

Sitecore CMS 6.1 Installation Guide



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Chapter 1 Introduction

This document describes the Sitecore CMS installation. The document includes the following chapters.

- Chapter 1 Sitecore CMS 6 Requirements This chapter describes the prerequisites, hardware and software requirements for Sitecore CMS 6 host and client computers.
- Chapter 2 Installing from the .ZIP This chapter describes the various approaches to installing Sitecore depending on your choice of database technologies, the server administrator's preferences, the environment (development, testing, content authoring, content delivery, and so on.)
- Chapter 3 Using the Sitecore Installation Program This chapter describes the Sitecore CMS installation program that guides you through the CMS setup process.

Please contact http://support.sitecore.net/helpdesk/ for assistance or to report any discrepancies between this document and the product.



Chapter 2

Sitecore CMS 6 Requirements

This chapter describes the prerequisites, hardware, and software requirements for Sitecore CMS 6 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 workstation.

This chapter contains the following sections:

- Sitecore Hosting Environment Requirements
- Sitecore Client Environment Requirements



2.1 Sitecore Hosting Environment Requirements

2.1.1 IIS Requirements

Sitecore CMS can be hosted on the following IIS versions running on supported operating systems:

- IIS 5.1
- IIS 6.0
- IIS 7.0
- IIS 7.5

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

Important

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

2.1.2 Operating System Requirements

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

- Windows XP (32-bit only)
- Windows Server 2003 (32/64-bit)
- Windows Server 2008 (32/64-bit)
- Windows Server 2008 R2 (32/64-bit)
- Windows Vista (32/64-bit)
- Windows 7 (32/64-bit)

Important

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

Windows XP Service Pack 2 (or a later update) must be installed on every Microsoft Windows XP computer that hosts Sitecore or accesses Sitecore with Internet Explorer. Sitecore highly recommends Service Pack 2 (or a later update) for Microsoft Windows 2003. Service Pack 1 is required as a minimum.

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.

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



2.1.3 .NET Framework Requirements

Sitecore CMS 6 requires .NET Framework 3.5.

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

Note

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

2.1.4 Database Requirements

Sitecore CMS supports the following database servers:

- MS SQL Server 2005. Express Edition is also supported.
- MS SQL Server 2008 (recommended).
- Oracle 10g, 11g.
- SQLite.

Sitecore recommends that you run Microsoft SQL Server 2005 on a separate database server.

2.1.5 Hardware Requirements

Minimum Sitecore Development Host Requirements

- Processor: Intel Core Duo or faster processor.
- RAM: 1 GB minimum, 2GB recommended.
- Software: Microsoft Visual Studio 2008 highly recommended.

Minimum Sitecore Server Host Requirements

- Processor: Intel Core Duo or faster processor, dual CPUs recommended.
- RAM: 2 GB minimum, 4GB recommended.



2.2 Sitecore Client Environment Requirements

2.2.1 Browser Requirements

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

- Firefox 3 Full support for the Content Editor, Preview, and Workbox. Limited support for the Page Editor.
- Microsoft Internet Explorer 6
- Microsoft Internet Explorer 7
- Microsoft Internet Explorer 8

If you are running Internet Explorer 6:

- You must install MSXML 4.0
- You must remove KB918899 (http://support.microsoft.com/kb/923996) or
 - You must install KB923996 (http://support.microsoft.com/kb/923996)
- Windows XP:
 - $\frac{http://www.microsoft.com/downloads/details.aspx?FamilyID=ff9bc431-01f3-48e8-9a58-d701d2e60c1d\&DisplayLang=en}{}$
- Windows 2003:
 - http://www.microsoft.com/downloads/details.aspx?familyid=4AE4AA58-97FB-4CCF-ABA4-F9271A9282E2&displaylang=en

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 and specific modules.

You do not need to install any additional software on Sitecore CMS clients that are used to access Sitecore CMS hosts.



Chapter 3

Installing from the .ZIP File

Depending on your choice of database technologies, the server administrator's preferences, and the environment you want to run — development, testing, content authoring, content delivery, and so on — there are various ways in which you can install Sitecore.

This chapter contains the following sections:

- Installing Sitecore
- Preparing to Install Sitecore CMS 6
- Updating the Security Settings for a Folder
- Quick Minimal Installation
- Configuring the IIS
- Configuring Folder Permissions
- Microsoft SQL Server Configuration
- Creating a Web Project in Visual Studio
- Post-Installation Steps
- Uninstalling Sitecore



3.1 Installing Sitecore

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.

With IIS, the Web server and the application server are inherently combined in ASP.NET. Sitecore CMS provides versioning, workflow, locking, security, browser-based user interfaces, abstract XML data storage and other facilities that improve the functionality of ASP.NET for Web solutions. Sitecore can be broken down into three logical components regardless of whether a setup <code>.exe</code> file or a <code>.zip</code> file is used to install a new instance of Sitecore and regardless of the database technology that is used.

The three logical components are:

- IIS document root ("the Web site").
- Supporting file system for logs and data. The data can be stored under the document root.
- Supporting relational databases. The databases are often stored under the supporting file system.

The archive from which the new Sitecore instance is created can also contain SQL Server databases. Configuration is managed by files such as web.config and the files under the /App_Config folder.

The Sitecore CMS can be distributed in two ways:

- As an executable installation program . exe file(s).
- As an archived copy of a Sitecore CMS solution in a file system a zip file.

The installation program should be used whenever possible. It contains a wizard which guides you through the installation process.

Using the installation program requires considerably less manual effort than configuring the zip file.

The installation program consists of two executable files, for instance:

- Sitecore 6.X.X rev. XXXXXX.exe.
- Sitecore 6,X,X rev. XXXXXX DB.exe.

The first file is intended for the Sitecore hosts — workstations or servers with ASP.NET and Sitecore installed that can also have Microsoft SQL Server installed and contains both the file system installation and the databases. The second file is intended for database servers that only have SQL Server installed.

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



3.2 Preparing to Install Sitecore CMS 6

When you thoroughly understand the Sitecore CMS architecture and have read the installation documentation, you should define a basic installation plan.

Before attempting to install Sitecore CMS, you should decide on the:

- Project name and acronym, for instance ProjectName.
- Acronym/prefix, for instance PN.
- Target installation file system root, for instance C:\inetpub\wwwroot\ProjectName.
- Database technology SQL Server 2005 or SQL Express, SQLite or Oracle.
- Database location locally or on a remote server.
- Appropriate Sitecore CMS license.
- Hardware.
- Administrative access to computers and databases.
- Access to Sitecore Developer Network (http://sdn.sitecore.net) contact a local sales office or partner manager.
- IIS configuration host headers, and so on.



3.3 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.

If the fields are selected and shaded, the permissions are inherited correctly from the parent folder.

3.3.1 Setting Permissions to Inherit

Permissions should be set to inherit. If permission is denied, errors occur when accessing file system resources.

To set permissions to inherit:

- 1. In Windows Explorer, right-click a parent folder such as Website or Data and select Properties.
- 2. In the **Properties** dialog box, click the **Security** tab.
- 3. In the Security tab, in the Group or user names field, select the IUSR_* and ASP.NET users.
- 4. In the **Security** tab, click Advanced.
- 5. In the **Advanced Security Settings** dialog box, select both the **Allow inheritable** permissions... and **Replace permission entries** checkboxes.

