Paper collection

A collection of papers that have come together as part of the research done for the thesis. The listing has no particular order. Each title has a reference in the bibliography. The citation style has been chosen to not interfere with the IEEE style bibliography used in the thesis.

Nr	Title	Year	Tags
001	A Survey of DevOps Concepts and Challenges[Lei+19]	2019	paper, survey, devops, ci, cd
002	Adopting DevOps in the real world: A theory, a model, and a case study[LPB19]	2019	paper, devops, case
003	DevOps in practice: A multiple case study of five companies[Lwa+19]	2019	paper, devops, case
004	Failure-Aware Application Placement Modeling and Optimization in High Turnover DevOps Environment[Suk+19]	2019	paper, devops, cloud, orchestration, apps, testing
005	Fallacies and Pitfalls on the Road to DevOps: A Longitudinal Industrial Study[CDT20]	2020	paper, devops, case, ci, cd
006	Dealing with Security in a Real DevOps Environment[LBS19]	2019	paper, devsecops
007	Reinventing ITIL in the Age of DevOps[Kai18]	2018	book, devops, itil
008	Cloud Native Patterns[Dav19]	2019	book, cloud-native
009	The DevOps Handbook[Wil+16]	2016	book, devops, agile
010	Continuous Delivery[HF10]	2010	book, ci, cd
011	Cloud Native DevOps with Kubernetes[DA19]	2019	book, devops, kubernetes
012	DevOps Improvements for Reduced Cycle Times with Integrated Test Optimizations for Continuous Integration[MLS18]	2018	paper, devops, ci, testing
013	Performance Evaluation of Microservices Architectures Using Containers[Ama+15]	2015	paper, containers, perf
014	Building Reactive Microservices in Java[Esc17]	2017	book, microservices, java

Nr	Title	Year	Tags
015	Continuous Delivery with Spinnaker[Bur+18]	2018	book, cd
016	Introducing Istio Service Mesh for Microservices[SP19]	2019	book, microservices, mesh
017	Microservices for Java Developers[BP19]	2019	book, microservices, java
018	Migrating to Microservice Databases[Yan17]	2017	book, microservices, db
019	Modern Java EE Design Patterns[Eis15]	2015	book, java
020	Speed Thrills: How to Harness the Power of CI/CD for Your Development Team[KR17]	2017	paper, ci, cd
021	The Enterprise Path to Service Mesh Architectures[Cal18]	2018	book, mesh
022	A Policy Based Application Deployment Method in Hybrid Cloud Environment[WR18]	2018	hybrid-cloud, policy
023	Policies Based Container Migration Using Cross-Cloud Management Platform[Jan+18]	2018	multi-cloud, policy, docker
024	Software-Defined Cloud Centers[RR18]	2018	book, cloud
025	Orchestrating the Deployment of High Availability Services on Multi-zone and Multi-cloud Scenarios[Mor+18]	2018	multi-cloud, ha, deploy
026	Hybrid Cloud resource provisioning policy in the presence of resource failures[JAS12]	2012	hybrid-cloud, policy, provisioning, failures
027	Policy-Driven Middleware for Heterogeneous, Hybrid Cloud Platforms[Des+13]	2013	hybrid-cloud, policy, middleware, PaaS
028	Extensible Declarative Management of Cloud Resources across Providers[SGS19]	2019	multi-cloud, cmp, tags
029	Systematic and Recomputable Comparison of Multi-cloud Management Platforms[SS18]	2018	multi-cloud, cmp
030	Transactional Migration of InhomogeneousComposite Cloud Applications[RS18]	2018	cloud, migration

Nr	Title	Year	Tags
031	Emerging Hybrid Cloud Patterns[Lin16]	2016	hybrid-cloud, surveys, patterns, enterprise
032	A Federated Multi-Cloud PaaS Infrastructure[Par+12]	2012	multi-cloud, PaaS
033	A Status of Serverless Computing and Function-as-a-Service(FaaS) in Industry and Research[Fox+17]	2017	FaaS, overview
034	State of DevOps 2019[For+19]	2019	DevOps, survey, overview

The following sections outline the bibliography of papers grouped by type.

Books

[Kai18]   Abhinav Krishna Kaiser. *Reinventing ITIL® in the Age of DevOps*. Apress, Berkeley, CA, 2018. ISBN: 978-1-4842-3976-6. URL: https://doi.org/10.1007/978-1-4842-3976-6.

[Dav19]   Cornelia Davis. *Cloud Native Patterns: Designing change-tolerant software*. First. Manning Publications, May 2019, p. 400. ISBN: 978-1617294297. URL: https://www.manning.com/books/cloud-native-patterns.

