



Sitecore CMS 6.3 Installation Guide

Installation guide for administrators and developers

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Chapter 1

Introduction

This document describes the Sitecore CMS installation.

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.

Sitecore can be broken down into three logical components regardless of whether a setup .exe file or a .zip 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.
- Supporting relational databases. The databases are often stored under the supporting file system.

Configuration is managed by files such as web.config and the files under the */App_Config* folder.

For information about hardening security when Sitecore is installed, see the *Security Hardening Guide*.

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.

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

The document includes the following chapters.

- Chapter 1 – Introduction
- Chapter 2 – Sitecore CMS 6 Requirements
- Chapter 3 – Using the Sitecore Installation Program
- Chapter 4 – Installing from the .ZIP File
- Chapter 5 – Limitations and Specific Requirements
- Chapter 6 – Appendix

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

1.1 Preparing to Install Sitecore CMS 6

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.

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, SQL Server 2008 or SQL Express, 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.

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 root.

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. For more information about IIS configuration on different editions of Windows Vista, refer to the following articles:

- [Why you need Vista Business / Ultimate for IIS 7?](#)
- [IIS 7.0 Features and Vista Editions](#)

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

- Ultimate
- Professional
- Enterprise

It is possible to run Sitecore on **Windows 7 Home Premium** if you install IIS 7.5 on it. For information about installing IIS 7.5 on Windows 7 Home Premium read the following article:

- [Installing IIS 7.5 on Windows 7 Home Premium, Home Basic, or Home Starter.](#)

You can read about feature limitations in **Windows 7** editions by reading the following article:

- [Available Web Server \(IIS\) Role Services in IIS 7.5](#)

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.

To reduce the number of ASP.NET configuration issues on Sitecore hosts running on IIS 6, install and enable IIS before updating the .NET framework.

If you are running IIS 6 and you have installed .NET Framework before installing IIS, please refer to the following article for troubleshooting instructions:

- [Troubleshooting an ASP.NET Installation \(IIS 6.0\)](#)

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).
- MS SQL Server 2008 R2.
- Oracle 10g, 11g.

Sitecore recommends that you run Microsoft SQL Server 2008 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 – Limited support for Content Editor, Preview, Workbox and Page Editor interfaces.
- Microsoft Internet Explorer 6
- Microsoft Internet Explorer 7
- Microsoft Internet Explorer 8

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

Using the Sitecore Installation Program

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

You can download the Sitecore Installation Program from the [Sitecore CMS Downloads page](#).

This chapter contains the following sections:

- Pre-installation Steps
- Installation Process
- Important Notes
- Troubleshooting

3.1 Pre-installation Steps for Windows Vista, Windows 7 and Windows 2008

Before you can install Sitecore on Windows Vista, Windows 7 or Windows 2008 you must ensure that the IIS 6 configuration compatibility features are enabled.

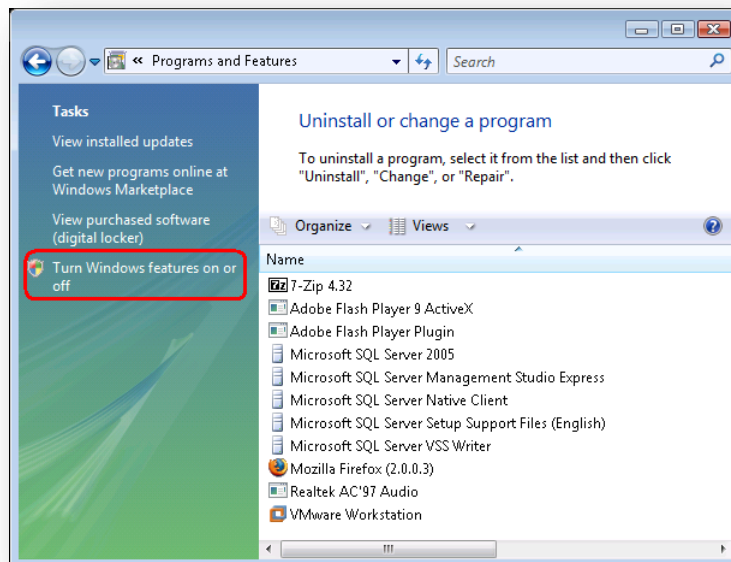
On Windows Vista, you must ensure that the UAC (User Account Control) configuration security policy *Detect application installations and prompt for elevation* is enabled.

3.1.1 IIS 6 Configuration Compatibility Features

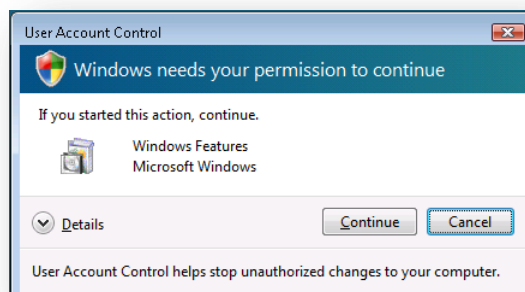
The Sitecore installation program requires IIS 6 configuration compatibility.

To ensure that the appropriate features are enabled:

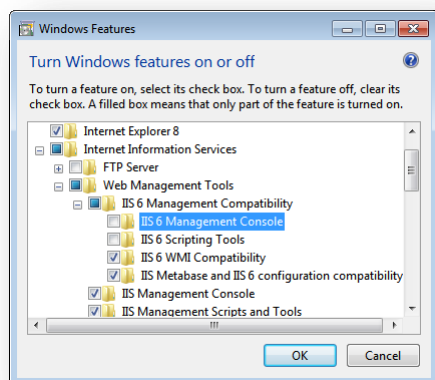
1. Log in to your Vista as an administrator.
1. Click Start, Control Panel.
2. Double-click the Programs and Features icon.
3. In the **Tasks** pane, click the *Turn Windows features on or off* task.



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



- Click Continue to open the **Windows Features** dialog box:



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

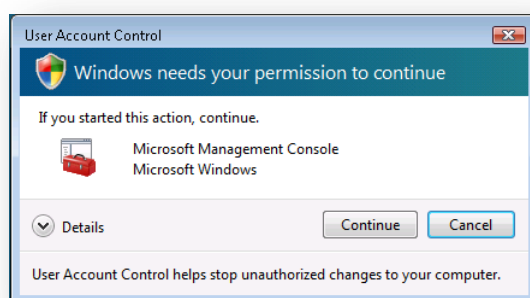
3.1.2 The UAC (User Account Control) Configuration (Windows Vista Only)

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:

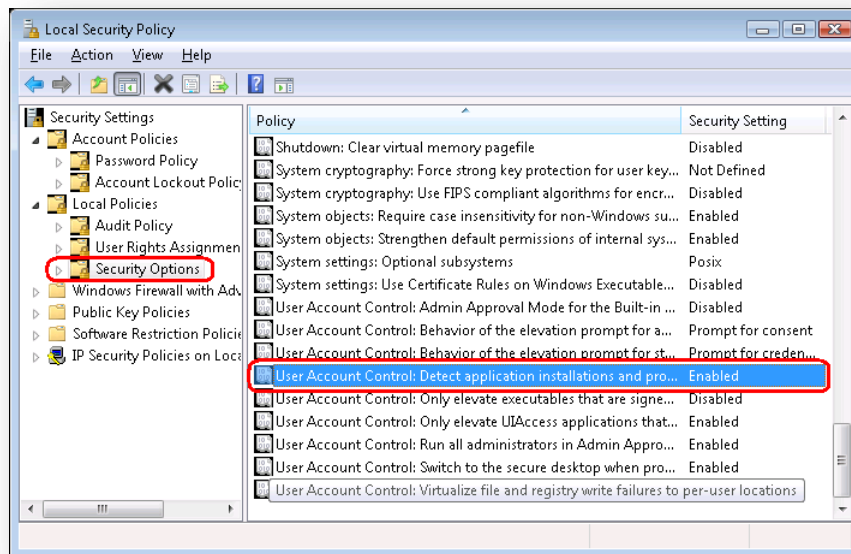
- Log in to Vista as an administrator.
- Press WIN + R to open the **Run** window.
- In the **Run** window, enter *secpol.msc* and press Enter.

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



- Click Continue to open the **Local Security Policy** window.
- In the left-hand pane, expand the *Local Policies* node and select *Security Options*.
- 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*.



3.2 Installation Process

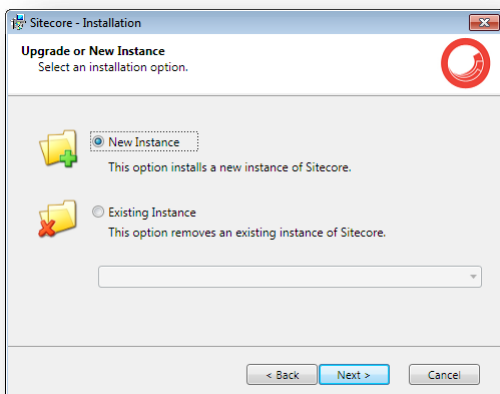
To start the installation process you need to launch the **Sitecore 6.X.X rev.XXXXXXX.exe** application, which starts the installation wizard. This section describes the steps of the wizard.

Welcome screen



Review the welcome screen and click **Next**.

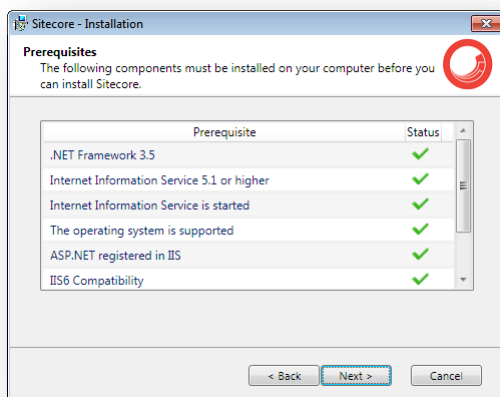
Upgrade or New Instance



Select the **New Instance** radio button to *install a new instance*.

Select the **Existing Instance** to *remove an existing instance of Sitecore CMS*. This option is only active when an instance of Sitecore already exists on the machine.

Prerequisites

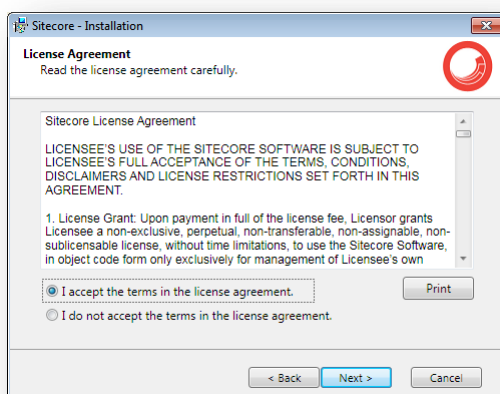


The wizard checks the components required to install Sitecore CMS and puts a green mark if a component meets the requirement or a red cross otherwise. If the latter is the case, you need to resolve the appropriate requirement before you proceed. Click **Next** when done.

Note

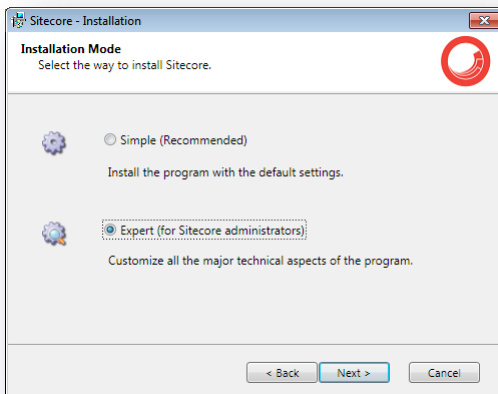
Among other things the application installer checks the presence of the WebClient service. This service enables Windows-based programs to create, access, and modify Internet-based files. The service is required for WebDAV functionality.

License Agreement



Read the License Agreement and select the appropriate radio button. Click **Next** when done.

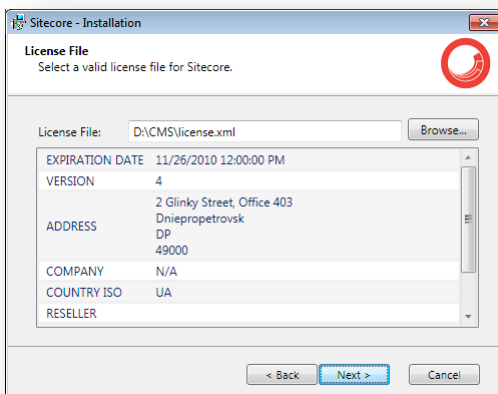
Installation Mode



Select the installation mode – **Simple**, which allows to install Sitecore quickly with the default settings or **Expert**, if you want to customize the installation.

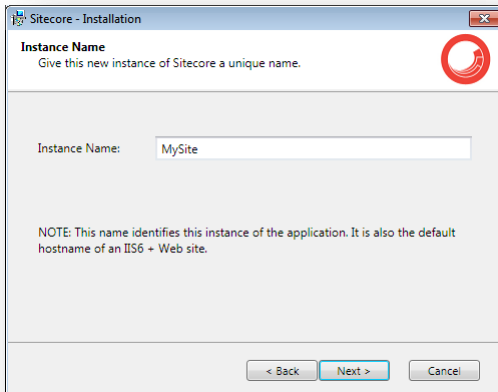
Click **Next** when done.

