IdeaBlade

DevForce Classic

Installation Guide

Table of Contents

Preface

This Installation Guide describes how to install and un-install DevForce.

Why the Big Document?

Installation should be easy so why do we need so many pages to cover this topic?

Installation itself is easy 95% of the time. Just launch the install executable, answer a few questions, and you're ready to start building your application.

It's that remaining 5% of the time that accounts for many of these pages. InstallShield, Visual Studio, SQL Server – even .NET itself – they all harbor some ugly surprises for the unlucky few. The bulk of this guide will help you recover. When it can't, there is always Customer Support.

Customer Support

Support options and how to contact Customer Support are covered in the "Troubleshooting" chapter.

Chapter Organization

Preface, which you are reading now, introduces the contents covered in the balance of the document.

Installation, describes how to install DevForce for the first time.

Updating Existing Applications, covers how to adjust your existing DevForce applications to accommodate the latest version of DevForce and 3rd party tools.

Remember to consult the IdeaBlade DevForce Release Notes for version-specific upgrade steps!

Documentation and Tools, introduces the documentation and tools installed with DevForce. It mentions also some of the resources available on-line.

Troubleshooting, covers how to work through installation issues.

Product Prerequisites

.NET and Visual Studio

DevForce Classic is compiled against .NET Framework 2.0 (CLR 2.0).

DevForce Classic versions from 3.4.0 on support application development using Windows Communications Foundation (WCF). WCF requires .NET Framework 3.0. Note that this is not required if you are not using WCF.

DevForce Classic versions from 3.6.0.1 on support installation into Visual Studio 2008. We have qualified DevForce against Visual Studio 2008 RTM.

DevForce Classic versions from 3.7.0 on support installation into Visual Studio 2010. We have qualified DevForce against Visual Studio 2010 RTM. Applications can be targeted for any version of the .NET Framework.

If DevForce 3.6.0.1 or later versions are installed on a system where both Visual Studio 2008 and Visual Studio 2005 are present, the DevForce Object Mapper and toolbox components will be present in both Visual Studio versions. Likewise with DevForce 3.7.0 or later versions – the Object Mapper will be installed to all versions of Visual Studio found.

We add the DevForce Object Mapping Tool ("Object Mapper") to your Visual Studio list of tools. You need the Object Mapper to define your business object mappings. Unfortunately, Visual Studio Express does not support add-in tools and so you cannot use the Object Mapper with Visual Studio Express.

Databases

DevForce object-oriented persistence works exceptionally well with all versions of MS SQL Server from SQL Server 2000 forward. The DevForce Enterprise edition license entitles the developer to support of other industry leading relational database products such as those from Oracle, Informix, and IBM. Please contact Customer Support to learn more about support for your database product.

UI Controls

Great DevForce WinForms applications can be built with standard .NET WinForms controls. Many customers prefer to substitute or supplement those controls with a third party control suite.

The DevForce advanced UI Data Binding infrastructure extends your ability to work effectively with any control suite. Today DevForce provides "in-the-box" visual design tools and special data binding components for Developer Express and Infragistics control suites. More advanced DevForce developers can make those same extensions to their own custom controls or to other third party controls.

Hardware

DevForce libraries and tools may execute in three environments: the developer's machine, the application server, and the client machines.

In general, the requirements for the .NET Framework and for DevForce are the same.

Operating System Requirements

Please refer to the.NET Framework documentation for the latest information on supported operating systems.

Additional Software Requirements

You will need the following additional software.

Scenario	Required Software
Client	.NET Framework v.2.0
Developer	Visual Studio 2005 Standard Edition or higher .NET Framework v.2.0 SQL Server .NET Data Provider
Server	.NET Framework v.2.0 SQL Server .NET Data Provider

.NET Framework v.2.0 Prerequisite

The .NET Framework, version 2.0, must be installed on both servers and client PCs.

Compatibility with Optional Third Party Control Suites

DevForce supports binding to certain third party control suites. These suites are not required in order to use DevForce, but we supply designer components to facilitate data binding to these suites. The versions of these products that we support natively on the system where you are doing client-side development using DevForce are given in the matrix shown below:

3rd Party Component Product	Version	Notes
Developer Express WinForms Collection Developer Express DXperience	3.2.0 6.1.3 6.2.2 6.3.1 7.1.0 7.2.1 7.3.3 8.1.1 8.2.1 8.3.2 9.1.2 9.2.4 9.3.1 10.1.4 10.2.3 11.1.4 11.2.7 (Compiled for .NET 3.5 and above.)	DevForce Designer support for XtraGrid and TextEdit type controls
Infragistics NetAdvantage	5.3 (5.3.20053.50) 6.1 (6.1.20061.28) 6.2 (6.2.20062.34) 6.3 (6.3.20063.53) 7.1 (7.1.20071.40) 7.2 (7.2.20072.61) 7.3 Hot fix (7.3.20073.1041) 8.1 (8.1.20081.1000) 8.2 (8.2.20082.1000) 8.3 (8.3.20083.1009) 9.1 (9.1.20091.1000) 9.2 (9.2.20092.1003) 10.1 (10.1.20101.1007)	DevForce Designer support for UltraGrid control Support for binding to UltraTextEdit, UltraNumeric, and UltraDateTime type controls in ControlBindingManager

