

Sitecore XP 7.5

Installing the Sitecore Experience Platform

Installation guide for administrators and developers



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Chapter 1

Introduction

This document describes how to install Sitecore Experience Platform 7.5.

The document contains the following chapters:

- Chapter 1 Introduction An introduction to the Sitecore Experience Platform 7.5 installation process
- Chapter 2 Sitecore CMS Requirements An outline of the installation requirements for Sitecore CMS
- Chapter 4 Installing the Sitecore CMS from the .ZIP File
 Step by step instructions for installing Sitecore CMS from the .ZIP file
- Chapter 5 Sitecore CMS Post-Installation Steps Information about necessary actions after installation
- Chapter 6 Configuring Sitecore Experience Database Step by step instructions for configuring Sitecore Experience Database
- **Chapter 7 Appendix** Supplementary instructions for configuring the environment



1.1 Getting Started

Sitecore Experience Platform (Sitecore XP) is the name of the entire Sitecore solution. It contains:

- Sitecore CMS the content management capabilities
- Sitecore xDB the experience marketing and scalability, and analytics features

These components are installed together. Sitecore XP is distributed as an .exe or .zip file.



1.2 Preparing to Install Sitecore CMS

For small implementations, including developer workstations and testing environments, Sitecore CMS and the database server can be installed on a single computer. For larger implementations, the database server is typically separated from the application server. The content authoring environment for business users is also frequently separated from the content delivery environment that is accessed by Internet users. For more information about scaling Sitecore CMS solutions, see the manual *Sitecore Scaling Guide*.

Sitecore CMS can be broken down into three logical components regardless of the database technology that is used:

- The IIS document root ("the website").
- The supporting file system for logs and data.
- The supporting relational databases. These databases are often stored under the supporting file system.

Configuration is stored in files such as web.config and the files under the /App Config folder.

For information about hardening security after you install Sitecore, see the Security Hardening Guide.

You can create an archive of your Sitecore CMS solution to move it from one computer to another.

For assistance or to report any discrepancies between this document and the product, please contact <u>http://support.sitecore.net/helpdesk/</u>.

Before installing Sitecore CMS, you should decide on the:

- Project name and acronym, for example, *ProjectName*.
- Acronym/prefix, for instance PN.
- Target installation file system root, for instance C:\inetpub\wwwroot\ProjectName.
- Database technology:
 - SQL Server 2014, SQL Server 2012, SQL Server 2008 R2 SP1, or SQL Express Editions of these databases.
 - MongoDB Database 2.6.x (for Sitecore xDB).
- Database location locally or on a remote server.
- Appropriate Sitecore license.
- Hardware.
- Administrative access to computers and databases.
- Access to Sitecore Developer Network (<u>http://sdn.sitecore.net</u>) contact a local sales office or partner manager.

IIS configuration – host headers, and so on.

1.2.1 Install Latest Updates

Visit Windows Update – <u>http://windowsupdate.microsoft.com</u> – to install all the appropriate service packs and security updates on all of your Sitecore CMS host and client computers.



1.2.2 UNC Share Not Supported

Sitecore CMS must be installed on a local drive, not a UNC share.

1.2.3 Sitecore Cannot Operate from a Virtual Directory

Do not create a virtual directory for Sitecore, because the product cannot operate from a virtual directory.

1.2.4 Install IIS before Updating .NET Framework

To reduce the number of ASP.NET configuration issues on Sitecore hosts, install IIS before installing or updating the .NET framework.

If you have installed or updated .NET framework before installing the IIS, refer to the following article that contains instructions about troubleshooting an ASP.NET installation:

http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/187d0e2c-8e89-49ada89d-e26e4d76ee68.mspx?mfr=true



Chapter 2

Sitecore CMS Requirements

This chapter describes the prerequisites, hardware, and software requirements for Sitecore CMS 7.5 host and client computers. In this document, the term "server" refers to a Windows OS Web server and the term "host" refers to an installation of Sitecore CMS on either a server or a workstation.

This chapter contains the following sections:

- Sitecore Hosting Environment Requirements
- Sitecore Client Requirements



2.1 Sitecore Hosting Environment Requirements

Sitecore CMS 7.5 has some specific requirements for the operating system, IIS Web Server, .NET Framework, and the database server.

2.1.1 IIS Requirements

Sitecore CMS can be hosted on the following IIS versions:

- IIS 8.5
- IIS 8.0
- IIS 7.5
- IIS 7.0

You must use the version of IIS that is supported by your operating system. For more information about IIS and operating systems, see Microsoft's documentation.

Sitecore CMS does not officially support any other ASP.NET web servers such as IIS Express, or Mono Web Server.

Important

Sitecore neither supports nor permits multiple IIS website definitions pointing to the same Sitecore web root.

2.1.2 Operating System Requirements

Sitecore CMS 7.5 is only compatible with the client and server operating systems that support .NET Framework 4.5.

Sitecore CMS can be hosted on the following Microsoft operating systems:

- Windows Server 2012 R2 (64-bit)
- Windows Server 2012 (64-bit)
- Windows Server 2008 R2 (64-bit) SP1+
- Windows Server 2008 (32/64-bit) SP2+
- Windows Vista (32/64-bit) SP2+
- Windows 8.1 (32/64-bit)
- Windows 8 (32/64-bit)
- Windows 7 (32/64-bit, Home Premium and higher) SP1+

Important

Go to Windows Update – <u>http://windowsupdate.microsoft.com</u> – and install all the appropriate service packs and security updates on all of your Sitecore CMS host and client computers.

Windows 8.1

Sitecore CMS supports the following editions of the Windows 8.1 operating system:

- Enterprise
- Professional



Core

Windows 8

Sitecore CMS supports the following editions of the Windows 8 operating system:

- Enterprise
- Professional
- Core

Windows 7

Sitecore CMS supports the following editions of the Windows 7 operating system:

- Ultimate
- Professional
- Enterprise

You can run Sitecore on Windows 7 Home Premium if you install IIS 7.5 on it. For more information about installing IIS 7.5 on Windows 7 Home Premium, see <u>http://technet.microsoft.com/en-us/library/cc731911.aspx</u>.

For more information about the feature limitations in the various Windows 7 editions, see <u>http://technet.microsoft.com/en-us/library/cc753473.aspx.</u>

Windows Vista

Sitecore CMS supports the following editions of the Windows Vista operating system:

- Business
- Ultimate
- Enterprise

The other editions of Vista, such as Home Basic, have IIS server limitations. For more information about IIS configuration on different editions of Windows Vista, see http://msmvps.com/blogs/bernard/archive/2007/04/03/why-you-need-vista-business-ultimate-for-iis-7.aspx and http://www.iis.net/learn/install/installing-iis-7/iis-features-and-vista-editions.

2.1.3 .NET Framework Requirements

Sitecore CMS requires .NET Framework 4.5.

Any available updates to the .NET Framework should be applied to every Sitecore host.

2.1.4 Visual Studio Requirements for Custom Solutions

Sitecore CMS requires Visual Studio 2012 or later.

The Sitecore code is compiled in .NET 4.5, and you must therefore use Visual Studio 2012 to compile your projects.



2.1.5 Database Requirements

Sitecore CMS supports the following database servers and their Express Editions:

- MS SQL Server 2008 R2 SP1
- MS SQL Server 2012
- MS SQL Server 2014
- MongoDB Database 2.6.x (for Sitecore xDB)

Note

Sitecore recommends that you run the database on a separate server from the web server.

2.1.6 Hardware Requirements for a Server Running a Single Sitecore Installation

Minimum configuration requirement:

- 4 core processor (4 threads)
- 8GB of RAM

Recommended configuration:

- 4 core processor (8 threads)
- 16GB of RAM

Note

The recommended hardware requirements are for running the software on a single computer. For more information about running Sitecore on different kinds of hardware, consult your Sitecore partner or technical sales representative.



2.2 Sitecore Client Requirements

This section describes the software and hardware requirements.