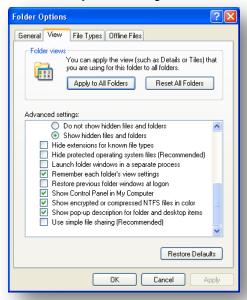
Making the Security Tab Visible

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

1. In Windows Explorer, click Tools, Folder Options.



2. In the Folder Options dialog box, click the View tab.



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

If an account, for example, ASP.NET, 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 ASPNET, NETWORK SERVICE or IUSR_<machinename> and click Check Names.

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



3.4 Quick Minimal Installation

The easiest way to configure in a well protected environment such as a multi-firewalled developer workstation is described below. The complete instructions are given for SQL Server 2005 Express Edition data storage type.

This section is a description of the easiest way to install and configure Sitecore on a developer workstation in a well protected environment.

- 1. Install Microsoft .NET Framework V3.5 and SQL Server 2005 Express Edition.
- 2. Go to Microsoft Update and install the latest service packs and security updates for Microsoft Windows, IIS, ASP.NET, and SQL Server 2005 Express Edition.

Unzip the installation archive to a folder in your file system, for example: D:\Sitecore\.

By default, you will create the following set of folders:

- o D:\Sitecore\Data
- o D:\Sitecore\Databases
- o D:\Sitecore\Website
- 3. Place the appropriate license.xml file in the /Website/data/ folder. In this example the folder is D:\Sitecore\Website\data. The location of the license file is determined by the <setting name="LicenseFile"... setting in web.config file.
- 4. Grant the ASP.NET and IUSR_* users full control of D:\Sitecore\ and all its subfolders.
- Grant the NETWORK SERVICE user full control of D:\Sitecore\Databases folder.
- 6. In /Website/App Config/folder, locate the ConnectionStrings.config file.
- 7. Open the ConnectionStrings.config file and enter the appropriate values in a line for each database, for example:

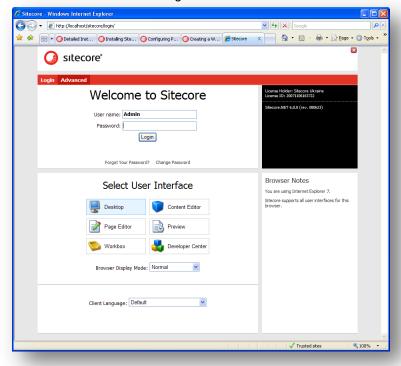
```
<add name="core" connectionString="user
id=_sql_server_user_;password=_user_password_;Data
Source=_sqlserver_;Database=_core_database_name_" />
```

- 8. Open the **Internet Information Services** window, right-click the default Web site and click Properties.
- 9. In the **Default Web Site Properties** window, click the **Home Directory** tab and set the home directory of the default Web site in IIS to the new document root.
- 10. Click the **ASP.NET** tab and ensure that .NET 2.0 is selected.
- 11. Add Sitecore CMS host to Internet Explorer's Trusted Sites.
- 12. Start the browser (Internet Explorer 7 or higher preferably) and enter the following address in the address bar:

http://localhost/sitecore



You should see the Sitecore login screen:



3.4.1 Detailed Installation

To install an instance of Sitecore:

- 1. Select a parent directory path for the project such as C:\InetPub and an identifier such as ProjectName
- 2. Extract the .zip archive to create:

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

for Microsoft SQL Server 2005 Express Edition

Extract C:\InetPub\ProjectName\Databases

- 3. Set permissions as described in Section 3.6, 'Configuring Folder Permissions'.
- 4. Copy a valid license file to the Data folder.
- 5. If you are running SQL Server, edit the ConnectionStrings.config file located in the /Website/App_Config/ folder. Enter the appropriate values in a line for each database, for instance:

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

6. If you are running SQLite:



Change the name of the web.config file to web.config.default and web.config.sqlite to web.config.

Edit the ConnectionStringsSQLite.config file located in /Website/App_Config/ folder. Enter the appropriate values in a line for each database.

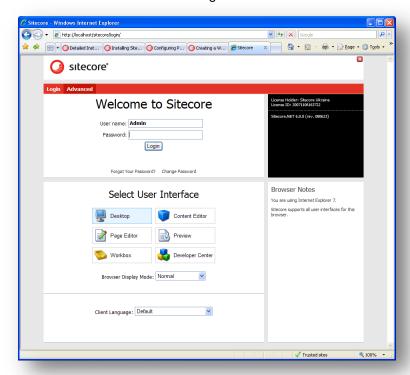
7. In the web.config file, edit the dataFolder attribute of the /configuration/sitecore/sc.variable node and enter the full path to the Data folder excluding the trailing slash, for instance:

<sc.variable name="dataFolder" value="D:\Sitecore\Data" />

- 8. In the IIS, set the home directory of the appropriate Web site to Website.
- 9. In the **ASP.NET** tab, ensure that .NET 3.5 is selected.
- 10. Add Sitecore CMS host to Internet Explorer's Trusted Sites.
- 11. Start the browser (Internet Explorer 7 or later) and enter the following address in the address bar:

http://localhost/sitecore

You should now see the Sitecore login screen:



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



3.5 Configuring the IIS

The following sections describe how to configure different versions of IIS (versions 5,6 and 7).

3.5.1 IIS 5,6 (Windows XP, Windows 2000, Windows 2003)

Complete the following steps to configure an existing site or create a new Web site in IIS (Windows 2003 only).

Note

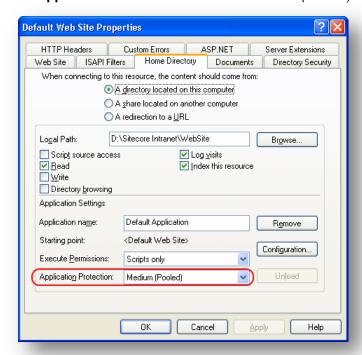
Do not create a virtual directory for Sitecore as the product cannot operate from a virtual directory.

1. Open the Internet Information Services (IIS) Manager.

If you are running Windows 2000 or Windows XP, click Control Panel, Administrative tools, Internet Information Services to open the Microsoft Management Console for the IIS.

If you are running Windows 2003, click Control Panel, Administrative tools, Internet Information Services (IIS) Manager to open the Microsoft Management Console for the IIS.

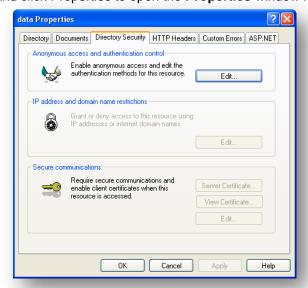
- 2. In the Internet Information Services window, expand Web Sites
 - Windows XP: Right-click Default Web Site and click Properties.
 - Windows 2000 Server, Windows 2003 Server: Create a new Web site.
- 3. In **Home Directory** tab, in the **Local path** field, enter or browse to the WebSite folder, for instance C:\InetPub\ProjectName\WebSite.
- 4. In the **Application Protection** field select *Medium (Pooled)*.



Do not select High (Isolated) as this will cause excessive caching.



5. In the Internet Information Services window, under Default Web Site, select the /data folder and click Properties to open the Properties window for this folder:



6. In the **Directory Security** tab, in the **Anonymous access and authentication control** section, click Edit. The Authentication Methods window will appear.



- 7. In the **Authentication Methods** dialog box, ensure that the **Anonymous access** check box is not checked.
- Repeat this procedure for the following folders and files: /sitecore/admin /sitecore/debug
- 9. Restart the IIS.