	10.2 (10.2.20102.1004) 10.3 (10.3.20103.1000) 11.1 (11.1.20111.1003)	

You can bind to versions of these control suites other than those listed above by using assembly binding redirection. This is discussed in the topic “Updating 3rd Party UI Control Suites” in this manual.

Company Facts

Please contact us or visit us at our headquarters in the San Francisco Bay Area:

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Emeryville, CA 94608
510.596.5100
www.ideablade.com

Installation

In this chapter we cover the steps to install DevForce.

- Pre-installation steps
- Remove earlier versions of DevForce
- Run the Installer
- Attach the IdeaBladeTutorial Database
- Post Installation Tasks

In the "Updating Existing Applications" chapter we explain how to adjust your existing application after installing a new version of DevForce.

Pre-installation

⇨ **Install a supported edition of SQL Server**

Our tutorials reference the "IdeaBladeTutorial" database which may be loaded into any edition of Microsoft SQL Server.   We recommend that you install an Express version of SQL Server 2005 or 2008 on your development or evaluation machine even if your application will address a database from a different vendor. Again, the reason has only to do with facilitating your tutorial learning experience; it is not a product requirement.

⇨ **Install SQL Server before Visual Studio (if possible)**

SQL Server overwrites some registry keys required to efficiently install the DevForce Object Mapping Tool and the DevForce ToolBox items. If you installed SQL Server ***after*** Visual Studio, you may need to repair these registry entries.

> This issue is discussed in http://blogs.msdn.com/chetanc/archive/2005/11/16/493495.aspx. We suggest how repair the damage in the topic "Toolbox Installer fails" in the Troubleshooting chapter below.
>
> Please visit our contact Customer Support if you require more information.

⇨ **Verify that Visual Studio Professional (or greater) is installed**

You should install Visual Studio before installing DevForce. DevForce versions prior to 3.6.0.1 require Visual Studio 2005. DevForce versions from 3.6.0.1 on may be installed into either Visual Studio 2005 or Visual Studio 2008. DevForce versions from 3.7.0 may be installed into Visual Studio 2005, Visual Studio 2008 or Visual Studio 2010. If multiple versions of Visual Studio are installed on your system, the DevForce components will be installed into all versions. Be sure to bring up Visual Studio at least once before installing DevForce.

Remove Earlier Versions of DevForce

> Skip this section if you are installing DevForce for the first time.

You must uninstall a previous version of DevForce before you can install a new version.

⇨ Delete DevForce ToolBox tab from the Visual Studio tool box

If you have manually added any ToolBox items from a previous version of DevForce, make sure that you have deleted the ToolBox tab and all of the ToolBox items.

⇨ Shut down Visual Studio.

⇨ Launch "Add or Remove Programs" from the Control Panel.

⇨ Find "IdeaBlade DevForce".

⇨ Click "Remove" and follow the dialog instructions.

In rare cases InstallShield is unable to install your previous version of DevForce in which case please refer to the "Un-install fails" topic in the Troubleshooting chapter.

Replacing the previous IdeaBladeTutorial database

We may have upgrades the IdeaBladeTutorial database that supports the DevForce Tutorials. Check the **IdeaBlade DevForce Release Notes** to see if we have done so.

> If we have **not** changed the database, you can skip these steps.

If we have updated the database, you should update your copy as well. We won't override your copy so you have to detach it before we will install the new one.

⇨ Detach your previous IdeaBladeTutorial database.

⇨ Delete or relocate the previous IdeaBladeTutorial database files.

The new release may come with a revised IdeaBladeTutorial database (check the Release Notes for that version).

We recommend that you always keep pace with the most recent tutorial database.

> The tutorial database files are "IdeaBladeTutorial_Data.MDF" and "IdeaBladeTutorial_Log.LDF". Be sure to delete or relocate both files after detaching the "IdeaBlade Tutorial" database.
>
> If you forget these steps before you install the new DevForce, you can upgrade later. Do them first and then run the Database Installer shortcut from the Start Menu.