License File



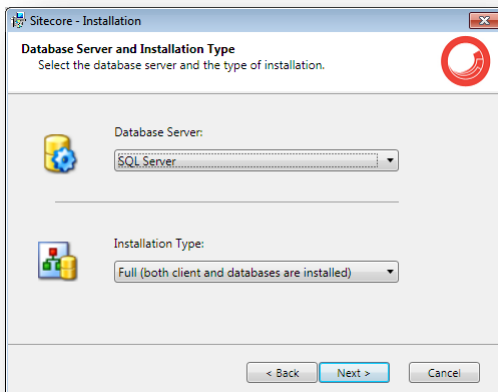
Select the license file. Click **Next** when done.

Instance Name



Give this new instance of Sitecore CMS 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.

Database Server and Installation Type



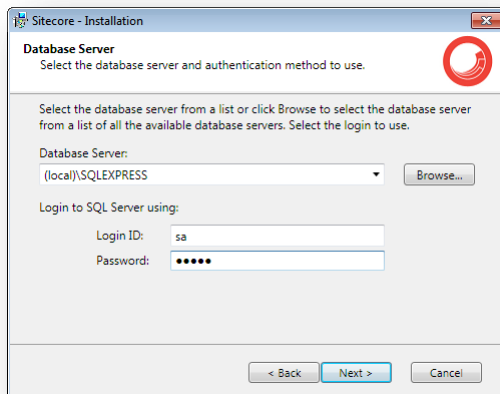
Choose the database server and the type of installation. The next section describes the SQL Server database option. If you are going to use Oracle storage, please proceed to the Oracle section.

The Client Only and Databases Only types are described in the sections below.

3.2.1 SQL Server

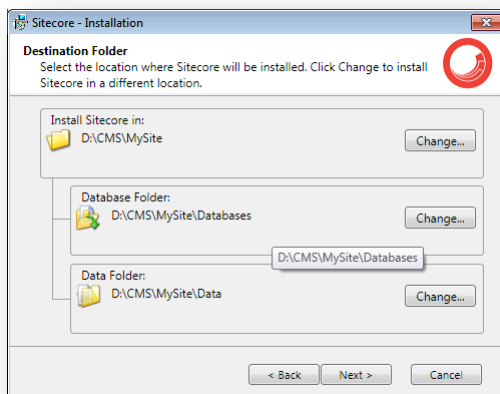
If you have chosen the SQL Server database storage on the **Database Server and Installation Type** step, you will see the following steps.

Database Server



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 corresponding password. Click **Next** when done.

Destination Folder

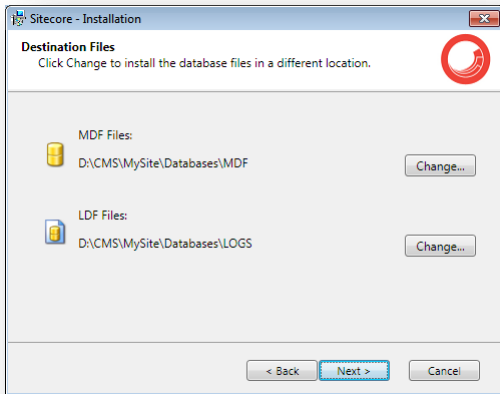


Select the folder where Sitecore CMS web site will be installed. You can also change the database folder and the folder where various data files will be stored (log files, packages, etc.). Click **Next** when done.

Note

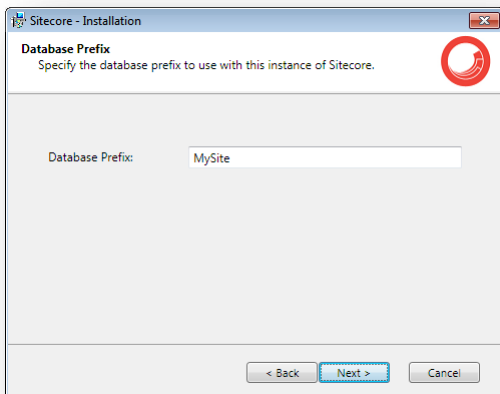
Make sure that the SQL server has the permissions to write to the destination folder.

Destination Files



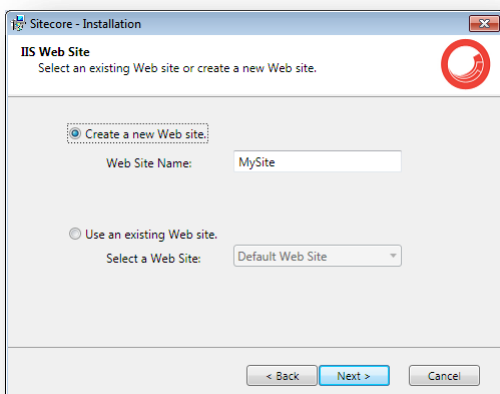
Click **Change** to change the default database file location.

Database Prefix



Specify the database prefix for this instance of Sitecore CMS.

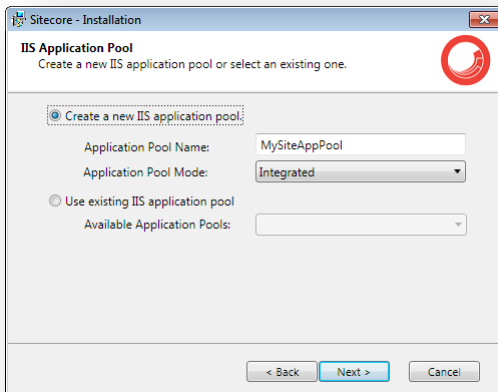
IIS Web Site



Select **Create a new Web site** to create a new web site.

Select **Use an existing Web site** to use an existing web site.

If you choose to create a new Web site, you will be prompted to create or select the IIS application pool:

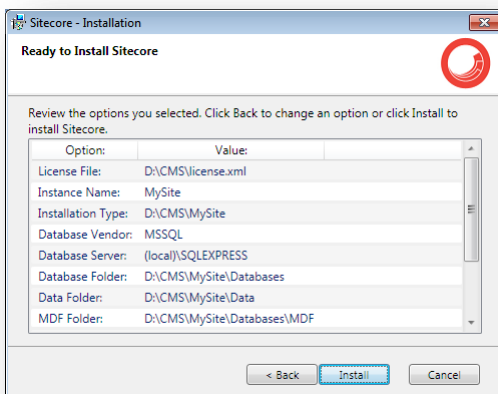


Note

If you select an existing Web site, the configuration of that IIS Web site will be changed and it will point to the new instance of Sitecore. The existing Web site will no longer be accessible under that name.

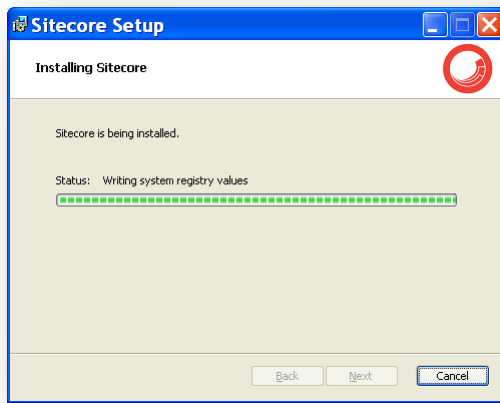
Click **Next** when done.

Ready to Install Sitecore



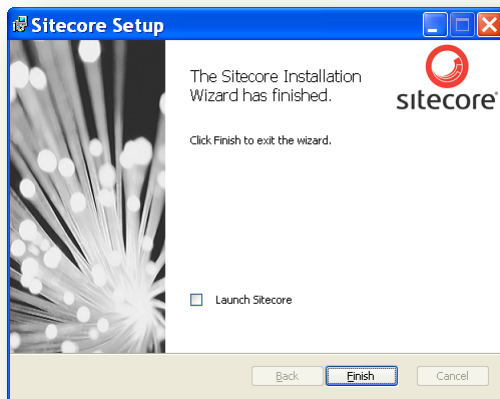
Review the options you selected. Click **Install** to install Sitecore CMS.

Installing Sitecore



After you click **Next** you will see a window which will inform you about the installation process.

Finish

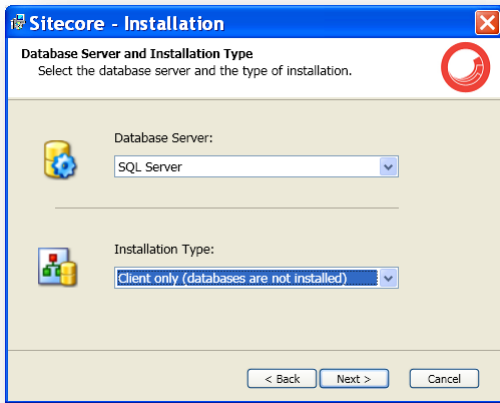


The Sitecore Installation Wizard has finished. Click **Finish** to exit the wizard.

Client Only Installation Type

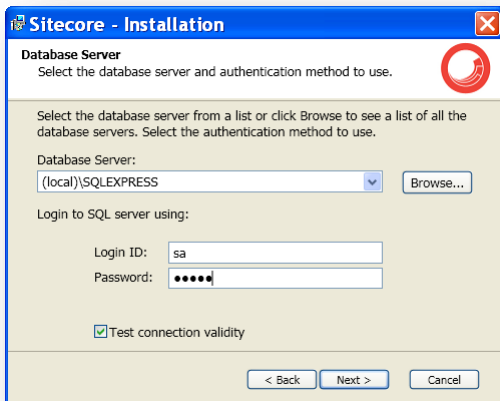
This section describes the Client Only installation type.

Database Server and Installation Type



Select **Client only** installation type to install everything except databases.

Database Server

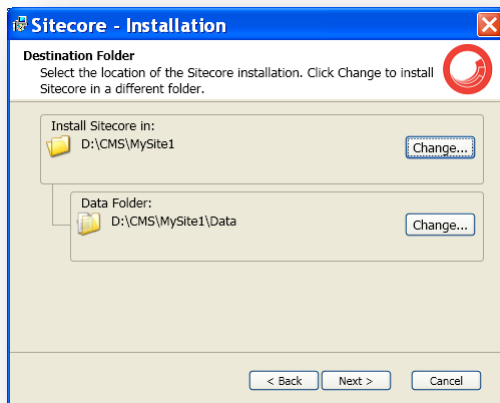


Select the database server (the local server is selected by default) and provide the server user login and password. Although you are not going to install databases, you need to specify this information to let the wizard write the connections strings correctly.

If you clear the **Test connection validity** check box, you can disable the connection validation and install Sitecore even if you don't have access to the SQL server.

Click **Next** when done.

Destination Folder



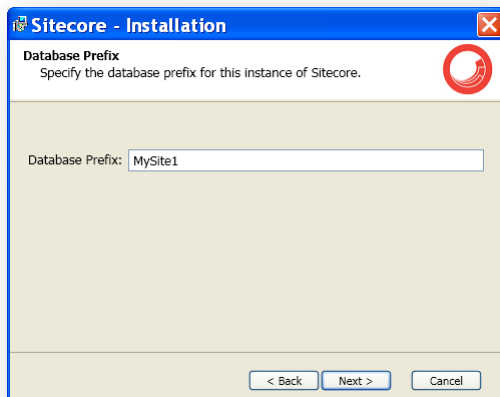
Select the folder where Sitecore CMS web site will be installed. You can also change the folder where various data files will be stored (log files, packages, etc.).

Note

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

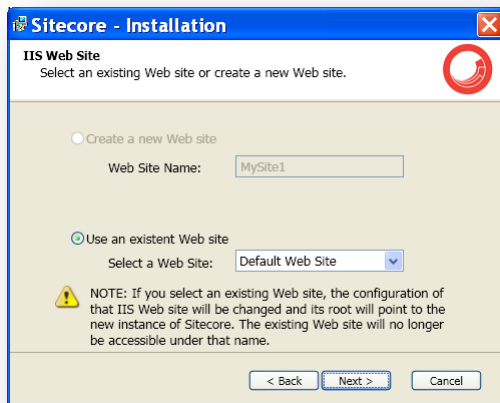
Click **Next** when done.

Database Prefix



Enter the database prefix for Sitecore databases. Although you are not going to install databases, you need to specify this information to let the wizard write the connections strings correctly. Click **Next** when done.

IIS Web Site

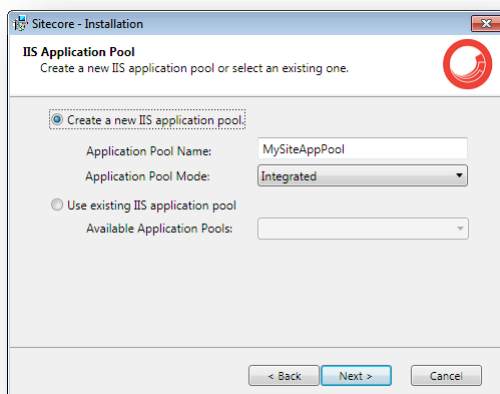


Select an existing web site or create a new Web site by selecting the appropriate option.

Select **Create a new Web site** to create a new web site.

Select **Use an existing Web site** to use an existing web site.

