

Iceberg Setup Guide

Overview

This document provides detailed instructions for setting up an Iceberg application on a machine meeting the specified requirements. Iceberg is implemented as an ASP.NET web application, with Microsoft SQL Server 2005 as the database platform. Many of the steps detailed here are standard to all web applications, and there is very little that is particular to Iceberg. Therefore, any experience working with ASP.NET applications, or Microsoft SQL Server databases will be beneficial while configuring your Iceberg installation. The basic steps are as follows:

- Extract the files from the archive
- Create the database
- Modify the application configuration file (web.config)
- Configure IIS to host the application as a web site or virtual directory
- Set up the required directory access permissions
- Test the application by logging in

Requirements

The following software is required to set up and run Iceberg. Although Iceberg will run on Windows XP with IIS installed, this should only be used for local testing and evaluation. You will need to use Windows Server in a production environment, as IIS on Windows XP is deliberately crippled to prevent production use. Also, please note that SQL Server 2005 Express Edition is not intended for use in production environments.

- Microsoft Windows XP or Microsoft Windows Server 2003
- IIS 5 or greater
- .NET Framework Version 2.0.50727
- SQL Server 2005 (Any edition, including Express)
- SQL Server Management Studio (Any edition, including Express)
- Zip Archiving Utility

Note: *SQL Server Management Studio may be required to complete set up of the database on your machine; it is not required at runtime. If you use SQL Server 2005 Express, you may not have management studio installed, you can download SQL Server Management Studio Express free of charge from Microsoft's web site.*

Note: *The archive is distributed in the ZIP format; you will need an archiving utility capable of extracting ZIP archives to set up Iceberg on your machine*

Extract files

1. Extract the files from the archive to a directory on your hard drive

The archive contains all the files and documentation you need to start running Iceberg. You should place it in a recognisable location such as C:\ICEBERG so that

you can easily find it again. The Readme in the archive provides more details on the specific files..

2. Optionally move the WebApplication folder to a different location

This directory must be accessible to IIS and ASP.NET. Please ensure the appropriate permissions are available in this location. Instructions are given in this document to enable internet access to the directory. You may want to move it to a different location for security reasons.

Create the database

The Iceberg database is distributed as a SQL script file, which can be executed from the command line. The script takes several parameters to define the name of the new database as well as its location on disk. This step requires familiarity with windows command line tasks, such as navigating to specific directories and formatting arguments. Experience of using the command line SQLCMD tool will also be useful here.

1. Create the database

a) Locate the database script file

This file, named `IcebergDatabase.sql`, is located in the `Deploy` directory, contained within the archive you extracted in the previous section. For example, if you extracted the files in the archive to a directory named `C:\Iceberg`, then the backup file will be located at the following path:
`C:\Iceberg\Deploy\IcebergDatabase.sql`

b) Open a command prompt and navigate to the `Deploy` directory, which contains the `IcebergDatabase.sql` file

c) Ensure that `SQLCMD` is available by typing `sqlcmd` with no arguments. You may have to adjust your `PATH` settings to include the `Sql Server` command line tools

d) Enter the following command on a single line:

```
sqlcmd -S "[ServerName]" -i IcebergDatabase.sql -v  
DatabaseName = "[DatabaseName]" PrimaryFilePhysicalName =  
"[DatabasePhysicalPath]" PrimaryLogFilePhysicalName =  
"[LogPhysicalPath]"
```

- `[ServerName]` is the name of the `Sql Server` you wish to create the database on, for example `'.\SQLEXPRESS'`
- `[DatabaseName]` is the name for the new database
- `[DatabasePhysicalPath]` is to location on disk where the file for the database should be stored, for example `"c:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\DATA\IcebergDatabase.mdf"`
- `[LogPhysicalPath]` is the location on disk where the file for the log should be stored, for example `"c:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\DATA\IcebergDatabase_log.ldf"`

e) The script will now execute and create the database

2. Change the default user name or password

You may optionally elect to change the user name or password that was created in the previous step. By default, the user is named 'IcebergUser' and the password is set to 'i1c2e3'. For security reasons, you may want to remove this account and replace it with a more secure login. To create a new login and associate it with the Iceberg database, use the following steps

a) Create a new login using Management Studio

- Expand the node for the database server instance and select the **Security** folder
- Right click the **Security** folder and select **New > Login**
- On the **General** tab, enter the name for the login
Make a note of this name, as you will need it later on
- Select SQL Server Authentication
- Enter a password for the login
Make a note of this password as you will need it later on
- Uncheck **Enforce password expiration**
- Uncheck **User must change password at next login**
- Press **OK** to create the user

