

DevOps

Best Practices
Pocket Guide

DevOps

Pocket Guide

Best Practices for DevOps

Bart de Best
Edited by
Louis van Hemmen

Colophon

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Table of Contents

1	<i>Introduction</i>	1
1.1	Background	1
1.2	Objective	1
1.3	Target audience	1
1.4	Structure	1
1.5	Reading guidelines	3
2	<i>DevOps defined (#01)</i>	5
2.1	DevOps – The origin	5
2.2	DevOps – What is it?	5
2.3	DevOps - Common features	5
2.4	DevOps - A framework	6
2.5	DevOps - Conclusion	7
3	<i>DevOps process (#02)</i>	9
3.1	Introduction	9
3.2	DevOps process	9
3.2.1	Planning process	11
3.2.2	Code process	11
3.2.3	Build process	12
3.2.4	Test process	13
3.2.5	Release process	13
3.2.6	Deployment process	14
3.2.7	Operate process	14
3.2.8	Monitor process	15
3.2.9	Relationship to the DevOps framework	16
4	<i>SLA's and NFR's (#10)</i>	19
4.1	Introduction	19
4.2	Terms	19
4.3	Concepts	19
4.4	Best Practices	20
4.4.1	Is a SLA still needed?	20

4.4.2	SLA in the funnel	21
4.4.3	SLA in the roadmap	21
4.4.4	SLA in the release planning	22
4.4.5	SLA in the code phase	22
4.4.6	SLA in the build phase	22
4.4.7	SLA in the test phase	22
4.4.8	SLA in the release phase	23
4.4.9	SLA in the operate phase	23
4.4.10	SLA in the monitor phase	23
5	<i>Agile change management process (#14)</i>	25
5.1	Introduction	25
5.2	Terms	25
5.3	Concepts	25
5.4	Best Practices	26
5.4.1	Level of control	26
5.4.2	Waste	26
5.4.3	Feature admin	27
6	<i>Exception Management (#20)</i>	29
6.1	Introduction	29
6.2	Terms	29
6.3	Concepts	29
6.4	Best Practices	30
6.4.1	Where does an exception occur?	30
6.4.2	Which information needs operations?	31
6.4.3	How to determine that the exceptions are complete?	34
6.4.4	Exception management in the DevOps process	36
6.4.5	Conclusion	37
7	<i>Continuous Monitoring (#29)</i>	39
7.1	Introduction	39
7.2	Terms	39
7.3	Concepts	39
7.4	Best Practices	39
7.4.1	Monitoring best practices	39
7.4.2	Monitoring KPI's per DevOps phase	40

7.4.3	Monitoring means.....	40
7.4.4	Monitor tools	41
8	<i>The Phoenix Project simulation (#31)</i>	43
8.1	Introduction	43
8.2	Terms	43
8.3	Concepts	44
8.4	Best Practices	44
8.4.1	How does the simulation work?	44
8.4.2	How does this relate to the DevOps process?	46
8.4.3	When to use this simulation?	49
	<i>Appendix A, Literature list.....</i>	53
	<i>Appendix B, Glossary</i>	55
	<i>Appendix C, DevOps terms</i>	77
	<i>Appendix D, Abbreviations.....</i>	108
	<i>Appendix E, Websites.....</i>	115
	<i>Appendix F, Index.....</i>	117

Figures

FIGURE 2-1, A DEVOPS FRAMEWORK.....	6
FIGURE 3-1, A DEVOPS PROCESS [COLLABNET].	10
FIGURE 3-2, RELATIONSHIP BETWEEN THE DEVOPS PROCESS AND FRAMEWORK. ...	16
FIGURE 4-1, BUSINESS ALIGNMENT.....	20
FIGURE 6-1, ISHIKAWA MODEL.	34
FIGURE 8-1, DURING THE SIMULATION PEOPLE INTERACT WITH EACH OTHER TO REALIZE A PROJECT.	46
FIGURE 8-2, THE PLANNING IS AN IMPORTANT ASPECT OF THE SIMULATION.	47
FIGURE 8-3, DEVOPS PROCESS STAGES.	48

Tables

TABLE 1-1, THE DEVOPS ARTICLES.....	3
TABLE 6-1, HEALTH MODEL FOR EVENT 'FILE SET INCOMPLETE'.....	35
TABLE 6-2, HEALTH MODEL FOR EVENT 'FILE SET INCOMPLETE'.....	35
TABLE 6-3, HEALTH, EXCEPTION MANAGEMENT IN THE DEVOPS PROCESS.	37