Install DevForce

Installing DevForce on Vista and Windows 7

The DevForce installation on these operating systems requires Administrator privileges. You must either be logged on as a user with Administrator privileges or run the installation as such a user. This requires that you know the password for one of the Adminstrators who are registered users on the system. If you are not logged on as an Administrator, do the following:

⇨ Right-click on the **Setup.exe** file

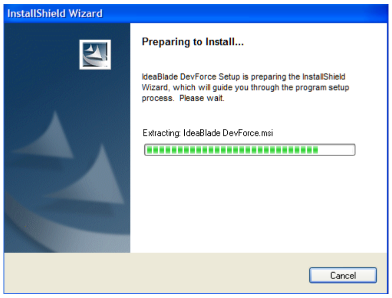
⇨ In response to the dialog that appears, fill in the password for one of the Administrators shown.

The installation should proceed normally.

Installing DevForce on all platforms

⇨ Double-click on the Setup.exe file in your installation media

You will see the initial welcome screen from InstallShield. InstallShield extracts the IdeaBlade DevForce.msi and then launches its InstallScript file.

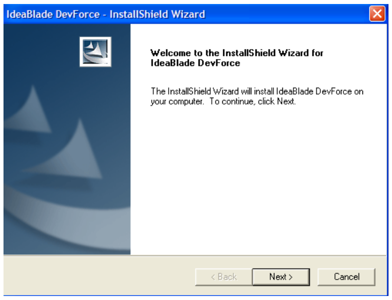


Preparing to Install...

IdeaBlade DevForce Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.

Extracting: IdeaBlade DevForce.msi

Extracting the .msi



Welcome to the InstallShield Wizard for IdeaBlade DevForce

The InstallShield Wizard will install IdeaBlade DevForce on your computer. To continue, click Next.

Ready to proceed

Installation Interview

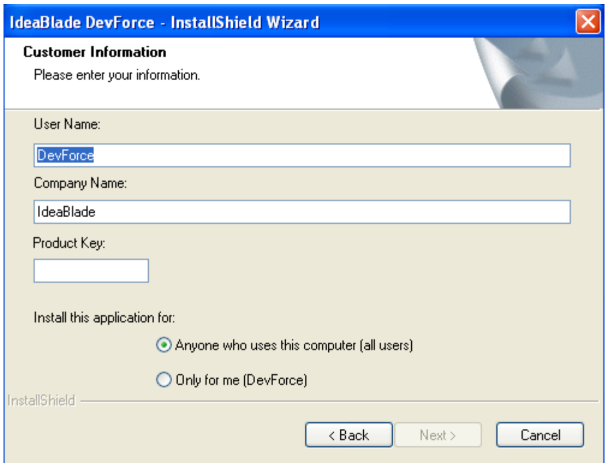
⇨ Click Next,

⇨ Review and then accept the License Agreement.

⇨ Fill in your name and organization in the Customer Information page.

⇨ Enter your Product Key.

If you purchased a premium version of the product, IdeaBlade gave you a product key to use here.



Customer Information

Please enter your information.

User Name: DevForce

Company Name: IdeaBlade

Product Key:

Install this application for:

● Anyone who uses this computer (all users)

○ Only for me (DevForce)

⇨ Click [Next]

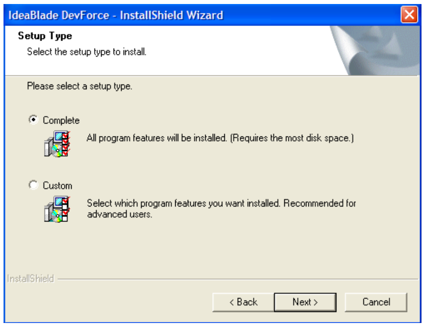
The installer displays an Invalid key warning message if you entered an unrecognized serial number. Try again. If the installer refused to recognize your serial number, please contact Customer Support.

⇨ Assign the destination folder

✓ **Do accept** the suggested destination

Of course you can change the destination folder. Picking a custom directory is technically harmless. But it can complicate technical support. You should only change the directory if you have a very good reason to do so.

⇨ Choose either "Complete" or "Custom" installation



IdeaBlade DevForce - InstallShield Wizard

Setup Type

Select the setup type to install.

Please select a setup type.

● Complete

All program features will be installed. (Requires the most disk space.)

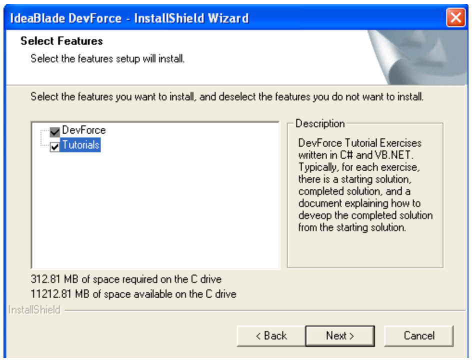
○ Custom

Select which program features you want installed. Recommended for advanced users.

Most developers will prefer "Complete".

