

STEVEN MANN

PowerShell for SharePoint® 2010

HOW-TO

Real Solutions for Using PowerShell for SharePoint® 2010

SAMS

STEVEN MANN

PowerShell™ for SharePoint® 2010

HOW-TO

SAMS

800 East 96th Street, Indianapolis, Indiana 46240 USA

PowerShell™ for SharePoint® 2010 How-To

Copyright © 2011 by Pearson Education, Inc.

All rights reserved. No part of this book shall be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher. No patent liability is assumed with respect to the use of the information contained herein. Although every precaution has been taken in the preparation of this book, the publisher and author assume no responsibility for errors or omissions. Nor is any liability assumed for damages resulting from the use of the information contained herein.

ISBN-10: 0-672-33559-X

ISBN-13: 978-0-672-33559-4

Library of Congress Cataloging-in-Publication Data

Mann, Steve, 1950-

PowerShell for SharePoint 2010 : how to / Steven Mann.
p. cm.

ISBN 978-0-672-33559-4

1. Intranets (Computer networks)—Management—Miscellanea. 2. Microsoft SharePoint (Electronic resource)—Miscellanea. 3. Groupware (Computer software)—Miscellanea. 4. Windows PowerShell (Computer program language)—Miscellanea. 5. Microsoft Windows (Computer file)—Miscellanea. I. Title.

TK5105.875.I6M365 2011

006.7'8—dc23

2011020669

Printed in the United States of America

First Printing: June 2011

Trademarks

All terms mentioned in this book that are known to be trademarks or service marks have been appropriately capitalized. Pearson cannot attest to the accuracy of this information. Use of a term in this book should not be regarded as affecting the validity of any trademark or service mark.

Warning and Disclaimer

Every effort has been made to make this book as complete and as accurate as possible, but no warranty or fitness is implied. The information provided is on an “as is” basis. The author and the publisher shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this book. Bulk Sales

Bulk Sales

Pearson offers excellent discounts on this book when ordered in quantity for bulk purchases or special sales. For more information, please contact:

U.S. Corporate and Government Sales

1-800-382-3419

corpsales@pearsontechgroup.com

For sales outside of the U.S., please contact:

International Sales

+1-317-581-3793

international@pearsontechgroup.com

Editor-in-Chief

Greg Wiegand

Executive Editor

Neil Rowe

Development Editor

Mark Renfrow

Managing Editor

Kristy Hart

Project Editor

Andy Beaster

Copy Editor

Bart Reed

Indexer

Tim Wright

Proofreader

Debbie Williams

Technical Editor

J. Boyd Nolan

Team Coordinator

Cindy Teeters

Book Designer

Gary Adair

Composition

Gloria Schurick

Contents at a Glance

| | |
|---|-----|
| Introduction | 1 |
| Part I: Getting Started | |
| 1 SharePoint 2010 Management Shell | 5 |
| 2 PowerShell Basics | 11 |
| Part II: Server Management | |
| 3 SharePoint Installation and Configuration | 21 |
| 4 Farm Management | 31 |
| 5 Web Application Management | 49 |
| 6 Service Application Management | 59 |
| 7 SharePoint Database Management | 67 |
| Part III: Development and Administration | |
| 8 Site Management | 81 |
| 9 Solutions and Features | 91 |
| 10 Content Deployment | 105 |
| Part IV: Service Application Management | |
| 11 InfoPath Form Services | 113 |
| 12 Enterprise Search | 123 |
| 13 SharePoint Foundation Search | 137 |
| 14 Profile Service | 143 |
| 15 Business Data Connectivity Service | 149 |
| 16 Secure Store Service | 155 |
| 17 Metadata Service | 163 |
| 18 Session State and State Services | 171 |
| Part V: Office Features | |
| 19 Excel Services | 181 |
| 20 PerformancePoint Services | 195 |
| 21 Access Services | 203 |
| 22 Visio Graphic Services | 213 |
| 23 Word Services | 219 |

Part VI: Appendices

A stsadm vs. SharePoint PowerShell231

B Upgrade/Migration237

Index239

Table of Contents

| | |
|---------------------|----------|
| Introduction | 1 |
|---------------------|----------|

Part I: Getting Started

| | |
|--|-----------|
| 1 SharePoint 2010 Management Shell | 5 |
| How Do I Run PowerShell? | 6 |
| How Do I Make PowerShell Aware of SharePoint? | 6 |
| What Is the SharePoint 2010 Management Shell? | 7 |
| What Is the SharePoint 2010 Management Shell Loading?..... | 8 |
| 2 PowerShell Basics | 11 |
| What Is a Cmdlet? | 12 |
| How Can I See the Possible Verbs for a Noun Command?..... | 12 |
| What Is a Parameter? | 12 |
| What Is a Switch Parameter?..... | 12 |
| How Can I See the Possible Parameters for a Cmdlet? | 12 |
| What Does F3 Do?..... | 13 |
| What Does F7 Do?..... | 13 |
| What Are Console Commands?..... | 14 |
| Path Environment Variable..... | 14 |
| Run Unsigned Scripts..... | 15 |
| Disable the Confirmation Prompt | 15 |
| Generate Inline Credentials | 16 |
| Reference an Assembly..... | 17 |

Part II: Server Management

| | |
|---|-----------|
| 3 SharePoint Installation and Configuration | 21 |
| Prepare the Microsoft SharePoint Installation Module..... | 22 |
| Install SharePoint Unattended | 23 |
| Installing Without a Product Key in the Configuration File..... | 24 |
| Configure a New SharePoint Farm | 24 |
| Join a Server to the SharePoint Farm | 26 |
| Create a New Web Application | 26 |
| Create a New Site Collection | 27 |
| Create a New Subsite | 28 |

| | |
|---|-----------|
| 4 Farm Management | 31 |
| Review Farm Configuration Values..... | 32 |
| Set the Farm Configuration Values | 32 |
| Refresh Installed Products..... | 34 |
| Change the Port of Central Admin | 34 |
| Change the Farm Passphrase | 34 |
| Retrieve the System Accounts | 35 |
| Retrieve Managed Accounts | 36 |
| Rename a Site Template | 36 |
| Rename a Server on the Farm | 37 |
| Display the Configured Managed Paths | 37 |
| Create a New Managed Path | 38 |
| Remove a Managed Path..... | 39 |
| Merge Log Files | 39 |
| End the Current Log File | 40 |
| Review SharePoint Designer Settings | 41 |
| Configure SharePoint Designer Settings | 41 |
| Review Workflow Configuration Settings | 42 |
| Modify Workflow Configuration Settings | 43 |
| Display Available Timer Jobs on the Farm | 44 |
| Get a Specific Timer Job | 45 |
| Enable a Timer Job | 46 |
| Disable a Timer Job | 46 |
| Start a Timer Job | 46 |
| Set the Schedule for a Timer Job | 47 |
| | |
| 5 Web Application Management | 49 |
| Display Available Web Applications on the Farm..... | 50 |
| Get a Specific Web Application | 50 |
| Remove a Web Application | 51 |
| Create a New Web Application | 51 |
| Configure Web Application Settings..... | 52 |
| Extend a Web Application | 53 |
| Create an Alternate Access Mapping URL..... | 54 |
| Display All Alternate Access Mappings | 55 |
| Get a Specific Alternate URL Entry | 55 |
| Change the Zone of an Alternate Access Mapping..... | 56 |
| Remove an Alternate Access Mapping..... | 56 |

| | |
|---|-----------|
| 6 Service Application Management | 59 |
| Install Service Applications | 60 |
| Display Available Service Applications on the Farm | 60 |
| Get a Specific Service Application | 61 |
| Configure IIS Settings for a Service Application | 61 |
| Share a Service Application | 62 |
| Remove a Service Application | 63 |
| Display Service Instances on a Server | 64 |
| Get a Specific Service Instance | 65 |
| Start a Service Instance | 65 |
| Stop a Service Instance | 66 |
| Ancillary Cmdlets for Service Applications | 66 |
| | |
| 7 SharePoint Database Management | 67 |
| Display All SharePoint Databases | 68 |
| Get a Specific Database | 69 |
| Create a New Content Database | 69 |
| Display All Content Databases for a Web Application | 70 |
| Detach a Content Database from a Web Application | 71 |
| Attach a Content Database to a Web Application | 72 |
| Delete a Content Database | 72 |
| Create a New Configuration Database | 73 |
| Delete a Configuration Database | 73 |
| Back Up a Configuration Database | 74 |
| Restore a Configuration Database | 75 |
| Back Up the SharePoint Farm | 75 |
| Restore the SharePoint Farm | 76 |
| Back Up a Site Collection | 76 |
| Restore a Site Collection | 77 |

Part III: Development and Administration

| | |
|--|-----------|
| 8 Site Management | 81 |
| Display All Available Site Collections on the Farm | 82 |
| Display Available Site Collections in a Web Application | 82 |
| Display Available Site Collections in a Content Database | 83 |
| Get a Specific Site Collection | 83 |
| Remove a Site Collection | 84 |
| Create a Site Collection | 84 |
| Set the Lock State of a Site Collection | 85 |
| Set the Storage Limits on a Site Collection | 86 |
| Create a Site Under a Site Collection | 87 |