Appendices

APPENDIX A, LITERATURE LIST.....	53
APPENDIX B, GLOSSARY.....	55
APPENDIX C, DEVOPS TERMS.....	77
APPENDIX D, ABBREVIATIONS.....	108
APPENDIX E, WEBSITES.....	115
APPENDIX F, INDEX.....	117

Introduction

DevOps is the new approach to unifying operations and development. A good idea to efficiently divide the efforts within organizations and thus have better grip and keep on the cost with a high-quality result. This is not a bad way of thinking! But reality shows that everyone gives a different meaning to DevOps. That is a natural process for such a large view change, mind-set and working method. But that does not mean that people cannot learn from each other. Available literature on this subject, however, is very diverse and very divergent. There is a risk that mistakes are repeated because previous lessons learned are overlooked. Let's re-use what went well!

Over the last few decades, various best practice models have emerged that everyone has mastered, all of these contain concepts that fit seamlessly within DevOps. The trick is to break these existing best practice models down into building blocks that give added value. To be in twined with DevOps in order to create a pragmatic approach. This is not or not enough emphasised in existing DevOps literature.

Fortunately, Bart has taken the initiative to view DevOps from a perspective of re-using the existing concepts. This book offers a series of best practices for DevOps that are based on the best practices of the last decades. This introduction is the first step towards a more well-founded framework of loosely coupled building blocks. Based on these building blocks, scenarios of DevOps applications can be constructed. Within a year, three more books will be compiled in which these DevOps scenarios will be fully elaborated and detailed.

Experts who have already been working with DevOps will get pointers to apply DevOps as intended.

Dr. Louis van Hemmen – BitAll b.v.

Preface

Over the past few decades, I have seen many methods and techniques come and go. But the arrival of DevOps (Development & Operations) is totally different. Instead of specifying exactly what needs to be done, as is common within the Infrastructure Technology Information Library® (ITIL), Application Services Library® (ASL) or Business Information Service Library® (BiSL), DevOps is all about storytelling. People share their experiences enabling others to benefit from them. This causes a major change in the way of working that we are accustomed to.

With this book, I would like to make a contribution to sharing of experiences. This book contains thirty articles I wrote in thirty days. The book is thus created in an incremental and iterative way. The individual articles are also published on www.ITpedia.nl.

The structure of the book is simple. The articles are numbered from one to thirty. The first two articles describe a framework that link the articles. Articles three to twenty-nine describe best practices. Finally, this book concludes with article thirty, which includes the business case of DevOps as well as an outlook to the future.

Each article has a similar structure. First, the relevant terms are defined, followed by an elaboration of the relevant concepts. The body of each article is very to the point therefore it is easy and quickly read. This book aims to prevent any form of waste.

I would like to thank the following persons for their inspiration and contribution to this book and appreciated their collaboration! My special gratitude goes out to Jane ten Have who reviewed the entire book.

- E. (Eric) Coenders
- J.A.E. (Jane) ten Have
- J. (Jan-Willem) Hordijk
- W.J. (Wim) Hoogenraad
- Dr. L.J.G.T. (Louis) van Hemmen
- F.J. (Fred) Ros RE RA

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- Drs. R. E. (Rene) Visser
- E.M.J. (Lisette) Wingelaar-Lemmers

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I wish you all the best with establishing your own DevOps teams. If you have any questions or comments, please do not hesitate to contact me. Much time has been spent in making this book as complete and consistent as possible. Should you find any shortcomings, I would like to hear from you, thus enabling me to correct items in the next edition.

Bart de Best (bartb@dbmetrics.nl), Zoetermeer.

1 Introduction

1.1 Background

In recent years, many organisations have experienced the benefits of using Agile approaches such as Scrum and Kanban. The software is delivered faster and quality increases while costs decrease. A major disadvantage is that many organisations that applied the Agile approach did not take into account the traditional service management approach, in terms of information management, application management and infrastructure management. The solution to this problem has been found in the Dev (Development) Ops (Operations) approach. Both worlds are merged into one team, thus sharing the knowledge and skills.

1.2 Objective

This book is about sharing knowledge about how DevOps teams work together. For each aspect of the DevOps process best practices are given in the form of 30 articles. The covered aspects are: Plan, Code, Build, Test, Release, Deploy, Operate and Monitor.

1.3 Target audience

This book is primarily focussed on DevOps team members. They are in fact responsible for the entire life cycle of a service. An important target group that does may not be forgotten are the auditors. Many best practices are related gathering the evidence that the DevOps team is in control.