If you are running Windows 2003:



 Open the Properties dialog box for the appropriate Application Pool, in the Performance tab and ensure that the Maximum number of worker processes is ALWAYS "1

On multiple processor servers, this value may automatically be set higher than 1 when you install the OS/IIS.

On these servers, it is therefore especially important to check this setting as it will likely be higher than "1".

2. Restart IIS.

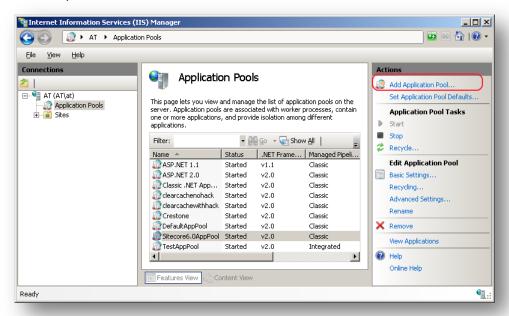
3.5.2 IIS 7 (Windows 2008, Windows Vista)

Complete the following steps to configure an existing site or create a new Web site in IIS 7 (Windows 2008 and Windows Vista only).

Note

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

- Open the Internet Information Services (IIS 7) Manager.
 Click Control Panel » Administrative tools » Internet Information Services (IIS) Manager to open the Microsoft Management Console for the IIS.
- 4. Create a new or open an existing application pool. To add a new one, click to the Application Pool node in the tree and click "Add Application Poll" in the Actions panel:



The "Add Application Pool" dialog window will appear.



5. In the "Add Application Pool" dialog window, enter the pool name in the Name field and set the ".NET Framework version" to ".Net Framework v2.0.XXXXX" and "Managed pipeline mode" to "Classic". Click OK.



Note

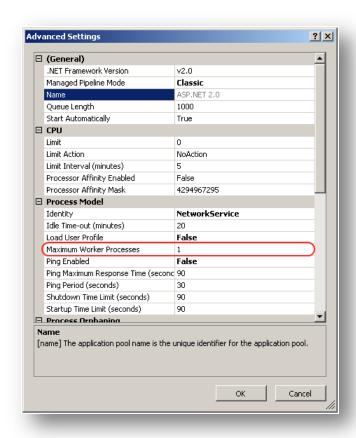
It is also possible to set "Managed pipeline mode" value to "Integrated".

Please be aware that Sitecore CMS 6 experiences several limitations running in IIS 7 Integrated application pool mode due to its nature and specific behavior. For the full list of known issues, please see the following URL:

http://sdn.sitecore.net/Products/Sitecore%20V5/Sitecore%20CMS%206/ReleaseNotes/KnownIssues/IIS%20in%20Integrated%20Pipeline%20mode.aspx

Click "Advanced Settings" on the Actions panel.
 Ensure that the Maximum number of worker processes is "1". On multiple processor servers,
 "Maximum Worker Processes" value may automatically be set higher than 1 when you install the OS/IIS.

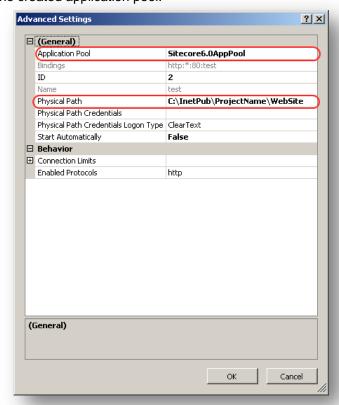






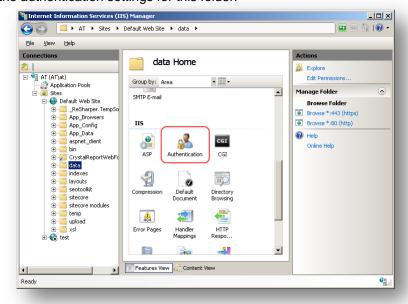
7. In the Connections panel, expand Web Sites and create a new Web site. Right-click on the created site and click "Manage Web Site/Advanced Settings".

In the Physical path field, enter or browse to the WebSite folder of your Sitecore installation, for instance C:\InetPub\ProjectName\WebSite. In the Application Pool field enter or browse the created application pool.

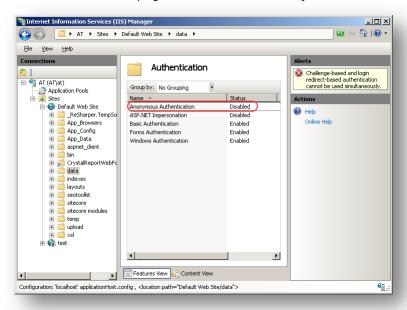




8. Browse your Sitecore site and select the /data folder and click "Authentication" icon to configure the authentication settings for this folder.



9. On the Authentication page, ensure that the Anonymous Authentication is disabled.



10. Repeat steps 6-7 for the following folders:

/sitecore/admin
/sitecore/debug

11. Restart the IIS.



3.6 Configuring Folder Permissions

Certain types of browser requests (generally for directory lookups and static resources) are executed with the permissions of the internet impersonation as specified under "Authentication and access control" on the **Directory Security** tab in the IIS management console. The default name for this account is IUSR_* where the star represents the machine name.

Requests for ASP.NET resources are executed with the permissions of ASP.NET. The default ASP.NET account on Windows XP is a local user named ASP.NET, which will also be used on Windows 2003 under specific conditions such as if "Run WWW service in IIS 5.0 isolation mode" is selected on the Services tab of the Web Sites container in the IIS management console. The default ASP.NET account on Windows 2003 is the local user named NETWORK SERVICE.

In general, if permissions for operating system users and roles are not specified in this document, they should not be defined on the file system, although certain use cases will require expanded permissions.

3.6.1 Root Folder Permissions

The IUSR * user must have Read and Execute access to the Website folder and its descendants.

The ASP.NET user must have rights to List Folder Contents on all directories above WebSite; for instance for C:\InetPub\ProjectName permissions may need to be opened on C:\InetPub and any other folders above ProjectName.

If anonymous access to the site has been allowed in IIS (IIS management console, in the **Properties** dialog box, on the **Directory Security** tab, in the **Authentication and access control** section) and the impersonate attribute of the /configuration/system.web/identity element in web.config file is set to true (<identity impersonate="true" />), the IUSR_* must have the List Folder Contents right instead of the ASP.NET user.

3.6.2 Specific Folder Permissions

In non-production environments, it's generally easiest to grant the ASP.NET user Full Control of the *Website* and *Data* folders as well as all their descendants.

We recommend that you restrict permissions even further in production environments. The ASP.NET user must have Read and Write access to the following resources:

Directory	Situations in which ASP.NET and/or IUSR_* Requires Read and Write Control
/data (or other directory as defined by the <i>dataFolder</i> attribute)	All Sitecore environments.
/indexes	All Sitecore environments. Important: ASP.NET and IUSR_* users require the modify access rights to this folder in order to maintain the search indexes.
/layouts	If Developer Center will be used to create and modify layouts and sublayouts.