Display All Subsites within a Site Collection 87

Get a Specific Subsite (Web) 88

Remove a Subsite (Web) from a Site Collection 88

Modify the Subsite (Web) URL 89

Move a Site Collection to a Different Content Database 89

Move All Site Collections from One Content Database to Another 90

9 Solutions and Features 91

Add a Solution to the SharePoint Farm 92

Display Available Solutions on the Farm 92

Get a Specific Solution..... 93

Deploy a Solution to a Web Application 93

Retract a Solution 94

Upgrade a Deployed Solution..... 95

Remove a Solution from the SharePoint Farm 96

Add a Sandboxed Solution to a Site Collection 96

Display Available Sandboxed Solutions in a Site Collection..... 97

Get a Specific Sandboxed Solution 97

Activate a Sandboxed Solution..... 98

Deactivate a Sandboxed Solution..... 98

Upgrade a Deployed Sandboxed Solution 99

Remove a Sandboxed Solution from a Site Collection..... 99

Display Available Features..... 100

Get a Specific Feature..... 101

Activate a Feature 101

Deactivate a Feature 102

Install a Feature in SharePoint..... 103

Uninstall a Feature from SharePoint..... 103

Export Installed Farm Solutions..... 104

10 Content Deployment 105

Create a New Deployment Path 106

Display Deployment Paths Configured on the Farm..... 106

Get a Specific Content Deployment Path 107

Remove a Content Deployment Path 107

Create a New Deployment Job 108

Display Deployment Jobs Configured on the Farm 108

Get a Specific Content Deployment Job..... 109

Remove a Content Deployment Job..... 109

Start a Content Deployment Job 109

Modify Content Deployment Configurations..... 110

Part IV: Service Application Management

| | |
|--|------------|
| 11 InfoPath Forms Services | 113 |
| Browser-Enable Form Templates | 114 |
| Throttle Data Connection Timeouts | 114 |
| Throttle the Data Connection Response Size | 115 |
| Modify Authentication Settings..... | 115 |
| Configure Session State..... | 116 |
| Enable View State..... | 117 |
| Verify and Upload a Form Template..... | 118 |
| Upload Multiple Form Templates at Once | 118 |
| Activate or Deactivate a Form to or from a Site Collection | 119 |
| Remove a Form from InfoPath Form Services..... | 119 |
| Quiesce a Form from InfoPath Form Services..... | 120 |
| Enable the Web Service Proxy..... | 120 |
| 12 Enterprise Search | 123 |
| Display the Enterprise Search Service Information | 124 |
| Display Enterprise Search Service Instances..... | 124 |
| Get a Specific Enterprise Search Service Instance | 125 |
| Configure the Crawl Account for Enterprise Search | 126 |
| Configure the Enterprise Search Service Performance Level..... | 126 |
| Display Enterprise Search Service Applications | 127 |
| Get a Specific Enterprise Search Service Application..... | 128 |
| Create a Custom Metadata Category..... | 128 |
| Display Available Metadata Categories..... | 129 |
| Get a Specific Metadata Category..... | 129 |
| Create a Custom Metadata Crawled Property..... | 130 |
| Display Available Crawled Properties | 131 |
| Get a Specific Metadata Crawled Property | 132 |
| Create a Custom Metadata Managed Property..... | 133 |
| Display Available Managed Properties | 133 |
| Get a Specific Metadata Managed Property | 134 |
| Create a Metadata Mapping | 135 |
| 13 SharePoint Foundation Search | 137 |
| Display the Search Service Information | 138 |
| Display Search Service Instances | 138 |
| Get a Specific Search Service Instance | 139 |
| Configure the Crawl Account..... | 139 |

| | |
|--|------------|
| Configure the Maximum Backup Duration | 141 |
| Configure the Search Service Performance Level..... | 141 |
| 14 Profile Service | 143 |
| Get the Identity of the Profile Service Application | 144 |
| Get a Specific Profile Service Application Instance | 144 |
| Configure Settings on the User Profile Service Application | 145 |
| Remove Old Comments..... | 145 |
| Remove Old Ratings..... | 146 |
| Remove Old Tags..... | 146 |
| Update the Profile Photo Store | 147 |
| Use Ancillary Cmdlets for the User Profile Service | 147 |
| 15 Business Data Connectivity Service | 149 |
| Get the Identity of the BCS Service Application | 150 |
| Get a Specific BCS Service Application Instance | 150 |
| Configure the BCS Database | 151 |
| Get a BCS Metadata Object..... | 151 |
| Import a BCS Model..... | 152 |
| Export a BCS Model..... | 153 |
| 16 Secure Store Service | 155 |
| Get the Identity of the Secure Store Service Application | 156 |
| Get a Specific Secure Store Service Application Instance | 156 |
| Enable Auditing for the Secure Store Service | 157 |
| Configure the Secure Store Database | 157 |
| Generate a New Master Key..... | 158 |
| Refresh the Encryption Key..... | 159 |
| Create Application Fields | 159 |
| Create a Target Application..... | 161 |
| Create a New Application Entry | 161 |
| 17 Metadata Service | 163 |
| Get the Identity of the Metadata Service Application | 164 |
| Get a Specific Metadata Service Application Instance | 164 |
| Configure the Metadata Service Accounts..... | 165 |
| Configure the Term Store Database | 165 |
| Configure the Content Type Hub | 166 |
| Get the Identity of the Metadata Service Proxy..... | 166 |

| | |
|---|-----|
| Get a Specific Metadata Service Application Proxy Instance..... | 167 |
| Configure the Metadata Service Connection Options | 168 |

18 Session State and State Services 171

| | |
|--|-----|
| Enable Session State..... | 172 |
| Disable Session State..... | 172 |
| Display Session State Information | 173 |
| Configure the Timeout of the Session State | 174 |
| Display State Service Applications Configured on the Farm..... | 175 |
| Get a Specific State Service Application | 175 |
| Rename a State Service Application..... | 176 |
| Perform a State Service Database Operation | 176 |

Part V: Office Features

19 Excel Services 181

| | |
|---|-----|
| Create a Trusted File Location | 182 |
| Display All Trusted File Locations..... | 183 |
| Get a Specific Trusted File Location | 183 |
| Remove a Trusted File Location | 184 |
| Create a Trusted Data Connection Library..... | 185 |
| Display All Trusted Data Connection Libraries | 185 |
| Get a Specific Trusted Data Connection Library..... | 186 |
| Remove a Trusted Data Connection Library..... | 186 |
| Create a New Safe Data Provider | 187 |
| Display All Safe Data Providers | 188 |
| Get a Specific Safe Data Provider | 188 |
| Remove a Safe Data Provider | 189 |
| Create a Blocked File Type | 190 |
| Display All Blocked File Types..... | 190 |
| Get a Specific Blocked File Type | 191 |
| Remove a Blocked File Type | 191 |
| Create a User-Defined Function Reference..... | 192 |
| Display All User-Defined Function References | 192 |
| Get a Specific User-Defined Function Reference..... | 193 |
| Remove a User-Defined Function Reference..... | 193 |
| Modify Excel Services Objects..... | 194 |

| | |
|--|------------|
| 20 PerformancePoint Services | 195 |
| Configure the Unattended Service Account | 196 |
| Display the Unattended Service Account..... | 196 |
| Create a Trusted Content Location..... | 197 |
| Create a Trusted Data Source Location | 198 |
| Display All Trusted Content Locations | 198 |
| Display All Trusted Data Source Locations..... | 199 |
| Display Details of Trusted Locations | 199 |
| Get a Specific Trusted Location | 200 |
| Remove a Trusted Location | 200 |
| Configure PerformancePoint Services to Enforce Trusted Locations | 201 |
| Configure PerformancePoint Services Application Settings | 202 |
| | |
| 21 Access Services | 203 |
| Configure the Application Log Size | 204 |
| Configure the Cache Timeout..... | 204 |
| Modify the Maximum Columns in a Query..... | 205 |
| Modify the Maximum Calculated Columns in a Query..... | 205 |
| Configure the Maximum Order By Clauses | 206 |
| Configure the Maximum Number of Rows in a Query | 206 |
| Configure the Maximum Number of Records in an Access Table | 207 |
| Configure the Maximum Number of Sources in a Query | 208 |
| Enable and Disable the Use of Outer Joins..... | 208 |
| Allow or Restrict Non-Remotable Queries | 209 |
| Throttle Access Services Memory Utilization | 210 |
| Throttle Session Memory Utilization | 210 |
| Configure User Sessions | 211 |
| Limit Template Sizes..... | 212 |
| | |
| 22 Visio Graphics Services | 213 |
| Configure the Unattended Service Account | 214 |
| Create a New Safe Data Provider..... | 214 |
| Display All Safe Data Providers..... | 216 |
| Get a Specific Safe Data Provider | 216 |
| Remove a Safe Data Provider | 217 |
| Set the Description of a Data Provider | 217 |
| Configure Visio Performance Settings..... | 218 |

| | |
|---|------------|
| 23 Word Services | 219 |
| Configure the Conversion Processes | 220 |
| Configure Conversion Throughput..... | 220 |
| Configure Supported Document Formats for Conversion | 222 |
| Modify Database Information | 223 |
| Modify Job Monitoring | 224 |
| Modify Conversion Timeouts | 225 |
| Modify the Maximum Conversion Attempts | 225 |
| Modify the Maximum Memory Usage | 226 |
| Disable Word 97–2003 Document Scanning..... | 226 |
| Disable Embedded Fonts in Conversions | 227 |
| Modify the Recycle Threshold | 228 |

Part V: Appendices

| | |
|---|------------|
| A stsadm vs. SharePoint PowerShell | 231 |
| B Upgrade/Migration | 237 |
| Index | 239 |

About the Author

Steve Mann was born and raised in Philadelphia, Pennsylvania, where he still resides today. He is an Enterprise Applications Engineer for Morgan Lewis and has more than 17 years of professional experience. Steve was previously a Principal Architect for RDA Corporation, where he worked for more than 13 years.