1.4 Structure

Each article starts with the definition of the specifically used terms and one or more concepts. The body of each articles is kept simple, short and fast to read.

This pocket guide contains only a set of all the DevOps articles that are published in the DevOps Best Practices book [Best 2018b]. In [Table 1-1](#) shows all the articles of [Best 2018b].

#	Subject	Title
#01	Common	DevOps defined
#02	Common	DevOps process
#03	Common	Organisation patterns
#04	Architecture	Process blue print
#05	Architecture	Tool portfolio
#06	Architecture	Monitoring
#07	Plan	Deliverables
#08	Plan	Waterfall is not yet over
#09	Plan	From funnel to Scrum board
#10	Plan	SLA's and NFR's
#11	Code	Functional & technical Design
#12	Code	Splitting features
#13	Code	Designing features and stories
#14	Code	Agile change management process
#15	Code	Static or dynamic requirements
#16	Code	Software Configuration Items
#17	Code	Versioning
#18	Code	Standard, Rules and Guidelines
#19	Code	Branching
#20	Code	Exception management
#21	Build	Continuous Integration
#22	Build	Tooling
#23	Test	Test types
#24	Test	Test patterns
#25	Release	Deployment pipeline
#26	Release	Forward releasing
#27	Release	Service model

#	Subject	Title
#28	Operate	Task demarcation
#29	Monitor	Continuous Monitoring
#30	Organisation	Business case

Table 1-1, The DevOps articles.

1.5 Reading guidelines

Each article starts with the definition of the specifically used terms and one or more concepts. The body of each articles is kept simple, short and fast to read.

Abbreviations

The use of abbreviations in this book is limited. However, if terms that are used regularly, the abbreviations are used to enhance readability. In addition, standard abbreviations that have been used, are written fully when first used. Appendix C contains an overview of all the abbreviations used in the book.

References

References to figures and tables are depicted in blue letters. References to literature is recognizable by brackets []. The literature list is defined in appendix A. References to websites are also placed between brackets [] and listed in appendix D.

Reading order

The articles can be read separately.

Terms

In this book, the terms Infrastructure Communication Technology (ICT) services and ICT products are defined as services and products, unless otherwise indicated.

The term "service" is also used in regard to the delivery of products. Each article describes the specific terms used in the article. Appendix B contains the specific terms used in this book. Appendix C contains terms that are commonly used in the context of DevOps. Annex D lists the abbreviations.

Appendix F, Index

A

A/B testing · 77
acceptance criterion · 55
acceptance test · 6, 13, 14, 60, 77
affinity · 5, 77
Agile
- culture · 5
- development · 7, 16, 17, 55
- process · 7, 17, 55
- project · 55, 72
- Scrum · 6, 11, 56, 61, 65
alert · 61
alternate path · 30, 78
annotation · 56
anti pattern · 79
API · 108
API function · 30
application · 31
- component · 94
- management · 91
- manager · 32
Application Programming Interface · See API
Application Services Library · See ASL
architect · 22
architecture · 23, 27, 65, 67
architecture model · 56
artefact · 13, 79
artefact repository · 12, 79
artifact · 83

ASL · XIV, 108
auditor · 1
authorisation error · 32
availability · 22, 41
awareness session · 43

B

baseline · 12, 13, 56, 58, 67, 68, 69, 70, 73
BASIC · 87
behaviour · 5
behaviour driven development · 80
best of breed · 56
binary · 80
BiSL · XIV, 108
blamelessness · 80
blue-Green deployment · 80
blueprint · 68
bottleneck · 69
branch · 56, 62, 68
branch by abstraction · 56
branching · 2, 57
branching strategy · 57
broken build · 80
bug-fix · 75
build · 11, 12, 13, 17, 22, 58, 66, 67, 72
- number · 75
building block · 11, 61, 62
business alignment · 19
business case · XIV, 3, 11, 20, 21, 55, 57, 63

About the author



Drs. Ing. B. de Best RI has been active in ICT since 1985. He worked primarily with the top 100 of Dutch business and government organizations. He has acquired experience in different roles within all aspects of system development, including operations for 12 years. After that, he focused on the subject of service management. Currently, as a consultant, he is active in all aspects of the knowledge management cycle of service management, such as training ICT managers and service managers, advising service management organisations, improving service management processes and

outsourcing (parts of) service management organisations. He graduated at both the HTS and University level in the management field.