[Wil+16]   John Willis et al. *The DevOps Handbook*. First. IT Revolution Press, Nov. 2016. ISBN: 978-1942788003. URL: https://itrevolution.com/book/the-devops-handbook/.

[HF10]   Jez Humble and David Farley. *Continuous Delivery: Reliable Software Releases through Build, Test, and Deployment Automation*. First. Addison Wesley Signature Series. Addison-Wesley, July 2010. ISBN: 978-0-321-60191-9.

[DA19]   Justin Domingus and John Arundel. *Cloud Native DevOps with Kubernetes*. First. O'Reilly Media, Inc., Feb. 2019. ISBN: 978-1-492-04076-7.

[Esc17]   Clement Escoffier. *Building Reactive Microservices in Java*. First. O'Reilly Media, Inc., May 2017. ISBN: 978-1-491-98628-8.

[Bur+18]   Emily Burns et al. *Continuous Delivery with Spinnaker*. First. O'Reilly Media, Inc., May 2018. ISBN: 978-1-492-03549-7. URL: https://www.spinnaker.io/publications/ebook/.

[SP19]   Burr Sutter and Christian Posta. *Introducing Istio Service Mesh for Microservices.* Second. O'Reilly Media, Inc., Mar. 2019. ISBN: 978-1-492-05260-9. URL: `https://developers.redhat.com/books/introducing-istio-service-mesh-microservices/`.

[BP19]   Rafael Benevides and Christian Posta. *Microservices for Java Developers.* Second. O'Reilly Media, Inc., Apr. 2019. ISBN: 978-1-492-03826-9.

[Yan17]   Edson Yanaga. *Migrating to Microservice Databases.* First. O'Reilly Media, Inc., Feb. 2017. ISBN: 978-1-491-97461-2.

[Eis15]   Markus Eisele. *Modern Java EE Design Patterns.* First. O'Reilly Media, Inc., Oct. 2015. ISBN: 978-1-491-93982-6.

[Cal18]   Lee Calcote. *The Enterprise Path to Service Mesh Architectures.* First. O'Reilly Media, Inc., Aug. 2018. ISBN: 978-1-492-04176-4.

Articles

[Lei+19]   Leonardo Leite et al. "A Survey of DevOps Concepts and Challenges". In: *ACM Comput. Surv.* 52.6 (Nov. 2019). ISSN: 0360-0300. DOI: `10.1145/3359981`. URL: `https://doi.org/10.1145/3359981`.

[LPB19]   Welder Pinheiro Luz, Gustavo Pinto, and Rodrigo Bonifácio. "Adopting DevOps in the real world: A theory, a model, and a case study". In: *Journal of Systems and Software* 157 (2019), p. 110384. ISSN: 0164-1212. DOI: `https://doi.org/10.1016/j.jss.2019.07.083`. URL: `http://www.sciencedirect.com/science/article/pii/S0164121219301517`.

[Lwa+19]   Lucy Ellen Lwakatare et al. "DevOps in practice: A multiple case study of five companies". In: *Information and Software Technology* 114 (2019), pp. 217–230. ISSN: 0950-5849. DOI: `https://doi.org/10.1016/j.infsof.2019.06.010`. URL: `http://www.sciencedirect.com/science/article/pii/S0950584917302793`.

[Mor+18]   R. Moreno-Vozmediano et al. "Orchestrating the Deployment of High Availability Services on Multi-zone and Multi-cloud Scenarios". In: *Journal of Grid Computing* 16 (Mar. 2018), pp. 39–53. ISSN: 1572-9184. DOI: `10.1007/s10723-017-9417-z`. URL: `https://doi.org/10.1007/s10723-017-9417-z`.

[Lin16]   D. S. Linthicum. "Emerging Hybrid Cloud Patterns". In: *IEEE Cloud Computing* 3.1 (2016), pp. 88–91.

[Fox+17]   Geoffrey C. Fox et al. "Status of Serverless Computing and Function-as-a-Service(FaaS) in Industry and Research". In: *CoRR* abs/1708.08028 (2017). arXiv: `1708.08028`. URL: `http://arxiv.org/abs/1708.08028`.

Inbooks

[RR18]   Pethuru Raj and Anupama Raman. "The Hybrid Cloud: The Journey Toward Hybrid IT". In: *Software-Defined Cloud Centers: Operational and Management Technologies and Tools*. Cham: Springer International Publishing, 2018, pp. 91–110. ISBN: 978-3-319-78637-7. DOI: `10.1007/978-3-319-78637-7_5`. URL: `https://doi.org/10.1007/978-3-319-78637-7_5`.