2.2.1 Software Requirements

Browser

Sitecore CMS clients are browser-based user interfaces and can run on the following browsers:

- Microsoft Internet Explorer 11
- Microsoft Internet Explorer 10
- Microsoft Internet Explorer 9
- Mozilla Firefox 17+
- Google Chrome 25+
- Apple Safari 6 for Mac OS (Windows is not supported by Apple)

Note

Sitecore CMS 7.5 supports all the current stable versions of these browsers unless stated otherwise. Sitecore CMS 7.5 does not support the Compatibility view in IE 9, IE 10, and IE 11.

For more information about configuring a browser, see the manual Browser Configuration Reference.

Silverlight

Some applications, such as xDB and Sitecore App Center require Microsoft Silverlight 4 or later.

Adobe Flash

To use the Report Designer in Sitecore xDB, you must also install Adobe Flash Player.

2.2.2 Hardware Requirements

- Processor: Intel Pentium 4, 2GHz or faster processor.
- RAM: 512 MB minimum, 1GB recommended.
- TCP/IP connection at 512Kbps or faster to the Sitecore CMS host.
- 1024x768 or greater screen resolution required for advanced operations.

You do not need to install any additional software on the Sitecore CMS clients that access Sitecore CMS servers.



Chapter 3 Installing the Sitecore CMS from the .EXE File

This chapter describes how to use the installation program to install the Sitecore CMS.

You can download the Sitecore installation program from the <u>Sitecore CMS Downloads</u> page on SDN.

This chapter contains the following sections:

- Windows Vista / Windows 7 / Windows 8 Pre-installation Steps
- The Installation Process
- Troubleshooting



3.1 Windows Vista / Windows 7 / Windows 8 Pre-installation Steps

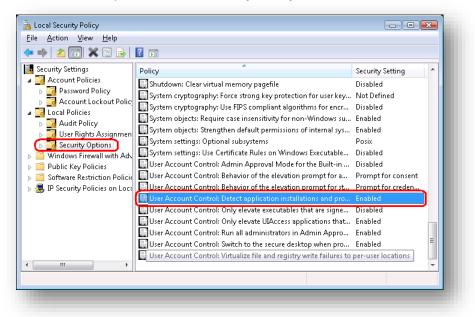
Before you can install Sitecore on Windows Vista or Windows 7, you must enable the *Detect application installations and prompt for elevation* UAC (User Account Control) configuration security policy.

3.1.1 The UAC (User Account Control) Configuration

To run the installation program on Windows Vista or Windows 7, the UAC (User Account Control) configuration security policy *Detect application installations and prompt for elevation* must be enabled (this setting is enabled by default).

To check if this setting has been changed on your machine:

- 1. Log in as an administrator.
- 2. Press WIN + R to open the **Run** window.
- 3. In the **Run** window, enter *secpol.msc* and press ENTER.
- 4. Click **Continue** to open the **Local Security Policy** window.



- 5. In the left-hand pane, expand the Local Policies node and select Security Options.
- 6. In the right-hand pane, scroll to the bottom of the list of policies.
- 7. Verify that the User Account Control: Detect application installations and prompt for elevation policy is set to Enabled.



3.2 The Installation Process

To start the installation, launch the *Sitecore 7.5. rev.XXXXX.exe* application, which starts the installation wizard. The installation wizard will guide you through the installation process.

This section describes the important steps in the wizard.

Note

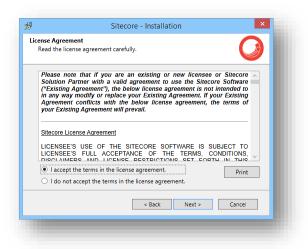
The Sitecore CMS configuration files are automatically modified according to the settings provided in the wizard.

Welcome Window



Click Next.

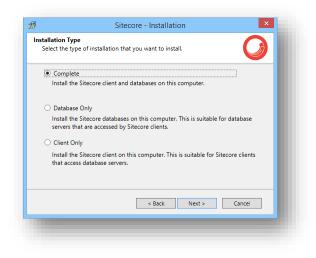
License Agreement



Read the license agreement and select the appropriate option. Click Next.



Installation Type



Select the type of installation that you want:

- Complete installs both the Sitecore databases and the Sitecore client.
- Database only only installs the Sitecore databases.
- Client only installs everything except the databases.

3.2.1 Complete

This installs both the Sitecore databases and the Sitecore client.

In the Installation Type window, select Complete.

To install Sitecore WebDAV features, you must have the WebClient service on your computer. If the WebClient service is not available, the following message appears:



Disregard this message if you do not want to install WebDAV features. Click Next.

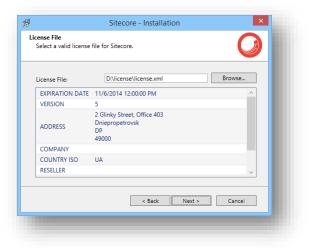


Instance Name

	Sitecore - Installation ×
nstance Name Give this new i	nstance of Sitecore a unique name.
Instance Name	: MySite
	ne identifies this instance of the application. It is also the default n IIS6 + Web site.
	< Back Next > Cancel

Give a unique name to this new instance of Sitecore. If you choose to create a new site in a later step, this name is also used as the hostname of an IIS web site.

License File



Browse to the license file that you want to use and then click Next.

Database Server

Select the database server.

If you select SQL Server, you see the following Database Server dialog box:



Select the database	e server and authentication m	ethod to use.	U	
Select the appropri	ate database vendor:	SQL Serve	r v	
	server from a list or click Bro available database servers. S at login.			
(local)\SQLEXPRESS				
Login ID:	sa			
Login ID: Password:	sa			
-	••••		Advanced	

Select the database vendor. Select the database server from a list or click **Browse** to see a list of all the database servers available. Enter the login id (SQL server user name) and the corresponding password. The installation program will use these credentials to access SQL server.

To set the database prefix options, click **Advanced** and the **Advanced Database Options** dialog box appears:

Verify that the wizard of t	an connect to the database server.
Database Prefix:	
Database Prefix:	MySite
Add this prefix to th	e names of the physical files.
Credentials to use in con	nection strings
Login ID:	sa
Password:	•••••

Specify the database prefix for this instance of Sitecore CMS and select whether to prefix physical files or not.

Enter the login id (SQL server user name) and corresponding password. Sitecore applications will use these credentials to access the SQL server. Click **OK**.

Click Next.



Destination Folder

estination Folder	core - Installation	
Select the location where Sitecor Sitecore in a different location.	re will be installed. Click Ch	hange to install
Install Sitecore in:		
C:\Inetpub\wwwroot\My	ySite	Change
For more options, click Advanced	d.	Advanced
	< Back Nex	xt > Cancel

Select the folder where the Sitecore web site will be installed.

To change the database folder and the folder where various data files will be stored — log files, packages, and so on — click **Advanced** and the **Destination Folders** dialog box appears:

🗐 sa	ecore Data:				
_	\Inetpub\ww	Browse			
	Sitecore Databases: C:\Inetpub\www.root\NewInstance1\Databases Browse				
м	DF Files:	C:\Inetpub\wwwroot\NewInstance1\Databa	Browse		
LD	F Files:	C:\Inetpub\wwwroot\NewInstance1\Databa	Browse		

Enter new destination folders and click **OK**.

Click Next.

Note

Make sure that SQL server has the permissions to write to the destination folder.



IIS Web Site

5 Web Site	ore - Installation	
Create a new Web site.		Ø
Web Site Name: MySite		
For more options, click Advanced.		Advanced
	< Back Next >	Cancel

Enter the name of the new website. Click **Advanced** to edit a website port, application pool name and its mode and .NET Framework version.

Specify	some additional parameters for IIS.
Applicatio	n Pool
Create a	oplication pool named MySiteAppPool
Nebsite	
Port:	80
	OK Cancel

Click OK.



The **IIS Web Site** dialog box will reflect the changes. In Sitecore CMS 7.5, the Sitecore ASP.NET MVC Integration is enabled by default, and you will see the corresponding field in the dialog box:

7	Sitecore - Installation ×
	Web Site Create a new Web site.
	Web Site Name: MySite
	Application Pool Name: NewInstance1AppPool Web Site Port: 80 .NET Version: 4
	For more options, click Advanced. Advanced
	< Back Next > Cancel

Click Next.