DevForce Express Licenses

If you have the DevForce Express edition the "Custom" option leads you to a page where you can choose to install no tutorials, or both the C# and VB.NET tutorials.



IdeaBlade DevForce - InstallShield Wizard

Select Features

Select the features setup will install.

Select the features you want to install, and deselect the features you do not want to install.

☑ DevForce
☑ Tutorials

Description

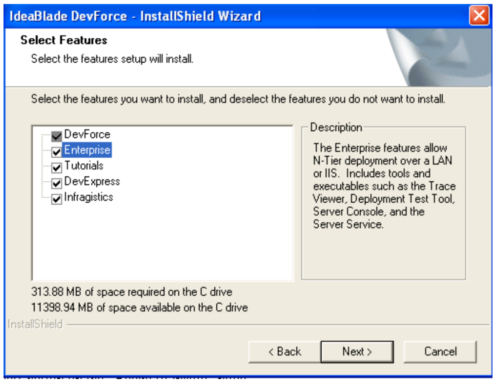
DevForce Tutorial Exercises written in C# and VB.NET. Typically, for each exercise, there is a starting solution, completed solution, and a document explaining how to deveop the completed solution from the starting solution.

312.81 MB of space required on the C drive
11212.81 MB of space available on the C drive

✓ We strive to deliver tutorials in both languages but inevitably there is a tutorial in just one language or the other. We also believe it is a good idea to be able to read both languages.

DevForce Professional, Enterprise, and Date-Restricted Licenses

These DevForce editions offer the same Tutorial options as the Express edition. In addition, you may be offered other choices such as support for one or more third party control suite. The page may look like this:



IdeaBlade DevForce - InstallShield Wizard

Select Features

Select the features setup will install.

Select the features you want to install, and deselect the features you do not want to install.

- ☑ DevForce
- ☑ Enterprise
- ☑ Tutorials
- ☑ DevExpress
- ☑ Infragistics

Description

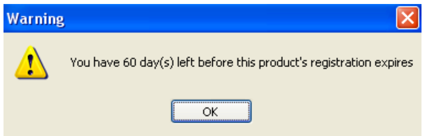
The Enterprise features allow N-Tier deployment over a LAN or IIS. Includes tools and executables such as the Trace Viewer, Deployment Test Tool, Server Console, and the Server Service.

313.88 MB of space required on the C drive
11398.94 MB of space available on the C drive

Confirm Installation

⇨ Click the [Next] button on the "Ready to Install" page.

If you have a date restricted key, you'll get a warning notifying you of how many days that you have left before the registration expires.



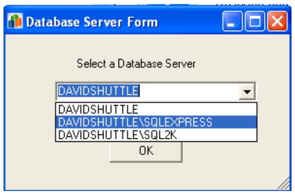
Warning

You have 60 day(s) left before this product's registration expires

⇨ Click [OK].

Select a SQL Server

If you have not already attached the IdeaBladeTutorial database, and you have more than one SQL Server on your system, you'll be prompted to make a choice among your several SQL Servers.



Database Server Form

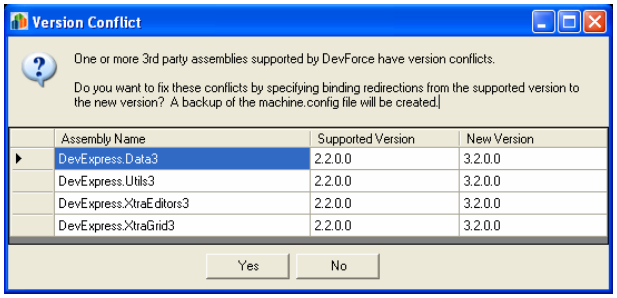
Select a Database Server

DAVIDSHUTTLE
DAVIDSHUTTLE
DAVIDSHUTTLE\SQLEXPRESS
DAVIDSHUTTLE\SQL2K

⇨ Select a SQL Server and click [OK].

Assembly Binding Redirection for 3rd Party UI Control Suites

The installation will automatically detect if a third party control suite installed on your machine conflicts with a version supported by this DevForce release; if so, you'll see a dialog such as this one.



Version Conflict

One or more 3rd party assemblies supported by DevForce have version conflicts.

Do you want to fix these conflicts by specifying binding redirections from the supported version to the new version? A backup of the machine.config file will be created.