Inproceedings

[Suk+19]   T. Suk et al. "Failure-Aware Application Placement Modeling and Optimization in High Turnover DevOps Environment". In: *2019 IEEE 12th International Conference on Cloud Computing (CLOUD)*. July 2019, pp. 115–123. DOI: `10.1109/CLOUD.2019.00030`.

[CDT20]   Alessandro Caprarelli, Elisabetta Di Nitto, and Damian Andrew Tamburri. "Fallacies and Pitfalls on the Road to DevOps: A Longitudinal Industrial Study". In: *Software Engineering Aspects of Continuous Development and New Paradigms of Software Production and Deployment*. Ed. by Jean-Michel Bruel, Manuel Mazzara, and Bertrand Meyer. Cham: Springer International Publishing, 2020, pp. 200–210. ISBN: 978-3-030-39306-9.

[LBS19]   Xabier Larrucea, Alberto Berreteaga, and Izaskun Santamaria. "Dealing with Security in a Real DevOps Environment". In: *Systems, Software and Services Process Improvement*. Ed. by Alastair Walker, Rory V. O'Connor, and Richard Messnarz. Cham: Springer International Publishing, 2019, pp. 453–464. ISBN: 978-3-030-28005-5.

[MLS18]   D. Marijan, M. Liaaen, and S. Sen. "DevOps Improvements for Reduced Cycle Times with Integrated Test Optimizations for Continuous Integration". In: *2018 IEEE 42nd Annual Computer Software and Applications Conference (COMPSAC)*. Vol. 01. July 2018, pp. 22–27. DOI: `10.1109/COMPSAC.2018.00012`.

[Ama+15]   M. Amaral et al. "Performance Evaluation of Microservices Architectures Using Containers". In: *2015 IEEE 14th International Symposium on Network Computing and Applications*. Sept. 2015, pp. 27–34. DOI: `10.1109/NCA.2015.49`.

[WR18]   H. Wei and J. S. Rodriguez. "A Policy Based Application Deployment Method in Hybrid Cloud Environment". In: *2018 IEEE 6th International Conference on Future Internet of Things and Cloud (FiCloud)*. 2018, pp. 93–99.

[Jan+18]   K. Janarthanan et al. "Policies Based Container Migration Using Cross-Cloud Management Platform". In: *2018 IEEE International Conference on Information and Automation for Sustainability (ICIAfS)*. 2018, pp. 1–6.

[JAS12]   B. Javadi, J. Abawajy, and R. O. Sinnott. "Hybrid Cloud resource provisioning policy in the presence of resource failures". In: *4th IEEE International Conference on Cloud Computing Technology and Science Proceedings*. 2012, pp. 10–17.

[Des+13]   Tom Desair et al. "Policy-Driven Middleware for Heterogeneous, Hybrid Cloud Platforms". In: *Proceedings of the 12th International Workshop on Adaptive and Reflective Middleware*. ARM '13. Beijing, China: Association for Computing Machinery, 2013. ISBN: 9781450325530. DOI: `10.1145/2541583.2541585`. URL: `https://doi.org/10.1145/2541583.2541585`.

[SGS19]   O. Serhiienko, P. Gkikopoulos, and J. Spillner. "Extensible Declarative Management of Cloud Resources across Providers". In: *2019 19th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID)*. 2019, pp. 678–683.

[SS18]   O. Serhiienko and J. Spillner. "Systematic and Recomputable Comparison of Multi-cloud Management Platforms". In: *2018 IEEE International Conference on Cloud Computing Technology and Science (CloudCom)*. 2018, pp. 107–114.

[RS18]   M. Ramírez López and J. Spillner. "Transactional Migration of InhomogeneousComposite Cloud Applications". In: *4th International Workshop on Cloud Adoption and Migration (CloudWays) @ 7th ESOCC*. 2018.

[Par+12]   Fawaz Paraiso et al. "A Federated Multi-Cloud PaaS Infrastructure". In: *5th IEEE International Conference on Cloud Computing*. hawaii, United States, June 2012, pp. 392–399. DOI: `10.1109/CLOUD.2012.79`. URL: `https://hal.inria.fr/hal-00694700`.

Reports

[KR17]   Ben Kamysz and Jared Ruckle. *Speed Thrills: How to Harness the Power of CI/CD for Your Development Team*. Tech. rep. Pivotal Software, Inc., Aug. 2017. URL: `https://content.pivotal.io/white-papers/speed-thrills-how-to-harness-the-power-of-ci-cd-for-your-development-team`.

[For+19]   Nicole Forsgren et al. *State of DevOps 2019*. Tech. rep. DORA, 2019. URL: `https://cloud.google.com/blog/products/devops-sre/the-2019-accelerate-state-of-devops-elite-performance-productivity-and-scaling`.