Ready to Install Sitecore



Review the options you selected. Click **Install** to install Sitecore XP.

A progress window informs you about the installation process.

3.2.2 Databases Only

This section describes the Databases Only installation. This option only installs the Sitecore databases.

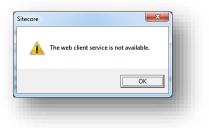


Installation Type



Select the Databases only option to only install the databases.

To install Sitecore WebDAV features, you must have the WebClient service on your computer. If not, the following message appears:



Disregard this message if you do not want to install WebDAV features.

Instance Name

	Sitecore	- Installation	l .	×
Web Site Create a new Web site	e.			Ø
Web Site Name: My	Site			
For more options, clici	k Advanced.			Advanced
		< Back	Next >	Cancel

Give this new instance of Sitecore XP a unique name. If you choose to create a new site on a later step, this name is also used as the hostname of an IIS web site.

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Database Server

Select the database server.

If you select SQL Server, you see the following Database Server dialog box:

Select the database	server and authentication me	thod to use.	U	
Select the appropria	ite database vendor:	SQL Serve	r V	
	server from a list or click Brow available database servers. Se at login.			
(local)\SQLEXPRESS V Browse				
Login ID:	sa			
Password:	••••			
For more options, c	lick Advanced.		Advanced	
	< Back	Next >	Cancel	

Select the database server from a list or click **Browse** to see a list of all the database servers that are available. Enter the login ID — SQL Server user name — and the corresponding password.

To set the database prefix options, click **Advanced** and the **Check the Advanced options of the database server** dialog box appears.

Advanced Dat Check the a		ns ons for the databa	se server.			
Verify that Database Pre		an connect to the d	atabase sen	ver.		
Database P	refix:	MySite				
				ОК	Cance	el 🛛

Specify the database prefix for this instance of Sitecore and select whether to prefix physical files or not. Click **OK**.



Destination Folder

)estinatio	n Folder		
	ne location where Sitecore will be	installed. Click Change to insta	a 🌔 🐊 📗
Sitecore	in a different location.		
Sitecore E	Databases:		
5	C:\Inetpub\wwwroot\NewInstand	:e1\Databases B	rowse
For mor	e options, click Advanced.	Ad	vanced
		Back Next >	Cancel
			concer

Select the location where the databases will be installed.

To change the database folder and the folder where various database files will be stored, click **Advanced**. The **Destination Folders** dialog box appears:



Enter destination folders and click **OK**.



Ready to Install Sitecore

eview the options you selecter istall Sitecore.	d. Click Back to change an option or click Install to
Option:	Value:
Instance Name:	NewInstance1
License File:	D:\license\license.xml
Database Server:	(local)\SQLEXPRESS
Destination Folder:	C:\Inetpub\wwwroot\NewInstance1
Web Site Name:	NewInstance1
	< Back Cancel

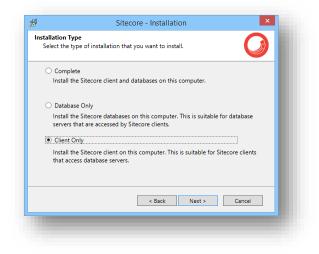
Review the options you selected. Click Install to install Sitecore CMS.

A progress window informs you about the installation process.

3.2.3 Client Only Installation

This section describes the Client Only installation. This installs everything except databases.

Installation Type



Select the Client only option.



To install the Sitecore WebDAV features, you must have the WebClient service on your computer. If not, the following message appears:

Sitecore	
	The web client service is not available.
	OK

Disregard this message if you do not want to install WebDAV features. Click Next.

Instance Name

	Sitecore - Installation
nstance N Give thi	ame new instance of Sitecore a unique name.
Instance	Name: MySite
	nis name identifies this instance of the application. It is also the default e of an IIS6 + Web site.
	< Back Next > Cancel

Give a unique name to the new instance of Sitecore CMS. If you choose to create a new site on a later step, the hostname of an IIS web site will also use this name.

License File

icense File:	D:\license\license.xml	[Browse
EXPIRATION DATE	11/6/2014 12:00:00 PM		^
VERSION	5		
ADDRESS	2 Glinky Street, Office 403 Dniepropetrovsk DP 49000		
COMPANY			
COUNTRY ISO	UA		
RESELLER			~

Select the license file. Click Next.

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Database Server

Select the database server.

If you have selected SQL Server, you see the following Database Server dialog box:

Select the appropri	ate database vendor:	SQL Serve	r Y
the password for the Database Server:	-	v	Browse
Login ID:	sa		
Login ID: Password:	sa •••••		
	•••••		Advanced

Select the database vendor. Select the database server from a list or click **Browse** to see a list of all the database servers available. Enter the login id — SQL Server user name — and the corresponding password. The installation program will use these credentials to access the SQL server.

To set the database prefix options, click **Advanced** and the **Check the advanced options of the database server** dialog box appears.

Check the advanced opt	ions for the database server.	
Verify that the wizard c	an connect to the database server.	
Database Prefix: Database Prefix:	MySite	
		_
	OK Cancel	

Specify the database prefix for this instance of Sitecore XP and select whether to prefix physical files or not. Click **OK**.

Click Next.



Destination Folder

Select	ion Folder : the location where Sitecore will be installed. Click Change to install
Sheee	
Install S	itecore in:
	C:\Inetpub\wwwroot\MySite Change
-	
For m	ore options, click Advanced. Advanced
	< Back Next > Cancel

Select the location where Sitecore will be installed.

To change the database folder and the folder where various database files will be stored, click **Advanced** and the **Destination Folders** dialog box appears:

7		Sitecore - Installation	×				
	nation Folders lect the location	ns where the database files will be installed.	Ø				
1	Sitecore Data:						
	C:\Inetpub\w	wwroot\MySite\Data	Browse				
	MDF Files:	C:\Inetpub\wwwroot\NewInstance1\Databa	Browse				
	LDF Files:	C:\Inetpub\wwwroot\NewInstance1\Databa	Browse				
		ОК	Cancel				

Enter destination folders and click **OK**.



IIS Web Site

I S Web Site Create a new Web site.	Ø
Web Site Name: MySite	
For more options, click Advanced.	Advanced
< Back	Next > Cancel

Enter the name of the new website.

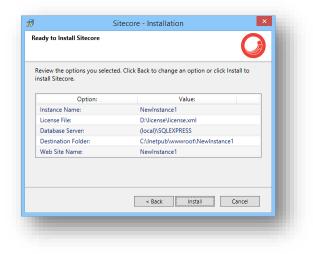
Click **Advanced** to edit a website port, application pool name and mode, .NET Framework version.

ļ	Sitecore - Installation ×
	ed Settings ome additional parameters for IIS.
Application Create ap	n Pool plication pool named MySiteAppPool
Website Port:	80
	OK Cancel

Click OK.



Ready to Install Sitecore



Review the options you selected. Click Install to install Sitecore.

A progress window informs you about the installation process.



3.3 Troubleshooting

If the installation program fails

If the installation program fails, archive the log file and attach it to your support request.

If the installation program fails after you click **Install** in the **Ready to Install** dialog box, the log file is automatically created at: %TEMP%\SitecoreInstaller.log.

Note

The log file is recreated during each installation. You should therefore copy it right after an unsuccessful installation. Otherwise, the file will be overwritten.

"Database '...' cannot be upgraded" error message while using SQL Server

When using SQL Server the installer returns the "Database '...' cannot be upgraded" error message, the user account configured to run the SQL server application must have Full access permissions to the website root folder. Typically, the SQL server application runs in the context of the NETWORK SERVICE account.



Chapter 4

Installing the Sitecore CMS from the .ZIP File

This chapter describes how to install Sitecore CMS 7.5 from the ZIP file of the website root.

This chapter contains the following sections:

- Installation Process Overview
- Configuring Folder and Registry Permissions
- Configuring the IIS
- Microsoft SQL Server Configuration
- Uninstalling Sitecore CMS



4.1 Installation Process Overview

This section describes how to install Sitecore from a ZIP archive of the Sitecore CMS site root.