Directory	Situations in which ASP.NET and/or IUSR_* Requires Read and Write Control
/sitecore/shell/Applications/debug	All Sitecore environments against which CMS users authenticate (generally everything except content delivery/runtime servers); create this directory if it does not exist.
/sitecore/shell/Controls/debug	All Sitecore environments against which CMS users authenticate (generally everything except content delivery/runtime servers); create this directory if it does not exist.
/temp	All Sitecore environments.
/upload	Sitecore environments to which users interactively upload media.
/xsl	If Developer Center will be used to create and modify XSL renderings.
/App_Data	All Sitecore environments in which this folder is used. Note: IUSR_* user requires Read and Write permissions to this folder as well.
/audit /logs /viewstate /mediacache /diagnostics	Both ASP.NET and IUSR_* users require modify permissions to these folders.

Note

ASP.NET and/or IUSR_* users require the modify access rights to the \temp folder to install Sitecore CMS.

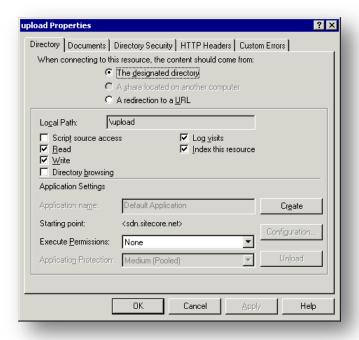
For custom XML controls, all directories specified in the ControlSources section of the web.config file must contain a debug folder with Read/Write access by the ASP.NET user.

NETWORK SERVICE user must have read and write access to the folder where the SQL databases are stored.

3.6.3 Deny Execute Permissions on the Upload Folder

You should set the Execute Permission to None in IIS in order to prevent the execution of an uploaded file on the server side when a user attempts to download it. Select *Properties* for the upload folder in IIS:





3.6.4 Grant Access to the Globalization Folder

To make the registration of custom languages work correctly you should:

- Grant the ASP.NET user 'Full Control' permission for the %WINDIR%\Globalization folder. If you fail to do this, custom languages cannot be registered correctly with .NET Framework and Sitecore CMS may work very slowly.
- If you are running Window Server 2003, you must grant access to the "NETWORK SERVICE" account, not the "ASP.NET" account (unless you use impersonation).
- You might also need to grant access to the following registry key to make registration of custom languages work correctly:

HKEY LOCAL MACHINE\SYSTEM\CurrentControlSet\Control\Nls

3.6.5 Grant Access to the Temporary Folders

Grant the IUSR_machinename account full control access to the C:\windows\microsoft.net\framework\\Temporary ASP.NET Files folder.

You must also grant the ASP.NET (NETWORK SERVICE in Windows 2003) user write access rights to the windows temp folder (typically \temp or \windows\temp) and to the temp folder under the "Documents and Settings" folder (either \documents and settings \aspnet \temp or \Documents and Settings \ServerName_\ASPNET \Local settings \Temp).



3.7 Microsoft SQL Server Configuration

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

3.7.1 Visual Studio 2005 and SQL Server Express Edition

When you install Visual Studio 2005, it may install some components of SQL Server 2005 Express. Furthermore, it may also configure the database to only use Windows authentication rather than mixed mode authentication and it may not install SQL Server Management Studio Express.

To update an instance of SQL Server 2005 Express that has been installed with Visual Studio 2005:

- 1. Log in to Windows as a user with administrative rights.
- 2. Install SQL Server Management Studio Express.
- 3. Click Start, All Program, Microsoft SQL Server 2005, SQL Server Management Studio Express.
- 4. In the Connect to Server dialog box, in the Authentication field, select Windows Authentication.
- 5. In the **SQL Server Management Studio Express** window, in the **Object Explorer** pane, expand the Security folder and expand the Logins folder.
- 6. Right-click sa and click Properties to open the Login Properties window
- 7. In the **General** page, enter and confirm the password for the security administrator.
- 8. In the **Status** page, under Login, select the **Enabled** check box and click OK.
- 9. In the **SQL Server Management Studio Express** window, right-click the database server (<*HOSTNAME*>*SQLEXPRESS*) at the top of **Object Explorer** and select Properties.
- 10. In the **Server Properties** window, select the **Security** page and in the **Server authentication** section, select **SQL Server and Windows Authentication mode** and then click OK.
- 11. Close Microsoft SQL Server Management Studio Express.
- 12. To restart SQL Server 2005 Express Edition, enter the following in a command prompt: net stop "Sql Server (SQLEXPRESS)"
 - net start "Sql Server (SQLEXPRESS)"
- 13. Start Microsoft SQL Server Management Studio Express.
- 14. Log in using **SQL Server Authentication** with the username *sa* and password you entered in step 6.

For information about an alternative method of allowing SQL Server Authentication, see http://support.microsoft.com/kb/322336.

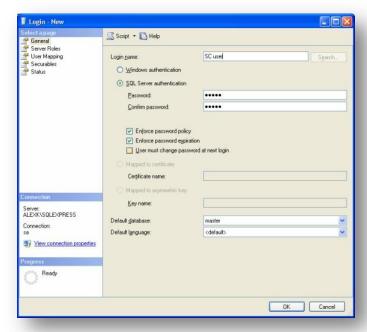
3.7.2 Creating a Database Account for Sitecore CMS Databases on SQL Server 2005

This section describes how to create a database account for Sitecore databases under SQL Server 2005 with the minimum required permissions.

- 1. Start SQL Server Management Studio Express.
- 2. Make sure the Sitecore databases are attached.



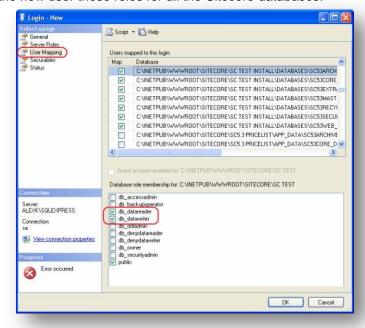
- 3. In SQL Server Management Studio Express, in the **Object Explorer** pane, expand the Security folder.
- 4. Right-click the Logins folder and click New Login to create a new login.



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



8. In the **Database role membership for** field, select **db_datareader** and **db_datawriter** to assign the new user these roles for all the Sitecore databases.



- 9. Ensure that the **public** checkbox is also selected.
- 10. Click OK to create the user.

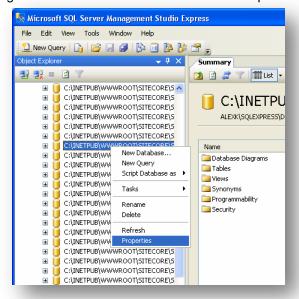
Granting Execute Rights to Stored Procedures

To grant execute rights to stored procedures:

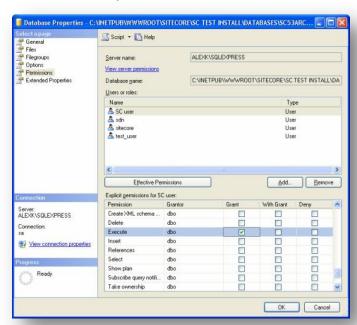
1. In the SQL Server Management Studio Express window, expand Databases.



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



3. In the **Database Properties** window, select the **Permissions** page.



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 CMS databases.

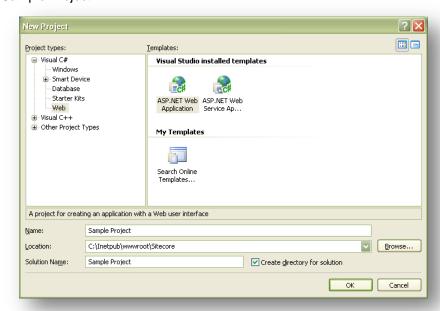


3.8 Creating a Web Project in Visual Studio

Sitecore extension projects should use the ASP.NET Web Application Project, supported by Visual Studio 2005 SP1 and Visual Studio 2008.

