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Mastering System Center Configuration Manager

Master how to configure, back up, and secure access to System Center Configuration Manager with this practical guide

Vangel Krstevski

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BIRMINGHAM - MUMBAI

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First published: December 2014

Production reference: 1191214

Published by Packt Publishing Ltd.
Livery Place
35 Livery Street
Birmingham B3 2PB, UK.

ISBN 978-1-78217-545-2

www.packtpub.com

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I would like to thank my family, friends, and colleagues for supporting me, especially my girlfriend, Monika, who stood by me and gave me support and motivation during the process of writing of this book.

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A big thanks to my dear friends Chetan Sharma and Chetan Tanwar for their motivation, support, and guidance.

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Table of Contents

Preface	1
Chapter 1: Introduction to System Center Configuration Manager 2012 R2	7
System Center Configuration Manager 2012 R2 – requirements	8
Prerequisites for System Center Configuration Manager 2012 R2	8
Creating the System Management container	9
Extending the Active Directory schema for SCCM 2012 R2	16
Installing Windows Server's roles and features	17
Installing ADK 8.1 for SCCM 2012 R2	18
Installing MS SQL Server 2012	21
Installing Windows Server Update Services	27
Installing System Center Configuration Manager 2012 R2	28
Site system server and roles	38
Site administration	39
Planning and deploying sites	40
Monitoring and maintaining the hierarchy	41
Summary	42
Chapter 2: Assets and Compliance	43
The benefits of centralized system management	44
Managing compliance	45
Configuring compliance settings	47
Configuration items and baselines	47
Configuration items	48
Configuration baselines	50
Compliance evaluation	52
Configuration packs	54
Exporting configuration items and baselines	55

Compliance authoring	55
Organization	55
Using Microsoft tools	56
Security Compliance Manager	56
CP Studio	56
The compliance strategy	57
Endpoint Protection	57
Prerequisites for Endpoint Protection	58
Planning for Endpoint Protection	59
Creating client settings and antimalware policies	59
Deploying to a test collection	60
Installing the Endpoint Protection role	62
Setting up a software update point for Endpoint Protection	65
Configuring the SUP to synchronize definition updates	65
Creating autodeployment rules for definition updates	67
Working with antimalware policies	69
Understanding the default antimalware policy	70
Creating a custom antimalware policy	71
Importing and merging antimalware policies	71
Configuring alerts for Endpoint Protection	72
Configuring e-mail notifications	73
Alert subscriptions	75
Configuring custom client device settings for Endpoint Protection	76
Deploying Endpoint Protection for custom client agent settings	76
Monitoring the status of Endpoint Protection	77
Configuring collections to appear in the collection view	77
Security state view	78
Malware remediation status	79
Reporting in Endpoint Protection	80
The Endpoint Protection client	82
Installing the Endpoint Protection client	82
Understanding Endpoint Protection client settings	82
Automatic removal of antimalware software	83
Removing the Endpoint Protection client	84
Delivering definition updates	84
Summary	84
Chapter 3: The Software Library	85
Introducing packages	85
Programs in Configuration Manager	86
Collections	86
Distribution Points	87
Deployments	87
Combining the use of packages, programs, collections, and deployments	87

Creating a package	87
Package properties	91
Program properties	93
Creating a package with the new package wizard	94
Custom packages	97
Repackaging software	97
Avoiding common issues	97
Testing packages	97
Creating and managing applications	98
About applications	99
About deployment types	99
Requirements as a component of a deployment type	100
Global conditions	101
Detection methods	101
User Device Affinity	102
Creating applications	103
Creating a Windows Installer application	103
Application properties	104
Creating deployment types	104
Creating a Windows Installer deployment type	104
Creating an application virtualization deployment type	108
Creating a script-based deployment type	110
Creating detection methods	111
Detection methods for a Windows Installer application	112
Other detection methods	112
Custom script detection methods	113
Custom detection methods with PowerShell	113
Managing applications	114
Dependencies	114
Revision history	116
Exporting and importing applications	117
Superseding applications	117
Application retirement and deletion	118
Package conversion	118
Operating System Deployment	119
Summary	129
Chapter 4: Reporting in Configuration Manager	131
SQL Server Reporting Services	131
Implementing SQL Server Reporting Services	132
SSRS requirements	132
SQL Server Reporting Services installation	133