You can download the Sitecore CMS ZIP archive from the SDN.

To install an instance of Sitecore:

- 1. Install Microsoft .NET Framework 4.5.
- 2. Make sure the ASP.NET feature is enabled for Internet Information Services.
- 3. Choose a parent directory path for the project, for example C:\InetPub\wwwroot\ProjectName.
- 4. Extract the .zip archive to create the following folders:

```
C:\InetPub\wwwroot\ProjectName\Website
C:\InetPub\wwwroot\ProjectName\Data
C:\InetPub\wwwroot\ProjectName\Databases
```

- 5. Set permissions as described in the section Configuring Folder and Registry Permissions.
- 6. Place the appropriate license.xml file to the /Data folder. The location of the /Data folder is determined by the following setting in the web.config file:

```
<sc.variable name="dataFolder" value="/data" />
```

This setting should be changed to the absolute location of the folder, such as: C:\InetPub\wwwroot\ProjectName\Data

- 7. Attach SQL databases from /Databases folder to the SQL server.
- 8. Edit the ConnectionStrings.config file located in the /Website/App Config/ folder.

Enter a connection string for each database, for example:

```
<add name="core" connectionString="user
id= sql server user ;password= user password ;Data
Source=_sqlserver_;Database=_core_database_name_" />
```

- 9. In the IIS, configure the website as described in the section *Configuring the IIS*.
- 10. Configure the Internet Explorer browser as described in the manual *Browser Configuration Reference*.
- 11. Start the browser and enter the following address in the address bar:

http://ProjectName/sitecore



You should see the Sitecore login screen:

Welcome to Sitecore	License Holder: Sitecore Ukraine License ID: 20131106213237
User Name: Password: Remember me Login Forgot Your Password Change Password	Stecore.NET 7.5 (rev. 140424) Browser Notes You are using Firefox.
Options	Sitecore supports Content Editor, Page Editor (Sitecore 6.), WebEdit (Sitecore 5.), Preview, and Workbox for this browser. The remaining user interfaces are not supported.

The default password for the Admin user is "b".



4.2 Configuring Folder and Registry Permissions

This section describes the NTFS permissions for folders and files and Windows registry permissions required by Sitecore CMS for proper functioning. For practical advice on how to edit NTFS permissions and registry permissions, please refer to the section *Server Configuration*, and to the MSDN website and Windows help application.

4.2.1 File System Permissions for Anonymous Requests

Certain types of browser requests (generally for directory lookups and static resources) are executed with the permissions of the anonymous Internet user account. This account requires *Read* permission to all the files, folders, and subfolders under the /Website folder.

The following table contains the default name for this account in different versions of IIS:

IIS version	Default anonymous Internet user account name
7, 7.5, 8.0, 8.5	IUSR

If IIS is not configured to use the default IUSR account for processing anonymous requests or if Anonymous authentication is not enabled for the website, the aforementioned permissions should be granted to the corresponding account(s).

4.2.2 File System Permissions for ASP.NET Requests

Sitecore CMS executes requests for ASP.NET resources and all the .NET code running within the application with the permissions of the account configured as an identity for the website's application pool.

This account requires *Modify* permissions to all the files, folders, and subfolders under the /Website and /Data folders.

The following table contains the default account used for processing ASP.NET requests in the different versions of IIS:

IIS version	Default ASP.NET account name
7	NETWORK SERVICE
7.5	NETWORK SERVICE
8.0	NETWORK SERVICE
8.5	NETWORK SERVICE

IIS 7 and later allows you to change the user account that is used for processing ASP.NET requests.

If you select a different user account to process the ASP.NET requests, you must grant this account the aforementioned permissions.

Note

For more information about application pool identities and specifically about assigning rights to the AppPoolIdentity account, see the article: <u>http://learn.iis.net/page.aspx/624/application-pool-identities/</u>

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4.2.3 File System Permissions for System Folders

To be able to load .NET runtime and ASP.NET resources used for processing the ASP.NET requests, the worker process hosting the Sitecore CMS application requires access to multiple system files and folders that are not distributed as a part of the Sitecore CMS but installed as a part of Windows OS and .NET framework.

Most of these permissions are granted by IIS to all ASP.NET applications automatically making the application pool identity account a member of the *IIS_IUSRS* security group.

However, on certain environments it is necessary to manually grant permissions for the application pool identity to the following system locations:

Default location	Required permissions	Comments
%WINDIR%\temp\	Modify	
%WINDIR%\Globalization\	Modify	Required for registering custom languages by the .NET Framework correctly
%PROGRAMDATA%\Microsoft\Crypto	Modify	Required for storing cryptographic keys used for encrypting/decrypting data

Note

ASP.NET and/or IUSR account require the modify access rights to the \temp folder to install Sitecore CMS.

These variables have the following default values:

Variable	Default value
%WINDIR%	C:\Windows
%PROGRAMDATA%	C:\ProgramData for IIS 7 and later

Note

For more information about built-in groups and accounts in IIS, refer to http://learn.iis.net/page.aspx/140/understanding-built-in-user-and-group-accounts-in-iis-7/

4.2.4 File System Permissions for SQL Server Files

If you are using SQL Server, the user account configured to run the SQL server application requires *Full access* to the /Databases folder containing MDF and LDF database files. Typically, the SQL Server application runs within the context of the *NETWORK SERVICE* account.

4.2.5 Windows Registry Permissions

Sitecore CMS contains a built-in functionality that reads and updates the Windows performance counters that can be used for monitoring and troubleshooting the Sitecore application. This functionality requires access to Windows registry keys. This access can be granted by making the application pool identity a member of the built-in *Performance Monitor Users* group.

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Note

If the required registry permissions are not granted, the "Access to the registry key 'Global' is denied" error will be written in the Sitecore log files whenever the application attempts to access Windows performance counters.

To avoid the error, you must prevent Sitecore from updating the performance counters. To do that, in the web.config file, set the Counters.Enabled setting to *false*.

Adding an Account to a User Group

To add a Windows account to a user group, use the net localgroup command.

For example, to add the *NETWORK SERVICE* account to the *Performance Monitor Users* group, run the following command on the server hosting the Sitecore CMS web application:

net localgroup "Performance Monitor Users" /add "NETWORK SERVICE"

An IIS reset is required for the changes to take effect.

For more information about the net localgroup command, refer to http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/net_localgroup.mspx



4.3 Configuring the IIS

The following sections describe how to configure different versions of IIS (versions 7, 7.5, 8 and 8.5) for Sitecore CMS.

The following list shows which operating systems use which IIS versions:

- IIS 7 Windows Server 2008, Windows Vista
- IIS 7.5 Windows Server 2008 R2 SP1, Windows 7
- IIS 8 Windows Server 2012, Windows 8
- IIS 8.5 Windows Server 2012 R2, Windows 8.1

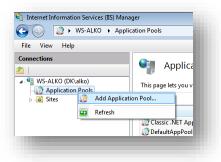
4.3.1 IIS 7, 7.5, 8, 8.5

This section contains the instructions for IIS 7, 7.5, 8 and 8.5.

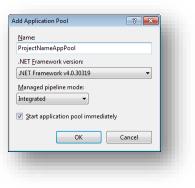
Create the Application Pool

To create the application pool for Sitecore on IIS 7, 7.5, 8 and 8.5 (Windows 7, Windows Server 2008, Windows 8, and Windows 8.1):

- 1. Start the IIS Manager.
- 2. In the **Connections** panel, select **Application Pools**.



