Learn SYSTEM CENTER CONFIGURATION MANAGER IN A MONTH OF LUNCHES

COVERS SCCM 1511 AND WINDOWS 10

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Learn System Center Configuration Manager
in a Month of Lunches

by James C. Bannan

Chapter 1

brief contents

Before you begin

I still remember vividly my first foray into Microsoft System Center Configuration Manager. I was working as a network and systems administrator, and the IT team that I was a part of had just made an unfortunate discovery. Our fleet of desktops and laptops had increased fourfold in a short space of time, and the deployment techniques we were using, which were just about satisfactory for a small environment, couldn't possibly scale and were now shown to be completely impractical. Even worse, we were facing a hardware refresh of nearly a third of the fleet, with no streamlined way to achieve it.

I jumped online and researched options, and Configuration Manager (ConfigMgr) came up time and time again as the best-of-breed solution for Windows deployment. The next day I spun up a server and spent the next two weeks trawling through TechNet articles and blog posts about how to set it up, configure it, and get Windows deployed.

When I look back at how I set up that first ConfigMgr environment, I'm amazed that it ever worked at all. I didn't know any of the best practices or finer nuances of the product and made some stunning, cringe-worthy errors in the bargain. Despite all of that, ConfigMgr got me and the business where we needed to be, and the whole experience ignited something of a personal zeal to learn as much as I could about the product, and to help educate other administrators who are in the same position as I was.

This book is the result of my experiences with ConfigMgr, the designs, implementations, troubleshooting, and yes, all the mistakes as well. It's the sort of book I wish I had access to when I was first learning to use ConfigMgr to deploy and manage Windows on an enterprise scale. This chapter covers what ConfigMgr is and

why you should use it, what you should know before getting started, and how to set up your lab environment.

One word of warning before you get started: setting up ConfigMgr is a lengthy process, and you won't get it all done in an hour. In all probability, if you've never done this before, it'll take about a day's worth of effort. But don't be disheartened; Config-Mgr is a complex product, so it makes perfect sense that the procedure to get it up and running is also complex. It's also absolutely critical that you have an environment of your own to work with, and in the process of setting up the lab, you'll learn a *lot* about how ConfigMgr works, all of which will be incredibly useful as you progress through the book.

1.1   *Why Configuration Manager?*

I'll go out on a limb and state up front that Microsoft System Center Configuration Manager is objectively the best product on the market for deploying and administering Windows in the enterprise. It's designed to deploy and manage desktops, laptops, and servers from the moment they arrive in your environment to the moment they leave, handling operating systems, applications, patching, compliance, antivirus, and reporting, just for starters.

> ### There's even more under the hood
>
> Configuration Manager has a rich and varied functionality set covering many aspects of system deployment, management, and reporting.
>
> Take a few minutes to read the official list of capabilities online: www.microsoft.com /en-us/server-cloud/system-center/configuration-manager-2012-capabilities.aspx.

ConfigMgr is a mature technology, tracing its roots back to Systems Management Server 1.0, which was released in 1994, as you can see in table 1.1. Given such a history, Microsoft has had a significant amount of time to develop and improve the technology to reflect customer needs based on ever-shifting industry trends: physical to virtual servers, tablets, slates, mobile devices, application management, patching, inventory, and now user-centric computing. It's the product that Microsoft uses to deploy and manage its own global fleet of servers, workstations, and applications, and it has a widespread and dedicated community of administrators and specialists.

Table 1.1   A timeline of Microsoft Systems Management

Year released	Product
1994	Systems Management Server (SMS) 1.0
1995	Systems Management Server (SMS) 1.1
1996	Systems Management Server (SMS) 1.2

Table 1.1   A timeline of Microsoft Systems Management *(continued)*

Year released	Product
1999	Systems Management Server (SMS) 2.0
2003	Systems Management Server (SMS) 2003
2006	Systems Management Server (SMS) 2003 R2
2007	System Center Configuration Manager 2007
2008	System Center Configuration Manager 2007 SP1
2009	System Center Configuration Manager 2007 SP2
2011	System Center 2012 Configuration Manager
2012	System Center 2012 Configuration Manager SP1
2013	System Center 2012 Configuration Manager R2
2015	System Center 2012 Configuration Manager R2 SP1
2015	System Center Configuration Manager (Build 1511)

As good as it is, ConfigMgr also has a dark side. Although it provides a deep and powerful framework, it's also open-ended, providing many ways of arriving at your end goal. Even harder is that one method isn't necessarily superior to another. "It depends" is a phrase you get used to when dealing with ConfigMgr.