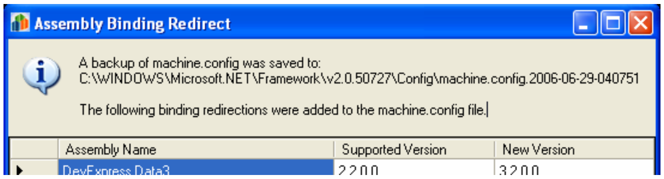
Assembly Name	Supported Version	New Version
DevExpress.Data3	2.2.0.0	3.2.0.0
DevExpress.Utils3	2.2.0.0	3.2.0.0
DevExpress.XtraEditors3	2.2.0.0	3.2.0.0
DevExpress.XtraGrid3	2.2.0.0	3.2.0.0

The DevForce supported version is typically older than the version of the 3rd party control you installed. The difference is almost always harmless; we'll let you know if we've discovered an incompatibility. Until we've had a chance to catch up, you'll need to tweak some configuration files to tell Visual Studio and your application that it is ok to proceed.

The tool can do some of that tweaking for you but you can opt out by clicking [No]; you'll see a message box before the installation continues.

✓ **Do click [Yes].**

This tool adjusts your "machine.config", the configuration file referenced by Visual Studio when you build your application. The tool creates a backup of your machine.config file before updating it to redirect the DevForce requested version(s) to the new 3rd party tool versions installed on your machine. The tool confirms your choice:



A backup of machine.config was saved to:
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\Config\machine.config.2006-06-29-040751

The following binding redirections were added to the machine.config file.

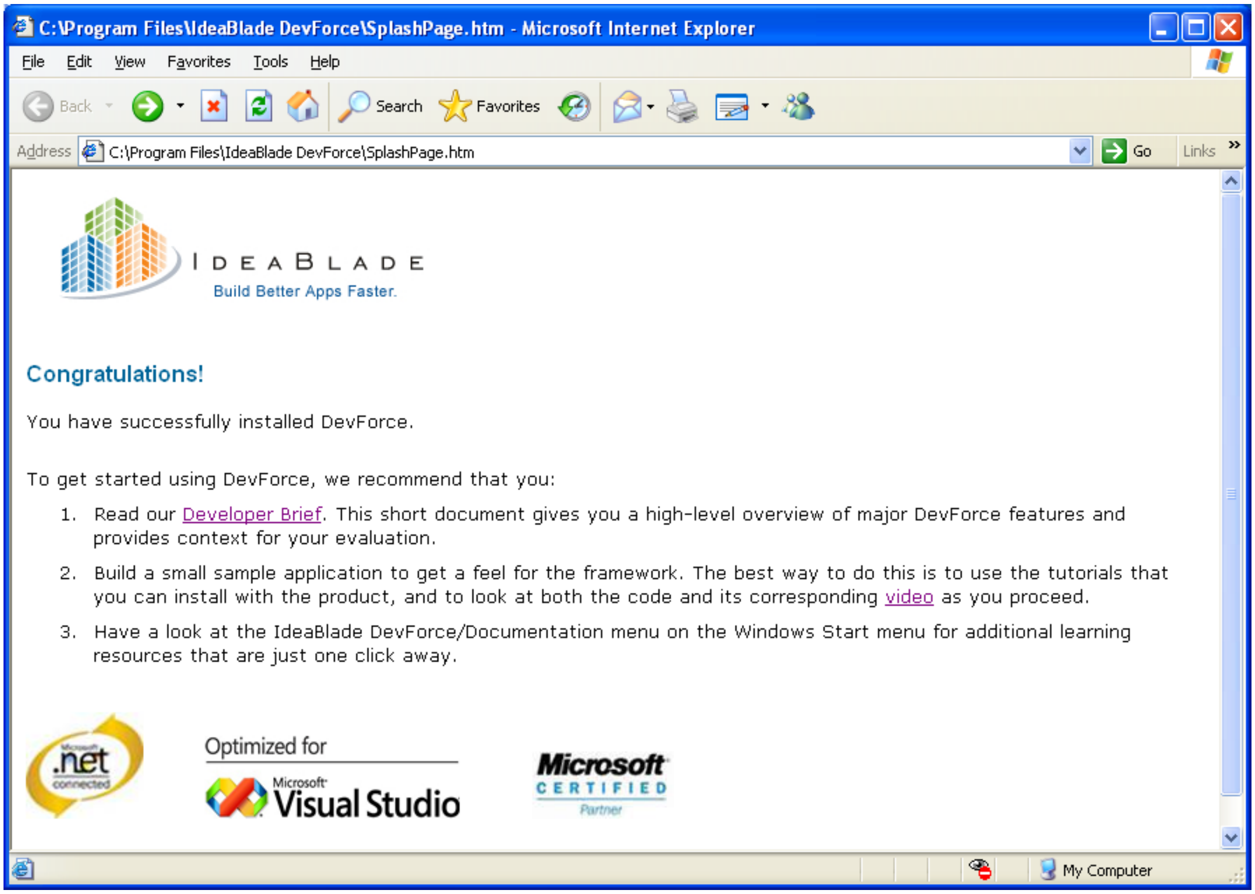
	Assembly Name	Supported Version	New Version
▶	DevExpress.Data3	2.2.0.0	3.2.0.0

If there is an error during assembly redirection, the machine.config is restored to its original state and installation continues.