3. Right-click Application Pools and click Add Application Pool.





4. In the Add Application Pool dialog box, enter the following values:

Field	Value
Name	ProjectNameAppPool
.NET Framework version	4.0 XXXXX
Managed pipeline mode	Integrated

5. Click OK.

6. In the Application Pools panel, select the application pool you have just created.

<u>File V</u> iew <u>H</u> elp						
Connections	Application Pools This page lets you view and manage pools are associated with worker pro isolation among different application Fitter: Name Asp. NET v4.0 Asp. NET v4.0 Cassic ANET AppPool Constancel AppPool NicamAppPool ProjectNameAppPool Sc66 Sc66 Constancel	the list of app cesses, contai 15.	applications, and pr		 	Add Application Pool Set Application Pool Defaults Application Pool Tasks Start Stop Recycle Edit Application Pool Basic Settings Recycling Recycling Reame Remove View Applications Help Online Help
ady	Features View Content View			+		G



7. In the Actions panel, click Advanced Settings.

	(General)		
E	NET Framework Version	v4.0	
	Enable 32-Bit Applications	False	
1	Managed Pipeline Mode	Integrated	
I	Name	ProjectNameAppPool	E
0	Queue Length	1000	
5	Start Automatically	True	
= (CPU		
	Limit	0	
l	Limit Action	NoAction	
l	Limit Interval (minutes)	5	
	Processor Affinity Enabled	False	
	Processor Affinity Mask	4294967295	
3	Process Model		
	Identity	ApplicationPoolIdentity	
	Idle Time-out (minutes)	20	
- I	Load User Profile	True	
	Maximum Worker Processes	1	
ł	Ping Enabled	True	*

- 8. In the **Advanced Settings** dialog box:
 - Set the .NET Framework version to v4.0.
 - Set the **Identity** setting to the built-in account called *ApplicationPoolIdentity* or *NetworkService*.
 - Ensure that the Maximum Worker Processes setting is set to 1.
 - Set the **Load User Profile** setting to *True*.

Create the Website

To configure the website:

- 1. Start the **IIS Manager**.
- 2. In the Connections panel, expand Sites.

ا 🖻 🕥 💽	WS-ALKO Sites	•
<u>F</u> ile <u>V</u> iew <u>H</u> e	lp	
Connections		Filter:
Applicati		Name
	Add Web Site <u>R</u> efresh	efai :ms
Š 🍝 📠	Switch to Content Vie	ew lySi
⊳ 😌 MyTe ⊳ 🈂 SC64I		MyTe



3. Right-click *Sites* and then click **Add Website**.

Site name:	Application pool:		
ProjectName	ProjectNameAppPool		S <u>e</u> lect
Content Directory <u>P</u> hysical path:			
C:\InetPub\ProjectName\W	ebsite		
Pass-through authenticatio	n		
Connect as Test Se	ttings		
Binding			
<u>I</u> ype: <u>I</u> P ad	dress:	Port:	
http 👻 All I	Jnassigned	▼ 80	
Host name:			
projectname			
Example: www.contoso.com	n or marketing.contoso.com		
Start Web site immediately			
		or 1	Cancel
		ОК	Cancel

4. In the Add Website dialog box, fill in the required fields, for example:

Field	Value
Site name	ProjectName
Application pool	ProjectNameAppPool
Physical path	C:\InetPub\ProjectName\Website
Host name	Projectname

- 5. Click OK.
- 6. Open the hosts file C:\Windows\System32\drivers\etc and add the following line:

127.0.0.1 projectname

Now you can access your website by entering the http://projectname address in your browser.

Limit Access to Anonymous Users

You should prevent anonymous users from accessing the following folders:

- /App_Config
- /sitecore/admin
- /sitecore/debug
- /sitecore/shell/WebService

For example, to limit anonymous access to the /App_Config folder:

1. Open the IIS.



2. In the **Connections** panel, browse to your Sitecore site and select the /App Config folder.

- 3. In the **App_Config Home** panel, double-click **Authentication** to configure the authentication settings for this folder.
- 4. In the Authentication panel, ensure that the Anonymous Authentication is disabled.

🚱 💿 📔 🕨 WS-ALKO 🕨 Sites	▶ ecmsite.net ▶ App_Config ▶			🖸 🛛 🟠 😥 🗸
<u>F</u> ile <u>V</u> iew <u>H</u> elp				
Connections	Group by: No Grouping			Actions Enable Edit
	Name	Status	Response Type	Help Online Help
👂 🌍 Default Web Site	Anonymous Authentication	Disabled		Online Help
 ecmsite.net 	ASP.NET Impersonation Forms Authentication	Disabled Disabled	HTTP 302 Logi	

- 5. Repeat steps 2-4 for the other folders you want to secure.
- 6. Restart the IIS.



4.4 Microsoft SQL Server Configuration

When you install Microsoft SQL Server, select **Mixed Mode** authentication (Windows Authentication and SQL Server Authentication).

If you have already installed MS SQL and you need to change the security authentication mode, refer to this article: <u>http://technet.microsoft.com/en-us/library/ms188670.aspx</u>

Note

You can also use Windows authentication to connect to the SQL server. For more information on connecting to the SQL server, see <u>http://msdn.microsoft.com/en-us/library/ff647396.aspx</u>

4.4.1 Creating a Database Account for Sitecore CMS Databases on SQL Server 2008 and 2012

This section describes how to create a database account for Sitecore databases under SQL Server 2008 with the minimum required permissions.

- 1. Start SQL Server Management Studio.
- 2. Make sure the Sitecore databases are attached.
- 3. In **SQL Server Management Studio**, in the **Object Explorer** pane, expand the *Security* folder.
- 4. Right-click the *Logins* folder and click **New Login** to create a new login.

Server: (ocal) Connection: sa 27 Mew connection properties Progress Pready Default gatabase: master Provider Provider Provider Provider Provider Provider Provider	electapage General	🔄 Script 🔻 🛐 Help				
Connection Server: Bay Wew connection properties Server: Bay Wew connection properties Credential Progress Default gatabase:	User Mapping Securables	Windows authentication	SC user			S <u>e</u> arch
		Password:	•••••			
Image: Connection properties Image: New connection propertis Image: Net		Confirm password:	•••••			
Image: Connection properties Image: Progress Im		Specify old password				
Image: Connection properties Image: Server: flocal		Old password:				
Image: set of the set of th		Enforce password policy	(
Image of the certificate Image of the certificate Image of the certificate <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
O Mapped to asymmetric key O Map to Credential Mapped Credentials Credential Server: (coal) Credentials Connection: sa Provider Wew connection properties Remoye Progress Default gatabase:			word at next login			
Image to Credential Image to Credential Server: Mapped Credentials Connection: Image to Credentials Image to Credentials Credential Image to Credentials Credential </td <td></td> <td>Mapped to certificate</td> <td></td> <td></td> <td>~</td> <td></td>		Mapped to certificate			~	
Connection Mapped Credentials Credential Provider Server: (loca) Condentials Credential Provider Image: Connection properties Image: Credential of the server of		Mapped to asymmetric key			-	
Server: (local) Connection: sa 21 Vew connection properties Progress Progress Progress Peddy Default database: master		Map to Credential			•	Add
(oca) Connection: sa Wew connection properties Progress Progress Progress Prody Default database: master Technicking Memory	Connection	Mapped Credentials	Credential	Provider		
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se <u>Progress</u> Peady Default gatabase: master mast						
Progress Remoye Remoye Remoye						
Ready Default gatabase:	View connection properties					
Ready Default gatabase:						
Default gatabase:	-					Remove
Default language:	Ready	Default <u>d</u> atabase:			-	
	. of the .	Default language:	<default></default>		•	

- 5. In the Login New window, select the General page and specify the login name.
- 6. Select the **SQL Server authentication** option and clear the **User must change password at next login** checkbox (this option is not supported on some Windows operating systems).