If you choose to create a new Web site, you will be prompted to create or select the IIS application pool:

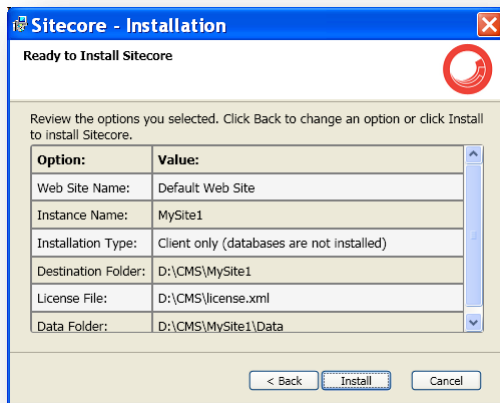


Note

If you select an existing Web site, the configuration of that IIS Web site will be changed and it will point to the new instance of Sitecore. The existing Web site will no longer be accessible under that name.

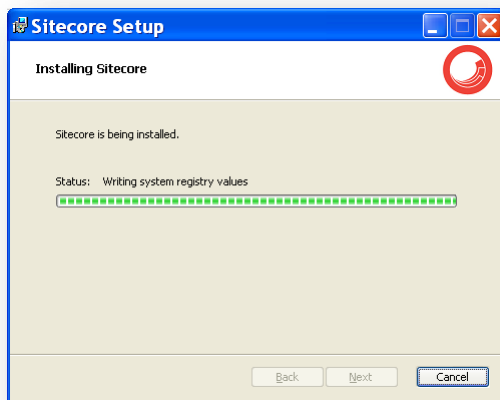
Click **Next** when done.

Ready to Install Sitecore



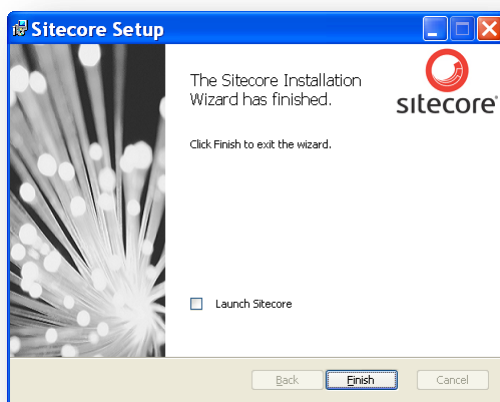
Review the options you selected. Click **Install** to install Sitecore CMS.

Installing Sitecore



After you click **Next** you will see a window which will inform you about the installation process.

Finish

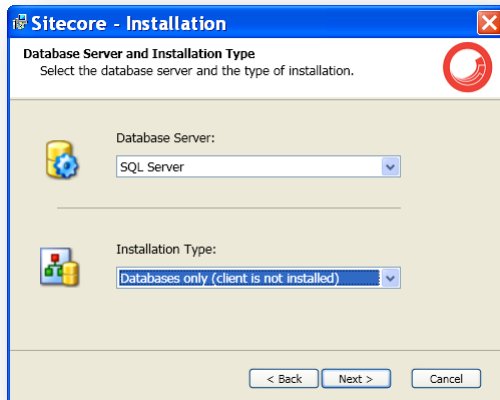


The Sitecore Installation Wizard has finished. Click **Finish** to exit the wizard.

Databases Only Installation Type

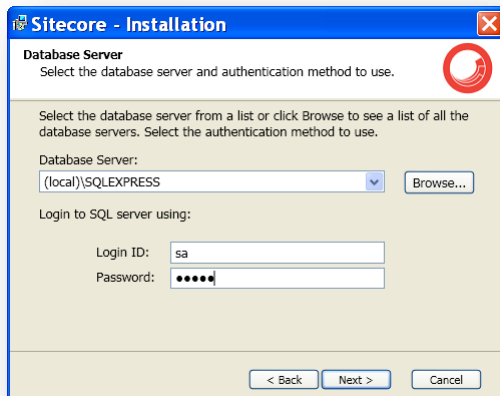
This section describes the Databases Only installation type.

Database Server and Installation Type



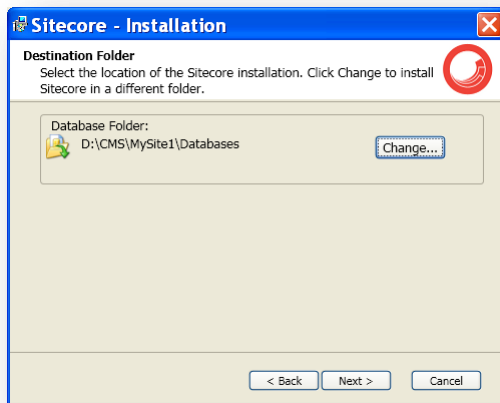
Select **Databases only** installation type to install only databases.

Database Server



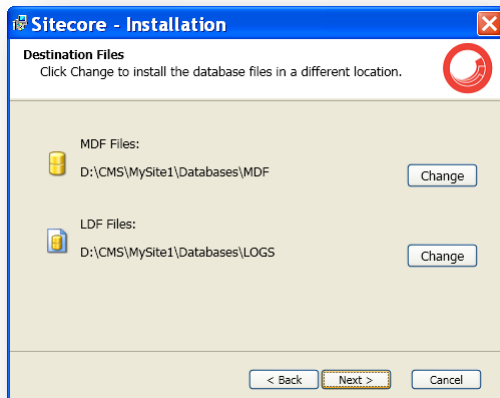
Select the database server from a list or click Browse to see a list of all the database servers available. Enter the login id (SQL server user name) and corresponding password. Click **Next** when done.

Destination Folder



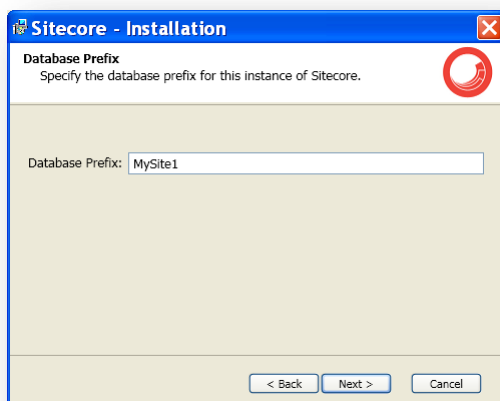
Select the location where the databases will be installed.

Destination Files



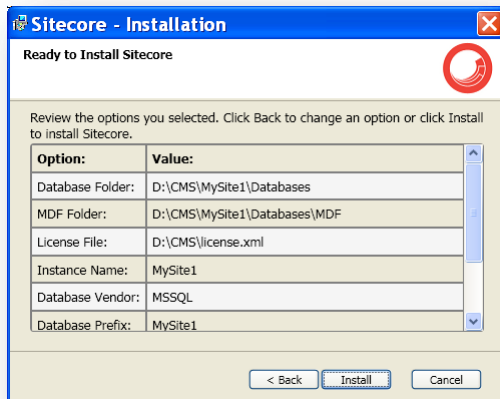
Click **Change** to change the default database file location. Click **Next** when done.

Database Prefix



Enter the database prefix for Sitecore databases. Click **Next** when done.

Ready to Install Sitecore



Review the options you selected. Click **Install** when done.

3.2.2 Oracle Tablespace

In case you are going to use Oracle database server, you must create the appropriate tablespace first. To do this, run the following SQL script:

```
create tablespace sitecore logging datafile 'sitecore.dbf' size 200M
reuse autoextend on next 100M extent management local segment space management auto;
```

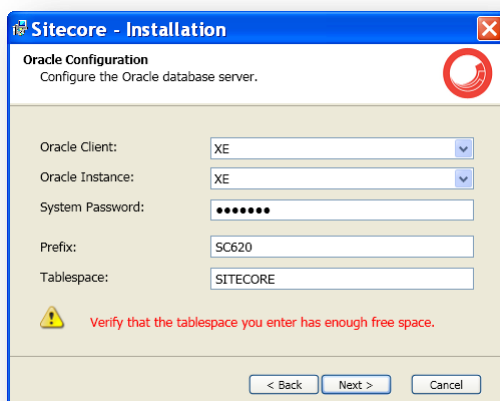
3.2.3 Oracle

If you have chosen the Oracle database storage on the **Database Server and Installation Type** step, you will see the following steps.

Important

You must create the Sitecore Oracle tablespace before you proceed with the installation. For more information, see **Section 3.2.2, Oracle Tablespace**.

Oracle Configuration

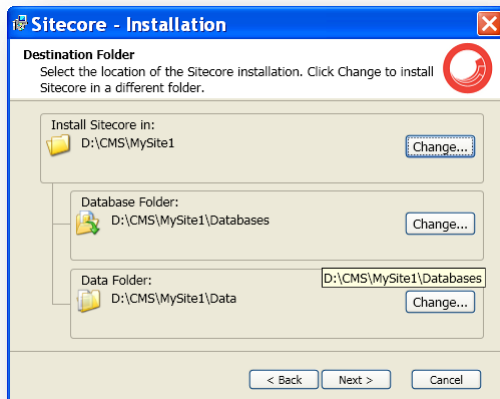


Configure the Oracle database server.

- **Oracle Client** – select the Oracle client.
- **Oracle Instance** – select the Oracle instance.
- **System password** – password for the system user of the Oracle instance.
- **Prefix** - prefix to use for user schema names and passwords.
- **Tablespace** – name of the tablespace for Sitecore data.

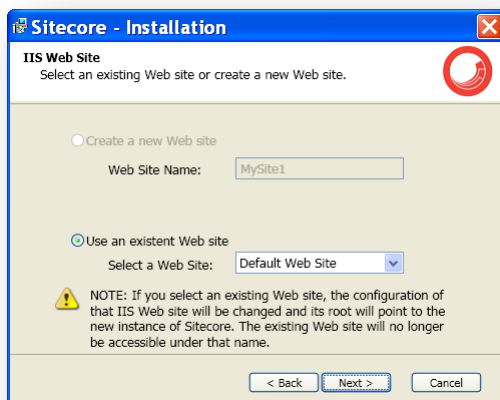
Click **Next** when done.

Destination Folder



Select the folder where Sitecore CMS web site will be installed. You can also change the database folder and the folder where various data files will be stored (log files, packages, etc.). Click **Next** when done.

IIS Web Site

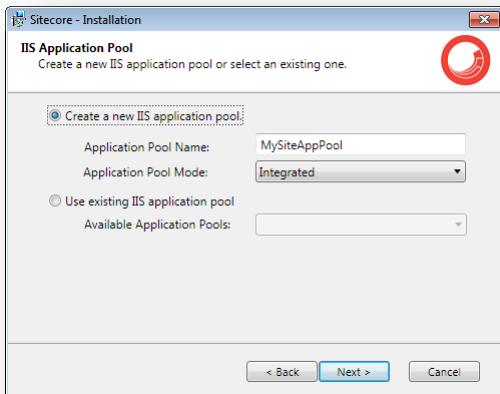


Select an existing web site or create a new Web site by selecting the appropriate option.

Select **Create a new Web site** to create a new web site.

Select **Use an existing Web site** to use an existing web site.

If you choose to create a new Web site, you will be prompted to create or select the IIS application pool:

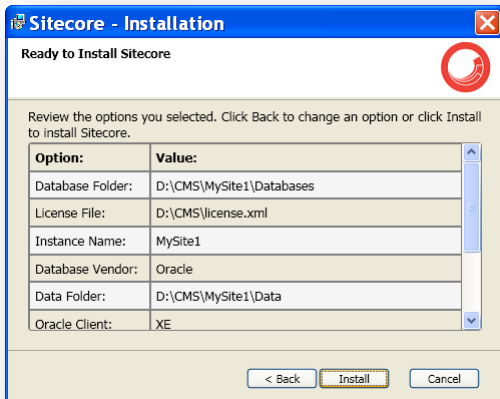


Note

If you select an existing Web site, the configuration of that IIS Web site will be changed and it will point to the new instance of Sitecore. The existing Web site will no longer be accessible under that name.

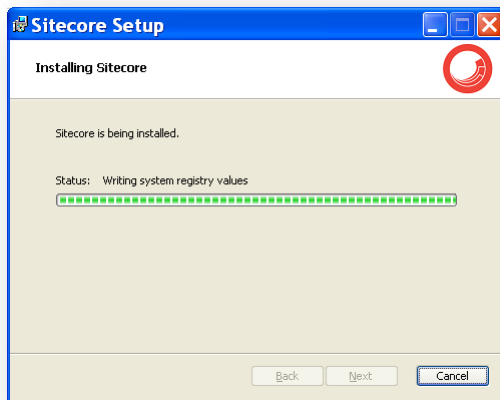
Click **Next** when done.

Ready to Install Sitecore



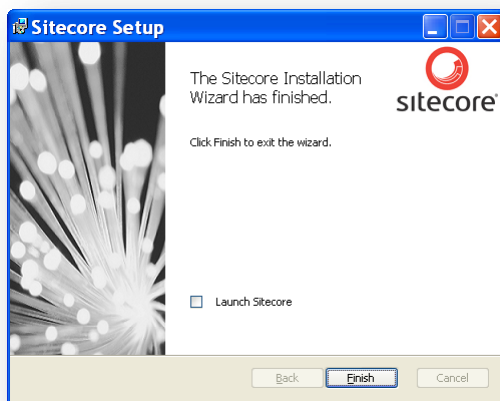
Review the options you selected. Click **Install** to install Sitecore CMS.

Installing Sitecore



After you click **Next** you will see a window which will inform you about the installation process.