To setup a Web Project:

- 1. Start Visual Studio.
- In Visual Studio, click File, New, Project.
- 3. In the **New Project** window, select *ASP.NET Web Application* and provide a name, for example: Sample Project.



When you click OK, Visual Studio creates a project folder with the name you specified and in the folder it creates some related files as well as some additional files that will not be used.

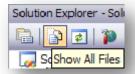
- 4. Close Visual Studio.
- 5. Open Windows Explorer and locate the project folder this will probably be in a folder under My Documents\Visual Studio 2005\Projects.
- 6. Move or copy the Properties folder, and the *.csproj, and *.csproj.user files to the Sitecore webroot. You can delete the Visual Studio project folder now if you wish.
- 7. In the Sitecore webroot, double-click the *.csproj file to open the project in Visual Studio.
- 8. In Visual Studio, in Solution Explorer, right-click the default.aspx page and click Exclude From Project.
- 9. In Solution Explorer, right-click References and click Add Reference.
- 10. In the ***** window, 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 themselves to edit them.
- 4. Close Visual Studio.

When you are prompted, save the specified items in the default location. In the future, you can open this project by opening the corresponding *.sln file in the Sitecore CMS webroot.

Related reading:

- http://msdn2.microsoft.com/en-us/asp.net/aa336618.aspx
- http://webproject.scottgu.com/
- http://webproject.scottgu.com/CSharp/Default.aspx
- http://webproject.scottgu.com/CSharp/HelloWorld/Helloworld.aspx



3.9 Post-Installation Steps

This section describes the steps that we recommended you to take after the Sitecore CMS webroot and databases have been installed.

3.9.1 Move the Data Folder to a Non-public Area

We strongly recommend that the *data* folder is moved to a non-public area.

If you do not move the *data* folder, anonymous visitors will be able to download any of the files contained in this directory by typing a direct URL to the file. Many of the files in the data folder contain valuable information that should not be available to unauthorized users.

To protect this information, move the *data* folder to a non-public area of the disk. Remember to give for the ASPNET,IUSR_<MachineName> (or Network Service user on Windows 2003) read/write access to the *data* folder.

After the folder has been moved, you must modify the <code>DataFolder</code> attribute in the web.config file to configure Sitecore to fetch data from the new location.

For example:

<sc.variable name="dataFolder" value="D:\Sitecore\Data" />

The path should have no trailing slash.

3.9.2 Rebuild the Search Index

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

To rebuild the Search Index, Log in to the Sitecore desktop and click *Control Panel » Database » Rebuild the Search Index*.





3.9.3 Making Your Computer More Secure

This section will help you to make your computer more secure against known attacks.

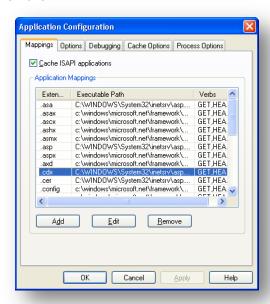
Disable all unused extensions in the IIS

We recommend that you disable all unused extensions in the IIS.

For a Sitecore solution, you only need the .NET and perhaps ASP extensions. You can therefore remove .idc, .shtm, and so on.

To remove these extensions:

- 1. Open the Internet Information Services window.
- 2. Right-click the Sitecore Web site and click Properties, Home Directory, Configuration.
- In the Application Configuration window, select the extensions you want to remove and click Remove.





3.10 Uninstalling Sitecore

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

net stop w3svc.

Stop the SQL Server process:

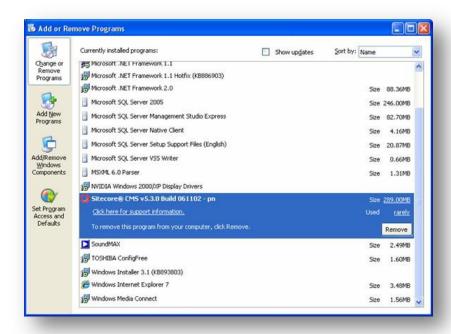
- for SQL Server Express: net stop "sql server (sqlexpress)"
- for every other edition of SQL Server: net stop "sql server (mssqlserver)"

Remove the Sitecore file system.

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

If you used the installation program to install Sitecore, use the Add or Remove Programs facility in Windows Control Panel to uninstall it.

In the Add or Remove Programs window, locate the appropriate entry and click Remove:



Restart the SQL Server and IIS services as appropriate.



Chapter 4

Using the Sitecore Installation Program

This chapter describes the process of Sitecore CMS installation using the setup executable installation program.

This chapter contains the following sections:

- The Sitecore Installation Program
- Windows Vista Pre-installation Steps
- Databases Setup
- Sitecore CMS Client Setup
- Important Notes
- Troubleshooting



4.1 The Sitecore Installation Program

The Sitecore installation program consists of two separate installation files:

- Sitecore 6.X.X rev. XXXXXX.exe
- Sitecore 6.X.X rev. XXXXXX DB.exe

If you want to run both the Sitecore SQL databases and the Sitecore Client on the same machine, you only need the Sitecore 6.X.X rev. XXXXXX.exe file.

If you want to host the databases on a separate database server, you should run Sitecore 6.X.X rev. XXXXXX DB.exe on that server first, and then install the Sitecore Client on the client machine. You must then edit the connection string so that it points the client installation to the actual location of the databases.



4.2 Windows Vista Pre-installation Steps

Before you can install Sitecore on Windows Vista you must ensure that certain settings are configured correctly.

You must ensure that:

- UAC (User Account Control) configuration security policy *Detect application installations and prompt for elevation* is enabled.
- The IIS 6 configuration compatibility features are enabled.

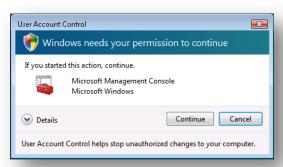
4.2.1 The UAC (User Account Control) Configuration

To run the installation program on Vista, 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 to Vista as an administrator.
- 2. Press WIN + R to open the Run window.
- 3. In the Run window, enter secpol.msc and press Enter.

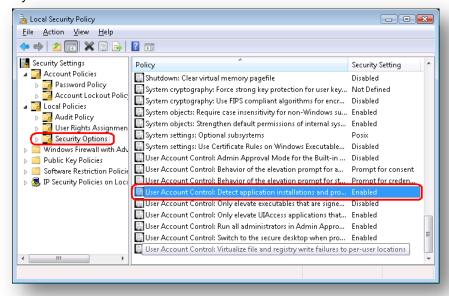
The UAC (User Account Control) requests your permission to continue.



- 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. Scroll to the bottom of the list of policies in the right-hand pane.



7. Verify that the User Account Control: Detect application installations and prompt for elevation policy is set to Enabled.



4.2.2 IIS 6 Configuration Compatibility Features

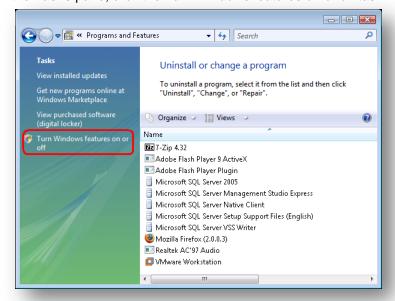
The Sitecore installation program requires IIS 6 configuration compatibility.