This is only step one of application redirection. It facilitates your application development but **you will need to write or modify your application's "app.config" file before deployment**. See the section on "Updating 3rd Party UI Control Suites" for instructions on how to perform assembly redirection manually.

The End

When installation is complete, the screen shown below appears. The "video" link takes you to the training videos on our Web site. Clicking on the logo at the top of the screen takes you to our home page on the Web.



C:\Program Files\IdeaBlade DevForce\SplashPage.htm - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address C:\Program Files\IdeaBlade DevForce\SplashPage.htm
Go Links
IDEABLADE
Build Better Apps Faster.
.net connected
Optimized for Microsoft Visual Studio
Microsoft CERTIFIED Partner
My Computer

Congratulations!

You have successfully installed DevForce.

To get started using DevForce, we recommend that you:

1. Read our Developer Brief. This short document gives you a high-level overview of major DevForce features and provides context for your evaluation.
2. Build a small sample application to get a feel for the framework. The best way to do this is to use the tutorials that you can install with the product, and to look at both the code and its corresponding video as you proceed.
3. Have a look at the IdeaBlade DevForce/Documentation menu on the Windows Start menu for additional learning resources that are just one click away.

Configuring the IdeaBlade Tutorials on Vista

The **IdeaBlade Tutorials** are located by default in the **Instructional Units** folder of the **Program Files\IdeaBlade DevForce** folder which is an Administrator-only folder.

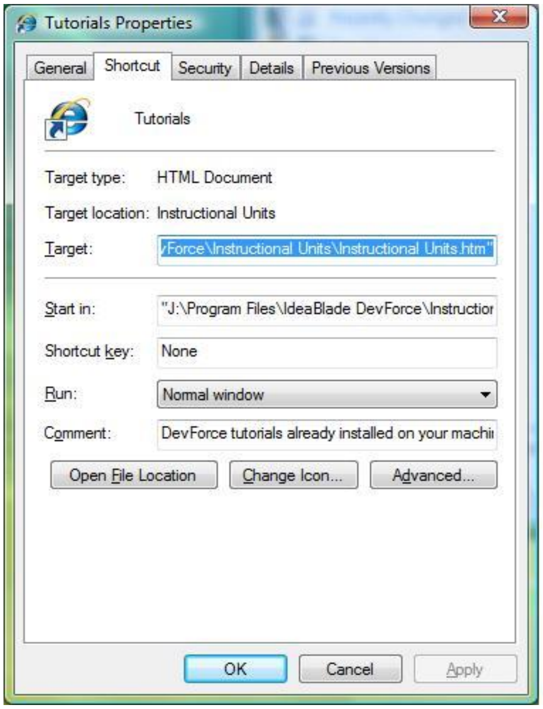
On Vista it is much more convenient to execute the Tutorials if the **Instructional Units** folder is moved to a location where non-administrators have read and write permissions. This is true even if you are an administrator. If you double-click on a solution in the Tutorials to open it, Visual Studio will be invoked with non-administrative privileges.

In addition to moving the Instructional Units folder to a less restrictive location, you may want to change the settings for the **Tutorials** selection from the IdeaBlade DevForce Documentation submenu so that the Tutorials will be more convenient to access.

To do this, do the following:

1. Move the **Instructional Units** folder from **Program Files\IdeaBlade** DevForce to a less restrictive folder.
2. From the Vista Start menu, select **IdeaBlade DevForce**, then **Documentation**..
3. Right-click on the **Tutorials** selection, then select **Properties** from the context menu.
4. In the **Target** field of the **Properties** window, enter a full path to the **Instructional Units.htm** file that is in the **Instructional Units** folder. Enter the full path to the **Instructional Units** folder in the **Start in:** field.

Alternatively, you may create a shortcut to the Tutorials on your desktop by right-clicking on the **Instructional Units.htm** file in the **Instructional Units** folder, selecting "**Send To**:" from the context menu, and then selecting Desktop.



Tutorials

Target type: HTML Document

Target location: Instructional Units

Target: vForce\Instructional Units\Instructional Units.htm"

Start in: "J:\Program Files\IdeaBlade DevForce\Instructior

Shortcut key: None

Run: Normal window

Comment: DevForce tutorials already installed on your machi

Attach the IdeaBladeTutorial Database

The DevForce tutorials derive their data from the IdeaBladeTutorial database. This is an MS SQL Server 2000 database file in the form of `.mdf` and `.log` files. You'll want to attach them to your SQL Server instance.

The DevForce installer tries to attach the IdeaBladeTutorial database for you.

