

A black and white photograph of a person standing in a server room, looking at a monitor on a mobile workstation. The person is silhouetted against the bright light from the server racks. The room is filled with tall server cabinets, and the floor is covered with a grid of perforated tiles. The overall atmosphere is technical and professional.

Santos Martinez
Peter Daalmans
Brett Bennett

Mastering System Center Configuration Manager

 **SYBEX**
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I want to dedicate this book to the following: my wife Karla; you are my soul mate and I want to grow old with you. To my kids Bryan and Naomi, I hope this gives you some inspiration one day of what you can achieve. And finally to all my family and friends for their support in my craziness.

—Santos Martinez

I dedicate this book to my father; since 1999 still deeply missed. To my mother, for all of your love and support in my life. To my girlfriend Samantha, our son Stef, and our upcoming newborn; thanks for putting up with me and for all of your love and support while writing this book. Love you all!

—Peter Daalmans

I dedicate this book to my family and friends, and I greatly appreciate the support you provide.

—Brett Bennett

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To my coauthors, Brett Bennett and Peter Daalmans, thanks for staying on the project and giving the best of yourselves; I know the readers will enjoy learning from both of you.

Thanks to my friends for their support on the book and for providing a great elevator pitch to your customers.

Finally, I want to thank all the Configuration Manager and Enterprise Mobility + Security community, which has always been so passionate about the technology and willing to help us improve our writing. Let's keep the conversation going.

—*Santos Martinez*

Special thanks to my family and friends. I had to balance my time with you with my commitment to writing this book. I couldn't have done this without you guys!

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Also special thanks to my employer and colleagues at IT-Concern, for giving me the space to speak at conferences and to be of value for the community.

Finally, many thanks to the Configuration Manager and Enterprise Mobility communities and in particular all my fellow Enterprise Mobility MVPs; thanks for your support.

—*Peter Daalmans*

I would like to thank my wife Rosalie, and my children Brittany, Jamie, and Justin for the support they have provided me in my career. I would also like to thank Microsoft, both as my employer for the past 10 years and also for the amazing products they develop that have kept me gainfully employed for the past 30 years. I would also like to thank the coauthors Santos and Peter, the reviewers, and the entire team at Sybex/Wiley who helped put this book together.

—*Brett Bennett*

About the Authors

Santos Martínez was born in Caguas, Puerto Rico, in 1982, and grew up in Caguas. Santos has more than 16 years of experience in the IT industry. He has worked on major implementations and in support of Configuration Manager and Enterprise Mobility + Security for many customers in the United States and Puerto Rico. Santos was a Configuration Manager engineer for a Fortune 500 financial institution and an IT consultant before joining Microsoft. For the Fortune 500 companies, he helped with the implementation and support of more than 200 Configuration Manager Site Servers and support of more than 300,000 Configuration Manager and Intune device clients worldwide.

Santos was a SQL Server MVP from 2005 to 2009 and then a Configuration Manager MVP from 2009 to 2011. He is well known in the Microsoft communities as a mentor for other MVPs and Microsoft FTEs and for helping other IT community members. He has also participated in Midwest Management Summit, and Microsoft Ignite as a technical expert for Configuration Manager, SQL Server, and Microsoft Intune. Santos is also a former Puerto Rican martial arts champion and currently holds a fourth-degree black belt in TaiFu Shoi Karate Do; he earned the title of Shihan Sensei.

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Peter is one of the founders of the Windows Management User Group Netherlands and shares his Configuration Manager and Microsoft Intune experience with the community via his blog (<http://ConfigMgrBlog.com>).

Besides speaking at the Windows Management User Group Netherlands, Peter speaks every year at several events like user group meetings in Europe, TechDays Netherlands, and ExpertsLive. In 2013 he had the honor to speak at TechEd Australia and TechEd New Zealand. Peter has also been a speaker at conferences like BriForum in London, Denver, and Boston; IT/Dev Connections; and the Midwest Management Summit.