Finish

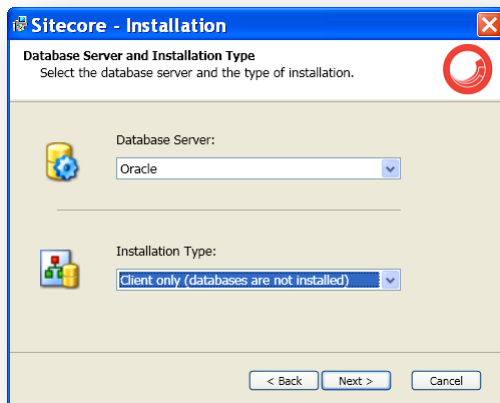


The Sitecore Installation Wizard has finished. Click **Finish** to exit the wizard.

Client Only Installation Type

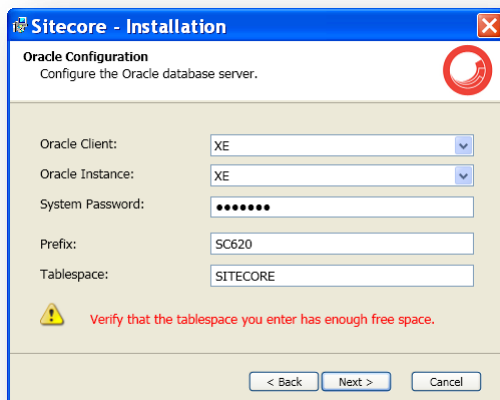
This section describes the Client Only installation type.

Database Server and Installation Type



Select **Client only** installation type to install everything except databases.

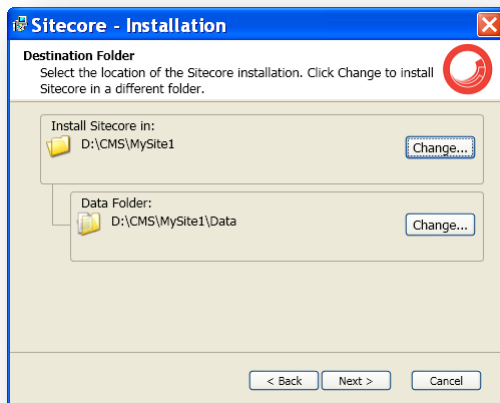
Oracle Configuration



Configure the Oracle database server.

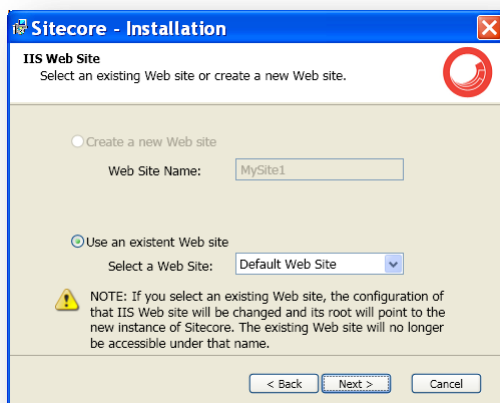
Although you are not going to install databases, you need to specify this information to let the wizard write the connections strings correctly. Click **Next** when done.

Destination Folder



Select the folder where Sitecore CMS web site will be installed. You can also change the folder where various data files will be stored (log files, packages, etc.). Click **Next** when done.

IIS Web Site

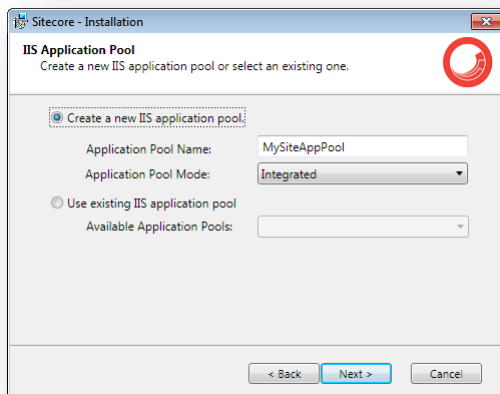


Select an existing web site or create a new Web site by selecting the appropriate radio box.

Select **Create a new Web site** to create a new web site.

Select **Use an existing Web site** to use an existing web site.

If you choose to create a new Web site, you will be prompted to create or select the IIS application pool:

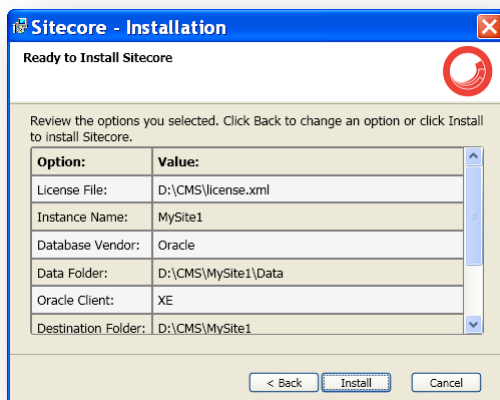


Note

If you select an existing Web site, the configuration of that IIS Web site will be changed and it will point to the new instance of Sitecore. The existing Web site will no longer be accessible under that name.

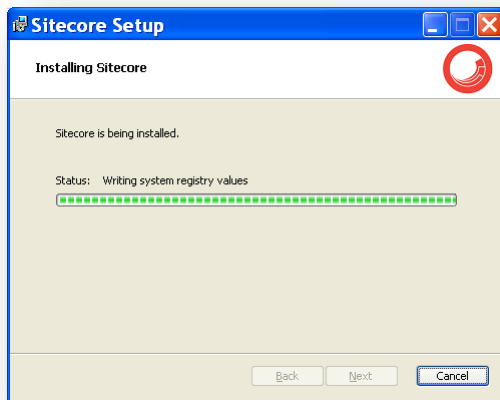
Click **Next** when done.

Ready to Install Sitecore



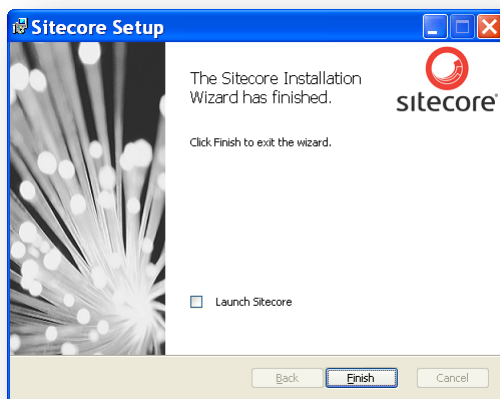
Review the options you selected. Click **Install** to install Sitecore CMS.

Installing Sitecore



After you click **Next** you will see a window which will inform you about the installation process.

Finish

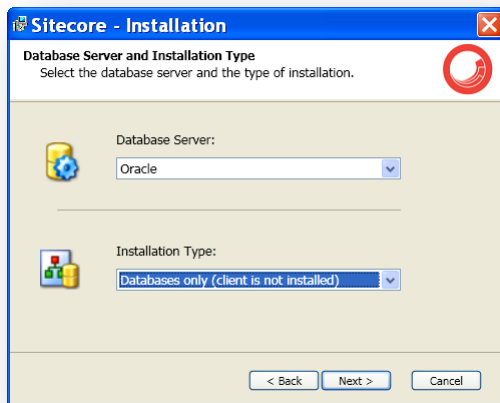


The Sitecore Installation Wizard has finished. Click **Finish** to exit the wizard.

Databases Only Installation Type

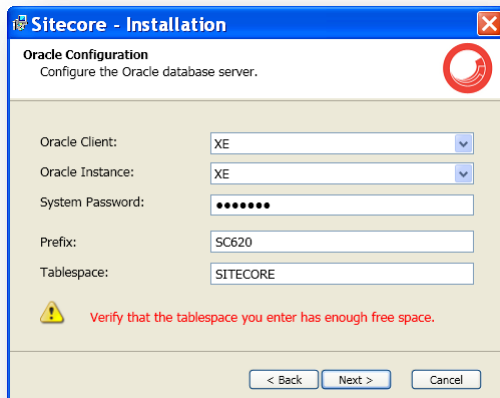
This section describes the Databases Only installation type.

Database Server and Installation Type



Select **Databases only** installation type to install only databases.

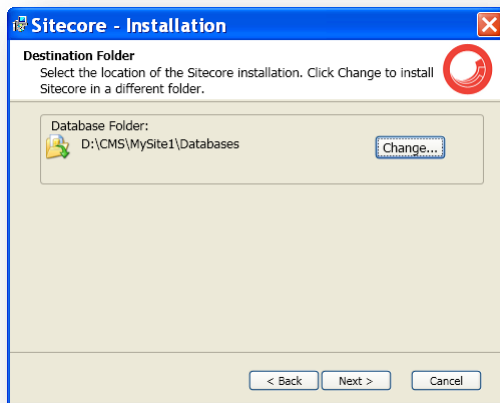
Oracle Configuration



Configure the Oracle database server.

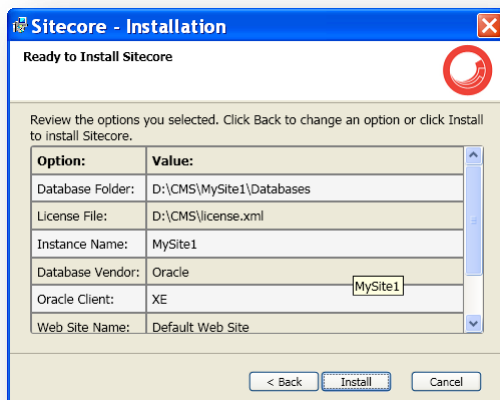
Click **Next** when done.

Destination Folder



Select the location where the databases will be installed.

Ready to Install Sitecore



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

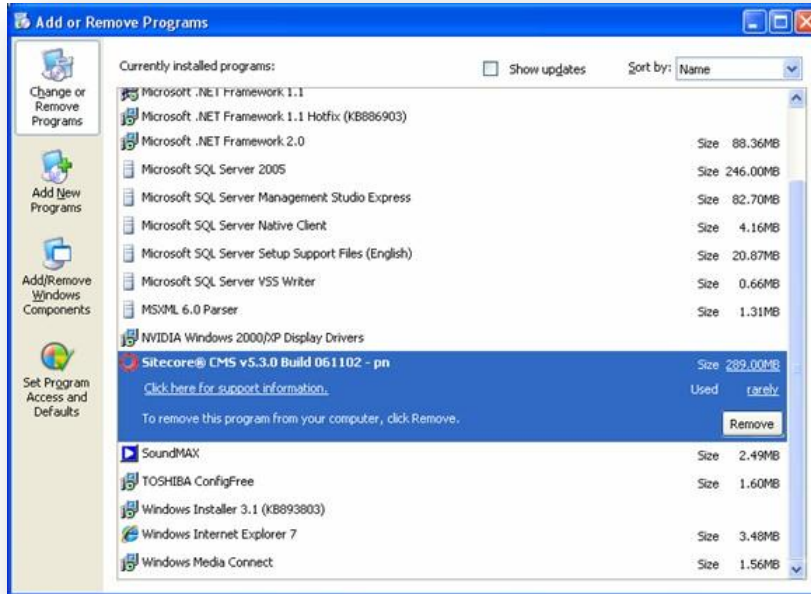
3.3 Important Notes

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

3.4 Uninstalling Sitecore

Use the Add or Remove Programs facility in Windows Control Panel to uninstall Sitecore.

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



Restart the SQL Server and IIS services as appropriate.

3.5 Troubleshooting

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: C:\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.

Chapter 4

Installing from the .ZIP File

This chapter describes how to install Sitecore using the ZIP archive of the Web site root. You can download the ZIP archive using the following page:

<http://sdn.sitecore.net/Resources/Sitecore%206.aspx>

This chapter contains the following sections:

- Installation Process Overview
- Configuring Folder and Registry Permissions
- Configuring the IIS
- Microsoft SQL Server Configuration
- Oracle Database Storage Setup
- Post-Installation Steps
- Uninstalling Sitecore (ZIP installation)

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 using the following page:

<http://sdn.sitecore.net/Resources/Sitecore%206.aspx>

To install an instance of Sitecore:

1. Install Microsoft .NET Framework V3.5.
2. Choose a parent directory path for the project, for example `C:\InetPub\ProjectName`.
3. Extract the .zip archive to create the following folders:

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

4. Set permissions as described in **Section 4.2, Configuring Folder and Registry Permissions**.

5. 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\ProjectName\Data
```

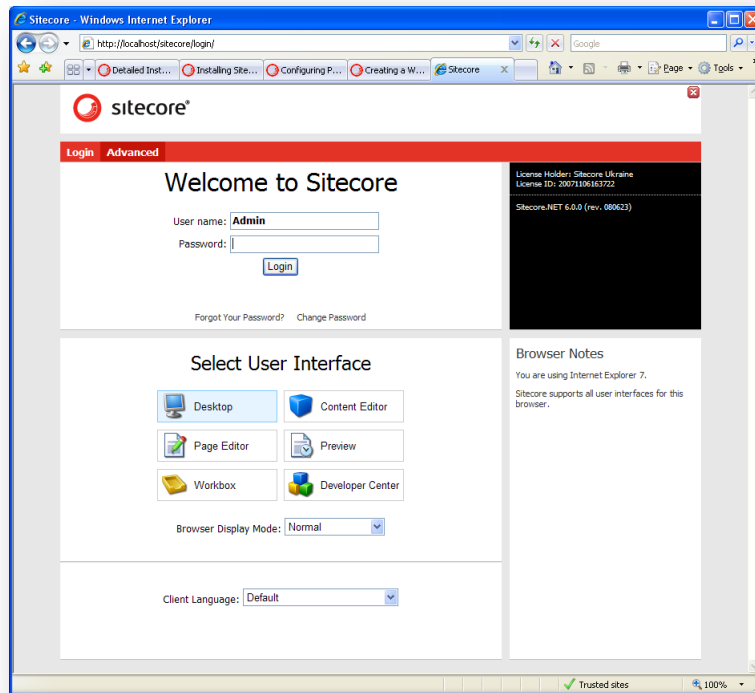
6. If you are running SQL Server, attach SQL databases from `/Databases` folder to the SQL server.
7. If you are running SQL Server, edit the `ConnectionStrings.config` file located in the `/Website/App_Config/` folder. Enter the appropriate values in a line for each database, for instance:

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

8. In the IIS, configure the web site as described in **Section 4.3, Configuring the IIS**.
9. Configure the Internet Explorer browser as described in [Internet Explorer Configuration Reference](#).
10. Start the browser and enter the following address in the address bar:

```
http://ProjectName/sitecore
```

You should now see the Sitecore login screen:



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 **Section 6.1, Server Configuration**, and to the MSDN web site 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* permissions to all 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
5 and 6	IUSR_*, where the star represents the machine name
7 and 7.5	IUSR

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

4.2.2 File System Permissions for ASP.NET Requests

Requests for ASP.NET resources and all the .NET code running within the application is executed with the permissions of the account configured as an identity for the web site's application pool. This account requires *Modify* permissions to all files, folders, and subfolders under the `/Website` and `/Data` folders.

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

IIS version	Default ASP.NET account name
5	ASPNET
6 and 7	NETWORK SERVICE
7.5	AppPoolIdentity

IIS 6 and later versions allow changing the user account used for processing ASP.NET requests.

If you choose a different user account for processing 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, refer to the following article: <http://learn.iis.net/page.aspx/624/application-pool-identities/>

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 (IIS_WPG on IIS 6).

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_* users require the modify access rights to the \temp folder to install Sitecore CMS.

Variables mentioned above have the following default values:

Variable	Default value
%WINDIR%	C:\Windows
%PROGRAMDATA%	C:\Documents and Settings\All Users for IIS 5/6; 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.

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"
```

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 5, 6, 7 and 7.5) for Sitecore CMS.

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

- IIS 5 – Windows XP.
- IIS 6 – Windows Server 2003.
- IIS 7 – Windows Vista.
- IIS 7.5 – Windows 7, Windows Server 2008.

4.3.1 IIS 7

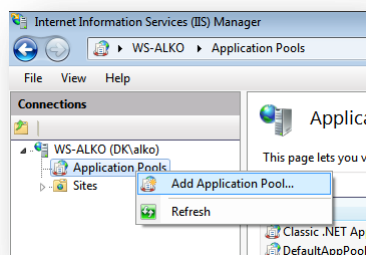
This section contains the instructions for IIS 7 and 7.5.

Create the Application Pool

This section describes how to create the application pool for Sitecore on IIS7 or IIS7.5 (Windows 7, Windows Server 2008).

To create the application pool:

1. Start the **IIS Manager**.
2. In the **Connections** panel, select **Application Pools**.
3. Right-click **Application Pools** and click **Add Application Pool**.



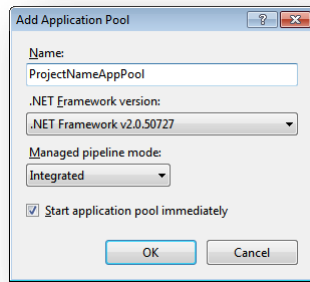
4. In the prompt dialog, enter the following values:

Name: ProjectNameAppPool

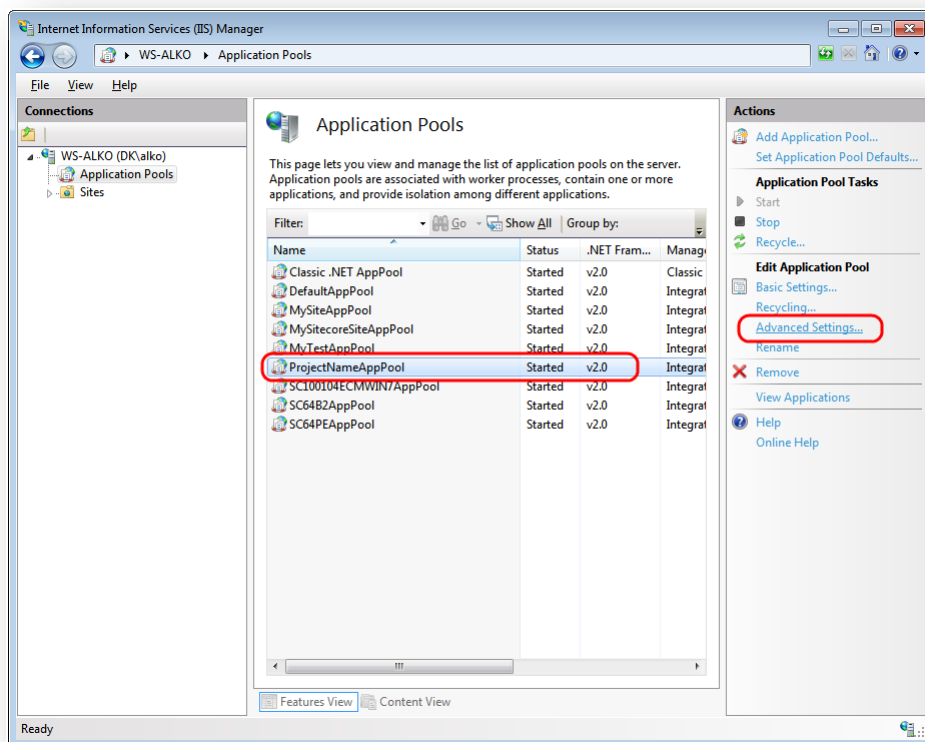
.NET Framework version: 2.0.XXXXX

Managed pipeline mode: Integrated.

Click **OK**.

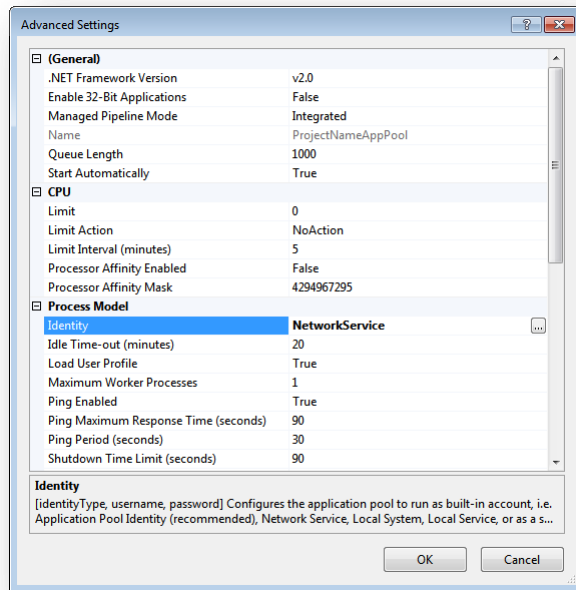


5. Select the application pool you have just created.
6. On the Actions panel, click **Advanced Settings**.



7. In the **Advanced Settings** dialog box, set the following settings:
 - Set the **.NET Framework version** setting to “v2.0”.
 - Set the **Identity** setting to the built-in account called “ApplicationPoolIdentity” or “NetworkService”.
 - Ensure that the **Maximum Worker Processes** setting is set to “1”.

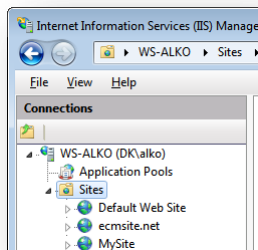
Set the **Load User Profile** setting to “true”.



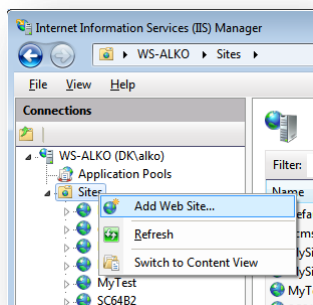
Create the Website

Complete the following steps to configure the Web site.

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



3. Right-click **Sites** and click **Add Web Site**.



4. In the **Add Web Site** dialog box, fill the required fields, for example:

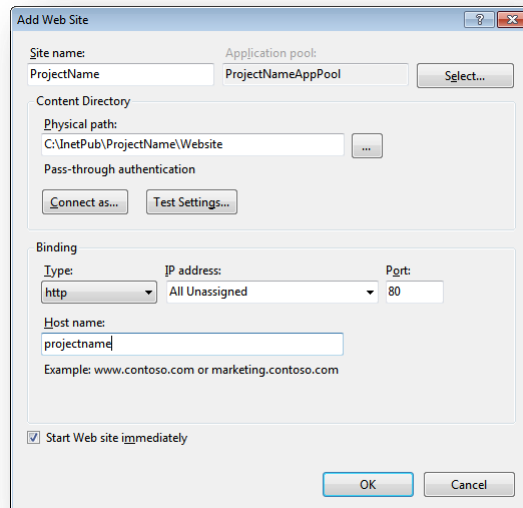
Site name: ProjectName

Application pool: ProjectNameAppPool

Physical path: C:\inetpub\ProjectName\Website

Host name: projectname

Click **OK**.



5. Add the following line to your `hosts` file that is located at `C:\Windows\System32\drivers\etc`:
`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

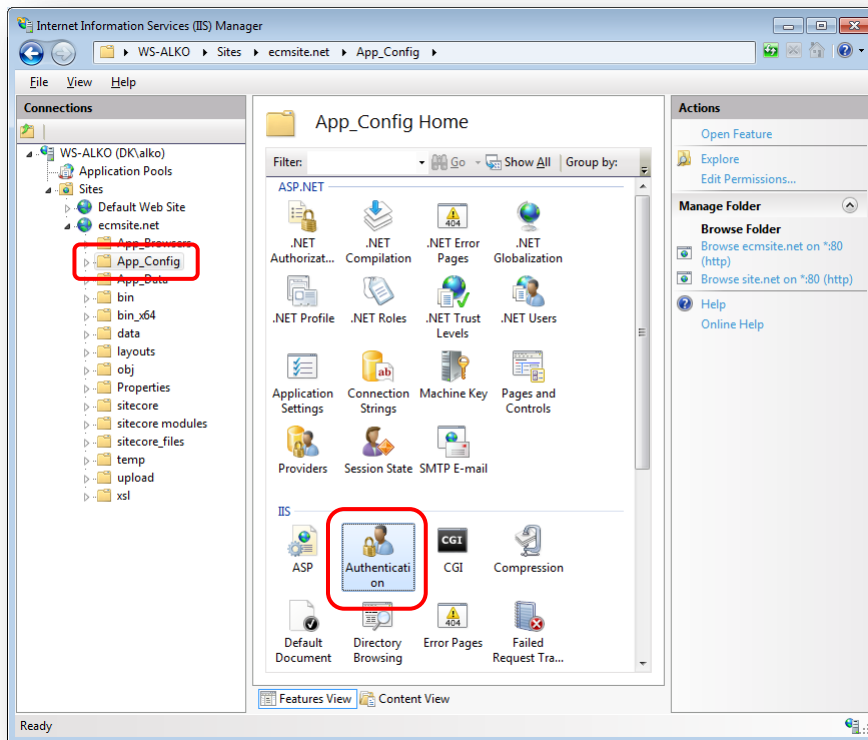
You should prevent anonymous users from accessing the following folders:

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

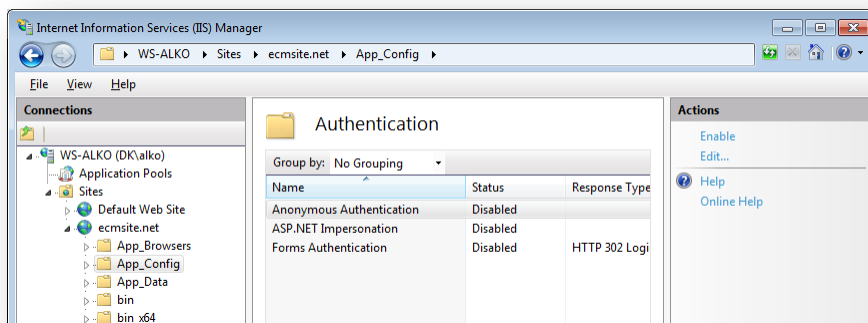
For instance, to limit anonymous access to the `/App_Config` folder:

1. Open the IIS.

- In the **Connections** panel, browse your Sitecore site and select the /App_Config folder.



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



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

4.3.2 IIS 6

This section contains the instructions for IIS 6.

