

Migrating to MariaDB

**Toward an Open Source
Database Solution**

William Wood

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Migrating to MariaDB: Toward an Open Source Database Solution

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First and foremost, I would like to dedicate this book to my son, Cam Carter, in that over many months there were times daddy could not do things that a four-year-old really needs to do. Someday he will understand, but for now I have lots of things to catch up on.

Next would be to my wonderful wife and her patience when I had to skip out on some family function, or something or another, in an attempt to get words on paper.

Finally, my boss, Phil Mazza, for providing me the opportunity to take on some interesting tasks and responsibilities. The fine folks at MariaDB for their database solution and allowing me to speak at their 2018 conference, and to the team at Apress for their patience and taking a chance on someone who has never done anything like this before. This dedication would of course be remiss without mentioning that none of this would be possible without the drivers for change.

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About the Author



William Wood is an IT professional who has worked across many disciplines in his 18-year career. He started his work experience as a student worker for his school’s engineering department, which ran the school’s website, doing LAMP Stack work for database-driven dynamic website development. He has been working specifically in the database field for the past 10 years, first on a team that supported development infrastructure and release engineering where he became the

Oracle SME, and then entering the working database administrator field in 2010 as a DBA, primarily working with and supporting Oracle and Oracle RAC in high-volume, compute intensive, and high availability environments.

About the Technical Reviewer



Ben Stillman is Director of Subscriber Services at MariaDB Corporation. He has over ten years experience with MariaDB and MySQL, and prior to that had several years of experience with Oracle Database and SQL Server. Ben is well-versed in migration challenges and has a good understanding of the various database platforms on the market and what each brings to the table. Ben resides near Columbus, Ohio where he enjoys spending time with his family and riding motorcycles.

Introduction

Migrating to MariaDB covers a wide range of topics that can be applied to many facets of the information technology industry in that the same methods and practices can be used in any type of migration and development project. There are many approaches to tackling a monumental task, and presented here you will find the strategies and methodologies that I have adopted over many years in the technology sector. This work follows a fictional company, FWP, and the leader of their database team, Vernon, through a database migration from Oracle to the MariaDB Open Source database.

The fictional portions of the story are based on many years spent in the technology sector as well as the educational endeavors that preceded them. The name of the company, FWP, was chosen entirely in jest for a comical take on what many will recall from their educational experience with the work examples and problems that all seemed to relate to one kind of widget or another. I grew to detest the widget and all that it stood for, so using it so widely says a bit about my acerbic sense of humor and wit. The story itself spans experiences and observations as seen throughout my career, to add a bit of storyline to what is many times considered the dry topic of technical information. It also provide a vehicle for explaining the how and why of many things that have been accomplished in a varied career, highlighting the successful migration from the Oracle database to the MariaDB database.

The more technically oriented reader may gravitate to a few chapters, while the project planners and managers might glean more by reading it in its entirety. Whatever the reader's strategy, there are many gems that can be gleaned from each chapter no matter their discipline or background. The first chapters provide the storyline and background for a small

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fictitious company that has a new solution that needs a more cost-effective solution for its database backend, and how the head of their database department went about making this transition successfully. Vernon and FWP are fictional, as are their solutions; however, I have made the same database migration successfully using the same methodologies, roadmap, and solutions as discussed here. This backend migration was completed successfully on many levels and is still ongoing at the time of this writing, which is part of why getting this completed was a struggle with the timeline and final product.

Many of the methodologies on display throughout this book have been around for a very long time. One of my favorites that seems to display itself time and time again is that of the age-old mantra of “Keep It Simple, Stupid”, referred to as KISS. It is very much applicable today as it was twenty years ago as I was exploring my educational pursuits. This is something that I have seen overlooked so many times with overworked, over-obfuscated, and increasingly complex solutions for problems that could be solved in a much simpler manner, making the solution easier to maintain, support, and deploy. There are also many methodologies covered here that have been around for a long time and are enjoying a rebranding or a reemergence in more recent times. Hopefully KISS comes full circle as well, as I am a big fan of the simple and effective solution.

There are many ways that one could make this same migration, so the more important aspect of this work is the path to follow, and not get hung up in the solution as applied here. What worked well here may not be as efficient for a much larger entity with a much larger data set size; however, the roadmap will still be the same and the solutions as provided will work when modified to suit the tasks requirements. Using Oracle’s own tool set in the migration of the data carried some weight, as these tools were already available within the database software. This meant no additional cost for software to do this work, making the migration even more fiscally responsible for any entity undertaking a similar task, arbitrary of the database they may be migrating to with few modifications.