To ensure that the appropriate features are enabled:

- 1. Log in to your Vista as an administrator.
- 2. Click Start, Control Panel.
- 3. Double-click the Programs and Features icon.



4. In the Tasks pane, click the Turn Windows features on or off task.



The UAC (User Account Control) will request your permission to continue.





5. Click Continue to open the Windows Features dialog box:



- 6. Locate and expand the Internet Information Services group.
- 7. Locate and expand the Web Management Tools group.
- 8. Locate and expand the IIS 6 Management Compatibility group.
- 9. Ensure that the IIS 6 WMI Compatibility feature is enabled.
- 10. Ensure that the IIS Metabase and IIS 6 configuration compatibility feature is enabled.



4.3 Databases Setup

This section describes how to install and set up Sitecore when the databases are hosted on a separate database server.

Go to the Sitecore CMS 6 download page and download the Sitecore 6.X.X rev. XXXXXX DB.exe file

Run the installation program and it will guide you through the installation process.

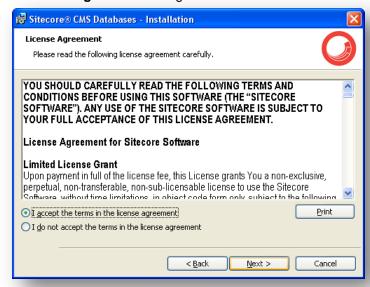
The installation wizard:

1. The **Welcome** dialog box.



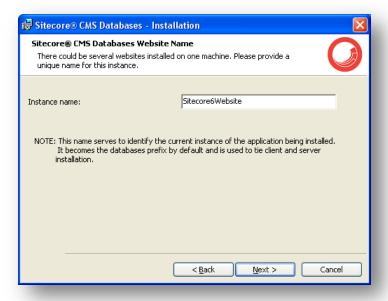


2. The License Agreement dialog box.



Read the license agreement and accept it to continue the installation. If you disagree, do not accept it and cancel the installation.

3. The Sitecore CMS Databases Website Name dialog box:

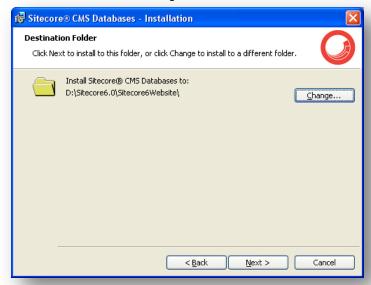


In the Instance name field, enter a unique name for the Web site you are going to create

This should a unique name. It serves as the database prefix and is used to tie the client and the server installation together.



4. The **Destination Folder** dialog box.

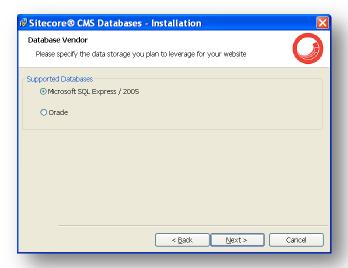


You can change the default destination folder for the Sitecore CMS databases.

Note

Make sure that your SQL Server user has enough rights to the database installation folder.

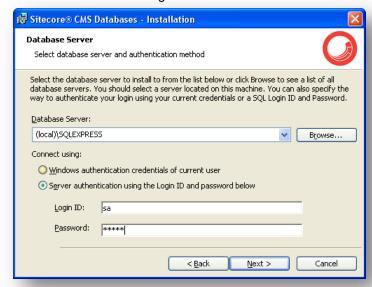
5. The **Database Vendor** dialog:



Choose the database vendor and click Next.



6. The **Database Server** dialog box.



You must select the database that you want to install the Sitecore databases on and specify the authentication method that you want to use.

By default sa user is used. For instructions on how to create a custom database account for Sitecore CMS, read section 3.7.2, Creating a Database Account for Sitecore CMS Databases on SQL Server 2005.

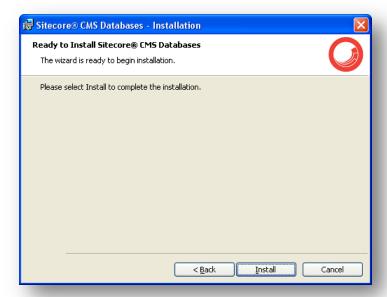
When you click Next, the installation program tries to establish the connection using the parameters that you specified. If it connects with the database, you can proceed. If it fails to connect, the program will offer to try again.

Note

You should provide the SQL Server name, which is used on the current server.



7. The Ready to Install dialog box.



Click *Install* to start the installation process or *Back* if you wish to change one of the settings.

8. The Installation Completed dialog box.



This dialog box is displayed when the installation is successfully completed.



4.4 Sitecore CMS Client Setup

This section describes how to install and set up the Sitecore client.

Go to the Sitecore CMS 6 download page and download the $\texttt{Sitecore}\ \texttt{6.X.X}\ \texttt{rev.}\ \texttt{XXXXXX.exe.}$

Run the installation program and it will guide you through the installation process.

Note

You should create a new IIS site before you run the installation program.

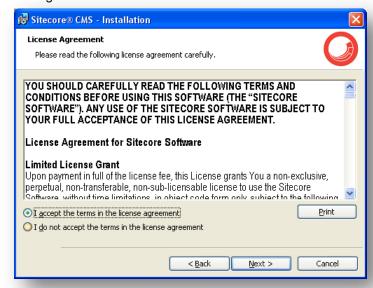
1. The **Welcome** dialog box.



2. The License Agreement dialog box.



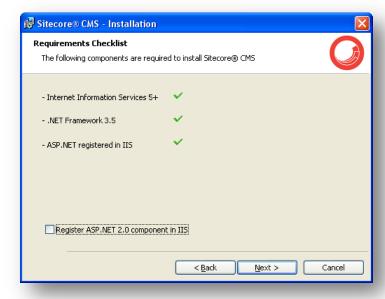
Read the license terms and accept it if you agree to continue the installation, or do not accept it if you disagree and cancel the installation.



9. The **Prerequisites** dialog box.

The installation checks the prerequisites at the very beginning of the installation. This dialog box shows the results of the check. If your machine satisfies the prerequisites, a green check mark is displayed; otherwise a red cross is displayed.

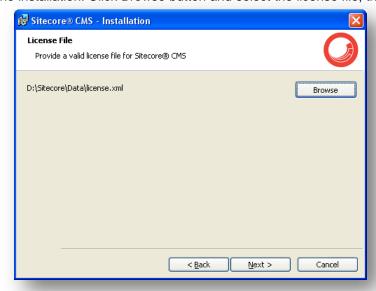
If the last prerequisite from the list is not satisfied, we recommended that you select the **Register ASP.NET 2.0 component in IIS** check box.



3. The License File dialog box.



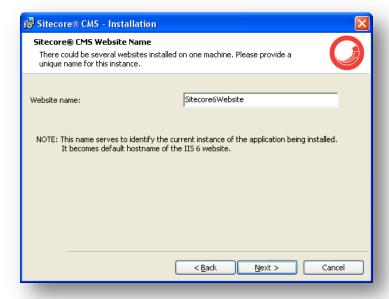
Browse and point the valid Sitecore license. Only in this case you will be allowed to proceed with the installation. Click Browse button and select the license file, then click Next.



4. The Website Name dialog box.

Enter the name of the Sitecore CMS Web site here. Due to the fact that several instances of Sitecore can be installed on one machine, this name serves as a unique identifier for the rest of the information related to this particular instance.

The name of the Web site must be the same as the Instance Name specified during the database installation.

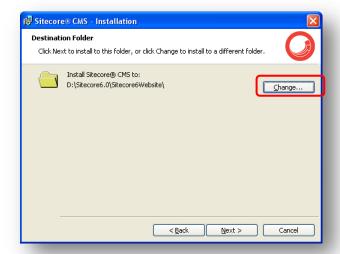


This name will also be used as the IIS site name if you choose to create one in the **Choose IIS** site dialog box.



5. The **Destination Folder** dialog box.

You can change the default destination folder for Sitecore.

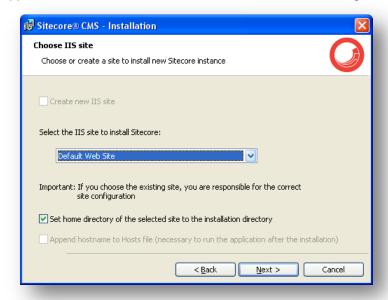




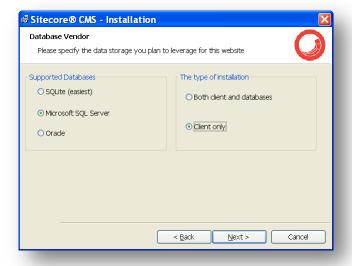


6. The Choose IIS site dialog box (Win2003 only).

If you install Sitecore on Windows 2003, this dialog box lets you specify whether you wish to create a new IIS Web site for the new Sitecore instance, or use an existing one. The **Create new IIS site** check box is selected by default. If you clear it, the dropdown menu with all available sites appears. Select a site, and Sitecore will be accessible through this site after the installation.



7. The **Database Vendor** dialog box.

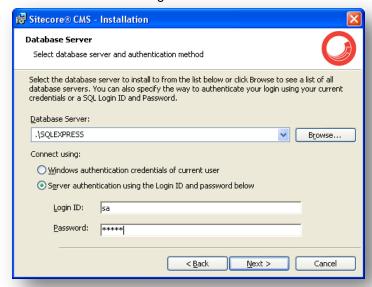


Select the type of database that you want to run Sitecore CMS on.

If you select Microsoft SQL Server, the installation program offers to provide the installation type (install both client and server side part on this machine or just the client, assuming that the databases were set up on a database server).



8. The **Database Server** dialog box.



Provide the connection settings for MS SQL or SQL Express database types here. In case of the *Client only* installation type, the name of the database server where the databases are already installed should be entered. When you click *Next*, the installation program tries to establish a connection with the parameters that you specified.

If it connects with the database, you can proceed. If it fails to connect, the program will offer to try again.

In particular situations server administrators may not want to use the *sa* user to connect to databases. For instructions on how to create a custom database account for Sitecore CMS, read section 3.7.2, *Creating a Database Account for Sitecore CMS Databases on SQL Server 2005.*

9. The **Database files** dialog box.

By default the program allows installing all the database files, disregarding the database vendor which was chosen. This dialog box allows you to uncheck the database files you don't want to be

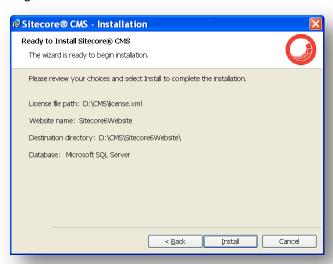


installed in order to save the disk space.



10. The **Ready to Install** dialog box.

Check your selections. Click Install if you are satisfied or click Back if you wish to change a setting.



11. The **Installation Complete** dialog box.

This dialog box will be displayed if the installation is completed successfully. You may check the Run Sitecore checkbox to run Sitecore after clicking the Finish button.



4.5 Important Notes

- The installation program performs IIS backup at the very beginning. There is therefore an option to repair the IIS in case of failure.
- The installation program automatically sets the ASP.NET version to 2.0 in the IIS without asking the user. The reason is that Sitecore CMS 6 runs under .NET Framework 3.5.
- You can install as many instances of Sitecore on a single computer as you wish.
- The Sitecore CMS configuration files are automatically modified according to the settings provided in the wizard.
- The windows authentication setting is disabled in the SQL Login settings dialog box, because Sitecore 5.3 supports SQL authentication.
- The XmlControls.ThrowException web.config setting specifies whether or not an exception is thrown when an Xml Control cannot be loaded. It is set to true by default, as long as it provides better debugging possibilities, but under certain conditions it might prevent the Sitecore client from working. Any errors are written to the log.



4.6 Troubleshooting

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

Here are two scenarios that you might come across:

• If the installation program fails after you click Install in the **Ready to Install** dialog box, the log file is automatically created in the following folder: C:\installlog.txt.

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.

• If the installation program fails before you click Install in the **Ready to Install** dialog box, you should run the installation again with the following parameters:

Setup.exe /V"/log log.txt", where log.txt is the log file name.

It log file is created in the same folder with the .exe file.



Chapter 5

Oracle Database Storage Setup

This chapter describes how to set up Oracle database storage for Sitecore CMS.



5.1 Quick Start Setup (Oracle 10g Express Edition only)

This section describes the quick installation of the Oracle data provider on a clean Sitecore CMS installation with Oracle 10g Express Edition. Such installation can be used for testing or development purposes.

- 1. Install Oracle 10g Express Edition Server (OracleXEUniv.exe). Note: Use "manager" password for SYSTEM user.
- 2. Install Sitecore CMS 6 using the .exe setup executable.
- 3. Load Sitecore data into the XE database:
 - a. In your computer's System Properties/Advanced/Environment Variables set up variables as follows:

DATABASE = XE TBS = USERS

- b. In the /Databases/Oracle folder launch createdata.bat.
- c. Remove DATABASE and TBS variables from the environment.
- 4. Copy the **dataFolder** variable definition from **Web.config** to **Web.config.Oracle**. For example <sc.variable name="dataFolder" value="c:\sitecore\data"/>
- 5. Backup the original Web.config and rename Web.config.Oracle to Web.Config.
- 6. Configure IIS as for a usual Sitecore installation and run Sitecore.



5.2 Oracle Storage Setup In Detail

This section describes setting up a Sitecore CMS with Oracle databases in detail.

5.2.1 Database Server Preparations

Database server must be an Oracle 10g or higher database instance which meets the following requirements:

- 1. Oracle instance must be configured in shared server mode.
- Oracle instance must contain a tablespace for Sitecore having at least 200MB of free space initially. More space will be needed as Sitecore database grows. Perform these steps on the Oracle Database Server (or a workstation PC with the administration tools for the Oracle) to set up Oracle databases for Sitecore CMS:
- 1. Install Sitecore CMS Databases (*DB.exe setup executable, version 6.0.2 or higher). Alternatively you can copy the /Databases/Oracle folder from an existing Sitecore 6 installation.
- 2. Load Sitecore data into the Oracle database:
 - In the computer's System Properties/Advanced/Environment Variables set up userlevel variables as follows:
 - DATABASE = The name of the Oracle Database instance that will host Sitecore data (as set up on the PC).
 - TBS = Name of the tablespace for Sitecore data
 - PASSWORD = password for the system user of the Oracle instance.
 - PREFIX = Prefix to use for user schema names and passwords (default: sc).
 - b. Launch the **createdata.bat** file from the /Databases/Oracle/folder.
 - c. Remove DATABASE, TBS, PASSWORD, PREFIX variables from the environment.