SSRS configuration	134
Role-based access control	134
Accessing SSRS Point	136
Data sources	136
Backing up SSRS	136
Reporting best practices	138
Reports in the Configuration Manager console	138
Creating a subscription	138
Managing SSRS report security	139
Creating a report	139
Creating custom reports	139
Development tools	140
Building a custom report	140
Interactive features of reporting services	148
Advanced custom report example	148
Authoring best practices for report development	151
Troubleshooting SSRS	152
SSRS logs	152
Optimizing SSRS performance	152
Subscriptions	153
Report caching	153
Report snapshots	153
Report timeout values	153
Best practices for performance	154
System Center Data warehouse	154
Summary	155
Chapter 5: Administration and Monitoring	157
The Configuration Manager's discovery methods	157
Hierarchy planning	158
Configuration Manager sites	159
Central administration site	159
Primary and secondary sites	159
Hierarchy-wide site system roles	160
Planning your hierarchy structure	161
Planning boundaries and boundary groups	162
Client discovery and installation methods	164
Role-based administration	166
In-console alerts	168
Managing alerts	168
Configuring alerts	169
Subscribing to alerts	169

Client settings	170
Defining a priority	171
Background Intelligent Transfer Service device settings	172
Client policy device settings	173
Mobile device client settings	173
Compliance settings for device settings	174
Computer agent device settings	175
Computer restart device settings	176
Hardware inventory device settings	177
Network access protection device settings	179
Power management device settings	180
Remote control device settings	180
Configuring remote control and remote assistance	180
Using a remote control	181
Remotely administering a client computer	182
Providing remote assistance	182
Software deployment device settings	183
Software inventory device settings	183
Using Resource Explorer	184
Summary	184
Chapter 6: Cloud Integration	185
Cloud integration – prerequisites	185
Subscribing to Windows Intune	186
Adding the Windows Intune subscription to Configuration Manager	187
Mobile device management	194
Configuring the Windows Intune connector role	194
Mobile device enrollment	195
Mobile application delivery	195
Cloud distribution points	196
Cloud distribution points – prerequisites	198
Creating certificates	198
Importing the certificates in Windows Azure	198
Creating the cloud distribution point	200
Configuring DNS for the cloud distribution point	205
Summary	206
Chapter 7: Security and Backup	207
Administrative users	207
Security roles	208
Built-in roles	209
Custom roles	209

Security scopes	210
Associating security scopes and collections with individual roles	211
Preventing unauthorized administrative access	212
The Active Directory security	212
Securing access at the database level	213
Auditing the Configuration Manager's administrative actions	214
Securing the Configuration Manager infrastructure	215
Building security into your hierarchy	216
Securing site systems	217
Physical security and hardware selection	217
System software security	217
Attack surface reduction and server hardening	218
Security software	218
Securing the site system's local administration	220
Securing the site database	221
Configuration Manager's network security	221
Client-to-server communications security	221
Server-to-server communications security	222
Site-to-site communications security	222
Site and SQL Server backups	222
Backing up Configuration Manager	222
Restoring Configuration Manager	225
Recovering from a site server operating system crash	225
Recovering from a Configuration Manager functional crash	225
Using backup and restore to migrate to a new environment	227
Moving Configuration Manager to a new hardware	227
Building a new Configuration Manager environment	227
Summary	228
Chapter 8: Troubleshooting	229
Troubleshooting network issues	229
Network configuration issues	230
Troubleshooting connectivity issues	230
Name resolution issues	231
Blocked or unresponsive ports	232
Timeout issues	232
Identifying network issues	233
Network issues affecting the site configuration	233
Network issues affecting the client installation	233
Issues with the Service Principal Name	233
Network issues affecting the software distribution	234
Network issues affecting site communications	234
Troubleshooting the data replication service	235

Troubleshooting console issues	236
Console logging	236
Verifying WMI permissions	237
Verifying DCOM permissions	239
Troubleshooting the client installation	240
Troubleshooting compliance settings	241
Troubleshooting application deployments	242
Troubleshooting software updates	243
Windows Server Update Services and Software Update Point	243
Troubleshooting SQL Server Reporting Services	244
Summary	245
Index	247

Preface

Microsoft System Center Configuration Manager is a powerful System Management product that helps IT administrators with better asset management and organization by grouping them into logical containers. These logical containers allow you to make the deployment of applications easier, software and security updates, antimalware definitions, and so on. Configuration Manager assists you in operating system deployment, allowing you to deploy OS images to multiple target systems at the same time. It also empowers users to be more productive from anywhere on any device by implementing state-of-the-art mobile device management functionalities.