There are several possible hurdles:

- The installer cannot detect an installed version of MS SQL Server.
- Your SQL Server is stopped or paused.
- You can't login to SQL Sever
- The installer detects a pre-existing attached copy of the tutorial database.
- You have multiple instances or a named instance of SQL Server.
- The installer cannot attach the tutorial database for some other reason.

> The good news is that DevForce installation can complete successfully even without the IdeaBlade Tutorial database. The less good news is that if the tutorial database the connection strings in the Tutorials will not be adjusted if you decide to attach the tutorial database manually later.
>
> You can address both problems by running the Database Installer from the "Start Menu ► IdeaBlade DevForce" as described in the "Documentation and Tools" chapter.

Installer cannot detect MS SQL Server

You can choose either to reverse the DevForce installation or continue without attaching the tutorial database.

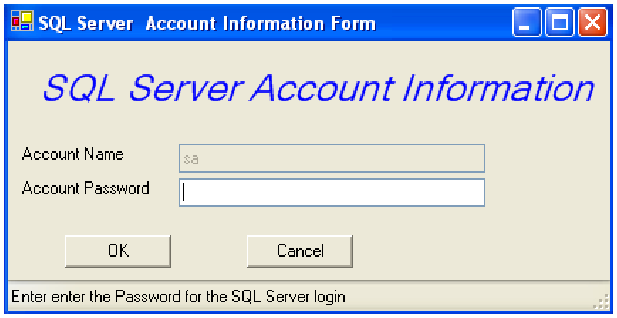
MS SQL Server is paused or stopped

You can choose either to reverse the DevForce installation or continue without attaching the tutorial database.

SQL Server log-in failure

The installer tries to access the master database using Windows Integrated Security. If it can, the process moves on to the next step.

If not, the installer must ask you to log in to the SQL Server via the following form.



SQL Server Account Information Form

SQL Server Account Information

Account Name: sa

Account Password:

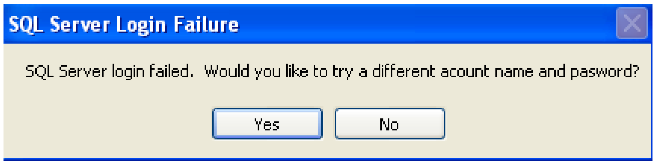
Enter enter the Password for the SQL Server login

Notice that the Account Name field is pre-filled with the "sa" (System Administrator) account and that you cannot change that account.

⇨ Enter the "sa" account password and press [OK].

Installation continues to the next step if SQL Server accepts the password.

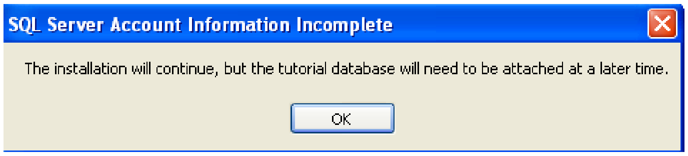
If not, you will get a prompt inviting you to reenter your password



SQL Server Login Failure

SQL Server login failed. Would you like to try a different acount name and pasword?

If the installer cannot access the Master database, it will not be able to install the Tutorial database. When you give up and click [No], you will see a prompt such as the following.



SQL Server Account Information Incomplete

The installation will continue, but the tutorial database will need to be attached at a later time.

⇨ Click [OK]

The installation continues leaving you to attach the IdeaBladeTutorial database at a later time.

> There are consequences if you can’t log-in to the master database either through Windows Integrated Security or via the “sa” account. The tutorials rely upon a connection string to this database. Each tutorial has its own copy of that string.
>
> The installer tries to adjust all of the string copies during the installation process. If the database installation process fails, you will likely have to correct each string manually.
>
> You will find these strings in each tutorial’s IdeaBlade.ibconfig file and in each “ORM” mapping file. You’ll learn about these files and how to adjust them in the Developers Guide.

Blocked by pre-existing IdeaBladeTutorial database

The installer guards against overwriting a pre-existing tutorial database.

If the IdeaBladeTutorial database is already attached or if it still resides in the target database file directory, the installer will silently continue.

The installer will not install the new version of the database nor will it report this fact.

This means that if you want InstallShield to install a fresh copy of the IdeaBladeTutorial database, you must do both of the following before you install DevForce.

⇨ Detach the database

⇨ Delete (or relocate) the database files.

> The tutorial database files are “IdeaBladeTutorial_Data.MDF” and “IdeaBladeTutorial_Log.LDF”. Be sure to delete or relocate both files after detaching the “IdeaBlade Tutorial” database.
>
> If you forget these steps before you install the new DevForce, you can upgrade later. Do them first and then run the Database Installer shortcut from the Start Menu.

After the Install

You'll get a confirmation message when the installation completes. In most cases, the installation is complete, and you are ready to begin.

Are You New to DevForce?

