Newman notes, this space is moving fast.

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