Peter resides in beautiful Breda, in the south of the Netherlands, with his girlfriend Samantha and his son Stef, with a newborn due Christmas 2016. In addition to his daily work, he is the chairman of the NAC Museum Foundation, which preserves the history of the soccer club NAC Breda. Australia is also a huge passion; he travels Down Under whenever he gets the chance to sniff the outback and the Aussie lifestyle.

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Brett Bennett lives in Texas and has been with Microsoft for over 10 years, currently as a Senior Premier Field Engineer. Brett has been in the computer industry for almost 30 years and has used every version of SMS/SCCM since SMS 1.0 beta was released in 1994. He has been involved with the development of several technical books over his career and has spoken at several technical conferences.

Brett is married to Rosalie Bennett and has three children (Brittany, Jamie, and Justin), three dogs (Yogi, Boo Boo, and Reeses), and one granddog (Rue). Brittany and Jamie are both graduates of Texas A&M and are now in the workforce, and Justin is currently finishing up his degree at A&M. Brett enjoys driving his Dodge Challenger, riding bikes, playing guitar, expanding his vinyl collection, and preparing tasty food in his Weber smoker (especially Texas-style beef brisket). You can reach Brett at texasmcse@yahoo.com, @texasmcse on Twitter, or on his blog at <https://blogs.technet.microsoft.com/breben>.

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Cliff Hobbs is the founder (in 2003) and CEO of FAQShop.com, one of the longest running websites covering System Management Server/Configuration Manager. In 2004 Microsoft awarded Cliff their MVP status in SMS; he was the first recipient from the UK and has received the award every year since. Cliff's passion is writing and sharing the knowledge he has gained working with the product since SMS 2.0 SP2 back in 1998. He has worked for some of the largest companies in the world, including Microsoft, HP, and Electronic Data Systems (EDS). Although Cliff currently lives in the UK with his wife Neco and his sons, he is looking for an opportunity that will allow him to emigrate with his family to Lisbon in Portugal, where he met his wife. Feel free to contact Cliff through FAQShop, where you can see the various ways Cliff can help you get the most from Configuration Manager.

Alessandro Cesarini is a premier field engineer at Microsoft and is based in Madrid. With more than 20 years of IT experience in multinational environments (Spain, the United Kingdom, France, Austria, Hungary, Poland, and Italy), he is helping customers with migration and deployment of Windows using Windows Assessment and Deployment Kit (ADK), Microsoft Deployment Toolkit (MDT), and System Center Configuration Manager. When he is not working or traveling, Alessandro is riding his bicycle, cooking at home, playing squash or Pádel, and spending time with his wife Eva.

Introduction

The Enterprise Mobility + Security product group has completed one of the most successful management products of all time. These folks work very hard to ensure that the product meets the higher standards and are always looking for feedback about it.

This book is written by a group of individuals who have endured the growing pains of this product, some even from day one, and who have helped Microsoft improve Configuration Manager with countless hours of real-world use and testing.

Welcome to *Mastering System Center Configuration Manager*. You will gain the knowledge you need to unlock Configuration Manager and Enterprise Mobility + Security to its full potential.

The Mastering Series

The Mastering series from Sybex provides outstanding instruction for readers with intermediate and advanced skills in the form of top-notch training and development for those already working in their field and provides clear, serious education for those aspiring to become pros. Every Mastering book includes the following:

- ◆ Real-world scenarios, ranging from case studies to interviews that show how the tool, technique, or knowledge presented is applied in actual practice
- ◆ Skill-based instruction, with chapters organized around real tasks rather than abstract concepts or subjects
- ◆ Self-review questions, so you can be certain you're equipped to do the job right

What This Book Covers

Mastering System Center Configuration Manager covers Microsoft's System Center Configuration Manager and Enterprise Mobility + Security. We detail the changes to Configuration Manager since 2012 R2.