This book will give you processes that work, while endeavoring to inform you about the most common administration scenarios that you're likely to encounter. ConfigMgr is a big beast, but tackle it head-on, and the rewards will be substantial.

1.2   Is this book for you?

If you're a systems administrator or a desktop administrator, responsible for deploying and managing Windows in a business environment, then this book is for you. If you're familiar with application deployment or patch management but are tired of doing things manually, this book is for you. If you're looking for a way to gain full, proactive visibility over your entire managed Windows environment, this book is for you.

ConfigMgr is an enterprise-grade infrastructure solution, so getting to grips with it requires a reasonable level of preexisting knowledge. You'll need to know how to set up and configure virtual machines, as well as have a decent working knowledge of both Windows Server and Windows clients. A grasp of networking concepts is essential, especially Internet Protocol version 4 (IPv4) addressing, as well as being comfortable enough with Active Directory (AD) to create and modify users and groups.

If you're unsure whether you meet some of the prerequisites, don't be discouraged—you almost certainly know more than you think you do! My advice is to just get stuck in.

1.3   How to use this book

Turn the pages, read the words, marvel at the diagrams, become enlightened.

Hmm, perhaps that's not quite enough detail! The Month of Lunches series is designed so that you can consume one chapter a day while you're consuming lunch. Parallel consumption, if you like. Each chapter should take only about 40 minutes to read, giving you an extra 20 minutes to finish your sandwich or practice what we've covered.

1.3.1   The main chapters

Each of the main chapters in this book covers a major section concerning the administration of ConfigMgr. Each chapter is constructed so that by the time you reach the end, you'll be empowered to work with or implement whatever topic was covered.

By the end of the month, you'll have gained a thorough understanding of Config-Mgr, and in the last couple of lunches you'll look at how it can be used in future, advanced scenarios. For example, not many companies are using ConfigMgr for management of Mac OS X or Linux platforms at the moment, whereas others aren't making use of Microsoft Azure or Microsoft Intune. Avoid any temptation to skip these chapters, because centralized cross-platform management and cloud integration are strong industry trends—the way of the future, in fact. These chapters will bring you up to speed on the latest and greatest, so even if you're not using them right now, chances are that you will!

1.3.2   Try It Now sections

Throughout each chapter, you'll find Try It Now sections: simple exercises that are included so you can get some practical experience with the technology as you work through each chapter. I've always found that I do my best learning when I get something to work in my own environment, rather than just reading about it, and the Try It Now sections are designed to reinforce what you've just learned.

1.3.3   Above & Beyond sidebars

Sidebars are scattered throughout the book, offering nuggets of interesting information about the topic at hand. The material in these sidebars is important, but not necessarily for immediate consumption.

This book isn't written for ConfigMgr architects or solution providers, so there's a deep technical layer that isn't featured here. But I know that you as a systems administrator will still want to know some of that information, so when you encounter an Above & Beyond sidebar in any of the chapters, take a couple of minutes to quickly read it.

1.3.4   Working with PowerShell

You can perform many ConfigMgr administrative tasks via either the ConfigMgr console or PowerShell. This book covers both methods, wherever possible. Some Power-Shell scripts involve multiple steps and won't be convenient one-liners. Rather than

bulk out the book with these scripts, I make them available on a dedicated Git repository (https://github.com/jamesbannan/configmgr-month-of-lunches) and provide the relevant links within the chapters as we go.

1.3.5 Labs

At the end of each chapter, a hands-on lab will get you working with the technology in a more formal, test-based manner. The labs are designed to work within your own testing environment. In chapter 2, you'll set up a fully functional, self-contained Config-Mgr environment to configure and tinker with.