b) Map the login to the Iceberg database

- Expand the **Security** folder and then expand the **Logins** folder
- Right click the user you just created, and select **Properties**
- Go to the **User Mapping** page
- In the **Users mapped to this login** grid, place a check beside the database you created above
The database is called Iceberg in this guide; you may have chosen a different name
- In the **Database role membership for** list, check the following roles
 - db_owner
 - public
- Press **OK**

c) Delete the automatically created login

- Return to the **Security** folder you were working with at the start of the previous step
- **Right click** the automatically generated login 'IcebergUser' and **click Delete**
- Press **OK** to delete the login
- Press **OK** in the popup message informing you that you must delete database users
- **Navigate** to the database you created in **Step 1** above, and expand its node
- **Expand** the **Security > Logins** node and locate the 'IcebergUser' item
- **Right click** on the 'IcebergUser' item and **click Delete**
- Press **OK** to complete the process

Configure application settings

This section assumes that you have familiarity working with XML files, and understand the concept of an element, and a path to an element expressed as **parent > child > descendant**. For more information on XML in general, the [W3Schools](http://www.w3schools.com) site is a good place to start.

1. Locate the web.config file and open it in a text editor such as Notepad

The **web.config** file is located in the **WebApplication** folder, which was created for you when you extracted the files above

2. Modify the connection string

a) You will need the following information, gathered when you were setting up the database

- The name of the database server (defaults to '.\SQLEXPRESS')
- The name of the Iceberg database you created (defaults to 'Iceberg')
- The login name (defaults to 'IcebergUser')
- The login password (defaults to 'i1c2e3')

b) Locate the connection string element with the following path - **configuration > connectionStrings > add**

The connection string is represented as an attribute of an **<add>** element with the name

Iceberg.Data.Properties.Settings.IcebergConnectionString

c) **Modify the connection string to refer to the database you set up previously**

The connection string will be set up to use the most common settings we expect users to choose, therefore, the server (**Data Source**) will be set to '.\SQLEXPRESS', and the database (**Initial Catalog**) and login (**User ID**) will be set to Iceberg. Using the information retrieved during the database setup, you can replace these settings with the ones you specified, if they differ. Connection strings can vary widely, and a full discussion is beyond the scope of this document, consult the SQL Server documentation for further details.

3. **Save the file and close your text editor**

Set up the Web application

Iceberg is implemented as an ASP.NET web application. You must publish the application via IIS in order to use it. The steps documented here are standard steps for setting up virtual directories and web sites in IIS, Iceberg has no additional requirements.

1. **Decide to set up Iceberg as a dedicated website, or as a virtual directory in an existing site**

If you are setting up Iceberg on a Windows XP machine, IIS restricts you from creating multiple web sites; therefore you must set up a virtual directory in the Default Web Site.

2. **Open the Internet Information Services management snap in**

You can run the IIS snap-in by clicking **Start > Programs > Administrative Tools > Internet Services Manager**.

a) **Dedicated website**

- **Right click** on the machine name and select **New > Website**
- Click **next** to begin
- Enter a name for the website in the **Description** field and click **next**
- Enter the IP address for the site and a TCP port, you may optionally enter a host header
- Click **next** to proceed
- Browse to the directory you created in step one and click **next**
- Ensure the **Read** and **Run Scripts** checkboxes are checked and leave the other boxes clear, click **next** to proceed
- Click **next** and then **finish** to create the site

b) **Virtual Directory**

- Choose a web site to create the directory in (such as the **Default Web Site**)
- **Right click** on the site and select **New > Virtual Directory**
- On the **Welcome Page** of the wizard, click **next**
- Enter the name of the virtual directory in the **Alias** field and click **next**
- Browse to the directory created in the first step and click **next**
- Ensure the **Read** and **Run Scripts** checkboxes are checked and leave all the other boxes clear, click next to proceed
- Click **Finish** to complete the wizard and create the virtual directory