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7. Select the **User Mapping** page and in the **User mapped to this login** field, select the Sitecore databases.

electa page	Script	🔻 📑 Help		
🚰 General 🚰 Server Roles				
P User Mapping	Users ma	apped to this login:		
P Securables	Мар	Database	User	Default Schema 🔺
🚰 Status		master		
		model		
		msdb		
		SC100104ECM100331_Analytics		E
	V	SC100104ECM100331Sitecore_Core	SC user	
	V	SC100104ECM100331Sitecore_Master	SC user	
	V	SC100104ECM100331Sitecore_Web	SC user	
		SC100104ECMWIN7_Analytics		
		SC100104ECMWIN7Sitecore_Core		-
	•			
	Gues	"" t account enabled for: SC100104ECM100331Sitecon a tole membership for: SC100104ECM100331Sitecon		
onnection	Gues Databas	t account enabled for: SC100104ECM100331Sitecon a tole membership for: SC100104ECM100331Sitecon		
	Databası	t account enabled for: SC100104ECM100331Sitecor		
Server:	Gues Database Ø aspn Ø aspn Ø aspn	t account enabled for: SC100104ECM100331Stecor s role membership for: SC100104ECM100331Stecor et_Membership_EdstcAccess et_Membership_FullAccess et_Membership_ReportingAccess		Î
Server: (local)	Gues Database daspn aspn aspn aspn aspn	t account enabled for: SC100104ECM100331Stecon a gole memberahip for: SC100104ECM100331Stecon at Memberahip <u>FoulAccess</u> et <u>Memberahip FoulAccess</u> et <u>Memberahip Reporting Access</u> et <u>Personalization BasicAccess</u>		Â
Server: (local) Connection:	Gues Database V aspn V aspn aspn aspn aspn	t account enabled for: SC100104ECM100331Stecor a role membership for: SC100104ECM100331Stecor et_ <u>Membership_FulAccess</u> et_Membership_FulAccess et_Personalization_BasicAccess et_Personalization_FulAccess		E
Server: (ocal) Connection: sa	Guese Database V aspn V aspn aspn aspn aspn aspn V aspn	t account enabled for: SC100104ECM100331Stecor a role membership for: SC100104ECM100331Stecor et <u>Monchenip BasicAccess</u> et <u>Membership ReportingAccess</u> et <u>Personalization FulAccess</u> et <u>Personalization FulAccess</u> e		Â
Server: (local) Connection: sa	Guess Databass daspn daspn aspn aspn aspn daspn daspn daspn daspn	account enabled for: SC100104ECM100331Stecor grole membership for: SC100104ECM100331Stecor et_Membership_FullAccess et_Membership_FepotingAccess et_Personalization_BasicAccess et_Personalization_FullAccess et_Personalization_FullAccess et_Profile_BasicAccess et_		Â
	Guess Databass daspn daspn aspn aspn daspn daspn daspn daspn daspn daspn daspn daspn daspn daspn	account enabled for: SC100104ECM100331Stecor s tole membership for: SC100104ECM100331Stecor et <u>Membership: PasicAccess</u> et <u>Membership: PethAccess</u> et <u>Membership: PethAccess</u> et <u>Personalization: FulAccess</u> et <u>Personalization: FulAccess</u> et <u>Personalization: ReportingAccess</u> et <u>Personalization: ReportingAccess</u> et <u>Profie. FulAccess</u> et <u>Profie. FulA</u>		Â
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Server: Jocal) Connection: B View connection properties rogress	Guess Database V aspn V aspn aspn aspn v aspn V aspn V aspn V aspn V aspn V aspn V aspn V aspn V aspn	t account enabled for: SC100104ECM100331Stecor a tole membership for: SC100104ECM100331Stecor at <u>Membership: PastoAccess</u> et, Membership: PetpotingAccess et, Membership: RepotingAccess et, Personalization _FulAccess et_Personalization _FulAccess et_Personalization _FulAccess et_Personalization _FulAccess et_Profile_BescAccess et_Profile_BescAccess et_Profile_BescAccess et_Roles_FulAccess et_Roles_FulAccess et_Roles_FulAccess		Â
Server: (ocal) Connection: sa <u>If View connection properties</u> Progress	Guess Database V aspn V aspn aspn aspn v aspn V aspn V aspn V aspn V aspn V aspn V aspn V aspn V aspn	account enabled for: SC100104ECM100331Stecor a role membership for: SC100104ECM100331Stecor et_Membership_FallAccess et_Membership_ReportingAccess et_Personalization_BasicAccess et_Personalization_FallAccess et_Personalization_FallAccess et_Portile_BasicAccess et_Portile_BasicAccess et_Portile_FallAccess et_Portile_FallAccess et_Roles_BasicAccess et_Roles_EguidAccess et_Roles_EguidAccess et_Roles_EguidAccess et_Roles_ReportingAccess		Ē
Server: (ocal) Connection: sa <u>If View connection properties</u> Progress	Guess Database V aspn V aspn aspn aspn v aspn V aspn V aspn V aspn V aspn V aspn V aspn V aspn V aspn	account enabled for: SC100104ECM100331Stecor a role membership for: SC100104ECM100331Stecor et_Membership_FallAccess et_Membership_ReportingAccess et_Personalization_BasicAccess et_Personalization_FallAccess et_Personalization_FallAccess et_Portile_BasicAccess et_Portile_BasicAccess et_Portile_FallAccess et_Portile_FallAccess et_Roles_BasicAccess et_Roles_EguidAccess et_Roles_EguidAccess et_Roles_EguidAccess et_Roles_ReportingAccess		Â

8. In the **Database role membership for** field, select the following check boxes:

For the Master and the Web databases:

- o db_datareader
- o db_datawriter
- o public

For the Analytics database (if you have CEP installed):

- o db_datareader
- o db_datawriter
- o public

For the Core database:

- o db_datareader
- o db_datawriter
- o public
- aspnet_Membership_BasicAccess
- aspnet_Membership_FullAccess
- aspnet_Membership_ReportingAccess
- aspnet_Profile_BasicAccess
- aspnet_Profile_FullAccess

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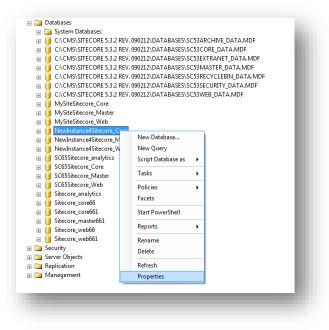


- aspnet_Profile_ReportingAccess
- aspnet_Roles_BasicAccess
- aspnet_Roles_FullAccess
- aspnet_Roles_ReportingAccess
- 9. Click OK to create the user.

4.4.2 Granting Execute Rights to Stored Procedures

To grant execute rights to stored procedures:

1. In the SQL Server Management Studio window, expand Databases.





2. Right-click a Sitecore database and the click **Properties**.

" General " Files	Scott - D Heb						
Flegroups	Servernane	ALEX	ALEXKVSQLEXPRESS				
P Optons Permasona	Yes any permition						
Extended Properties	Database pame	CVN	TPUB/W/W/WR001	I\SITECORE\SC	TEST INSTAL	LYDA	
	Users or soles:						
	Name			Ty			
	A SC uner			Un			
	Ash			Un			
	A stecce			Un			
	& test_user			Ue	en .		
	<					- 2	
	Effective Pe	missione]	644	Ben	048 J	
	Explicit permissions for S	C user					
lever	Permission	Grantor	Grant	With Grant	Derg		
LD/K\SQLEVPRESS	Create XML schema	dbo					
ometion	Delete	do					
8	Execute	dbo	2				
	linced	db0			E1		
57 View convertion properties							
97 Yes convertion properties	References	do					
TAD WATSCH APPENDING							
B) Very convertion properties (2011)	References	dbo	0				
AD MUSIC S ROSA COST.	Relevences Select	dbo dbo dbo		000			

- 3. In the **Database Properties** window, select the **Permissions** section and select the user that you want to grant rights to.
- 4. In the **Users or roles** field, select the user and in the **Explicit permissions for** field, in the **Grant** column, give the user *Execute* permission.

Repeat this procedure for the other Sitecore databases.

Important

The analytics database for Sitecore xDB runs on MongoDB. For more information about configuring Sitecore xDB on MongoDB see the *xDB Configuration Guide*.



4.5 Uninstalling Sitecore CMS

Before uninstalling Sitecore, delete the IIS Website or update it to reference a different directory, or stop IIS by executing the following command:

net stop w3svc.

Remove the Sitecore file system.

Remove any databases on remote or local servers that are used by this instance of Sitecore.



Chapter 5

Sitecore CMS Post-Installation Steps

This chapter describes the recommend steps that you should take after installing Sitecore CMS.

This chapter contains the following sections:

- Content Expiration
- Windows Authentication for Sitecore
- Setting Microsoft SQL Server Database Properties
- Rebuild the Search Index and the Link Database
- Cache Configuration



5.1 Content Expiration

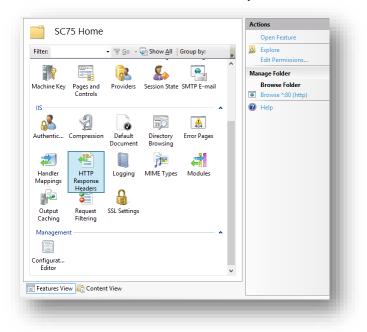
Set the IIS Expire Web content header to improve performance.

The Expire Web content header (located in common HTTP Response headers) is how IIS determines whether to return a new version of the requested web page if the request is made after the web page content has expired. IIS marks each web page before it is sent using the settings that you provide for content expiration. The website visitor's browser translates the expiration mark.

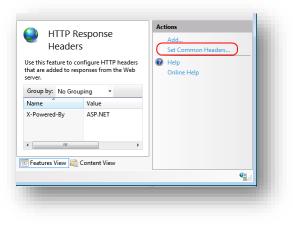
By setting Expire Web content to something other than immediately, you can reduce second-access load times by 50 to 70 percent. This setting does not affect dynamically generated content.

To enable the Expire Web content header in IIS 7.x:

- 1. Launch IIS Manager.
- 2. Navigate to the site that you want to enable the Expire Web content header.
- 3. In the **IIS** section, double click **HTTP Response Headers**.



4. In the Actions panel, click Set common headers...



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- 5. Select the Expire Web content check box.
- 6. Select the After check box and set the number of days to its default (7).

Set Com	nmon HTTP Response Headers	? 💌
🔽 Ena	able HTTP <u>k</u> eep-alive	
🔽 Exp	pire <u>W</u> eb content:	
\bigcirc	Immediately	
۲	After: 7 Day(s) ▼	
0	On (in Coordinated Universal Time (UTC)):	
	Thursday , June 09, 2011	▼ 12:00:00 AM
	ок	Cancel

7. Click OK.



5.2 Windows Authentication for Sitecore

You can configure Sitecore to use Windows Authentication for SQL connection (SQL 2008/Windows 2008 (R2)) and effectively remove the user name and password from the connectionStrings.config file.

1. Open IIS and find the application pool that Sitecore is running under. Open **Advanced Settings** and in the **Identity** field, set the identity to the domain user.

	Processor Affinity Enabled	False	^	
	Processor Affinity Mask	4294967295		
	Processor Affinity Mask (64-bit o	4294967295		
4	Process Model			
Þ	Generate Process Model Event L			
	Identity	dk\ely		
	Idle Time-out (minutes)	20		
	Idle Time-out Action	Terminate		
	Load User Profile	True		
	Maximum Worker Processes	1		
	Ping Enabled	True		
	Ping Maximum Response Time	90	- 1	
	Ping Period (seconds)	30		
	Shutdown Time Limit (seconds)	90		
	Startup Time Limit (seconds)	90		
đ	Process Orphaning			
	Enabled	False		
	Executable			
	Executable Parameters		~	
id s		Configures the application pool to ru Pool Identity (recommended), Netwo or as a specific user identity.		
		OK Cancel		

- 2. In the SQL Server register the domain user and grant security permissions on Sitecore databases for the domain user. For more information, see the section *Creating a Database Account for Sitecore CMS Databases on SQL Server 2008 and 2012.*
- 3. On the machine that hosts Sitecore, add the domain user to the IIS_IUSRS group.
 - Adjust the permissions for the IIS_IUSRS group according to the instructions in the sections: File System Permissions for ASP.NET Requests and File System Permissions for System Folders.
- 4. Edit the /App_Config/ConnectionStrings.config file and replace the user id and password parameters with the trusted connection=yes option:

xml version="1.0" encoding="utf-8"?
<connectionstrings></connectionstrings>
<add connectionstring="Data</td></tr><tr><td>Source=.\sql2008;Database=Sandbox6_Core;Trusted_Connection=Yes" name="core"></add>
<add connectionstring="Data</td></tr><tr><td>Source=.\sql2008;Database=Sandbox6 Master;Trusted Connection=Yes" name="master"></add>
<add connectionstring="Data</td></tr><tr><td>Source=.\sql2008;Database=Sandbox6_Web;Trusted_Connection=Yes" name="web"></add>

- 5. Prepare your identity so that it can be used as a service account with "aspnet_regiis.exe" and the <u>-ga switch</u>.
- 6. To add your domain service account to the local "Performance Monitor Users" group follow the instructions in the section *Windows Registry Permissions.*

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Note

If you use xDB, the same configuration must be repeated for the Reporting database. The connection string for the Analytics database must be:

<add name="reporting" connectionString="Data Source=<Data-Source>;Database=Sandbox6_Analytics;Trusted_Connection=Yes" />



5.3 Setting Microsoft SQL Server Database Properties

There are some Microsoft SQL Server database properties that, when configured correctly, can increase performance:

Compatibility Level

Compatibility Level effects SQL syntax and query parsing, and should have no impact on performance. Setting the Compatibility Level to a value of *SQL Server 2008(100)* takes advantage of new T-SQL features, which are used in many of the scripts/commands.

Auto Close

When MS SQL Server opens a database, resources are allocated to maintain that state. Memory for locks, buffers, security tokens, and so on are all assigned. These operations take time. The *Auto Close* property defines how these resources are handled. If it is set to *true* or *ON*, then when the last connection is closed, these resources are deallocated. If a new connection comes in within a short period of time (1/10 of a second or quicker), then all of those resources need to be activated again. Setting the *Auto Close* property to *false* or *OFF* prevents this from happening.

Auto Shrink

The Auto Shrink property uses many resources when it's called, and you have no control over when it is called. If you combine *Auto Shrink* with *Auto Growth*, you can get into a spiral of constantly growing and shrinking the database, taking valuable resources away from other database tasks as well as causing fragmentation issues. If a database or file requires a SHRINK command, it should be done via a script, a command, or a scheduled maintenance plan. Setting the *Auto Shrink* property to *false* or *OFF* disables this feature.

Recovery Model

In the Simple Recovery Model, MS SQL Server records a minimal amount of information in the transaction log. MS SQL Server truncates the transaction log whenever the transaction log becomes 70 percent full or the active portion of the transaction log exceeds the size that MS SQL Server can recover in the amount of time that is specified in the Recovery Interval server level configuration. Setting the Recovery Model to Simple has the lowest amount of overhead over Full and Bulk-logged, which is crucial to the performance requirements needed for the Sitecore CMS databases.

To set these properties:

- 1. Open MS SQL Server Management Studio.
- 2. In the Object explorer, right click the CMS Master database and select Properties.



3. Select the **Options** page and set the parameters as shown in the following image:

🥑 Database Properties - NewIn Select a page	_			
P General	🔄 Script 🔻 🚺 Help			
Files				
Filegroups	Collation:	SQL Latin1 General CP1 CI AS	•	
Options	-			
🚰 Change Tracking	Recovery model:	Simple		
Permissions	Compatibility level:	SQL Server 2008 (100)		
Extended Properties	Other options:			
	Automatic		*	
	Auto Close	True		
	Auto Create Statistics	True		
	Auto Shrink	False		
	Auto Update Statistics	True		
	Auto Update Statistics Asynchronou	isly False	E	
	Cursor			
	Close Cursor on Commit Enabled	False		
	Default Cursor	GLOBAL		
	Miscellaneous			
Connection	ANSI NULL Default ANSI NULLS Enabled	False False		
Server:		False		
WS-ELY	ANSI Padding Enabled ANSI Warnings Enabled	False		
0	Arithmetic Abort Enabled	False		
Connection: sa	Concatenate Null Yields Null	False		
	Cross-database Ownership Chaining			
View connection properties	Date Correlation Optimization Enable			
	Numeric Round-Abort	False		
Progress				
Ready	ANSI NULL Default			
		OK	Cancel	

- 4. In the Compatibility Level field, select SQL Server 2008(100).
- 5. Set the **Auto Close** property to *false*.
- 6. Set the **Auto Shrink** property to *false*.
- 7. In the **Recovery Model** field, select Simple
- 8. Click OK.

Repeat these actions for the Sitecore Core and Web databases.