1.3.6 Further exploration

Some of the chapters in this book, such as those on operating system deployment, contain functional tasks that take much longer than a lunchtime to complete.

The content in these chapters is designed to provide as much practical information as possible about the challenging concepts contained within, but implementing outcomes such as creating a master Windows image or deploying a managed system will almost certainly have to be worked through when you have a decent chunk of time available. Having said that, I strongly encourage you to find that time, because conquering difficult concepts within ConfigMgr is the best way to deepen your theoretical and practical knowledge of the product.

1.3.7 Which Log? sections

Log files are absolutely paramount for not only troubleshooting ConfigMgr, but also offering insight into what's happening under the hood. Often the administrative console shields you from what's going on, making the product something of a black box. The real action can be found in the log files.

As you read through each chapter, keep an eye out for the Which Log? sections, which will direct you to the right log file so that you can see exactly what ConfigMgr is up to.

1.4 Setting up your lab environment

You're going to be doing a lot of practicing in ConfigMgr throughout this book, and you'll want to have a lab environment to work in; please don't practice in your company's production environment.

Chapter 2 covers all the details of getting ConfigMgr installed and running for your lab. This chapter will give you a chance to explore some of the key functions at the same time you're having your first run at using ConfigMgr.

1.5 Using online resources

Apart from the MoreLunches.com website, I strongly encourage you to trawl through the ConfigMgr online documentation at Microsoft TechNet. Finding what you're looking for can sometimes be difficult (although I'll give you some tips for searching),

but Microsoft has done and continues to do an outstanding job documenting and explaining what is a broad and complex product.

Additionally, you can head over to my blog at www.jamesbannanit.com, where I document features and issues relating to ConfigMgr and operating system and application deployment as I come across them. You can get in touch with me directly via the blog, or through Twitter, where my handle is @jamesbannan.

1.6 *Being immediately effective with ConfigMgr*

Everything you read in this book is designed to get you, as a current or future Config-Mgr administrator, effective straightaway in your production environment. This sometimes means that I don't go into the level of technical depth that sits simmering under the surface of some topics because, frankly, you don't necessarily need to know all the theory right away in order to be effective. Sometimes it's far better to learn enough to be productive, and then come back to the topic later in further depth so that you have context as well as a solid, practical foundation upon which to build a greater understanding.

So with that, let's get stuck into ConfigMgr.

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JAMES BANNAN

Businesses rely on a complex patchwork of client computers, physical and virtual servers, middleware, mobile devices, and cloud services. Microsoft System Center Configuration Manager sits in the middle of this mix, providing a single administrative control center to deploy and manage Windows servers and applications across your entire infrastructure, including cross-platform management of Mac OS X, Linux, and UNIX. To get up to speed with the day-to-day tasks of managing a system with ConfigMgr, all you need is this book—and a quiet place to eat your lunch.

Learn System Center Configuration Manager in a Month of Lunches is a super-practical guide to Microsoft System Center Configuration Manager. In this book, you'll cut to the chase and learn the administrative procedures and techniques that will keep your systems humming smoothly. Whether you're a new sysadmin or you already understand the inner workings of Active Directory and Windows Server, you'll be productive immediately as you work through the 22 self-contained lessons in this handy tutorial.

WHAT'S INSIDE

- Covers the latest build of Configuration Manager
- How to simplify updates, operating system deployment, and reporting
- Cross-platform and mobile management including Linux, OS X, and Windows
- Smart application delivery

No prior experience with System Center Configuration Manager needed.

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"The single most useful consolidated source of SCCM guidance I've found."
—Francis Setash
US Department of State

"The best book that explains SCCM with the least amount of theoretical jargon."
—Nasir Naeem, Interserve Plc

"A one-stop shop for ConfigMgr admins."
—David Moravec
Mainstream Technologies

"A nice, gradual, and hands-on introduction to SCCM ... will bring you to operational status in no time."
—Alain Couniot, STIB-MIVB

"The quickest way to learn SCCM!"
—Joseph Moody
DeployHappiness.com