3. Ensure the correct ASP.NET version is selected

You must have the .NET Framework Version 2.0.50727 installed in order to run Iceberg. You may also have to set up the IIS script maps using the aspnet_regiis tool as ASP.NET may not be registered correctly if you install IIS after installing ASP.NET. See the [documentation](#) for further details

a) **For web sites or virtual directories**, right click **and select** Properties

b) **Go to the ASP.NET tab**

If this tab is not visible, please ensure ASP.NET has been installed and configured for use with IIS, see the notes above

c) **Ensure the ASP.NET version dropdown is set to 2.0.50727**

d) **Press OK**

4. Note: Additional steps may be required If you have version 1.x of the .NET framework installed

If you are running web sites under version 1.x of the .NET framework in IIS, you may have to isolate the Iceberg application. If you receive a red **Server Application Unavailable** message when you attempt to access the application, try these steps.

a) **For IIS 5.x**

- **Right click** on the web site or virtual directory and select **properties**
- Select the **Home Directory** or **Virtual Directory** tab for websites or virtual directories respectively
- Under **Application Settings**, set the **Application Protection** setting to **High (Isolated)**

- Press **OK**

b) For IIS 6.0

- Expand the local computer node
- **Right click** the **Application Pools** node and select **New > Application Pool**
- In the **Application pool ID** field enter a name, such as Iceberg
- Press **OK**
- **Right click** on the web site or virtual directory and select **properties**
- Select the **Home Directory** or **Virtual Directory** tab for websites or virtual directories respectively
- Under **Application Settings** set the **Application Pool** dropdown to the pool you just created
- Press **OK**

5. Set up access permissions

a) Disable Windows XP Simple file sharing

If you are using Windows XP, you must disable Simple file sharing to access security settings for a directory

- Open **My Computer**
- Go to the **Tools > Folder Options** on the menu bar of the **My Computer** window
- When the **Folder Options** form appears, Select the **View** tab
- In the **Advanced Settings** area, scroll to the bottom of the list
- Ensure the **Use simple file sharing (Recommended)** checkbox is **clear**
- Press **OK**

b) Enabling internet access to the WebApplication directory

If you placed the **WebApplication** folder in a location outside of your web root (by default c:\inetpub\wwwroot) then you will need to grant read permissions for the **Internet User Guest** account and the **ASP.NET worker process** account. If you see the red **Server Application Unavailable** message, and the event log entry contains an **Access is denied** message, then complete the following steps.

- **Right click** on the folder you wish to grant access to and select

Properties

- Select the **Security** tab and then click the **Add** button
- In the area that appears, type the name of the ASP.NET user account

If you see a Name not found popup ensure that you are using the correct account for your version of Windows, and that you have spelled the name correctly.

 - For **Windows XP**, type **ASPNET**
 - For **Windows Server 2003** type **IIS_WPG**
- Press **OK** to add an entry for the account
- Click the **Add** button once more
- In the area that appears, type the name of the **Internet Guest User account**

*The name of this account is **IUSR_<machine name>** where **<machine name>** is the name of the computer. If you do not know the name of the computer, or your computer name has changed since IIS was installed, it may be easier to simply view all the users available, and select the correct one. To do so:*

 - Click the **Advanced button** on the **Select users or groups** form
 - When the extended form appears, click **Find Now**
 - This will list all the user identities available for selection. Select the one that begins with **IUSR_** and press **OK**.
 - This will enter the name of the account in the preceding form, at which point you can continue.
- Press **OK**

c) Granting extended permissions to the ASP.NET account for specific application folders

These steps tell you how to add permissions for the ASP.NET user account. You must complete these steps for each of the folders which require access, see below.

- **Right click** on the folder you wish to grant access to and select **Properties**
- Select the **Security** tab and then click the **Add** button
- In the area that appears, type the name of the ASP.NET user account

If you see a Name not found popup ensure that you are using the correct account for your version of Windows, and that you have spelled the name correctly.

 - For **Windows XP**, type **ASPNET**
 - For **Windows Server 2003** type **IIS_WPG**

- Press **OK** to add an entry for the account
- Ensure the entry you have just added is selected, and look to the **Permissions** area below
- To the right of the **Full Control** permission, **check** the box in the **Allow** column
- Press **OK**

d) You must complete the steps above for three folders in the WebApplication directory

- Temp
- Documents
- Images

Test the installation

1. Open the Internet Information Services management snap in

You can run the IIS snap-in by clicking **Start > Programs > Administrative Tools > Internet Services Manager**.

2. Navigate to the Web Site or Virtual Directory you created for the Iceberg web application

3. Right click on the site or virtual directory, and click Browse

4. The site should appear in the right hand pane

5. Log in to Iceberg using the default built in admin account

User name and password are both **admin**. You can change the admin password in the configuration area, and we advise you to do so

6. You have successfully set up your Iceberg application!