5.4 Rebuild the Search Index and the Link Database

Follow these instructions only if you install Sitecore using the ZIP archive of the Website root.

You should rebuild the Search Index for the core database and the Quick search index.

Rebuilding the Search Indexes

To rebuild the Search Index:

• Log in to the Sitecore Desktop, click **Control Panel**, and then click **Indexing**. In the **Indexing Manager**, you can choose which database indexes you want to rebuild.

Rebuilding the Link Database

To rebuild the Link Database:

• Log in to the Sitecore Desktop and click **Control Panel**, **Database**, **Rebuild the Link Database** and select all the available databases.



5.5 Cache Configuration

When Sitecore CMS is installed, you should optimize caching to improve solution performance, reduce server load, and increase system capacity.

For more information about cache configuration, see the manual Cache Configuration Reference.



Chapter 6

Configuring Sitecore Experience Database

This chapter describes how to configure the Sitecore Experience Database.

The Sitecore Experience Database (Sitecore xDB) is a central data repository for marketers. It collects and connects all customer interactions in a single view, and enables immediate, personalized, automated experiences. Sitecore xDB uses MongoDB as a collection database.

This chapter contains the following sections:

- Prerequisites
- Configuration Process



6.1 **Prerequisites**

The Sitecore xDB 7.5 requires the following prerequisites for installation:

- Sitecore CMS 7.5 (7.5 Initial Release) or later
- Sitecore License file supporting Sitecore xDB
- Microsoft SQL Server 2008 R2 SP1 or SQL Server 2012
- Microsoft Silverlight 4 or later
- MongoDB 2.6.x

For more information on how to install MongoDB, see http://docs.mongodb.org/manual/.



6.2 Configuration Process

Sitecore xDB is included into the Sitecore XP package. You do not need to install it separately.

There are three overall steps to configuring Sitecore xDB:

- Configuring the reporting database attach the Sitecore.Analytics.mdf database to SQL Server. This database is used for reporting.
 - o In the ConnectionStrings.config file, customize the following string:

```
<add name="reporting" connectionString="user id=_username_;password=_password_;Data Source=_server_;Database=Sitecore_Analytics" />
```

Note

You can create a database account with the minimum required permissions for the *analytics* database as described in the section Microsoft SQL Server Configuration.

- Installing MongoDB download and install the latest version of MongDB.
- **Configuring Sitecore to use Mongo databases** perform the actions outlined in the following procedure for each Mongo server.

To configure Sitecore to use Mongo databases:

1. In the ConnectionStrings.config file, customize the following MongoDB connection strings:

```
<add name="analytics" connectionString="mongodb://localhost/analytics" />
<add name="tracking.live" connectionString="mongodb://localhost/tracking live" />
<add name="tracking.history" connectionString="mongodb://localhost/tracking_history" />
```

- 2. Update the relevant web.config and Sitecore.Analytics.config settings, such as *MailServer* and *Analytics.EMailFromAddress* (for sending out reports as emails).
- 3. If you wish to use DMS with Sitecore MVC, in /*App_Config/Include*/folder, rename the Sitecore.MvcAnalytics.config.disabled file to Sitecore.MvcAnalytics.config.
- 4. To limit the lookup activity to one server, in the /App_Config/Include/Sitecore.Analytics.config file, update the Analytics.PerformLookup setting.

Note

You can enable lookups on either a CM or a CD instance. The Sitecore instance should be able to access the MaxMind web service.

For more information about GeoIP lookup functionality, see MaxMind Signup and Purchase.

5. Restart Internet Information Services (IIS).

For more information about configuring Sitecore xDB to use with Sitecore CMS, see the manual *xDB Configuration Guide*.

For more information about scalability of Sitecore xDB architecture, see the manual *xDB Overview and Architecture*.

For more information about upgrading and converting from an earlier version of Sitecore to the Sitecore Experience Platform (XP), see the manual *xDB Upgrade and Conversion Process*.

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Chapter 7

Appendix

This chapter contains the supplementary instructions that help you to configure your environment.

This chapter contains the following sections:

- Server Configuration
- Creating a Web Project in Visual Studio



7.1 Server Configuration

The following sections contain miscellaneous information and techniques concerning the server configuration.

7.1.1 Updating the Security Settings for a Folder

To update the security settings for a folder:

- 1. In Windows Explorer, right-click the folder and select Properties.
- 2. In the **Properties** dialog box, click the **Security** tab.
- 3. In the **Group or user names** field, select a user or group and grant them the appropriate permissions in the **Permissions for** field.
- 4. In the **Security** tab, click **Advanced**.
- 5. In the **Advanced Security Settings** dialog box, select the **Replace permission entries** checkboxes.

Making the Security Tab Visible

If the Security tab is not visible, - this can occur after upgrading from Windows XP Home to Professional:

- 1. In Windows Explorer, click Organize, Folder and search options.
- 2. In the Folder Options dialog box, click the View tab.

der Options	×			
eneral View Search				
- Folder views	_			
You can apply the view (such as Details or Icons) th				
you are using for this folder to all folders of this type				
Apply to Folders Reset Folders				
Advanced settings:	_			
Files and Folders	<u> </u>			
Always show icons, never thumbnails Always show menus				
Aways show menus Display file icon on thumbnails	=			
Display file size information in folder tips				
Display the full path in the title bar (Classic theme only)				
Hidden files and folders				
Don't show hidden files, folders, or drives				
 Show hidden files, folders, and drives Hide empty drives in the Computer folder 				
Hide extensions for known file types				
Hide protected operating system files (Recommended)	-			
	_			
Restore Defau	lts			
OK Cancel A	polv			
	рріу			
	_			

3. Ensure that the Use simple file sharing check box is not selected.

If an account is not visible in the **Security** tab, you must make it visible.

Making an Account Visible

To make an account visible in the **Security** tab:

- 1. In the **Properties** dialog box, click the **Security** tab.
- 2. In the Security tab, click Add.



- 3. In the **Select Users, Computers, or Groups** dialog box, in the **From this location** field, ensure that the local computer is selected.
- 4. In the Enter the object names to select field, enter the name of the account, and click Check Names.

Alternatively, you can click **Advanced** and then click **Find Now** and select the account you want to add.



7.2 Creating a Web Project in Visual Studio

Sitecore supports the Visual Studio Web Application project model for Sitecore solutions.

Important

Create a Visual Studio solution and at least one project for each Sitecore solution that uses Visual Studio. Follow the steps outlined below as a single sequence once for each new Sitecore solution, then add new projects to the existing solution as appropriate.

To create a Visual Studio Web Application project for an existing Sitecore solution:

- 1. In Visual Studio, click the File menu, then click New, Project.
- 2. In the New Project dialog box, in the Project Types tree, expand Visual C#, and then click Web.
- 3. In the **Templates** list, click **ASP.NET Web Application**.
- 4. Select the version of the .NET Framework. While installing Sitecore CMS, in the **IIS Website** step you selected the version of the .NET Framework: 4.5.
 - Select .NET Framework 4 in the Visual Studio project.
- 5. In the **Name** field, enter the name of the project, for example MyWebSite. Visual studio uses this name as the default .NET namespace and assembly name.
- 6. In the Location field, enter the document root of the Sitecore solution, for example C:\inetpub\sitecore\MyWebSite\WebSite.
- 7. In the **Solution Name** field, enter the name of the solution, which is typically the name of the project, for example MyWebSite.
- 8. Select the **Create directory for solution** check box, and then click **OK**. Visual Studio creates the project in a subdirectory of the directory specified by **Location**, and then opens your project.
- 9. In Solution Explorer, right-click References and click Add Reference.
- 10. Click the Browse tab and select the Sitecore.Kernel.dll file, and then click OK.
- 11. In Solution Explorer, select the Sitecore.Kernel.dll file and set the Copy Local property to false.

To edit files in Visual Studio, you must make them visible and include them in the project.

To make the files visible:

1. In the Solution Explorer, click **Show All Files**.



- 2. You must now include the files you want to edit. For example, right-click the XSL folder and click *Include in Project*.
- 3. Finally, double click the files to edit them.