What this book covers

Chapter 1, Introduction to System Center Configuration Manager 2012 R2, is all about the initial setup of Configuration Manager 2012 R2. It shows you how to install and set up all the prerequisites and requirements. In the end, there is an explanation on System Center Configuration Manager sites and site hierarchy and all of the site features and functionalities.

Chapter 2, Assets and Compliance, is more about compliance settings and Endpoint Protection. Compliance settings, with knowledge and creativity, can give you feedback about the configuration and compliance of your Windows-based systems and mobile devices.

Chapter 3, The Software Library, explains the different ways in which you can deploy software and also explains how you can use System Center Configuration Manager to do this. It gives you an overview of what applications are and how to create them in Configuration Manager, how to make deployment types, and how to create different detection rules.

Chapter 4, Reporting in Configuration Manager, explains how SQL Server Reporting Services give you the opportunity to show the information contained in the Configuration manager database using SSRS reporting.

Chapter 5, Administration and Monitoring, describes the way in which the System Center Configuration Manager hierarchy is organized. Towards the end, it discusses all the aspects of client settings and how to use these settings to make an optimal configuration for your business needs.

Chapter 6, Cloud Integration, describes the benefits of a public cloud, specifically Windows Azure, and explains how you can use System Center Configuration Manager 2012 R2 to deliver application packages to your clients that run on different mobile device operating systems.

Chapter 7, Security and Backup, describes the infrastructure security for Configuration Manager and the delegation of administrative access. This chapter includes a detailed description of a new role-based administration model and an overview of the Configuration Manager controls and security accounts.

Chapter 8, Troubleshooting, presents the different aspects of how to troubleshoot issues related to the functionalities of Configuration Manager. It begins with common network-related issues and continues by explaining common Configuration Manager console issues.

What you need for this book

In order to be able to follow the guidelines in this book and implement the procedures explained in it, you will need the following software:

- System Center Configuration Manager 2012 R2
- Microsoft Windows Server 2012 R2
- 7 ZIP
- Microsoft SQL Server Report Builder 2012
- Windows Azure

Who this book is for

This book is excellent for IT administrators who want to improve their system and asset management. A fair understanding of the core elements and applications related to SCCM will be helpful.

Conventions

In this book, you will find a number of styles of text that distinguish between different kinds of information. Here are some examples of these styles, and an explanation of their meaning.

Code words in text, database table names, folder names, filenames, file extensions, pathnames, dummy URLs, user input, and Twitter handles are shown as follows: "You can use the prerequisites checker tool that is provided with the System Center Configuration Manager 2012 R2 installation media, which is located in \SMSSETUP\BIN\x64\prereqchk.exe."


A block of code is set as follows:


```
mpcmdrun.exe -removedefinitions [All]
```

Any command-line input or output is written as follows:

```
SMSEP Setup Started....  
Installing the SMSEP  
Unable to query registry key  
(SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\Microsoft Security  
Client),  
return (0x00000002) means EP client is NOT installed  
Installation was successful.
```

New terms and **important words** are shown in bold. Words that you see on the screen, in menus or dialog boxes for example, appear in the text like this: "To view or edit the configuration items on a particular site, click on the **Assets and Compliance** section of the Configuration Manager console and select **Compliance Settings**."

 Warnings or important notes appear in a box like this.

 Tips and tricks appear like this.

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1

Introduction to System Center Configuration Manager 2012 R2

System Center Configuration Manager, formerly named Systems Management Server, is a Microsoft product that is a part of the System Center Suite. It provides management capabilities for large groups of different device types such as workstations, servers, laptops, and mobile devices. These devices can run on different operating systems such as Windows, Windows Embedded, Linux, UNIX, Mac OS X, Windows Phone, iOS, Symbian OS, and Android. Not only does it provide management of such device types, but it also provides these features: remote control for some of the devices' OSes, software distribution, patches and patch management, operating system deployment, and creating devices' software and hardware inventory. So, System Center Configuration Manager provides both efficient and effective IT services with the help of scalable software deployment, devices compliance management, as well as the asset management of discovered hardware and software resources.

System Center Configuration Manager helps with the control of its IT infrastructure and assets. The asset management functionality provides IT engineers with a detailed image of the software and hardware inventory, which clients are using them, and where they are located in the infrastructure. This asset management functionality provides reports that help enterprises to optimize their hardware and software usage and take better strategic decisions regarding software licenses and compliance with these licenses.