For the past 8 years, Steve has primarily focused on collaboration and business intelligence solutions using Microsoft technologies. He managed the internal BI Practice Group at RDA for several years. He was also heavily involved within RDA's Collaboration/Search Practice Group.

Steve has authored and coauthored several books related to the subject of SharePoint Server 2010. His blog site can be found at www.SteveTheManMann.com.

Dedication

*In loving memory of my grandfather, Max Winitz, who always
taught me to do my best and to be a man.*

Acknowledgments

Thanks to Sams Publishing and Neil Rowe for making this book a reality and for giving me the opportunity to share my ideas and solutions.

Tell Us What You Think!

As the reader of this book, you are our most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, what areas you'd like to see us publish in, and any other words of wisdom you're willing to pass our way.

I welcome your comments. You can email or write me directly to let me know what you did or didn't like about this book—as well as what we can do to make our books stronger.

Please note that I cannot help you with technical problems related to the topic of this book, and that due to the high volume of mail I receive, I might not be able to reply to every message.

When you write, please be sure to include this book's title and author as well as your name and phone or fax number. I will carefully review your comments and share them with the author and editors who worked on the book.

Email: feedback@sampublishing.com

Mail: Neil Rowe
Executive Editor
Sams Publishing
201 West 103rd Street
Indianapolis, IN 46290 US

Reader Services

Visit our website and register this book at informit.com/register for convenient access to any updates, downloads, or errata that might be available for this book.

Introduction

Overview of This Book

PowerShell is becoming the de facto administration tool for Microsoft Server products. The ability to script out reusable steps and code makes life easier for administrators, developers, and managers alike. With the latest release of Microsoft SharePoint Server 2010, PowerShell is the recommended administration tool. The previous stsadm console application is still available for backward compatibility but will soon be deprecated. Therefore, it is essential to understand the available cmdlets within SharePoint 2010.

This book is designed to provide a great reference of the SharePoint cmdlets across all areas and features within the product. The scenarios covered can be used to build out simple to complex scripts using the syntax and examples found within this book's chapters.

How to Benefit from This Book

This book provides a brief overview of how to get started with PowerShell in a SharePoint environment. It is not, however, a tutorial on PowerShell scripting itself. Use this book as a guide for performing repeated tasks or scripting out steps that need to be replicated across your SharePoint environments (development, staging, production, and so on). Whether it is for server management (including farm and web application administration), development, or the new service applications, this book describes the common cmdlets and SharePoint functionality available through PowerShell.

There have been changes within the SharePoint 2010 cmdlets during various releases (for example, beta, release candidates, and product releases). Many examples provided on the Internet use the old cmdlets and/or do not provide the appropriate parameters or types. In addition, some of the documentation on the cmdlets, settings, and configurations available on the Internet is incorrect. You can rest assured that all of the sample command lines in this book have been tested and confirmed to be as accurate as possible.

You can access the code examples used in this book by registering on the book's website at informit.com/register. Go to this URL, sign in, and enter the ISBN to register (free site registration required). After you register, look on your Account page, under Registered Products, for a link to Access Bonus Content.

How to Continue Expanding Your Knowledge

This book will provide the basis for what is possible within PowerShell scripts for SharePoint. To become an overall PowerShell expert you may want to expand your knowledge by exploring other books that discuss general PowerShell scripting techniques and syntax. Several general PowerShell books are available at informit.com.

CHAPTER 3

SharePoint Installation and Configuration

IN THIS CHAPTER

- ▶ Prepare the Microsoft SharePoint Installation Module
- ▶ Install SharePoint Unattended
- ▶ Configure a New SharePoint Farm
- ▶ Join a Server to the SharePoint Farm
- ▶ Create a New Web Application
- ▶ Create a New Site Collection
- ▶ Create a New Subsite

This chapter explores how you may use PowerShell scripts to perform the installation and configuration of SharePoint 2010. Microsoft provides a set of tools that aids in the installation. Use these procedures to script out and run unattended installations.

Prepare the Microsoft SharePoint Installation Module

Scenario/Problem: You need to have access to extended SharePoint installation commands within PowerShell.

Solution: Download and install the SPMModule from Microsoft.

Before you can install SharePoint from within PowerShell, you need to download and install the SPMModule code from Microsoft. The downloadable file can be found at <http://www.microsoft.com/downloads/en/details.aspx?FamilyID=c57556ff-8df0-44fd-aba6-3df01b9f80ce> (or search for SPMModule Powershell).

Unzip the file and place it into a local folder. Add this folder to the PSModulePath environment variable. The code is unsigned, so you must allow unsigned scripts to run. See Chapter 2, “PowerShell Basics,” for steps on adding an environment variable and allowing the execution of unsigned scripts.

Launch Windows PowerShell by right-clicking the icon and selecting Run As Administrator. Import the modules extracted from the zipped SPMModule by using the commands in Listing 3.1.

LISTING 3.1 Importing the SPMModule Components

```
Import-Module SPMModule.misc  
Import-Module SPMModule.setup
```

TIP You will need to set your execution policy to unrestricted in order to successfully import the SPMModule.misc and SPMModule.setup files. You will therefore be prompted on the import of some of the scripts. Entering an **R** for Run Once will install the scripts properly.

The cmdlets to install and configure SharePoint are now installed and ready for use.

NOTE Importing the SPMModule.misc file performs a check for updates. If updates are available, you will be notified. Perform any updates before proceeding.

Install SharePoint Unattended

Scenario/Problem: You need to install SharePoint from PowerShell.

Solution: Use the `Install-SharePoint` cmdlet from the `SPModule`.

The first step in unattended installation and configuration is to actually install SharePoint onto the server. The `Install-SharePoint` cmdlet is provided by the `SPModule` to perform the installation. This cmdlet is used in conjunction with a setup configuration file that contains the installation parameters.

Sample setup configuration files are included on the SharePoint installation disc. They are contained within their own folder within `Files`, as shown in Figure 3.1. An example of the configuration file contents is shown in Listing 3.2.

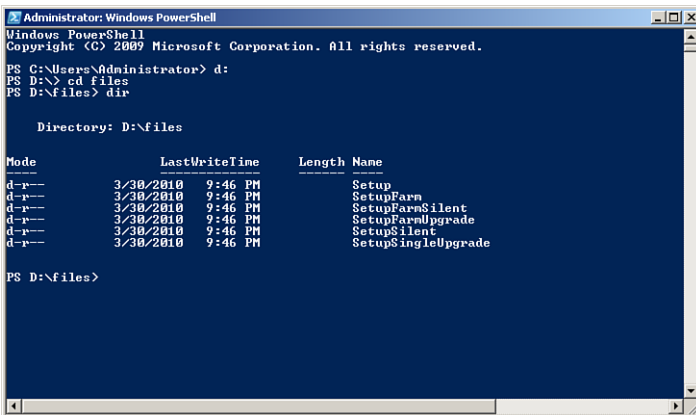


FIGURE 3.1 Sample configuration files are contained within the folders shown.

LISTING 3.2 Sample Farm Setup Configuration File

```

<Configuration>
  <Package Id="sts">
    <Setting Id="LAUNCHEDFROMSETUPSTS" Value="Yes"/>
  </Package>

  <Package Id="spswfe">
    <Setting Id="SETUPCALLED" Value="1"/>
  </Package>

  <Logging Type="verbose" Path="%temp%"
Template="SharePoint Server Setup(*).log"/>
  <!--<PIDKEY Value="Enter Product Key Here" />-->
  <Setting Id="SERVERROLE" Value="APPLICATION"/>
  
```

```
<Setting Id="USINGUIINSTALLMODE" Value="1"/>
<Setting Id="SETUPTYPE" Value="CLEAN_INSTALL"/>
<Setting Id="SETUP_REBOOT" Value="Never"/>
</Configuration>
```

Copy the config.xml file that matches your intended installation to a local drive location. Open the file in Notepad and uncomment the PIDKEY line by removing the "<!--" from the front and "-->" from the back. Enter your SharePoint product key in place of "Enter Product Key Here." Save your changes.

You may now use this configuration file with the Import-SharePoint cmdlet, which has the following syntax:

```
Install-SharePoint -setupexepath <path to setup.exe on disc>
-configxmlpath <path to the setup config.xml>
```

A sample command-line entry is shown in Listing 3.3.

LISTING 3.3 Installing SharePoint from the Command Line

```
Install-SharePoint -setupexepath D:\setup.exe -configxmlpath
c:\config.xml
```

SharePoint will be installed on the server accordingly.

TIP Install SharePoint on all servers that will participate in the farm (except for the database server) before configuring a new farm or joining to an existing farm.

Installing Without a Product Key in the Configuration File

For security purposes, you may not want to store the product key within the configuration file. Instead you can use the `-PIDKey` parameter followed by your product key in quotes on the command line with the `Install-SharePoint` cmdlet, as shown in Listing 3.4.

LISTING 3.4 Installing SharePoint from the Command Line with a Product Key

```
Install-SharePoint -setupexepath D:\setup.exe -configxmlpath
c:\config.xml -PIDKey "ABDCE-FGHIJ-KLMNO-PQRST-UVWXY"
```

Configure a New SharePoint Farm

Scenario/Problem: You need to configure a new SharePoint farm from the command line.

Solution: Use the `New-SharePointFarm` cmdlet from the `SPModule`.

The `New-SharePointFarm` cmdlet allows you to configure a new SharePoint farm on the server. The syntax is as follows:

```
New-SharePointFarm -databaseserver <server name>
-databaseaccessaccount (Get-Credential <domain\account>)
-farmname <name of new farm>
-passphrase (ConvertTo-SecureString -asplaintext -force -string "Enter a
farm pass phrase here")
```

This command requires credentials for the database server. Therefore, the `Get-Credential` PowerShell command is used in conjunction with `New-SharePointFarm`. After you enter the command, PowerShell will prompt for the password of the database access account entered, as shown in Figure 3.2.

TIP Use inline credentials instead of `(Get-Credential)`. See Chapter 2 for more details.

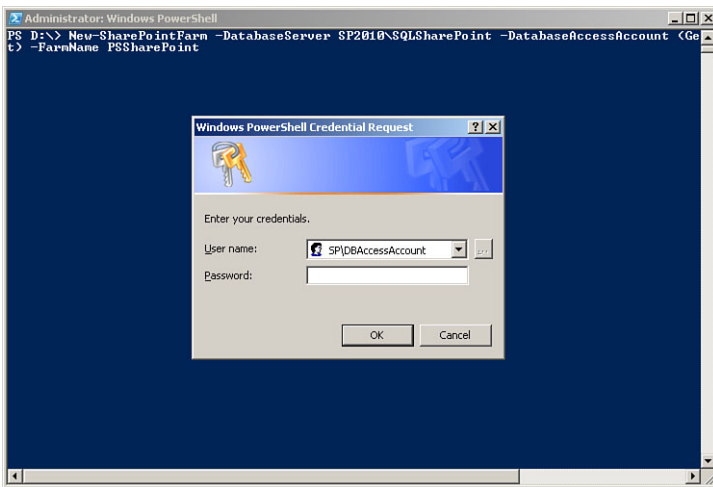


FIGURE 3.2 Using `Get-Credential` prompts for the corresponding password.

Once the credentials have been entered, the new farm will be configured using the database server entered. This essentially creates the `SharePoint_Config` database and prepares the farm for use.

NOTE The farm passphrase is a password that is used when you are adding new servers to the farm or making farm configuration changes. It needs to be entered into the cmdlet as a secure string; therefore, the `ConvertTo-SecureString` cmdlet is also used in conjunction with `New-SharePointFarm`.

Join a Server to the SharePoint Farm

Scenario/Problem: You need to join the servers to the new SharePoint farm.

Solution: Use the `Join-SharePointFarm` cmdlet from the `SPModule`.

The previous cmdlet (`New-SharePointFarm`) created the database and configured the SharePoint farm. You cannot run this again on the other servers. Instead, you need to join the servers to the farm using the `Join-SharePointFarm` cmdlet:

```
Join-SharePointFarm -databaseserver <database server name>  
-configurationdatabasename <config database>  
-passphrase (ConvertTo-SecureString -asplaintext -force -string  
"<farm pass phrase>")
```

The farm passphrase used with the `Join-SharePointFarm` cmdlet should be the same passphrase used when you are creating the new SharePoint farm.

Create a New Web Application

Scenario/Problem: You need to create a new web application for the SharePoint farm.

Solution: Use the `New-SPWebApplication` cmdlet from the SharePoint 2010 Management Shell.

You may now use the SharePoint 2010 Management Shell because SharePoint has been installed and the `SPModule` commands have been utilized. If you are running a full script and/or still wish to use the PowerShell console, be sure to add the SharePoint snap-in (`Add-PsSnapin Microsoft.SharePoint.PowerShell`) such that the SharePoint cmdlets are available.

To add a new web application, use the `New-SPWebApplication` cmdlet as follows:

```
New-SPWebApplication -applicationpool <name of new application pool>  
-name <name of new web app>  
-applicationpoolaccount <service account to be used for the  
application pool> -port <desired port number>
```

A sample command-line entry for creating the main SharePoint web application is shown in Listing 3.5.

LISTING 3.5 Creating a New Web Application

```
New-SPWebApplication -applicationpool SharePoint-80  
-name SharePoint-80 -applicationpoolaccount SP\AppPoolAccount -port 80
```

This process may take a few minutes. When it's completed, the display name and the URL of the new web application are presented in the console.

TIP If you do not include the port number, a random port number will be assigned. The first web application created will use port 80.

Create a New Site Collection

Scenario/Problem: You need to create a new top-level site collection.

Solution: Use the `New-SPSite` cmdlet from the SharePoint 2010 Management Shell.

To add a new site collection, use the `New-SPSite` cmdlet, as follows:

```
New-SPSite -url <full url of new site collection>  
-name <name of new site collection>  
-owneralias <site collection administrator>  
-template <site collection template to use>
```

A sample command-line entry for creating the root site collection using the Team Site template is shown in Listing 3.6.

LISTING 3.6 Creating the Root Top-level Site Collection

```
New-SPSite -url http://sp2010/ -name Home -owneralias SP\SiteAdmin  
-template STS#0
```

The site template names can be found using `Get-SPWebTemplates`. If no template is provided, the site collection will still be created. In this case, once the site is accessed via the browser, SharePoint will prompt for a site collection template to be selected.

TIP You can only create one site collection at the root of the web application. Subsequent site collections must be created using a managed path. See Chapter 4, "Farm Management," for more information on creating a managed path.

Create a New Subsite

Scenario/Problem: You want to create sites under your site collection.

Solution: Use the `New-SPWeb` cmdlet from the SharePoint 2010 Management Shell.

To add a new subsite, use the `New-SPWeb` cmdlet as follows:

```
New-SPWeb -url <full url of new site> -name <name of new site>
-template <site template to use>
```

A few switch parameters are available for the `New-SPWeb` cmdlet:

- ▶ `AddToTopNav`
- ▶ `UniquePermissions`
- ▶ `UseParentTopNav`

The `AddToTopNav` switch parameter places the new site within the top navigation of the site collection. Using the `UseParentTopNav` switch parameter replicates the top nav of the site collection onto the new subsite. Creating a site with `UniquePermissions` forces the site to not inherit permissions from the site collection and only grants the System Account Full Control access.

A sample command-line entry for creating a subsite using the Team Site template is shown in Listing 3.7.

LISTING 3.7 Creating a Subsite in the Root Site Collection

```
New-SPWeb -url http://sp2010/PSSubSite -name "PS Sub Site"
-template STS#0 -AddToTopNav -UniquePermissions -UseParentTopNav
```

The site template names can be found using `Get-SPWebTemplates`. If no template is provided, the site will still be created. In this case, once the site is accessed via the browser, SharePoint will prompt for a site template to be selected.

Using both `AddToTopNav` and `UseParentTopNav` ensures the new site always appears in the top navigation, as shown in Figure 3.3.

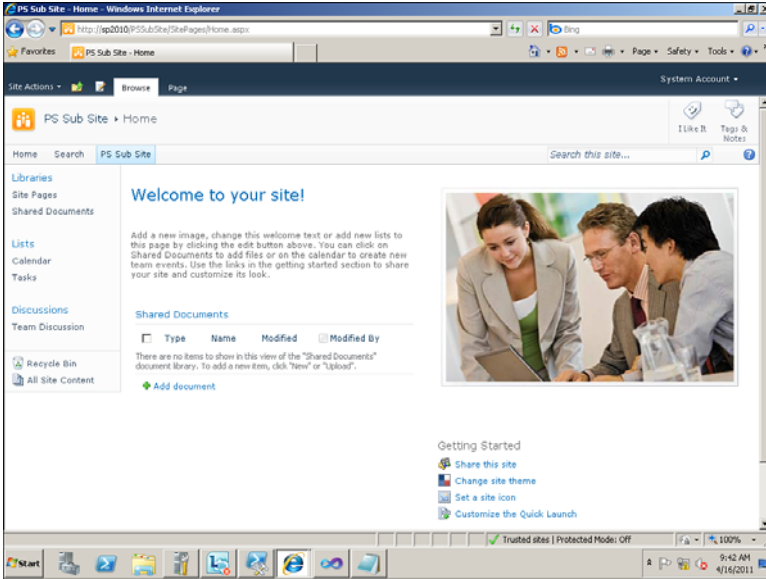


FIGURE 3.3 Using the switch parameters places the subsite in the top nav.

This page intentionally left blank

Index

A

Access Services

- application log size, configuring, 204
- cache timeout, configuring, 204-205
- memory utilization, throttling, 210
- Order By clauses, setting maximum, 206
- outer joins, enabling/disabling, 208-209
- queries
 - configuring, 208
 - maximum rows, configuring, 206-207
 - modifying, 205-206
- session memory utilization, throttling, 211
- tables, configuring, 207
- template sizes, limiting, 212
- user sessions, configuring, 211-212

accounts (Managed Metadata Service), configuring, 165

activating

- features, 101-102
- forms, 119
- sandboxed solutions, 98

adding

- folder path to PSModulePath, 14-15
- sandboxed solutions to site collections, 96-97
- SharePoint PowerShell snap-in, 6
- solutions to farms, 92

aliases, 14

alternate access mappings

- creating, 54-55
- displaying, 55
- removing, 56-57
- zone, modifying, 56

application entries (Secure Store Service), creating, 161-162

applications

- BCS
 - identifying, 150
 - instances, retrieving, 150-151

- Enterprise Search Service
 - displaying, 127
 - retrieving, 128
- Managed Metadata Service, identifying, 164
- Secure Store Service, identifying, 156
- Session State Service
 - renaming, 176
 - retrieving, 175
- User Profile Service, identifying, 144

assemblies, referencing, 17

attaching content database to web applications, 72

auditing, enabling Secure Store Service, 157

authentication

- inline credentials, generating, 16
- modifying for Info Path Form Services, 115-116
- SharePoint farm passphrase, changing, 34-35

B

backing up

- configuration databases, 74
- SharePoint farms, 75
- site collections, 76

Backup-SPConfigurationDatabase cmdlet, 74

Backup-SPFarm cmdlet, 75

Backup-SPSite cmdlet, 76

BCS (Business Data Connectivity Service)

- applications, identifying, 150
- database, configuring, 151
- metadata objects, obtaining, 151-152
- models
 - exporting, 153
 - importing, 152

blocked file types, configuring Excel Services, 190-192

browser-enabled form templates, 114

C

cache timeout (Access Services), configuring, 204-205

cd command, 14

Central Administration, changing port number, 34

changing SharePoint farm passphrase, 34-35

cls command, 14

cmdlets, 12

- Backup-SPConfigurationDatabase, 74
- Backup-SPFarm, 75
- Backup-SPSite, 76
- Disable-SPFeature, 102
- Disable-SPSessionStateService, 172-173
- Disable-SPTimerJob, 46
- Dismount-SPContentDatabase, 71
- Enable-SPFeature, 101-102
- Enable-SPInfoPathFormTemplate, 119
- Enable-SPSessionStateService, 172
- Enable-SPTimerJob, 46
- Export-SPBusinessDataCatalog-Model, 153
- Get-EnterpriseSearchMetadata-ManagedProperty, 134-135
- Get-SPAAlternateURL, 55
- Get-SPBusinessDataCatalogMetadata-Object, 151-152
- Get-SPContentDatabase, 70-71
- Get-SPContentDeploymentJob, 108
- Get-SPContentDeploymentPath, 106-107
- Get-SPDatabase, 68-69
- Get-SPDesignerSettings, 41
- Get-SPEnterpriseSearchMetadata-Category, 129
- Get-SPEnterpriseSearchMetadata-CrawledProperty, 131-132
- Get-SPEnterpriseSearchService, 124
- Get-SPEnterpriseSearchService-Application, 127-128
- Get-SPEnterpriseSearchService-Instance, 124-125

- Get-SPExcelBlockedFileType, 190
- Get-SPExcelDataConnectionLibrary, 185-186
- Get-SPExcelDataProvider, 188-189
- Get-SPExcelFileLocation, 183-184
- Get-SPExcelUserDefinedFunction, 192-193
- Get-SPFarmConfig, 32
- Get-SPFeature, 100-101
- Get-SPManagedAccount, 36
- Get-SPManagedPath, 37-38
- Get-SPMetadataServiceApplication, 164
- Get-SPProcessAccount, 35-36
- Get-SPSearchService, 137-138
- Get-SPServiceApplication, 60, 150, 156
- Get-SPServiceApplicationProxy, 166-167
- Get-SPServiceInstance, 64-65, 138-139
- Get-SPSite, 82-84
- Get-SPSolution, 92-93
- Get-SPStateServiceApplication, 175
- Get-SPTimerJob, 44-45
- Get-SPUserSolution, 97-98
- Get-SPVisioSafeDataProvider, 216
- Get-SPWeb, 87-88
- Get-SPWebApplication, 50
- Get-SPWorkflowConfig, 42
- Get-WebApplication, 50-51
- Import-SPBusinessDataCatalog-Model, 152
- inline credentials, generating, 16
- Install-SharePoint, 23
- Install-SPFeature, 103-104
- Install-SPInfoPathFormTemplate, 118
- Install-SPService, 60
- Install-SPSolution, 92-94
- Install-SPUserSolution, 96-98
- Join-SharePointFarm, 26
- Merge-SPLogFile, 39-40
- Mount-SPContentDatabase, 72
- Move-SPSite, 89-90
- New-SecureStoreTargetApplication, 161
- New-SecureStoreTargetApplication cmdlet, 161
- New-SharePointFarm, 25
- New-SPAlternateURL, 54-55
- New-SPConfigurationDatabase, 73
- New-SPContentDatabase, 69-70
- New-SPContentDeploymentJob, 108
- New-SPContentDeploymentPath, 106
- New-SPEnterpriseSearchMetadata-Category, 128
- New-SPEnterpriseSearchMetadata-CrawledProperty, 130-131
- New-SPEnterpriseSearchMetadata-ManagedProperty cmdlet, 133
- New-SPEnterpriseSearchMetadata-Mapping, 135
- New-SPExcelDataConnectionLibrary, 185
- New-SPExcelDataProvider, 187-188
- New-SPExcelFileLocation, 182-183
- New-SPExcelUserDefinedFunction, 192
- New-SPLogFile, 40
- New-SPManagedPath, 38-39
- New-SPSecureStoreApplication, 161-162
- New-SPSecureStoreApplicationField, 159-160
- New-SPSite, 27, 84-85
- New-SPVisioSafeDataProvider, 214-215
- New-SPWeb, 28, 87
- New-SPWebApplication, 26-27
- New-SPWebApplicationExtension, 53-54
 - parameters, 12
 - Confirm, 15-16
 - viewing, 12-13
- Publish-SPServiceApplication, 62-63
- Remove-SPAlternateURL, 56-57
- Remove-SPConfigurationDatabase, 73-74
- Remove-SPContentDatabase, 72
- Remove-SPContentDeploymentJob, 109
- Remove-SPContentDeployment-Path, 107
- Remove-SPExcelBlockedFileType, 191-192

- Remove-SPExcelDataConnectionLibrary, 186-187
- Remove-SPExcelDataProvider, 189
- Remove-SPExcelFileLocation, 184
- Remove-SPExcelUserDefinedFunction, 193-194
- Remove-SPManagedPath, 39
- Remove-SPServiceApplication, 63
- Remove-SPSite, 84
- Remove-SPSocialItemByDate, 145-147
- Remove-SPSolution, 96
- Remove-SPUserSolution, 99-100
- Remove-SPVisiSafeDataProvider, 217
- Remove-SPWeb, 88-89
- Remove-SPWebApplication, 51
- Rename-SPServer, 37
- Restore-SPFarm, 75-76
- Restore-SPSite, 77
- Set-AccessServiceApplication, 204-212
- Set-SPAlternateURL, 56
- Set-SPCentralAdministration, 34
- Set-SPDesignerSettings, 41-42
- Set-SPEnterpriseSearchService, 126
- Set-SPFarmConfig, 32-34
- Set-SPInfoPathFormServices, 114-117
- Set-SPInfoPathWebServiceProxy, 120-121
- Set-SPPassPhrase, 34-35
- Set-SPProfileServiceApplication, 145
- Set-SPSearchService, 139-141
- Set-SPServiceApplication, 61-62
- Set-SPSessionStateService, 174
- Set-SPSite, 85-86
- Set-SPTimerJob, 47
- Set-SPVisioExternalData, 214
- Set-SPVisioPerformance, 218
- Set-SPWeb, 89
- Set-SPWebApplication, 52-53
- Set-SPWebTemplate, 36-37
- Set-SPWordConversionServiceApplication, 220-228
- Set-SPWorkflowConfig, 43-44
- SPStateServiceDatabase, 176-177
- Start-SPContentDeploymentJob, 109-110
- Start-SPTimerJob, 46-47
- switch parameters, 12
- Test-SPContentDatabase, 237
- Test-SPInfoPathFormTemplate, 118
- Uninstall-SPSolution, 94-95
- Uninstall-SPUserSolution, 98-99
- Update-SPProfilePhotoStore, 147
- Update-SPSecureStoreApplicationServerKey, 159
- Update-SPSecureStoreMasterKey, 158-159
- Update-SPSolution, 95-96
- Update-SPUserSolution, 99
- Upgrade-SPContentDatabase, 237-238
- verb-noun combinations, viewing, 12
- command history menu, displaying, 13-14**
- commands, console commands, 14**
- comments, removing from User Profile Service, 145-147**
- configuration databases**
 - backing up, 74
 - creating, 73
 - deleting, 73-74
 - restoring, 75
- configuration values (SharePoint farms), viewing, 32**
- configuring**
 - Access Services
 - application log size, 204
 - cache timeout, 204-205
 - queries, 206-210
 - tables, 207
 - user sessions, 211-212
 - BCS, database, 151
 - Enterprise Search
 - crawl account, 126
 - performance level, 126-127
 - Excel Services
 - blocked file types, 190-192
 - safe data providers, 187-189

- trusted data connection libraries, 185-187
- trusted file locations, 182-184
- user-defined functions, 192-194
- InfoPath Forms Services, session state, 116-117
- Managed Metadata Service
 - accounts, 165
 - connection options, 168-169
 - content type hub, 166
 - term store database, 165-166
- PPS
 - application setting, 202
 - trusted locations, 199-202
 - unattended service account, 196
- Secure Store Service, database, 157-158
- service applications, IIS settings, 61-62
- Session State Service, session timeout, 174
- SharePoint Designer, 41-42
- SharePoint farms, 24-25
- SharePoint Foundation Search
 - crawl account, 139-140
 - maximum backup duration, 141
 - search service performance level, 141-142
- site collections
 - lock state, 85-86
 - storage limits, 86
- User Profile Service, applications, 145
- Visio Graphics Services
 - performance settings, 218
 - unattended service account, 214
- web applications, 52-53
- Word Service
 - conversion processes, 220
 - conversion timeouts, 225
 - maximum conversion attempts, 225-226
 - supported conversion document format, 220-222
- Confirm parameter, 15-16**
- confirmation prompt, disabling, 15-16**
- connection options, Managed Metadata Service, configuring, 168-169**
- console commands, 14**
- content databases**
 - creating, 69-70
 - deleting, 72
 - displaying, 70-71
 - site collections, listing, 83
 - site collections, moving, 89-90
 - web applications, attaching, 72
 - web applications, detaching, 71
- content deployment jobs**
 - obtaining, 109
 - removing, 109
 - starting, 109-110
- content deployment paths**
 - obtaining, 107
 - removing, 107
- content type hub (Managed Metadata Service), configuring, 166**
- conversion processes (Word Services), configuring, 220**
- crawl accounts**
 - for Enterprise Search, configuring, 126
 - for SharePoint Foundation Search, configuring, 139-140
- crawled properties**
 - displaying, 131-132
 - retrieving, 132
- creating**
 - alternate access mappings, 54-55
 - application fields (Secure Store Service), 159-160
 - configuration databases, 73
 - content databases, 69-70
 - deployment jobs, 108
 - deployment paths, 106
 - managed path for web applications, 38-39
 - metadata crawled properties, 130-131
 - metadata managed properties, 133
 - metadata mappings, 135
 - site collections, 84-85
 - subsites, 28, 87

- top-level site collection, 27
- web applications, 51-52
- web applications for SharePoint farms, 26-27

credentials, generating inline credentials, 16

custom metadata categories, creating, 128

D

data connection response size, throttling, 115

databases

- BCS, configuring, 151
- configuration databases, creating, 73
- content databases
 - available site collections, listing, 83
 - creating, 69-70
 - site collections, moving, 89-90
- displaying, 68
- retrieving, 69
- Secure Store Service, configuring, 157-158

deactivating

- features, 102
- forms, 119
- sandboxed solutions, 98-99

deleting

- configuration databases, 73-74
- content databases, 72

deploying, solutions to web applications, 93-94

deployment jobs

- creating, 108
- displaying, 108

deployment paths

- creating, 106
- displaying, 106-107

detaching, web applications from content database, 71

dir command, 14

Disable-SPFeature cmdlet, 102

Disable-SPSessionStateService cmdlet, 172-173

Disable-SPTimerJob cmdlet, 46

disabling

- confirmation prompt, 15-16
- timer jobs, 46
- Word Service document scanning, 226-227

Dismount-SPContentDatabase cmdlet, 71

displaying

- alternate access mappings, 55
- available features, 100-101
- cmdlet information, 12
- cmdlets
 - parameters, 12-13
 - verb-noun combinations, 12
- command history menu, 13-14
- configured deployment paths on farms, 106-107
- crawled properties, 131-132
- databases, 68
- Enterprise Search Service applications, 127
- Enterprise Search Service information, 124
- Enterprise Search Service instances, 124-125
- farms
 - available solutions, 92
 - web applications, 50
- last executed statement, 13
- managed path of web applications, 37-38
- metadata categories, 129
- sandboxed solutions, 97
- search service information (SharePoint Foundation Search), 137-138
- service applications, 60
- session state information, 173
- Session State Service, 172-173
- SharePoint Foundation Search instances, 138-139
- site collections, 82
- subsites of site collections, 87-88
- timer jobs, 44-45
- web applications, content databases, 70-71

document scanning (Word Service),
disabling, 226-227

downloading, SPMModule, 22

E

Enable-SPFeature cmdlet, 101-102

Enable-SPInfoPathFormTemplate cmdlet,
119

Enable-SPSessionStateService cmdlet, 172

Enable-SPTimerJob cmdlet, 46

enabling

Secure Store Service auditing, 157

Session State Service, 172

timer jobs, 46

web services proxy, 120-121

encryption key (Secure Store Service),
refreshing, 159

Enterprise Search

applications

displaying, 127

retrieving, 128

crawl account, configuring, 126

crawled properties, retrieving, 132

custom metadata categories, creating,
128

instances

displaying, 124-125

retrieving, 124-125

managed properties

displaying, 133-134

retrieving, 134-135

metadata categories, displaying, 129

metadata crawled properties, creating,
130-131

metadata managed properties, creating,
133

metadata mappings, creating, 135

performance level, configuring, 126-127

service information, displaying, 124

Excel Services

blocked file types, configuring, 190-192

safe data providers, configuring,
187-189

trusted data connection libraries,
configuring, 185-187

trusted file locations, configuring,
182-184

user-defined functions, configuring,
192-194

exporting, BCS models, 153

Export-SPBusinessDataCatalogModel
cmdlet, 153

extending

farm solutions, 104

web applications, 53-54

F

F3 function key, displaying last executed
statement, 13

F7 function key, displaying command
history menu, 13-14

farms

backing up, 75

configuration databases, deleting,
73-74

configuration values

modifying, 32-33

viewing, 32

configuring, 24-25

deployment jobs, displaying, 108

deployment paths, displaying, 106-107

restoring, 76

servers

joining, 26

log files, merging, 39-40

log files, stopping, 40

renaming, 37

service applications

displaying, 60

installing, 60

removing, 63

retrieving, 61

sharing, 62-63

Session State Service applications,
identifying, 175

- site collections
 - displaying, 82
 - removing, 84
- site templates, renaming, 36-37

- solutions
 - adding, 92
 - displaying, 92
 - exporting, 104
 - removing, 96

- timer jobs
 - disabling, 46
 - displaying, 44-45
 - enabling, 46
 - retrieving, 45
 - scheduling, 47
 - starting, 46-47

- web applications
 - alternate access mapping, creating, 54-55
 - alternate access mappings, removing, 56-57
 - configuring, 52-53
 - creating, 26-27, 51-52
 - displaying, 50
 - extending, 53-54
 - managed path, creating, 38-39
 - managed path, displaying, 37-38
 - managed path, removing, 39
 - removing, 51
 - retrieving, 50-51
 - SharePoint Designer settings, reviewing, 41

features

- activating, 101-102
- deactivating, 102
- installing, 103
- listing, 100-101
- retrieving, 101
- uninstalling, 103-104

folders, path, adding to PSModulePath, 14-15

form templates, uploading multiple simultaneously, 118

forms

- activating, 119
- removing from InfoPath Forms Services, 119

G

generating

- inline credentials, 16
- Secure Store Service master key, 158-159

Get-EnterpriseSearchMetadataManaged-Property cmdlet, 134-135

Get-Help cmdlet, 12

Get-SPAlternateURL cmdlet, 55

Get-SPBusinessDataCatalogMetadataObject cmdlet, 151-152

Get-SPContentDatabase cmdlet, 70-71

Get-SPContentDeploymentJob cmdlet, 108

Get-SPContentDeploymentPath cmdlet, 106-107

Get-SPDatabase cmdlet, 68-69

Get-SPDesignerSettings cmdlet, 41

Get-SPEnterpriseSearchMetadataCategory cmdlet, 129

Get-SPEnterpriseSearchMetadataCrawled-Property cmdlet, 131-132

Get-SPEnterpriseSearchService cmdlet, 124

Get-SPEnterpriseSearchServiceApplication cmdlet, 127-128

Get-SPEnterpriseSearchServiceInstance cmdlet, 124-125

Get-SPExcelBlockedFileType cmdlet, 190

Get-SPExcelDataConnectionLibrary cmdlet, 185-186

Get-SPExcelDataProvider cmdlet, 188-189

Get-SPExcelFileLocation cmdlet, 183-184

Get-SPExcelUserDefinedFunction, 192-193

Get-SPFarmConfig cmdlet, 32

Get-SPFeature cmdlet, 100-101

Get-SPManagedAccount cmdlet, 36

Get-SPManagedPath cmdlet, 37-38

Get-SPMetadataServiceApplication cmdlet, 164

Get-SPProcessAccount cmdlet, 35-36
Get-SPSearchService cmdlet, 137-138
Get-SPSearchServiceInstance cmdlet, 138-139
Get-SPServiceApplication cmdlet, 60-61, 144-145, 150-151, 156, 164
Get-SPServiceApplicationProxy cmdlet, 166-167
Get-SPServiceInstance cmdlet, 64-65
Get-SPSessionStateService cmdlet, 173
Get-SPSite cmdlet, 82-84
Get-SPSolution cmdlet, 92-93
Get-SPStateServiceApplication cmdlet, 175
Get-SPTimerJob cmdlet, 44-45
Get-SPUserSolution cmdlet, 97-98
Get-SPVisioSafeDataProvider cmdlet, 216
Get-SPWeb cmdlet, 87-88
Get-SPWebApplication cmdlet, 50
Get-SPWorkflowConfig cmdlet, 42
Get-WebApplication cmdlet, 50-51

H-I

identifying

- BCS applications, 150
- Managed Metadata Service applications, 164
- Managed Metadata Service proxy, 166-167
- Secure Store Service applications, 156
- User Profile Service application, 144

IIS settings, configuring for service applications, 61-62

importing

- BCS models, 152
- SPModule components, 22

Import-SPBusinessDataCatalogModel cmdlet, 152

InfoPath Forms Services, 113-121

- authentication settings, modifying, 115-116
- browser-enabled form templates, 114
- data connection response size, throttling, 115

- data connection timeouts, throttling, 114-115
- form templates, uploading, 118
- forms
 - quiescing, 120
 - removing, 119
- session state, configuring, 116-117
- View State, 117
- web services proxy, enabling, 120-121

Insert key, text, overwriting, 13

installing

- BCS applications, retrieving, 150-151
- features, 103
- service applications, 60
- SharePoint
 - unattended installation, 23-24
 - without product key, 24
- SPModule, 22

Install-SharePoint cmdlet, 23

Install-SPFeature cmdlet, 103-104

Install-SPInfoPathFormTemplate cmdlet, 118

Install-SPService cmdlet, 60

Install-SPSolution cmdlet, 92-94

Install-SPUserSolution cmdlet, 96-98

instances

- Managed Metadata Service applications, retrieving, 164
- Secure Store Service, retrieving, 156-157
- SharePoint Foundation Search
 - displaying, 138-139
 - retrieving, 139
- User Profile Service applications, retrieving, 144-145

J

job monitoring (Word Service), modifying, 224-225

joining servers to SharePoint farms, 26

Join-SharePointFarm cmdlet, 26

K-L

last executed statement, displaying, 13

launching

management console, 7-8

PowerShell, 6

license state of SharePoint products, refreshing, 34

limiting Access Services template sizes, 212

listing

available features, 100-101

available site collections

on content databases, 83

on farms, 82

on web applications, 82-83

service applications, 60

lock state of site collections, setting, 85-86

log files

merging, 39-40

stopping, 40

M

managed accounts, retrieving, 36

Managed Metadata Service

accounts, configuring, 165

application proxy instance, obtaining, 167

applications

identifying, 164

instances, retrieving, 164

connection options, configuring, 168-169

content type hub, configuring, 166

proxy, identifying, 166-167

term store database, configuring, 165-166

managed path

creating for web applications, 38-39

removing from web applications, 39

managed properties

displaying, 133-134

retrieving, 134-135

management console, launching, 7-8

master key (Secure Store Service), generating, 158-159

maximum backup duration, SharePoint Foundation Search, configuring, 141

Merge-SPLogFile cmdlet, 39-40

merging, server log files, 39-40

metadata

categories, displaying, 129

crawled properties, creating, 130-131

managed properties, creating, 133

modifying

alternate access mapping zones, 56

content deployment configurations, 110

InfoPath Forms Services, authentication, 115-116

maximum memory usage (Word Service), 226

SharePoint farm configuration values, 32-33

subsites, 89

web applications, workflow configuration settings, 43-44

Word Service database information, 223-224

Mount-SPContentDatabase cmdlet, 72

Move-SPSite cmdlet, 89-90

moving site collections to different content database, 89-90

multiple form templates, uploading simultaneously, 118

N

New-SharePointFarm cmdlet, 25

New-SPAlternateURL cmdlet, 54-55

New-SPConfigurationDatabase cmdlet, 73

New-SPContentDatabase cmdlet, 69-70

New-SPContentDeploymentJob cmdlet, 108

New-SPContentDeploymentPath cmdlet, 106

New-SPEnterpriseSearchMetadataCategory cmdlet, 128

New-SPEnterpriseSearchMetadataCrawled-Property cmdlet, 130-131

New-SPEnterpriseSearchMetadataManaged-Property cmdlet, 133

New-SPEnterpriseSearchMetadataMapping cmdlet, 135

New-SPExcelBlockedFileType, 190

New-SPExcelBlockedFileType cmdlet, 190

New-SPExcelDataConnectionLibrary cmdlet, 185

New-SPExcelDataProvider cmdlet, 187-188

New-SPExcelFileLocation cmdlet, 182-183

New-SPExcelUserDefinedFunction cmdlet, 192

New-SPLogFile cmdlet, 40

New-SPManagedPath cmdlet, 38-39

New-SPSecureStoreApplication cmdlet, 161-162

New-SPSecureStoreApplicationField cmdlet, 159-160

New-SPSite cmdlet, 27, 84-85

New-SPVisioSafeDataProvider cmdlet, 214-215

New-SPWeb cmdlet, 28, 87

New-SPWebApplication cmdlet, 26-27, 51-52

New-SPWebApplicationExtension cmdlet, 53-54

O

obtaining

- BCS metadata objects, 151-152
- content deployment jobs, 109
- content deployment paths, 107
- databases, 69
- features, 101
- Managed Metadata Service application proxy instance, 167
- service instances, 64
- site collections, 83-84
- solutions, 93

Order By clauses (Access Services), setting maximum number, 206

outer joins (Access Services), enabling/disabling, 208-209

overwriting text, 13

P

parameters

- cmdlets, 12
- Confirm, 15-16
- switch parameters, 12
- viewing, 12-13

passphrase, changing in SharePoint farms, 34-35

performance

- of Enterprise Search, configuring, 126-127
- of SharePoint Foundation Search, configuring, 141-142

port number of Central Administration, changing, 34

PowerShell, running, 6

PPS (PerformancePoint Services)

- application settings, configuring, 202
- trusted content locations
 - creating, 197
 - displaying, 198-199
- trusted data source locations
 - creating, 198
 - displaying, 199
- trusted locations, configuring, 199-202
- unattended service account
 - configuring, 196
 - displaying, 196-197

Profile Photo Store, updating, 147

properties, SharePoint 2010 Management Shell, 8-9

PSCredential object, generating, 16

PSModulePath, folder path, adding, 14-15

Publish-SPServiceApplication cmdlet, 62-63

Q

queries (Access Services)

- configuring, 208-210
- maximum columns, adjusting, 205-206
- maximum rows, configuring, 206-207

quiesce, forms, 120

R

referencing, SharePoint assemblies, 17

refreshing

- encryption key (Secure Store Service), 159
- SharePoint product license state, 34

Registration folder, SharePoint 2010 Management Shell, 7-8

Remove-SPAlternateURL cmdlet, 56-57

Remove-SPConfigurationDatabase cmdlet, 73-74

Remove-SPContentDatabase cmdlet, 72

Remove-SPContentDeploymentJob cmdlet, 109

Remove-SPContentDeploymentPath cmdlet, 107

Remove-SPExcelBlockedFileType cmdlet, 191-192

Remove-SPExcelDataConnectionLibrary cmdlet, 186-187

Remove-SPExcelDataProvider cmdlet, 189

Remove-SPExcelFileLocation cmdlet, 184

Remove-SPExcelUserDefinedFunction cmdlet, 193-194

Remove-SPManagedPath cmdlet, 39

Remove-SPServiceApplication cmdlet, 63

Remove-SPSite cmdlet, 84

Remove-SPSocialItemByDate cmdlet, 145-147

Remove-SPSolution cmdlet, 96

Remove-SPUserSolution cmdlet, 99-100

Remove-SPVisiSafeDataProvider cmdlet, 217

Remove-SPWeb cmdlet, 88-89

Remove-SPWebApplication cmdlet, 51

removing

- alternate access mappings, 56-57
- configuration databases, 73-74
- content database from web applications, 72
- content deployment jobs, 109
- content deployment paths, 107
- forms from InfoPath Forms Services, 119

- managed path from web applications, 39

- safe data providers (Visio Graphics Service), 217

- service applications, 63

- site collections, 84

- solutions from farms, 96

- subsites from site collections, 88-89

- User Profile Service comments, 145-147

- web applications, 51

Rename-SPServer cmdlet, 37

renaming

- servers, 37

- Session State Service applications, 176

- SharePoint farm site templates, 36-37

Restore-SPFarm cmdlet, 75-76

Restore-SPSite cmdlet, 77

restoring

- configuration databases, 75

- site collections, 77

retracting, solutions, 94-95

retrieving

- crawled properties, 132

- databases, 69

- Enterprise Search Service applications, 128

- Enterprise Search Service instances, 124-125

- features, 101

- managed accounts, 36

- Managed Metadata Service application instances, 164

- managed properties, 134-135

- safe data providers (Visio Graphics Service), 216

- sandboxed solutions, 97-98

- Secure Store Service application instances, 156-157

- service applications, 61

- service instances, 64-65

- Session State Service applications, 175

SharePoint farms, 76

SharePoint Foundation Search instances, 139

system accounts, 35-36

timer jobs, 45

User Profile Service application instance, 144-145

web applications, 50-51

reviewing

SharePoint Designer settings, 41

web applications, workflow configuration settings, 42

running

management console, 7-8

PowerShell, 6

unsigned scripts, 15

S

safe data providers

Excel Services, configuring, 187-189

Visio Graphics Service

creating, 214-215

description, setting, 217

removing, 217

retrieving, 216

sandboxed solutions

activating, 98

adding to site collections, 96-97

deactivating, 98-99

displaying, 97

removing from site collections, 99-100

retrieving, 97-98

upgrading, 99

scheduling, timer jobs, 47

scripts, unsigned, running, 15

Secure Store Service

application entries, creating, 161-162

application fields, creating, 159-160

applications

identifying, 156

instances, retrieving, 156-157

auditing, enabling, 157

database, configuring, 157-158

encryption key, refreshing, 159

master key, generating, 158-159

target applications, creating, 161

servers

joining to SharePoint farms, 26

log files

merging, 39-40

stopping, 40

renaming, 37

service applications

displaying, 60

IIS settings, configuring, 61-62

installing, 60

removing, 63

retrieving, 61

sharing, 62-63

service instances

retrieving, 64-65

starting, 65

stopping, 66

session state, configuring for InfoPath Form Services, 116-117

Session State Service

applications

renaming, 176

retrieving, 175

disabling, 172-173

enabling, 172

session state information, displaying, 173

session state, timeout, configuring, 174

Set-AccessServiceApplication cmdlet, 204-212

Set-SPAlternateURL cmdlet, 56

Set-SPCentralAdministration cmdlet, 34

Set-SPDesignerSettings cmdlet, 41-42

Set-SPEnterpriseSearchService cmdlet, 126

Set-SPFarmConfig cmdlet, 32-34

Set-SPInfoPathFormServices cmdlet, 114-117

- Set-SPInfoPathWebServiceProxy cmdlet, 120-121**
- Set-SPPassPhrase cmdlet, 34-35**
- Set-SPProfileServiceApplication cmdlet, 145**
- Set-SPSearchService cmdlet, 139-141**
- Set-SPSecureStoreServiceApplication cmdlet, 157**
- Set-SPServiceApplication cmdlet, 61-62**
- Set-SPSessionStateService cmdlet, 174**
- Set-SPSite cmdlet, 85-86**
- Set-SPTimerJob cmdlet, 47**
- Set-SPVisioExternalData cmdlet, 214**
- Set-SPVisioPerformance cmdlet, 218**
- Set-SPWeb cmdlet, 89**
- Set-SPWebApplication cmdlet, 52-53**
- Set-SPWebTemplate cmdlet, 36-37**
- Set-SPWordConversionServiceApplication cmdlet, 220-228**
- Set-SPWorkflowConfig cmdlet, 43-44**
- setting, SharePoint farm configuration values, 32-33**
- SharePoint**
 - assemblies, referencing, 17
 - databases, displaying, 68
 - farms
 - backing up, 75
 - configuration values, modifying, 32-33
 - configuration values, viewing, 32-33
 - configuring, 24-25
 - license state, refreshing, 34
 - passphrase, changing, 34-35
 - removing, 84
 - restoring, 76
 - servers, joining, 26
 - servers, merging log files, 39-40
 - servers, renaming, 37
 - site templates, renaming, 36-37
 - timer jobs, disabling, 46
 - timer jobs, displaying, 44-45
 - timer jobs, enabling, 46
 - timer jobs, retrieving, 45
 - timer jobs, scheduling, 47
 - timer jobs, starting, 46-47
 - web applications, creating, 26-27, 51-52
 - web applications, creating managed path, 38-39
 - web applications, displaying managed path, 37-38
 - web applications, extending, 53-54
 - web applications, removing, 51
 - web applications, removing managed path, 39
 - installing
 - unattended installation, 23-24
 - without product key, 24
- SharePoint 2010 Management Shell, 7-8**
 - properties, 7-8
 - Registration folder, 7-8
- SharePoint Designer, configuring, 41-42**
- SharePoint Foundation Search, 137-142**
 - crawl account, configuring, 139-140
 - instances, displaying, 138-139
 - maximum backup duration, configuring, 141
 - search service information, displaying, 137-138
 - search service performance level, configuring, 141-142
- SharePoint PowerShell snap-in, adding, 6**
- sharing, service applications, 62-63**
- site collections**
 - backing up, 76
 - creating, 27, 84-85
 - displaying, 82
 - forms, activating/deactivating, 119
 - lock state, setting, 85-86
 - moving to different content database, 89-90
 - obtaining, 83-84
 - removing, 84
 - restoring, 77
 - sandboxed solutions
 - adding, 96-97

- displaying, 97
- removing, 99-100
- storage limits, configuring, 86
- subsites
 - creating, 28, 87
 - displaying, 87-88
 - modifying, 89
 - removing, 88-89
 - retrieving, 88
- on web applications, listing, 82-83
- site templates, renaming, 36-37**
- snap-ins, adding SharePoint PowerShell snap-in, 6**
- solutions**
 - adding to farms, 92
 - deploying to web applications, 93-94
 - displaying, 92
 - exporting, 104
 - obtaining, 93
 - removing from farms, 96
 - retracting, 94-95
 - sandboxed
 - deactivating, 98-99
 - retrieving, 97-98
 - upgrading, 99
 - sandboxed
 - activating, 98
 - adding to site collections, 96-97
 - displaying, 97
 - sandboxed, removing from site collections, 99-100
 - upgrading, 95-96
- SPModule**
 - downloading, 22
 - installing, 22
- SPStateServiceDatabase cmdlet, 176-177**
- starting**
 - content deployment jobs, 109-110
 - service instances, 65
 - timer jobs, 46-47
- Start-SPContentDeploymentJob cmdlet, 109-110**
- Start-SPTimerJob cmdlet, 46-47**

- stopping**
 - log files, 40
 - service instances, 66
- storage limits, of site collections, setting, 86**
- stsadm operations, 231-236**
- subsites**
 - creating, 28, 87
 - displaying, 87-88
 - modifying, 89
 - removing from site collections, 88-89
 - of site collections. retrieving, 88
- switch parameters, 12**
- syntax, cmdlet parameters, 12**
- system accounts, retrieving, 35-36**

T

- tables (Access Services), configuring, 207**
- target applications (Secure Store Service), creating, 161**
- templates**
 - browser-enabled form templates, 114
 - form templates, uploading, 118
- term store database (Managed Metadata Service), configuring, 165-166**
- Test-SPContentDatabase cmdlet, 237**
- Test-SPInfoPathFormTemplate cmdlet, 118**
- text, overwriting, 13**
- throttling**
 - Access Services memory utilization, 210
 - data connection response size, 115
 - data connection timeouts, 114-115
- throughput, configuring Word Service conversion, 220-222**
- timer jobs**
 - disabling, 46
 - displaying, 44-45
 - enabling, 46
 - retrieving, 45
 - scheduling, 47
 - starting, 46-47

top-level site collection

- creating, 27
- subsites, creating, 28

trusted content location (PPS)

- creating, 197
- displaying, 198-199

trusted data connection libraries, configuring Excel Services, 185-187**trusted data source locations (PPS), displaying, 199****trusted file locations, Excel Services, configuring, 182-184****type command, 14****U****unattended service account, PPS**

- configuring, 196
- displaying, 196-197

unattended SharePoint installation, 23-24**uninstalling features, 103-104****Uninstall-SPSolution cmdlet, 94-95****Uninstall-SPUserSolution cmdlet, 98-99****unsigned scripts, running, 15****Update-SPProfilePhotoStore cmdlet, 147****Update-SPSecureStoreApplicationServerKey cmdlet, 159****Update-SPSecureStoreMasterKey cmdlet, 158-159****Update-SPSolution cmdlet, 95-96****Update-SPUserSolution cmdlet, 99****updating Profile Photo Store, 147****Upgrade-SPContentDatabase cmdlet, 237-238****upgrading**

- sandboxed solutions, 99
- solutions, 95-96

uploading form templates, 118**User Profile Service****applications**

- comments, removing, 145-147
- configuring, 145
- identifying, 144
- instances, retrieving, 144-145
- Profile Photo Store, updating, 147

user sessions (Access Services), configuring, 211-212**user-defined functions, Excel Services, configuring, 192-194****V****verb-noun combinations (cmdlets), viewing, 12****View State (InfoPath Forms Service), 117****viewing**

- cmdlet information, 12
- cmdlets, verb-noun combinations, 12
- parameters, 12-13
- service applications, 60
- SharePoint farm configuration values, 32

Visio Graphics Services

- performance, configuring, 218
- safe data providers
 - creating, 214-215
 - description, setting, 217
 - displaying, 216
- unattended service account, configuring, 214

W**web applications**

- alternate access mappings
 - creating, 54-55
 - displaying, 55
 - removing, 56-57
 - zone, modifying, 56

configuration databases, creating, 73

configuring, 52-53

content databases

attaching, 72

deleting, 72

detaching, 71

displaying, 70-71

creating, 26-27, 51-52

displaying, 50

extending, 53-54

managed path

creating, 38-39

displaying, 37-38

removing, 39

removing, 51

retrieving, 50-51

SharePoint Designer settings,

reviewing, 41

site collections, listing, 82-83

solutions

deploying, 93-94

retracting, 94-95

workflow configuration settings

modifying, 43-44

reviewing, 42

web services proxy

enabling, 120-121

Word Service

conversion processes

configuring, 220

throughput, 220-222

conversion timeouts, configuring, 225

database, modifying, 223-224

document scanning, disabling, 226-227

embedded fonts in conversion,

disabling, 227-228

job monitoring, modifying, 224-225

maximum conversion attempts,

configuring, 225-226

maximum memory usage, modify-

ing, 226

recycle threshold, modifying, 228

supported conversion document format,

configuring, 220-222

workflow configuration settings (web applications)

modifying, 43-44

reviewing, 42

X-Y-Z

zones for alternate access mapping, modifying, 56