These new features include, but are not limited to, the following:

- ◆ A completely new mechanism for content distribution—focusing on the needs of the user while retaining the ability to distribute to systems as well
- ◆ A user self-service catalog for content deployment
- ◆ Updates to software update management and operating system deployment

- ◆ The ability to manage mobile devices, including Windows Phone, iPhones, iPads, Android, and more, with Windows Intune
- ◆ A robust alerting mechanism
- ◆ A redesigned infrastructure to increase scale and reduce complexity
- ◆ The ability to manage profiles with Compliance Settings
- ◆ Integration with Cloud, using Windows Azure and Intune

What You Need to Get the Most Out of This Book

To be able to follow the step-by-step instructions in this book, it is recommended that you have a minimum of Windows Server 2012 R2 or Windows Server 2016 and SQL Server 2014 with all the applicable updates installed; read more on this subject in Chapter 2. Also, make sure you have the media for Configuration Manager, because we will go through installing this software in the first few chapters. Your computer also needs an Internet connection so you can download updates in various parts of the installation process. Evaluation versions of any of this software are fine for our purposes.

How We Structured This Book

To help you understand the features of Configuration Manager, we have structured this book to match the names of features as they are listed in the Configuration Manager Administration console wherever possible, with a few exceptions.

Chapter 1, “Overview of System Center Configuration Manager and Microsoft Intune,” is an introduction to Configuration Manager features and Microsoft Intune integration and features.

Chapter 2, “Planning a Configuration Manager Infrastructure,” covers site roles, how they are leveraged, and their application in your enterprise.

Chapter 3, “Migrating to Configuration Manager,” covers the process of moving to Configuration Manager. Discussions include planning the migration, using the new migration tool, and more.

Chapter 4, “Installation and Site Role Configuration,” covers the details of site role installation, configuration, and troubleshooting.

Chapter 5, “Client Installation,” covers client installation aspects in relation to Configuration Manager, such as the various installation methods found within Configuration Manager 2012.

Chapter 6, “Client Health,” covers the mechanism Configuration Manager uses to help ensure clients remain healthy.

Chapter 7, “Application Deployment,” provides a comprehensive look at planning, configuring, and using the application deployment model in Configuration Manager, including elements like deployments, deployment types, dependencies, rules, and relationships.

Chapter 8, “Software Updates,” gives you a step-by-step guide of this completely redesigned feature that is now based on Windows Server Update Services.

Chapter 9, “Operating System Deployment,” gives you an in-depth look at how Configuration Manager allows an administrator to deploy a single operating system to multiple types of machines.

Chapter 10, “Inventory and Software Metering,” focuses on the heart of Configuration Management, one of the core features that most other features tie into.

Chapter 11, “Asset Intelligence,” covers the mechanism Configuration Manager uses for tracking assets, including hardware, software, and licensing.

Chapter 12, “Reporting,” discusses probably the most used aspect of Configuration Manager by users outside the IT department. It gives other users the ability to report on various parts of Configuration Manager.

Chapter 13, “Compliance Settings,” offers an in-depth look at setting up a predefined level of standards for all your devices and how Configuration Manager will ensure your clients are maintained at that standard.

Chapter 14, “Endpoint Protection,” details the use of Configuration Manager to manage malware protection throughout the computing environment.

Chapter 15, “Role-Based Administration,” covers the new approach to security in Configuration Manager. Role-based security is used to assign the access needed for specific job functions.

Chapter 16, “Disaster Recovery,” provides the information necessary to protect your Configuration Manager databases by backing them up properly so that you can use those backups to recover from a disaster if it strikes.

Chapter 17, “Troubleshooting,” shows how to ensure your Configuration Manager environment stays healthy and gives you a baseline of where and what to look for if problems arise.

Chapter 18, “Enterprise Mobility and Configuration Manager,” provides information on Enterprise Mobility + Security and its integration with Configuration Manager.

Errata

We have done our best to make sure that the content in this book is as accurate as possible at the time it was written. If you discover any mistakes that we have missed in the editing process, please let us know at <http://sybex.custhelp.com> so we can address them in future versions of this book.

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