System Center Configuration Manager 2012 R2 – requirements

System Center Configuration Manager has multiple requirements that you need to take into consideration before executing any deployment of System Center Configuration Manager 2012 R2. The following are the requirements:

- Site systems cannot be installed on Server Core installations for the following operating systems:
 - Windows Server 2008 or Windows Server 2008 R2
 - Windows Server 2008 Foundation or Windows Server 2008 R2 Foundation
 - Windows Server 2012 or Windows Server 2012 R2; an exception to this is that starting with System Center 2012 R2 Configuration Manager, these operating systems support the distribution point site system role, without PXE or multicast support
 - Windows Server 2012 Foundation or Windows Server 2012 R2 Foundation
- After a site system server is installed, you cannot change the following:
 - The domain name of the domain where the site system server is located
 - The domain membership of the server
 - The name of the server
- Configuration Manager Site system roles cannot be installed on an instance of a Windows Server Failover Cluster. You can only install the site database server on Windows Server Failover Cluster.

For the full list of requirements, take a look at the following link:

http://technet.microsoft.com/en-us/library/gg682077.aspx#BKMK_SupConfigSiteSystemReq

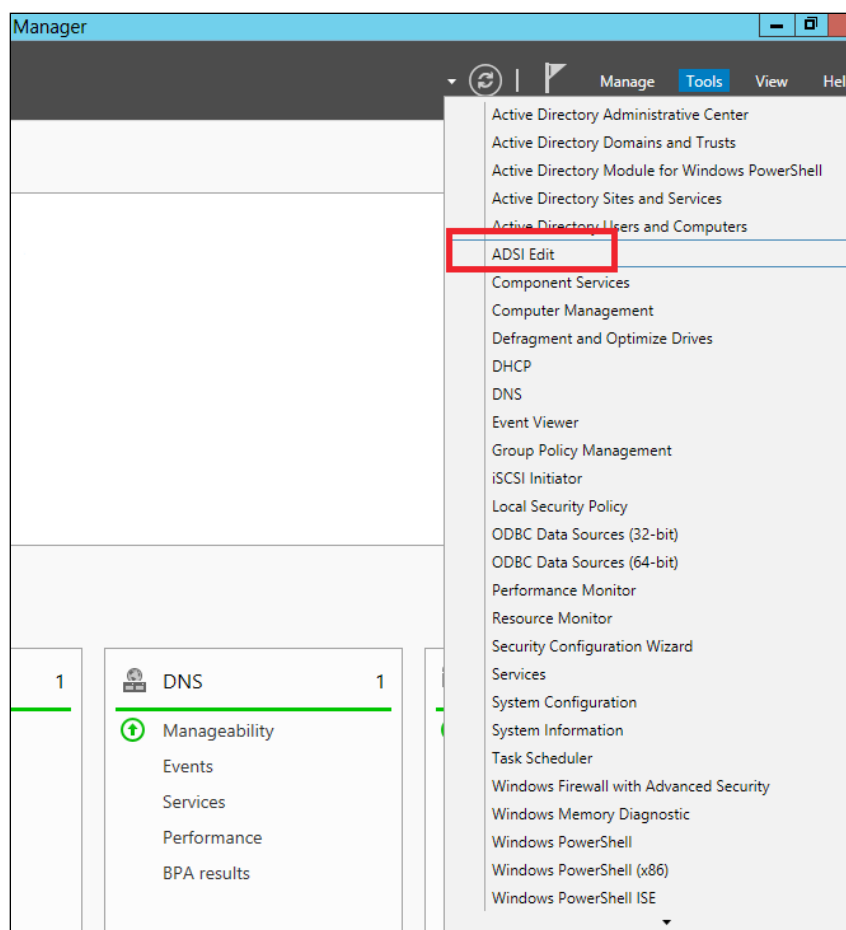
Prerequisites for System Center Configuration Manager 2012 R2

Before you start deploying System Center Configuration Manager, you must make sure that your infrastructure meets all of the prerequisites. What follows is a list and a step-by-step guide that shows you how to meet these prerequisites.