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

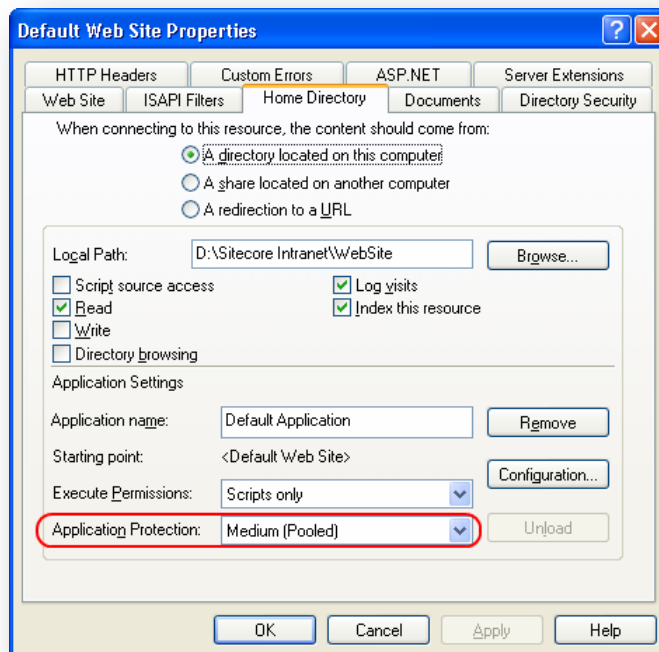
Note
Do not create a virtual directory for Sitecore as the product cannot operate from a virtual directory.

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.

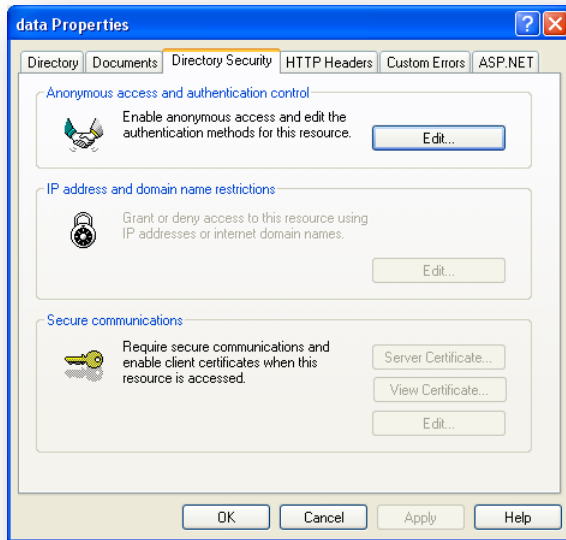
If you are running Windows 2003, click Control Panel, Administrative tools, Internet Information Services (IIS) Manager to open the Microsoft Management Console for the IIS.

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)*.

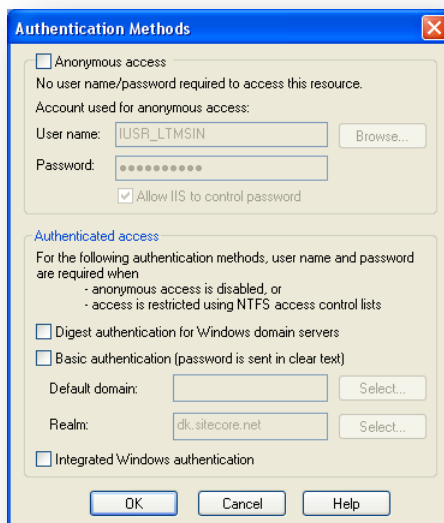


Do not select *High (Isolated)* as this will cause excessive caching.

- 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:



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



- 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
- 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.

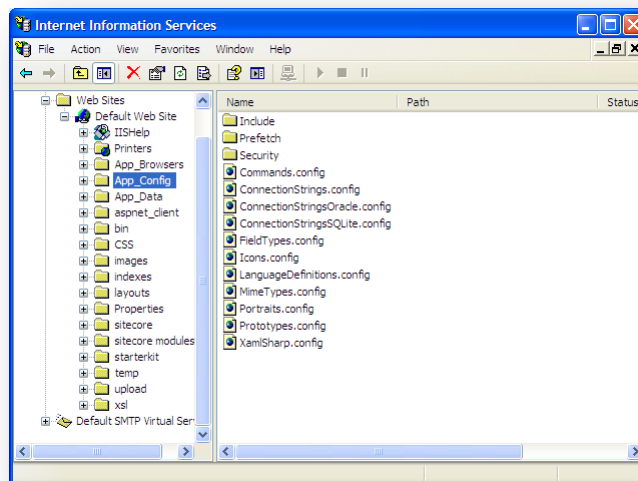
Limit Access to Anonymous Users

You should prevent anonymous users from accessing the following folders:

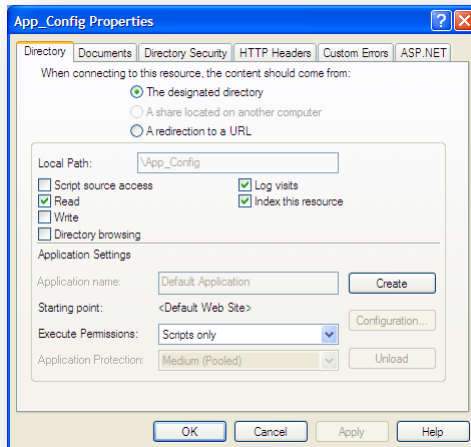
- /App_Config
- /sitecore/admin
- /sitecore/debug
- /sitecore/shell/WebService

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

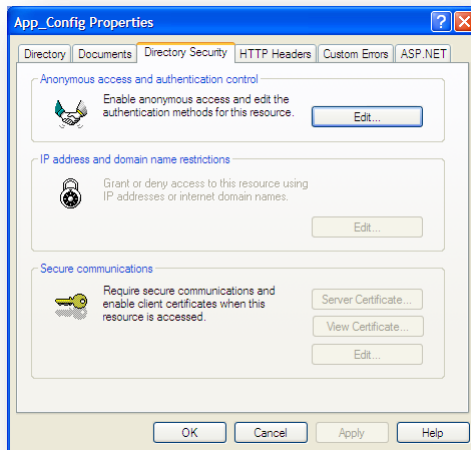
1. Open the IIS.
2. Navigate to the Web Sites\Default Web Site\App_Config folder.



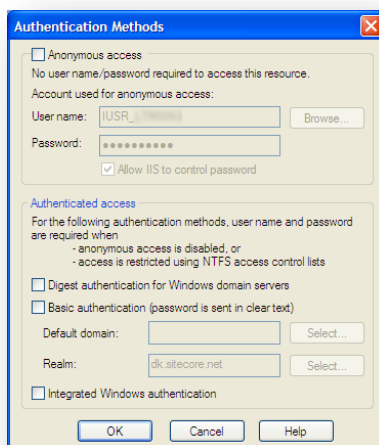
- In the **Internet Information Services** window, right-click the `App_Config` folder and click **Properties**:



- In the **App_Config Properties** window, click the **Directory Security** tab.



- In the **Anonymous access and authentication control** section, click **Edit**.



- In the **Authentication Methods** window, ensure that the **Anonymous access** check box is cleared.

Repeat this process for the other folders and restart the IIS.

Note

If you have upgraded to Sitecore 6 from an earlier version and followed the upgrade instructions, you should have removed all the obsolete files. However, if you did not follow the upgrade instructions, you should prevent anonymous access to the rest.aspx file. This file is stored in the /sitecore folder.

4.3.3 IIS 5

This section contains the instructions for IIS 5.

Set the Home Directory

Complete the following steps to set the Web site home directory.

- Open the Internet Information Services (IIS) Manager.
- In the **Internet Information Services** window, expand Web Sites.
- Right-click Default Web Site and click **Properties**.
- In **Home Directory** tab, in the **Local path** field, enter the path to the `WebSite` folder, for instance `C:\InetPub\ProjectName\WebSite`.

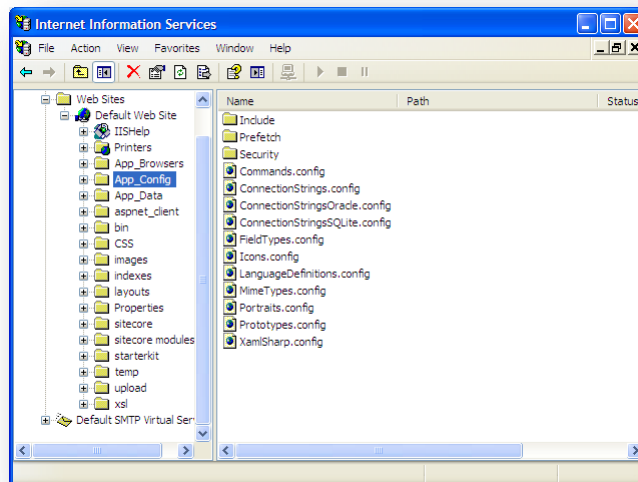
Limit Access to Anonymous Users

You should prevent anonymous users from accessing the following folders:

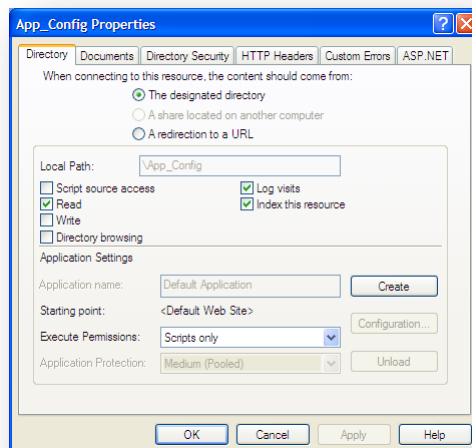
- /App_Config
- /sitecore/admin
- /sitecore/debug
- /sitecore/shell/WebService

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

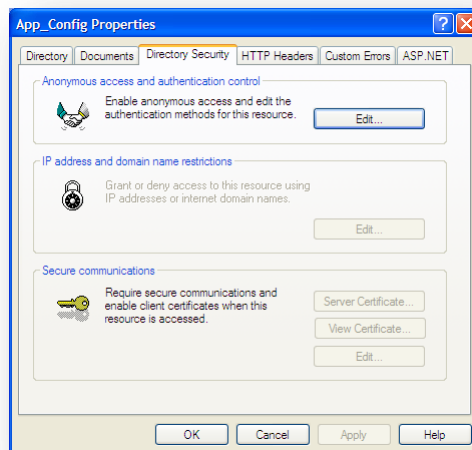
- Open the IIS.
- Navigate to the `Web Sites\Default Web Site\App_Config` folder.



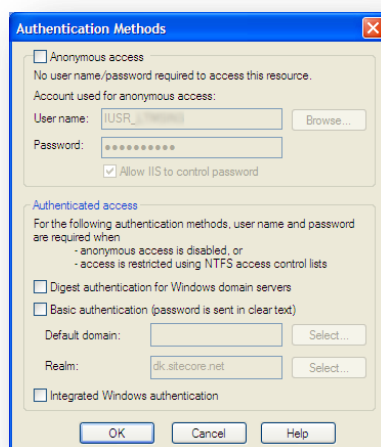
3. In the **Internet Information Services** window, right-click the `App_Config` folder and click **Properties**:



4. In the **App_Config Properties** window, click the **Directory Security** tab.



5. In the **Anonymous access and authentication control** section, click **Edit**.



6. In the **Authentication Methods** window, ensure that the **Anonymous access** check box is cleared.
7. Restart the IIS.

Repeat this process for the other folders.

Note

If you have upgraded to Sitecore 6 from an earlier version and followed the upgrade instructions, you should have removed all the obsolete files. However, if you did not follow the upgrade instructions, you should prevent anonymous access to the rest.aspx file. This file is stored in the /sitecore folder.

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 the following article:

<http://technet.microsoft.com/en-us/library/ms188670.aspx>

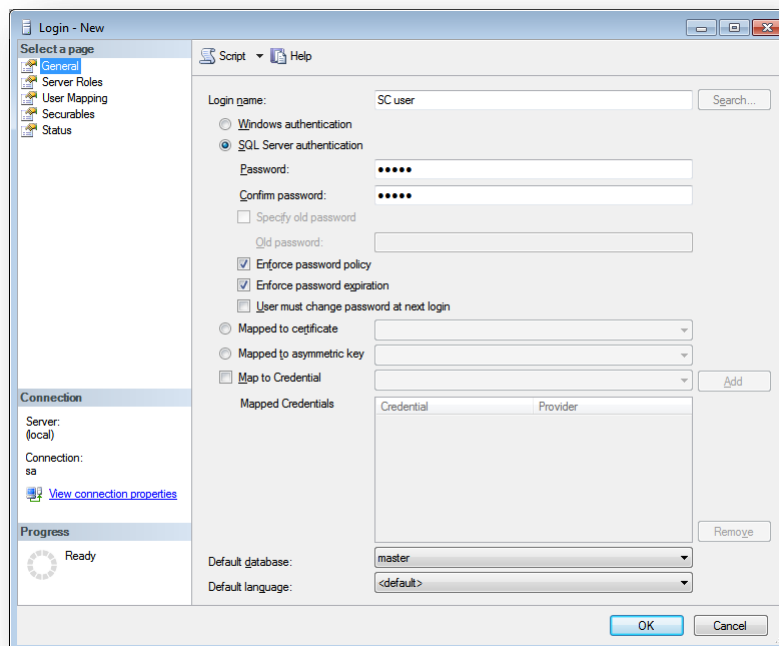
Note

It is also possible to use Windows authentication to connect to SQL server. For more information on connecting to SQL server refer to <http://msdn.microsoft.com/en-us/library/ff647396.aspx>

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

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 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).
7. 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 the following check boxes:

For the *Master* and the *Web* databases: db_datareader, db_datawriter, public.