Other books by this author



Agile Service Management with Scrum

On the way to a healthy balance between the dynamics of developing and the stability of managing the information provision

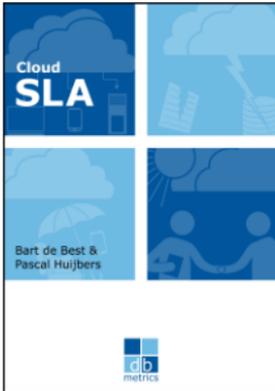
Using Agile software development is taking off. The terms Scrum and Kanban are already common to many organisations. Agile software development needs different requirements for the management of software.

Many organisations are mastering this new challenge. In particular, the interaction between the Scrum development process and the support of the software that the Scrum development process has produced, is an important aspect. Thisbook specifically discusses this interaction. Examples of topics that are discussed here are the service portfolio, SLAs and the handling of incident and change requests.

This book first defines the risk areas when implementing Scrum and Kanban. Next the various Agile terms and concepts are discussed. The content of Agile service management is described both at the organisational- as the process level. The relevant risks are specified for each of the service management processes. In addition, the implementation of each process within the context of Scrum is indicated.

This book is just one of the best practices reads of best practices that have been published by this author in a series of publications.

Author : Bart de Best
Publisher : Leonon Media, 2014
ISBN : 978 90 51501 807



Cloud SLA

The best practices of cloud service level agreements

More and more organisations choose to replace traditional ICT services by cloud services. Setting up effective SLAs for traditional ICT services is a real challenge for many organisations. With the arrival of cloud services, this seems to be much simpler at first, but soon the hard questions come up like data ownership, information links and security. This book describes what cloud services are.

The risks involved in entering into contracts and SLAs are discussed. Based on a long list of risks and countermeasures, this book also provides recommendations for the design and content of the various service level management documents for cloud services. This book first defines cloud and then describes various aspects like cloud patterns and the role of a cloud broker. The core of the book is the discussion of contract aspects, service documents, service design, risks, SLAs and cloud governance. In order to allow readers to get started with Cloud SLAs, the book also includes checklists of the following documents: Underpinning Contract (UC), Service Level Agreement (SLA), Document Financial Agreements (DFA), Document Agreement and Procedures (DAP), External SpecSheets (ESS) and Internal SpecSheets (ISS).

Author : Bart de Best
Publisher : Leonon Media, 2017
ISBN : 978 94 92618 009



DevOps Best Practices

Best Practices for DevOps

In recent years, many organisations have experienced the benefits of using Agile approaches such as Scrum and Kanban. The software is delivered faster whilst quality increases and costs decrease. The fact that many organisations that applied the Agile approach did not take into account the traditional service management techniques, in terms of information management, application management and infrastructure management,

is a major disadvantage. The solution to this problem has been found in the Dev (Development) Ops (Operations) approach. Both worlds are merged into one team, thus sharing the knowledge and skills. This book is about sharing knowledge on how DevOps teams work together.

For each aspect of the DevOps process best practices are given in 30 separate articles. The covered aspects are: Plan, Code, Build, Test, Release, Deploy, Operate and Monitor. Each article starts with the definition of the specifically used terms and one or more concepts. The body of each article is kept simple, short and easy to read.

Author : Bart de Best
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ISBN : 978 94 92618 078



SLA Templates

A complete set of SLA templates

The most important thing in providing a service is that the customer is satisfied with the delivered performance. With this satisfaction, the supplier gets re-purchasing's, promotions in the market and is the continuity of the company ensured. Perhaps the most important aspect of this customer satisfaction for a supplier is that the employees in question get a drive to further develop their own knowledge and skills to satisfy even more customers.

This book describes the templates for Service Level Agreements in order to agree with the customer on the required service levels. This book gives both a template and an explanation for this template for all common service level management documents. The following templates are included in this book:

- Service Level Agreement (SLA)
- Underpinning Contract (UC)
- Operational Level Agreement (OLA)
- Document Agreement and Procedures (DAP)
- Document Financial Agreements (DFA)
- Service Catalogue
- External Spec Sheet (ESS)
- Internal Spec Sheet (ISS)
- Service Quality Plan (SQP)
- Service Improvement Program (SIP)

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Poster

SLA Templates

DevOps Poster

This poster lists all the DevOps terms that a student must learn in order to pass the exam of DevOps Professional of Exin. This poster can be ordered at info@leonon.nl.

The subjects on the poster are based on the basic training material of Exin. Since there are many terms to be learned, this poster will help to learn them by reviewing them all at once daily.

Author : Bart de Best
Publisher : Leonon Media, 2018
Ordering : info@leonon.nl