Installation scripts will set up three user schemas: %PREFIX%core, %PREFIX%master, %PREFIX%web (default: sccore, scmaster, scweb). User passwords are the same as the user names.

5.2.2 Website Server Setup Instructions

The following instructions describe a web server setup where Sitecore CMS file system will be hosted.

- Install Oracle Client matching the Oracle Database version. Make sure Oracle Data Provider for .NET 2.0 is installed. Add a connection to the appropriate Oracle instance (created as described in the Database Server Preparations section). For detailed instructions on this topic, refer to Section Adding a Connection to the Oracle Instance.
 - **Note:** When installing Oracle Data Provider in a 64-bit Environment, make sure you use Oracle Client for Windows x64.
- 2. Install Sitecore CMS 6. If you are installing Sitecore from a ZIP archive (not an exe setup executable) you should configure the dataFolder setting and put a valid license.xml file into the data folder before proceeding to next steps.
- 3. Copy dataFolder variable definition from Web.config to Web.config.Oracle. For example <sc.variable name="dataFolder" value="c:\sitecore\data"/>
- 4. In the Web.config.Oracle, in runtime/assemblyBinding section set bindingRedirect to the Oracle.DataAccess assembly version installed on your system:



- a. Open Global Assembly Cache by running the 'assembly' command in the command prompt of the Run console (Win+R).
- b. Locate Oracle.DataAccess.dll for your Oracle Client version, right-click, choose Properties and copy the Version value which can be in one of the following formats:
 - i. 10.2.x.x (Oracle Client versions prior to 10.2.0.2).
 - ii. 2.102.x.x or 2.111.x.x (Oracle Client versions 10.2.0.2 and higher).
- c. Modify the assemblyBinding setting. Replace 10.2.0.100 with your assembly version:

- 5. Backup the original Web.config and rename Web.config.Oracle to Web.config.
- 6. Modify connection strings in /App_Config/ConnectionStringsOracle.config to point to the valid Oracle instance.
 - a. Data Source parameter must point to the local Oracle instance name as configured in the Oracle Net Manager.
 - User names and passwords must be adjusted to match those installed on the database server. Default names/passwords are sccore/sccore, scmaster/scmaster and scweb/scweb.
- 7. Configure IIS as for a usual Sitecore installation and run Sitecore.

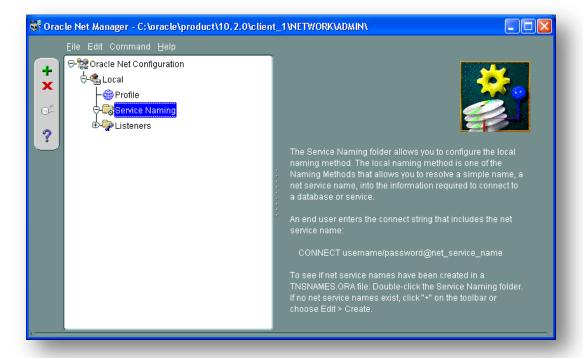
Adding a Connection to the Oracle Instance

After installing Oracle Client on your PC or server you can find Oracle Net Manager in All Programs » Oracle - Home » Configuration and Migration tools » Net Manager.



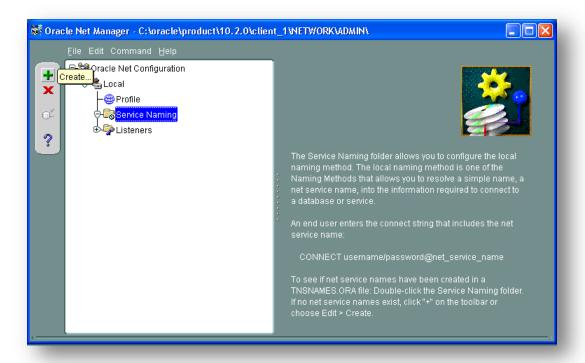


The main window of Net Manager consists of the item tree (on the left side) and the details pane (on the right side). To the left of the item tree there is a toolbar that allows to add and remove connection descriptions.

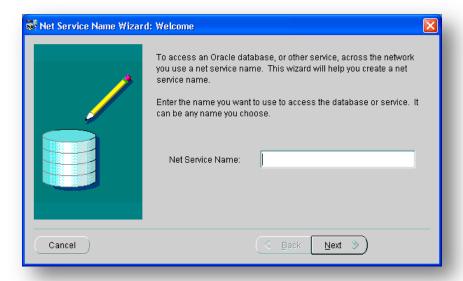


To add a new connection to Oracle instance click the Create button on the toolbar to the left of the item tree.





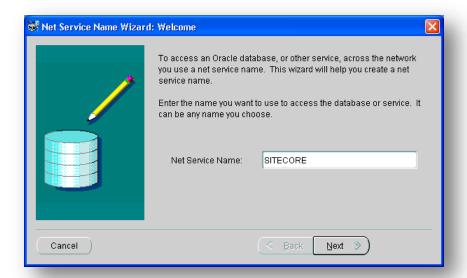
This starts the Net Service Name Wizard.



On the first page of the wizard enter the Net Service Name and click Next.

Net Service Name is the local alias that Sitecore will use to connect to the Oracle server. It must be specified in the *data source* part of the connection strings in ConnectionStringsOracle.config in Sitecore.





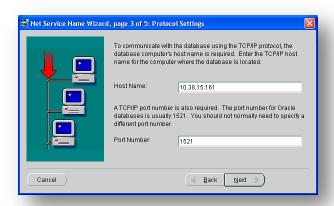
Choose Protocol to connect to the Oracle service and click *Next*. It is most common to use TCP/IP protocol without encryption in local networks.





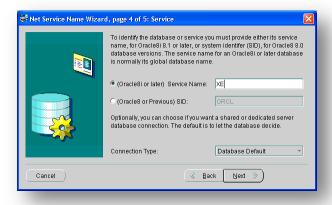
For TCP/IP protocol set up the following settings: *host name* (or IP address) where the Oracle server is located and TCP *Port number*. Click *Next* to proceed.

Note: Default port number is 1521.



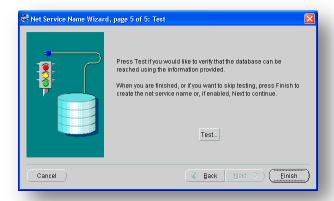
Enter the Oracle service name (as configured on the remote server) and click Next.

Note: For Oracle 10g Express Edition service name is XE.

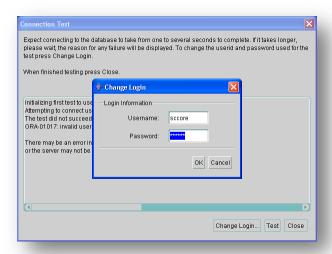




Once all parameters are entered, you can test connection to your server on the test page by clicking the *Test* button.

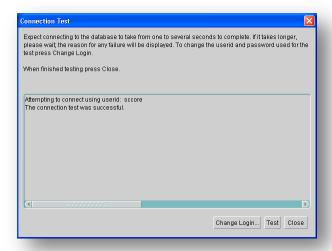


If the server does not accept the default 'scott/tiger' credentials, click *Change Login* button and enter login and password to one of your Sitecore database schemas.





When all parameters are entered correctly, connection test will report success.



Close the test window and click *Finish* to close the wizard. Net Manager main window will display the newly created connection and its parameters.