For the *Core* database:

db_datareader,

db_datawriter,

public,

aspnet_Membership_BasicAccess,

aspnet_Membership_FullAccess,

aspnet_Membership_ReportingAccess,

aspnet_Profile_BasicAccess,

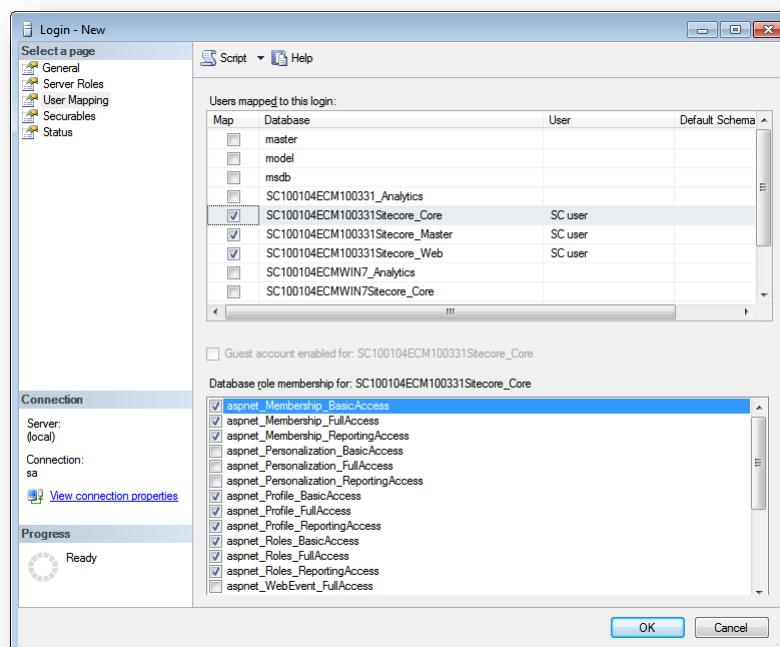
aspnet_Profile_FullAccess,

aspnet_Profile_ReportingAccess,

aspnet_Roles_BasicAccess,

aspnet_Roles_FullAccess,

aspnet_Roles_ReportingAccess,



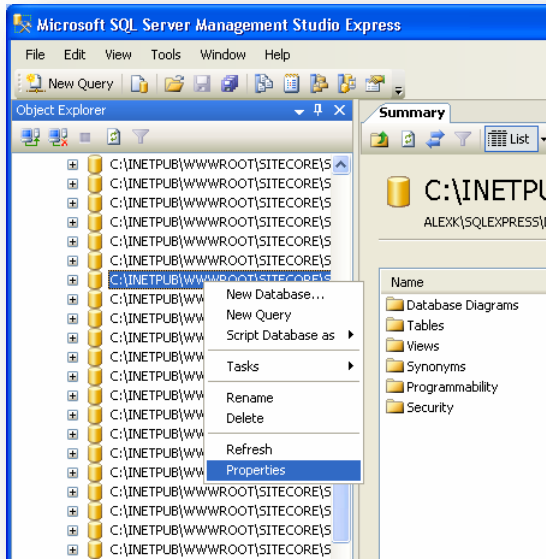
9. Click OK to create the user.

Granting Execute Rights to Stored Procedures

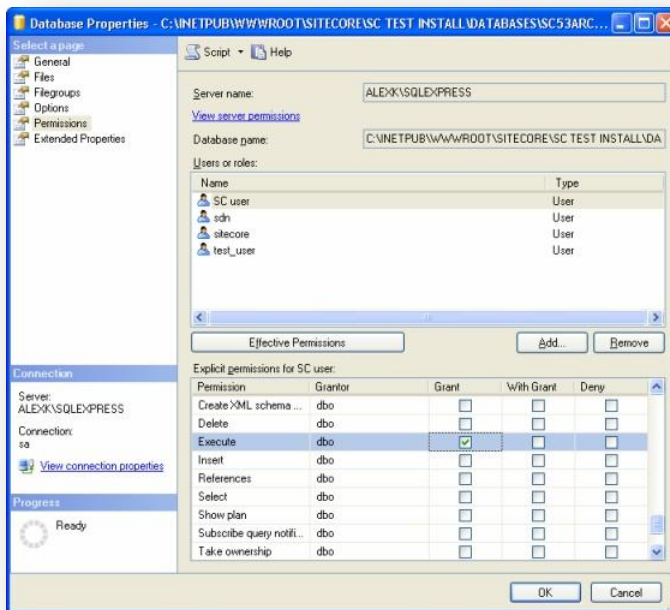
To grant execute rights to stored procedures:

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** section and select the user you want to grant rights.



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.

4.5 Oracle Database Storage Setup

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

4.5.1 Oracle Storage Setup

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

Database Server Preparations

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

5. Oracle instance must be configured in shared server mode.
6. 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:
7. 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.
8. Load Sitecore data into the Oracle database:
 - a. In the computer's System Properties/Advanced/Environment Variables set up user-level 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.

Website Server Setup Instructions

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

9. 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 6.1.2, 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.
10. 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.
11. Copy dataFolder variable definition from Web.config to Web.config.Oracle.
For example `<sc.variable name="dataFolder" value="c:\sitecore\data"/>`

12. 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:

```
<dependentAssembly>
  <assemblyIdentity name="Oracle.DataAccess"
    publicKeyToken="89b483f429c47342"/>
  <bindingRedirect oldVersion="9.2.0.401"
    newVersion="10.2.0.100"/>
</dependentAssembly>
```

13. Backup the original Web.config and rename Web.config.Oracle to Web.config.
14. 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.
 - b. User names and passwords must be adjusted to match those installed on the database server. Default names/passwords are sscore/score , scmaster/scmaster and scweb/scweb.
15. Configure IIS as for a usual Sitecore installation and run Sitecore.

4.6 Post-Installation Steps

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

4.6.1 Rebuild the Search Index and the Link Database

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*. Select all available databases.

To rebuild the Link Database, log in to the Sitecore desktop and click *Control Panel » Database » Rebuild the Link Database*. Select all available databases.

4.7 Uninstalling Sitecore (ZIP installation)

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.

Chapter 5

Limitations and Specific Requirements

This chapter contains various limitations and environment-specific requirements.

This chapter contains the following sections:

- OS Specific Requirements **Error! Reference source not found.**
- Maximum Number of Worker Processes
- Browser Specific Requirements
- Miscellaneous

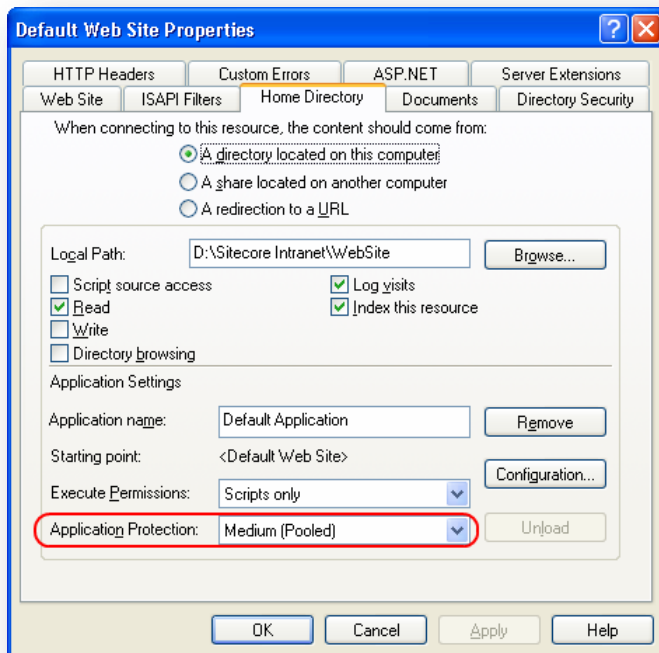
5.1 OS Specific Requirements

This section contains requirements related to operating systems.

5.1.1 Windows XP

If you are running Windows XP, make the following setting:

In the **Application Protection** field select *Medium (Pooled)*.



Sitecore works fine with each of the three different levels of application protection. The *Medium (Pooled)* level is just the recommended setting since it has better performance than the *High (Isolated)* setting and more strict security as compared to the *Low* setting. For more details, refer to the [Application Protection article](#).

5.2 Maximum Number of Worker Processes

Sitecore does not support configuration when the **Maximum number of worker processes** is set to two or higher. You must set this setting to "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".

5.3 Browser Specific Requirements

Internet Explorer 6

If you are running Internet Explorer 6:

- You must install MSXML 4.0
- When visiting a Web page that uses a custom pop-up object, Microsoft Internet Explorer 6 can close unexpectedly and generate an error in the Mshtml.dll file. This problem occurs after you install security update 918899 on a Windows XP Service Pack 2 (SP2)-based or a Windows Server 2003 Service Pack 1 (SP1)-based computer.

You must remove KB918899 (<http://support.microsoft.com/kb/918899>)

or

You must install KB923996 (<http://support.microsoft.com/kb/923996>)

Windows XP:

<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>

5.4 Miscellaneous

This section contains miscellaneous uncategorized requirements.

5.4.1 Install Latest Updates

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.

5.4.2 UNC Share Not Supported

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

5.4.3 Sitecore Cannot Operate from a Virtual Directory

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

5.4.4 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-8e89-49ad-a89d-e26e4d76ee68.mspx?mfr=true>

Chapter 6

Appendix

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

This chapter contains the following sections:

- Server Configuration
- IIS
- Creating a Web Project in Visual Studio
- Cache Configuration

6.1 Server Configuration

6.1.1 Updating the Security Settings for a Folder

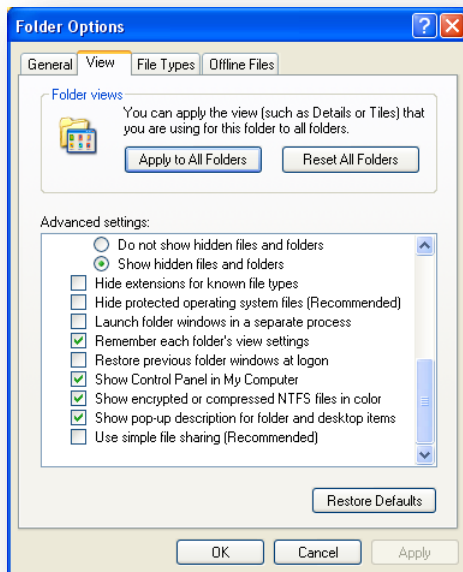
To update the security settings for a folder:

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 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 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:

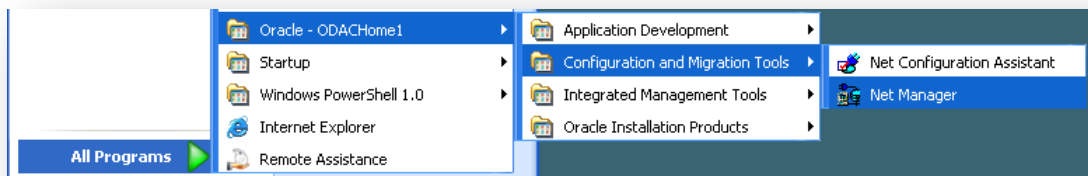
1. In the **Properties** dialog box, click the **Security** tab.
2. In the **Security** tab, click Add.

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.

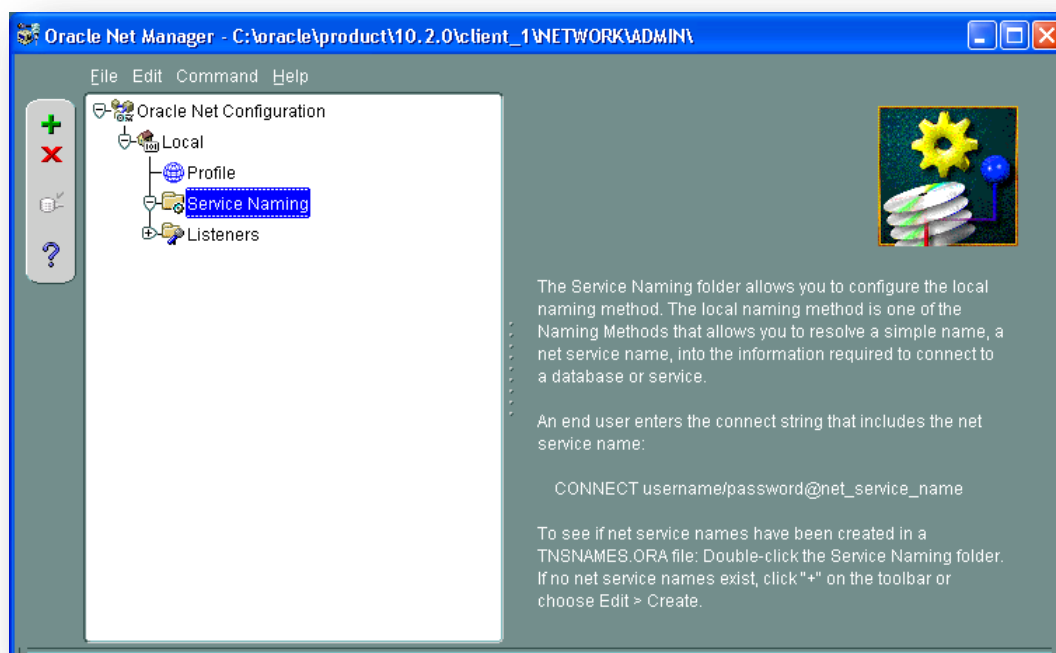
Alternatively, you can click Advanced and then click Find Now and select the account you want to add.

6.1.2 Adding a Connection to the Oracle Instance

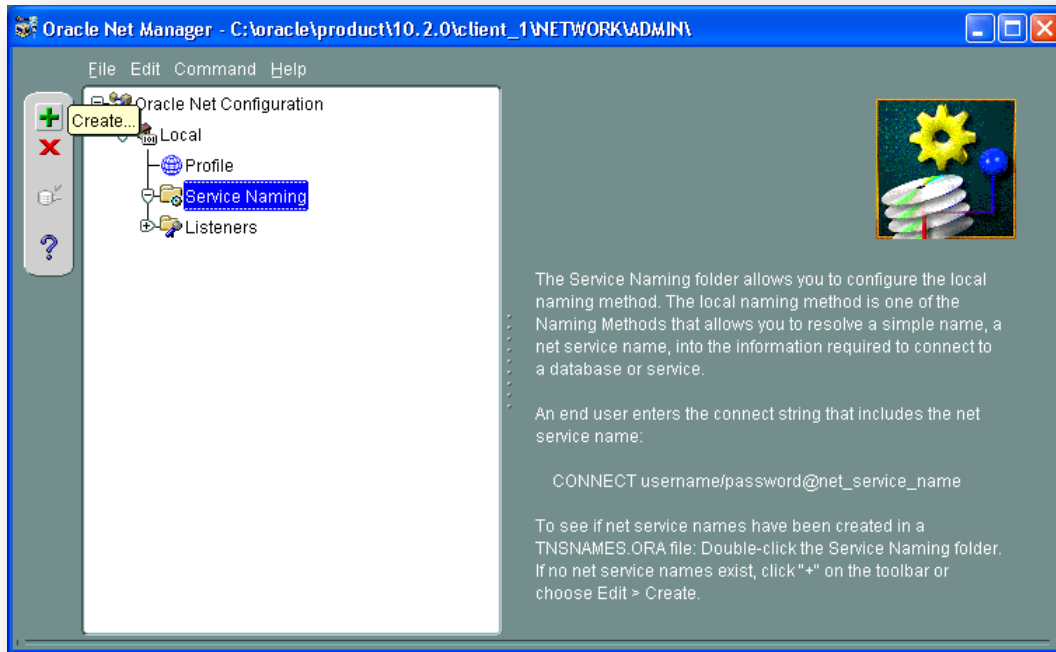
After installing Oracle Client on your PC or server you can find Oracle Net Manager in All Programs » Oracle - Home » Configuration and Migration tools » Net Manager.



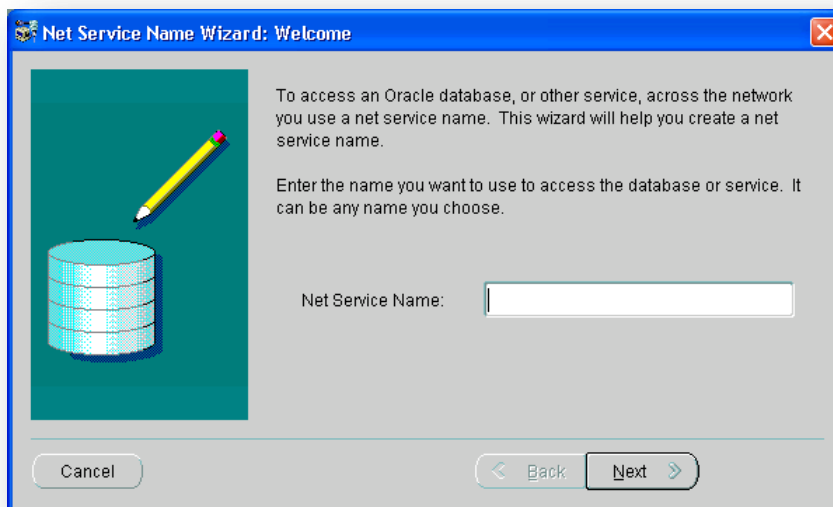
The main window of Net Manager consists of the item tree (on the left side) and the details pane (on the right side). To the left of the item tree there is a toolbar that allows to add and remove connection descriptions.



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

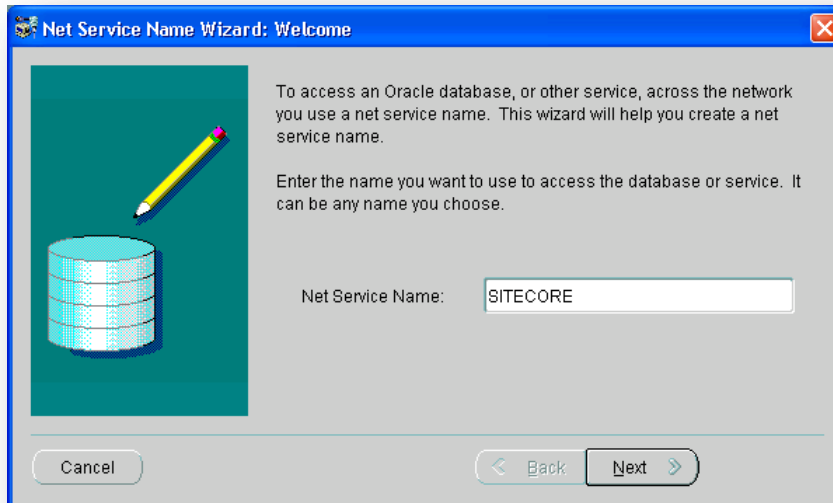


This starts the *Net Service Name Wizard*.

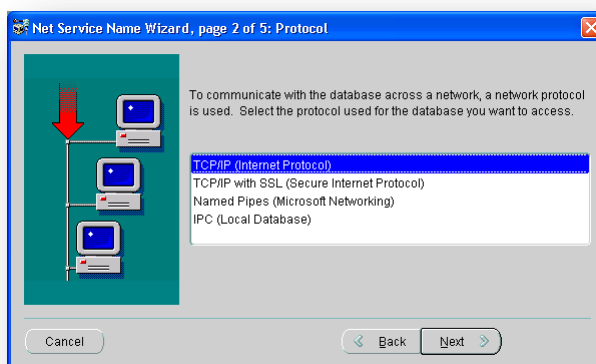


On the first page of the wizard enter the *Net Service Name* and click *Next*.

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.

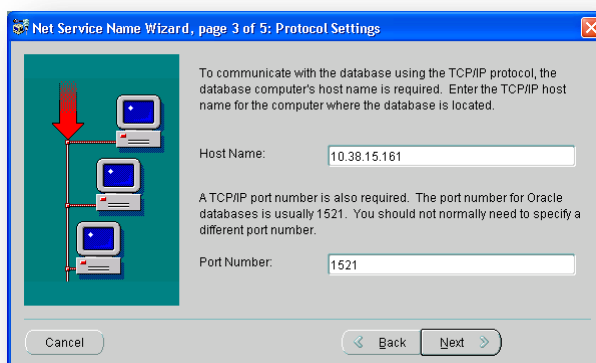


Choose Protocol to connect to the Oracle service and click *Next*. It is most common to use TCP/IP protocol without encryption in local networks.



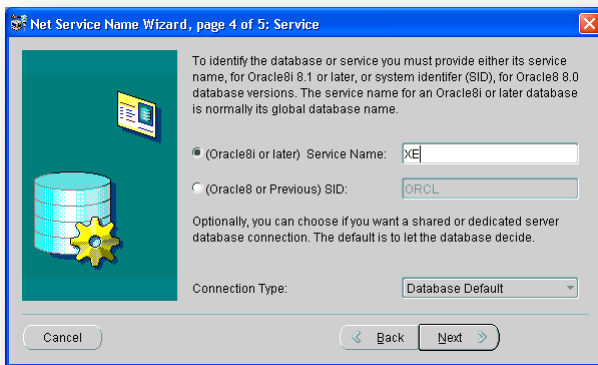
For TCP/IP protocol set up the following settings: *host name* (or IP address) where the Oracle server is located and *TCP Port number*. Click *Next* to proceed.

Note: Default port number is *1521*.

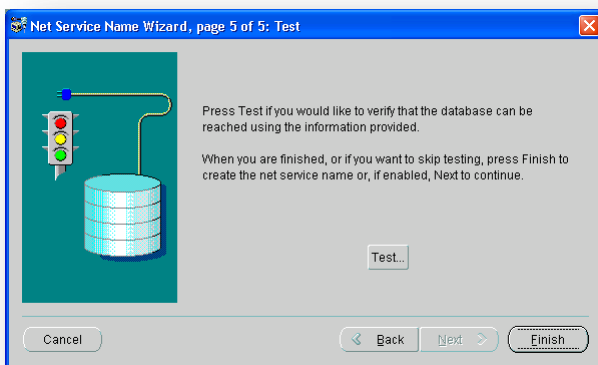


Enter the Oracle service name (as configured on the remote server) and click *Next*.

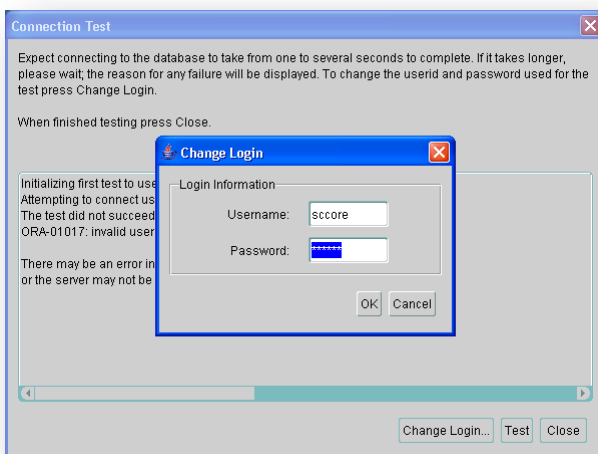
Note: For Oracle 10g Express Edition service name is **XE**.



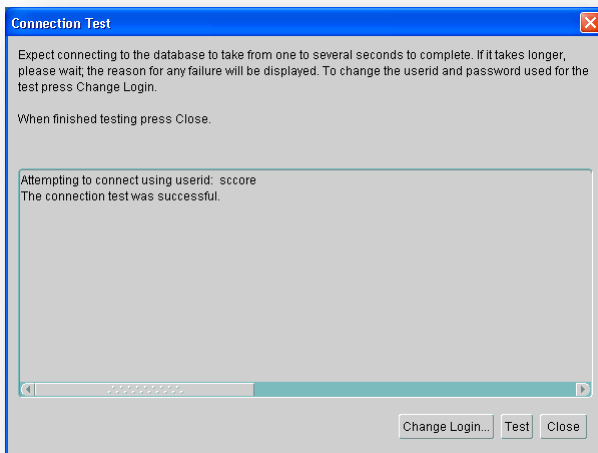
Once all parameters are entered, you can test connection to your server on the test page by clicking the **Test** button.



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.

6.2 IIS

This section contains various useful techniques related to IIS.

6.2.1 Accessing IIS

Open the Internet Information Services (IIS) Manager.

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

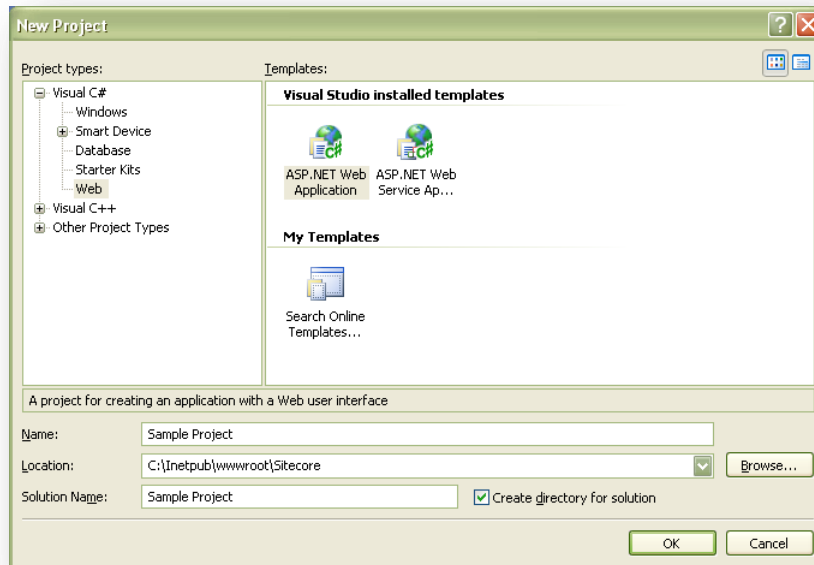
If you are running Windows 2003, click Control Panel, Administrative tools, Internet Information Services (IIS) Manager to open the Microsoft Management Console for the IIS.

6.3 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 later.

To setup a Web Project:

1. Start Visual Studio.
2. 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.



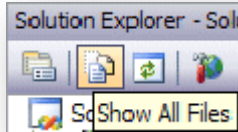
When you click OK, Visual Studio creates a project folder with the name you specified and in the folder it creates some related files as well as some additional files that will not be used.

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. 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:

12. In the Solution Explorer, click Show All Files.



13. You must now include the files you want to edit. For example, right-click the XSL folder and click Include in Project.
14. Finally, double click the files themselves to edit them.
15. 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>

6.4 Cache Configuration

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

For more information about cache configuration, see *Cache Configuration Reference* on SDN.