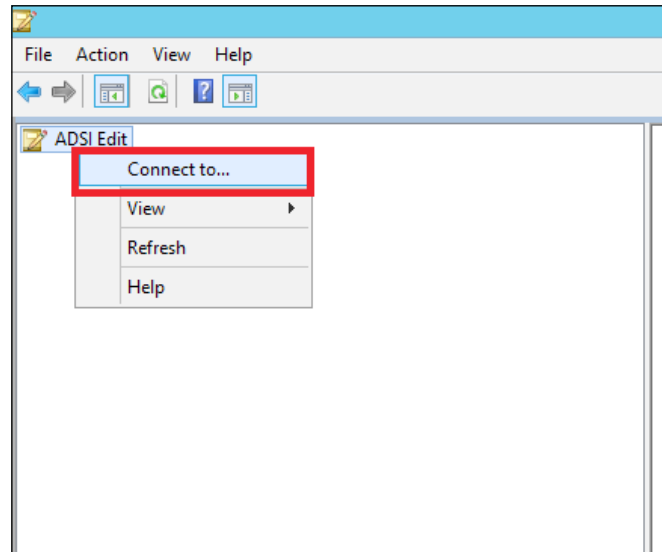
Creating the System Management container

When the Active Directory schema is extended, the System Management container in Active Directory is not created by default. The container has to be created in all Active Directory domains that contain a primary site server or a secondary site server that publishes site information to Active Directory. In order to create the System Management container, take a look at the following steps:

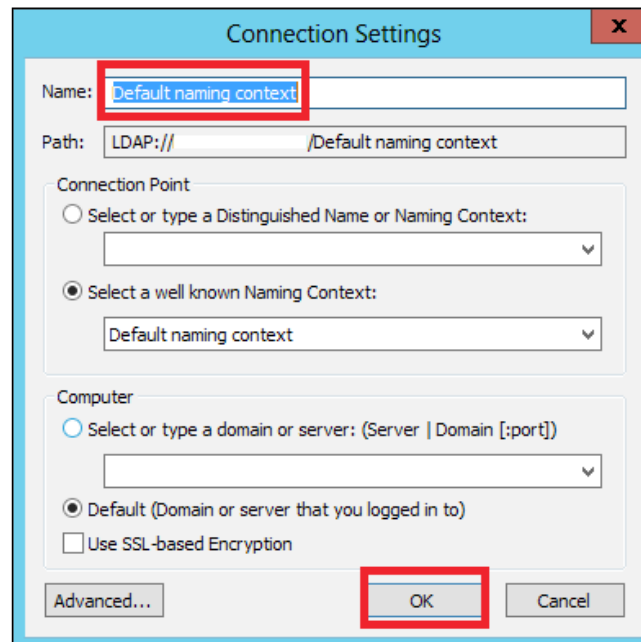
1. You have to log on to your Domain Controller and open **ADSI Edit**. You can also do this from any other machine that has **ADSI Edit** installed on it and connect to the Domain Controller. The account that you use to connect to the Domain Controller must have permissions to modify objects in **ADSI Edit**. You can open **ADSI Edit** from **Server Manager Console**, from the Control Panel\System and Security\Administrative Tools locations or by opening **Run** under the Start icon and typing `adsiedit.msc`:



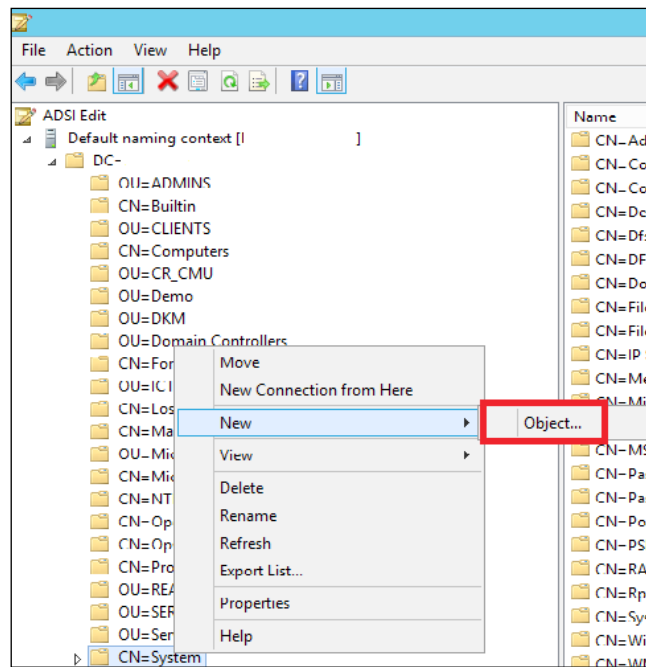
2. Right-click on **ADSI Edit** and click on **Connect to...**:



3. In the **Connection Settings** window, make sure that the **Name** field is set to **Default naming context**. Leave everything else as it is and click on **OK**:



4. In the **ADSI Edit** console, expand **Default naming context** in the folder pane, right-click on **CN=System**, click on **New**, and then click on **Object...**:



5. When the **Create Object** window appears, select **container** and click on **Next**:

