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**Configuring and Administering Microsoft®
SharePoint® 2010**
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Module 1

Introducing SharePoint 2010

Contents:

Lesson 1: Evaluating the Features of SharePoint 2010	2
Lesson 2: Preparing for SharePoint 2010	4
Lesson 4: Advanced Installation of SharePoint 2010	6

Lesson 1

Evaluating the Features of SharePoint 2010

Contents:

Additional Reading **3**

Additional Reading

Sites

- [Microsoft SharePoint 2010 Sites \(SP2010_Sites_Datasheet.pdf\)](#)

Communities

- [Microsoft SharePoint 2010 Communities](#)

Content

- [Microsoft SharePoint Server Content \(SP2010_Content_Datasheet.pdf\)](#)

Search

- [SharePoint Search Datasheet \(SP2010_Search_Datasheet.pdf\)](#)

Insights

- [Microsoft SharePoint Server 2010 Insights \(SP2010_Insights_Datasheet.pdf\)](#)

Composites

- [Microsoft SharePoint Composites \(SP2010_Composites_Datasheet.pdf\)](#)

Lesson 2

Preparing for SharePoint 2010

Contents:

Additional Reading

5

Additional Reading

Infrastructure Requirements

- [Hardware and software requirements \(SharePoint Server 2010\)](#)

Infrastructure Options

- [Setting Up the Development Environment for SharePoint Server](#)
- [Microsoft Online](#)

Overview of SharePoint Licensing

- [SharePoint editions](#)

Role, Software, and Configuration Prerequisites

- Details and links to all prerequisites can be found at [Hardware and software requirements \(SharePoint Server 2010\)](#).

Additional Prerequisites

- An [update](#) is available that provides additional features and improvements for ADO.NET Data Services in the .NET Framework 3.5 SP1 on a computer that is running Windows 7 or Windows Server 2008 R2.
- [Two issues](#) occur when you deploy an ASP.NET 2.0-based application on a server that is running IIS 7.0 or IIS 7.5 in Integrated mode.
- You receive [error 401.1](#) when you browse a Web site that uses Integrated Authentication and is hosted on IIS 5.1 or a later version.

Client Browser and Application Requirements

- [Plan Browser Support](#)

Lesson 4

Advanced Installation of SharePoint 2010

Contents:

Additional Reading	7
--------------------	---

Additional Reading

Scripted Configuration of SharePoint and the Farm

- [Quick start: Deploy single server in an isolated Hyper-V environment \(SharePoint Server 2010\)](#)
- [Install SharePoint Server 2010 by using Windows PowerShell](#)

Language Packs

- [Deploy language packs \(SharePoint Server 2010\)](#)

Module 2

Creating a SharePoint 2010 Intranet

Contents:

Lesson 1: Performing Initial Farm Configuration	2
Lesson 2: Configuring the SharePoint Logical Structure	4
Lesson 3: Exploring the SharePoint Web Application and Physical Architecture	6

Lesson 1

Performing Initial Farm Configuration

Contents:

Additional Reading

3

Additional Reading

Service Applications: An Overview

- Module 8, "Configuring and Securing SharePoint Services and Service Applications," details managed accounts.

Managed Accounts: An Overview

- Module 8, "Configuring and Securing SharePoint Services and Service Applications," details managed accounts.

Lesson 2

Configuring the SharePoint Logical Structure

Contents:

Additional Reading

5

Additional Reading

Create a Web Application

[Create a Web Application \(SharePoint Server 2010\)](#)

Create a Site Collection

- [Create a site collection \(SharePoint Server 2010\)](#)
- [Delete a site collection \(SharePoint Server 2010\)](#)

Site Collection Settings

- [Add or remove site collection administrators \(SharePoint Server 2010\)](#)
- [Manage site collection storage limits \(SharePoint Server 2010\)](#)

Managed Paths

- [SharePoint 101: Managed Paths](#)
- [Define managed paths \(SharePoint Server 2010\)](#)

Content Databases

- [SharePoint Server 2010 Capacity Management: Software Boundaries and Limits](#)
- [Add a content database \(SharePoint Server 2010\)](#)

Lesson 3

Exploring the SharePoint Web Application and Physical Architecture

Contents:

Additional Reading

7

Additional Reading

SharePoint Databases

- [Database types and descriptions \(SharePoint Server 2010\)](#)
- [Storage and SQL Server capacity planning and configuration \(SharePoint Server 2010\)](#)
- [MSDN, Tables and Views](#)

Module 3

Administering and Automating SharePoint

Contents:

Lesson 1: Configuring Central Administration	2
Lesson 2: Administering SharePoint from the Command Line	4
Lesson 3: Automating SharePoint Operations with Windows PowerShell	10

Lesson 1

Configuring Central Administration

Contents:

Additional Reading

3

Additional Reading

Central Administration

- [Change the Central Administration Web site port number \(SharePoint Server 2010\)](#)
- [Setadminport: Stsadm operation \(Office SharePoint Server\)](#)

Administrative Roles

- [Choose administrators and owners for the administration hierarchy \(SharePoint Server 2010\)](#)

Lesson 2

Administering SharePoint from the Command Line

Contents:

Detailed Demo Steps	5
Additional Reading	9

Detailed Demo Steps

Demonstration: Windows PowerShell Basics

Open the SharePoint 2010 Management Shell

To open the SharePoint 2010 Management Shell:

- Click **Start**, click **All Programs**, click **Microsoft SharePoint 2010 Products**, and then click **SharePoint 2010 Management Shell**.

Cmdlets

Windows PowerShell commands are called *cmdlets*, pronounced "command-lets."

List available cmdlets

The Get-Command cmdlet lists cmdlets.

- Type **Get-Command**.

Cmdlets are not case sensitive. The following cmdlets are equivalent:

- Get-Command
- get-command
- GET-COMMAND

Cmdlets always follow the *Verb-Noun*, also called the *Action-Object* format. The *Noun* is always singular.

For example, the cmdlet to list all processes running on a machine is *Get-Process*. To list all processes running on a machine:

- Type **Get-Process**.

There are a limited number of verbs, which can be listed with the *Get-Verb* cmdlet.

Nouns follow naming standards managed by the Windows PowerShell team. For example, all SharePoint nouns begin with *SP*.

List all SharePoint cmdlets

To list all SharePoint cmdlets:

- Type **Get-Command -noun SP* | more**.

Tab completion

Windows PowerShell supports *tab completion*, so you can type a few letters and then press TAB to complete your typing. This applies not only to paths, which is possible in Command Prompt as well, but also to cmdlets and their parameters.

To experience tab completion, perform the following steps in SharePoint 2010 Management Shell, which creates a new content database for a Web application:

1. Type **New-SPCont**, and then press TAB.

Windows PowerShell completes the name of the cmdlet, `New-SPContentDatabase`.

The first parameter of the `New-SPContentDatabase` cmdlet is the name of the database you want to create.

2. Press SPACEBAR, type **TestContentDB**, and then press SPACEBAR.
The next parameter is the name of the database server on which to create the content database.
3. Type **-Da**, and then press TAB.
Windows PowerShell completes the name of the parameter, `-DatabaseServer`.
4. Press SPACEBAR, type **SP2010-WFE1**, and then press SPACEBAR.
The other required parameter is the name of the Web application with which the content database is associated.
5. Type **-W**, and then press TAB.
Windows PowerShell completes the name of the parameter, `-WebApplication`.
6. Press SPACEBAR, and then type **"http://intranet.contoso.com"**.
7. Press CTRL+C to cancel the command without executing it.

Get-Help

Windows PowerShell cmdlets are well documented with a standard documentation format.

Get help about a cmdlet

To get help about a cmdlet, use the `Get-Help` cmdlet.

- Type **Get-Help <cmdlet>**, where *cmdlet* is the name of the cmdlet about which you want help.

The `Get-Help` cmdlet has the following syntax:

```
Get-Help cmdlet [-examples | -detailed | -full ]
```

Where optional parameters produce various types and levels of detail.

- **-examples.** Shows examples of the cmdlet
- **-detailed.** Shows detailed information about the cmdlet and each of its parameters. Also shows examples
- **-full.** Shows all documentation of the cmdlet

Without a parameter, the `Get-Help` cmdlet shows a synopsis, a more detailed description, and the syntax of the cmdlet.

For example, to get help, including examples, about the `New-SPContentDatabase` cmdlet, type the following:

```
Get-Help New-SPContentDatabase -detailed
```

Objects

Unlike Command Prompt, in which commands return text that then must be parsed and processed as text, Windows PowerShell returns *objects*—representations of the component itself.

For example, the `Get-Process` cmdlet returns objects representing processes on a computer. Type the following to retrieve all processes on a computer:

```
Get-Process
```

To limit the processes, use a parameter of the `Get-Process` cmdlet. For example, the `-Name` parameter limits processes returned based on their name. The following command retrieves all processes on a computer named `iexplore`:

```
Get-Process -Name iexplore
```

The `-Name` parameter is the default parameter for the `Get-Process` cmdlet, so it can be omitted:

```
Get-Process iexplore
```

In these examples, Windows PowerShell outputs several properties of each process it returns. You are not doing anything with the objects other than showing properties.

However, objects returned by a cmdlet can be stored in variables for later use or piped to a subsequent cmdlet as input for the cmdlet.

Pipeline

Windows PowerShell features a *pipeline*—a channel through which the output of a cmdlet can be passed to the following cmdlet. The pipeline is represented by the pipe character (`|`).

For example, type the following to stop all processes named `iexplore` on a computer:

```
Get-Process iexplore | Stop-Process
```

The `Get-Process` cmdlet gets running processes on a machine. The `Stop-Process` cmdlet stops processes. In this example, the `Get-Process` cmdlet gets processes named `iexplore`, and then passes the processes through the pipeline to the `Stop-Process` cmdlet.

As you learn later in this lesson, one of the most important differences between Windows PowerShell and Command Prompt is that cmdlets return *objects*, not text. In Command Prompt, commands return text, and the text can be piped to another command. In Windows PowerShell, cmdlets return objects, which can be manipulated in much more powerful ways further down the pipeline. For example, the `Get-Process` cmdlet returns objects representing processes named `iexplore`. The next command in the pipeline stops those processes, but it could just as easily be a cmdlet that changes the priority of the processes or that returns specific information about the processes, such as their memory and processor utilization.

Aliases

Windows PowerShell allows a cmdlet to have *aliases*, which are alternate names for the cmdlet. For example, `gps` and `ps` are aliases for `Get-Process`. Also, `kill` is an alias for `Stop-Process`.

List available aliases

The `Get-Alias` cmdlet lists aliases.

- Type **Get-Alias**.

List aliases for a specific cmdlet

To list aliases for a specific cmdlet:

- Type **Get-Alias -definition <cmdlet>**, where *cmdlet* is the cmdlet for which you want to list aliases.

For example, type the following to list aliases for `Stop-Process`:

```
Get-Alias -definition Stop-Process
```

If you see a cmdlet that is not following the *Verb-Noun* syntax, it is certain that the cmdlet is using an alias. Sometimes it can be difficult to interpret what a command is doing when an alias is used.

List the cmdlet associated with an alias

To list the cmdlet for a specific alias:

- Type **Get-Alias <Alias>**, where *Alias* is the alias you want to define.

For example, type the following to list the cmdlet for the alias kill:

```
Get-Alias kill
```

Variables

As you begin to find and create Windows PowerShell scripts, there's one more concept you must understand: *variables*. Variables are memory locations that store a value or object and are represented in Windows PowerShell by a name that starts with a dollar sign (\$).

To assign a variable—that is, to create and define a variable—simply use the following syntax:

```
$variable = value
```

For example, the following script stops all processes named iexplore:

```
$process = "iexplore" Get-Process $process | Stop-Process
```

The result is the same as the one-liner shown earlier. However, by separating the name of the process from the line that performs the action of finding and stopping the process, you can more easily modify the script. Or you could use the Read-Host cmdlet to prompt a user for the name of a process, instead of hard-wiring the name of the process into the script.

To assign a string value to a variable, enclose the value in single or double quotation marks, as shown earlier.

Variables can also store one or more objects. Examine the following script:

```
$process = Get-Process "iexplore"  
$process | Select ID, name, description $process | Stop-Process
```

In this example, the variable `$process` is set to the collection of processes named iexplore. The variable is then used in two following commands. The first reports the ID, name, and description of each process in `$process`. The second stops each process.

`$_`

The special variable `$_` represents the current object in the pipeline. You see examples of this later in the module.

For now, simply imagine that you are looping through a collection of objects—for example, each site collection in a Web application—and you want to do something to each object—for example, list the site collection administrators. As you loop through the collection, you can use the `$_` variable to represent the current site collection.

Again, you learn more about `$_` and put it to use later in the module.

Additional Reading

Introducing Windows PowerShell

- [About Windows PowerShell](#)

Demonstration: Windows PowerShell Basics

- [Understanding Important Windows PowerShell Concepts](#)
- [Learning Windows PowerShell Names](#)
- [Using Tab Expansion](#)
- [Getting Information About Commands](#)
- [Getting Detailed Help Information](#)
- [Understanding the Windows PowerShell Pipeline](#)
- [Using Familiar Command Names](#)
- [Using Variables to Store Objects](#)
- [Windows PowerShell on Microsoft TechNet](#)
- [Windows PowerShell Scripting Center](#)

Lesson 3

Automating SharePoint Operations with Windows PowerShell

Contents:

Additional Reading

11

Additional Reading

SharePoint 2010 Management Shell

- [PS Thread Options](#)

Delegate Permissions to Use Windows PowerShell

- [SharePoint 2010 Products administration by using Windows PowerShell](#)

Examine the SharePoint Logical Structure Using Windows PowerShell

- [Understanding the Windows PowerShell Pipeline](#)

Objects, Members, Properties, and Methods

- [Viewing Object Structure \(Get-Member\)](#)

Select, Sort, and Format Output

- [Selecting Parts of Objects \(Select-Object\)](#)
- [Sorting Objects](#)
- [Using Format Commands to Change Output View](#)
- [Redirecting Data with Out-* Cmdlets](#)

Filtering Objects

- [Removing Objects from the Pipeline \(Where-Object\)](#)

Variables

- [Using Variables to Store Objects](#)

Iteration (Looping)

- [Repeating a Task for Multiple Objects \(ForEach-Object\)](#)

Local, Global, and Remote Commands

- [Running Remote Commands](#)

Windows PowerShell Scripts

- [Running Windows PowerShell Scripts](#)
- [Stop Malicious Code in Windows PowerShell with Execution Policies](#)
- [Using Windows PowerShell to Sign Scripts with Digital Certificates](#)

Module 4

Configuring Content Management

Contents:

Lesson 1: Optimizing Content Storage and Access	2
Lesson 3: Configuring the Managed Metadata Service	4

Lesson 1

Optimizing Content Storage and Access

Contents:

Additional Reading

3

Additional Reading

Lists and Libraries

- [Deploying Shortcuts and Favorites to SharePoint Sites](#)

What Is New in Lists and Libraries?

- [What's New: List Enhancements](#)

Large Lists

- [Designing Large Lists and Maximizing List Performance](#)

Remote BLOB Storage

- [Overview of Remote BLOB Storage \(SharePoint Server 2010\)](#)
- [FILESTREAM Storage in SQL Server 2008](#)

Configure RBS for SharePoint 2010

- [How to: Enable FILESTREAM](#)
- [Install and configure Remote BLOB Storage \(RBS\) with the FILESTREAM provider \(SharePoint Server 2010\)](#)
- [Set a content database to use Remote Blob Storage \(RBS\) \(SharePoint Server 2010\)](#)
- [Migrate content into or out of Remote BLOB Storage \(RBS\) \(SharePoint Server 2010\)](#)

Lesson 3

Configuring the Managed Metadata Service

Contents:

Additional Reading	5
--------------------	---

Additional Reading

Manage Term Groups

- [Managed metadata input file format \(SharePoint Server 2010\)](#)

Term Store Design

- [Plan terms and term sets \(SharePoint Server 2010\)](#)

Benefits of the Managed Metadata Services

- [Managed metadata overview \(SharePoint Server 2010\)](#)

Manage Managed Metadata Service Applications

- [Create, update, publish, and delete a managed metadata service application \(SharePoint Server 2010\)](#)
- [Create, update, and delete a managed metadata service connection \(SharePoint Server 2010\)](#)
- [Plan to share terminology and content types \(SharePoint Server 2010\)](#)
- [Managed metadata service application overview \(SharePoint Server 2010\)](#)

Roles, Capabilities, and Permissions

- [Plan to share terminology and content types \(SharePoint Server 2010\)](#)
- [Managed metadata service application overview \(SharePoint Server 2010\)](#)

Module 5

Configuring Authentication

Contents:

Lesson 1: Understanding Classic SharePoint Authentication Providers **2**

Lesson 1

Understanding Classic SharePoint Authentication Providers

Contents:

Additional Reading

3

Additional Reading

Configure Kerberos Authentication

- [Configure Kerberos Authentication \(SharePoint Server 2010\)](#)
- [Kerberos \(Windows Server 2008 and Windows Server 2008 R2 Technical Library\)](#)
- [Kerberos Authentication Technical Reference \(Windows Security Collection\)](#)
- [Windows Authentication](#)
- [Kerberos Explained](#)
- [How to use SPNs when you configure Web applications that are hosted on Internet Information Services](#)
- [SETSPN](#)
- [How to create a SharePoint farm with Kerberos authentication, see *Configure Kerberos authentication \(SharePoint Server 2010\)*](#)

Module 8

Configuring and Securing SharePoint Services and Service Applications

Contents:

Lesson 1: Securing the Enterprise SharePoint Service	2
Lesson 2: Securing and Isolating Web Applications	4
Lesson 3: Services and Service Applications	6

Lesson 1

Securing the Enterprise SharePoint Service

Contents:

Additional Reading

3

Additional Reading

Track SharePoint Installation

- [Track SharePoint 2010 Installations by Service Connection Point](#)
- [Track or block SharePoint Server 2010 installations](#)

Lesson 2

Securing and Isolating Web Applications

Contents:

Additional Reading

5

Additional Reading

Secure Communications Using Secure Sockets Layer

- [How to enable "Active Directory Certificate Service" in Windows Server 2008 R2](#)
- [How to enable SSL on a SharePoint 2010 web application](#)

Lesson 3

Services and Service Applications

Contents:

Additional Reading

7

Additional Reading

Service Application Components

- [Services architecture planning](#)

Service Applications

- [Services architecture planning](#)

Module 9

User Profiles and Social Networking

Contents:

Lesson 1: Configuring User Profiles	2
Lesson 2: Implementing SharePoint 2010 Social Networking Features	4

Lesson 1

Configuring User Profiles

Contents:

Additional Reading

3

Additional Reading

Overview of User Profiles

- [Enable SharePoint Server 2010 Colleague in Outlook, 2010](#)
- [ADSI Edit](#)

Profile Properties

- [User profile properties](#)

Lesson 2

Implementing SharePoint 2010 Social Networking Features

Contents:

Additional Reading

5

Additional Reading

Configure Social Features

- [Enable or disable personal and social features for users or groups](#)
- [Activate or deactivate the SocialRibbonControl farm-level feature](#)
- [Plan policies for user profiles](#)

Audiences

- [Add, edit, or delete an audience \(SharePoint Server 2010\)](#)

Module 10

Administering and Configuring SharePoint Search

Contents:

Lesson 1: Configuring Search

2

Lesson 2: Refining Search

4

Lesson 1

Configuring Search

Contents:

Additional Reading

3

Additional Reading

SharePoint 2010 Enterprise Search Editions

- [SharePoint 2010 Enterprise Search](#)

SharePoint 2010 Search Architecture

- [What's new in enterprise search](#)

Scaling

- [Search Architectures](#)

Administration

- [Post-installation steps for search](#)

Crawl Configuration

- [Manage crawl rules](#)
- [Best practices for using crawl logs](#)

Query Configuration

- [Manage federated locations](#)
- [Manage metadata properties](#)
- [Manage search scopes](#)

Search Reporting

- [Use search administration reports](#)

Lesson 2

Refining Search

Contents:

Additional Reading

5

Additional Reading

Relevance

- [Relevance in SharePoint Search](#)

Module 11

Implementing Office Web Apps

Contents:

Lesson 2: Configuring Excel Services	2
Lesson 6: Implementing Access Services	4

Lesson 2

Configuring Excel Services

Contents:

Additional Reading

3

Additional Reading

Understanding Excel Services

- [Browser compatibility details](#)

Lesson 6

Implementing Access Services

Contents:

Additional Reading

5

Additional Reading

Publishing Access to SharePoint

- [Improving the Reach and Manageability of Access 2010 Database Applications with Microsoft Access Services.](#)

Module 13

Implementing Business Continuity

Contents:

Lesson 1: Protecting and Recovering Content	2
Lesson 2: Working with Backup and Restore for Disaster Recovery	4
Lesson 3: Implementing High Availability Solutions	6

Lesson 1

Protecting and Recovering Content

Contents:

Additional Reading

3

Additional Reading

Importing and Exporting Content

- [Export a site, list or document library](#)
- [Import a list or document library](#)

Lesson 2

Working with Backup and Restore for Disaster Recovery

Contents:

Additional Reading

5

Additional Reading

Protecting Content Using Backups

- [To back up a site collection](#)
- [Backup a content database](#)

Protecting the Farm Using Backups

- [To back up a farm](#)

Lesson 3

Implementing High Availability Solutions

Contents:

Additional Reading

7

Additional Reading

Implementing SQL Server Clustering

- [Getting Started with SQL Server 2008 R2 Failover Clustering](#)
- [Installing a SQL Server 2008 R2 Failover Cluster](#)

Implementing SQL Server Database Mirroring

- [Configure availability by using SQL Server database mirroring](#)
- [Sample script for configuring SQL Server database mirroring](#)

Implementing Log Shipping

- [Configure availability by using SQL Server database mirroring](#)
- [Sample script for configuring SQL Server database mirroring](#)

Module 14

Monitoring and Optimizing SharePoint Performance

Contents:

Lesson 1: Monitoring Logs	2
Lesson 3: Configuring Usage Reports and Web Analytics	4
Lesson 4: Monitoring and Optimizing SharePoint Performance	6

Lesson 1

Monitoring Logs

Contents:

Additional Reading

3

Additional Reading

Administer Unified Logging Service Logs

[Logging and events cmdlets](#)

View Administrative Reports

[View administrative reports](#)

Lesson 3

Configuring Usage Reports and Web Analytics

Contents:

Additional Reading

5

Additional Reading

View Web Analytics Usage Reports

[View Web Analytics reports](#)

Lesson 4

Monitoring and Optimizing SharePoint Performance

Contents:

Additional Reading

7

Additional Reading

Performance Monitoring

- [System Center Operations Manager](#)
- [Virtualization planning \(SharePoint Server 2010\)](#)

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