The installation process loaded a number of helpful resources onto your machine such as tutorials, a concepts manual and a developer guide. You can learn a bit more about these in the "Documentation and Tools" chapter near the end of this guide.

Before You Begin

We suggest that you take a quick tour of Visual Studio to confirm the installation. You will want to confirm that

- The IdeaBlade DevForce Object Mapping Tool is available in the "Tools" menu.
- The Visual Studio Toolbox window shows the DevForce tab and our Toolbox items

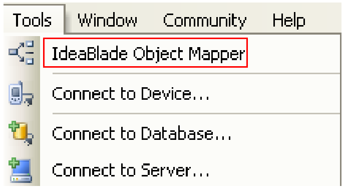
IdeaBlade DevForce Object Mapper

IdeaBlade DevForce Object Mapping Tool (AKA, the "Object Mapper") is essential to building your business object model. You should be able to launch the Object Mapper from the Visual Studio "Tools" menu.

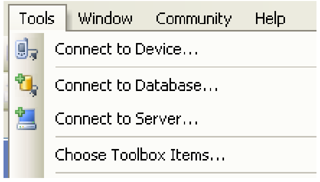
⇨ Launch Visual Studio.

⇨ Click the "Tools" menu.

You should see the Object Mapper at, or near, the top of the menu.



Object Mapper present



Object Mapper missing

If the Object Mapper is missing, please see the "Object Mapper install fails" topic in the Troubleshooting chapter.

DevForce ToolBox

DevForce provides visual UI design components that help you place controls on a form and bind them to application objects without programming.

These components should appear in the "IdeaBlade DevForce" tab of the Visual Studio Toolbox.

Note: the Toolbox is not automatically installed in Visual Studio 2010 installations.

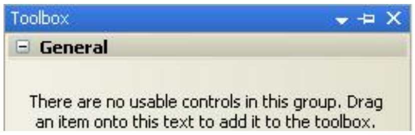
Reviewing the Visual Studio Toolbox

⇨ Launch Visual Studio.

⇨ Select "View ► Toolbox" from the menu (or press [Ctrl+Alt+X]).

The Toolbox window should appear.

It will be empty initially.



There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

The Toolbox only shows visual design components when the active Visual Studio tab displays a Form or UserControl in "Design View."

If you have a solution with a Form or UserControl

⇨ Open that solution

⇨ Navigate to the Form or UserControl

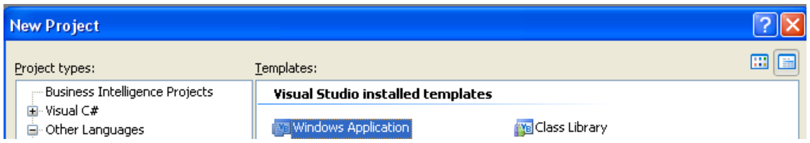
⇨ Display it in "Design View"

From scratch

We will create a new Windows Application and solution.

⇨ Select "File ► New ► Project …" from the menu.

⇨ Select a "Windows Application" template and click [OK].



The language and rest of the dialog doesn't matter for these purposes.

Visual Studio generates a solution and a project. The active tab displays "Form1".

> Delete this solution and project when you're done.

The tab is in "Code View" if you see code instead of a graphical "design canvas".You will need to switch to "Design View".

⇨ Right-click the mouse from within the tab.

⇨ Select "View Designer" from the context menu.

Examine the Toolbox Window

⇨ Select "View ► Toolbox" from the menu (or press [Ctrl+Alt+X]).

The window displays a number of so-called "Tabs" such as the "All Windows Forms" tab. You should see "IdeaBlade DevForce" among them, preferably at the top.

> You can drag a Toolbox tab into any position in the Toolbox window.

If you don't see it, proceed directly to the "Toolbox Installer" topic.

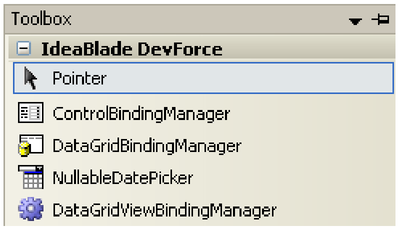
⇨ Open the "IdeaBlade DevForce" tab.

Its contents vary. What you see depends upon:

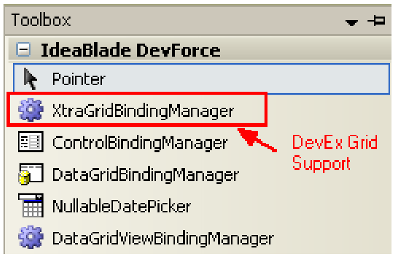
- Your installed DevForce edition
- The 3rd party control suites you've picked.
- Your post-installation customizations (e.g., deleted items)

- Breakdowns of the Toolbox install process.

The following figure shows a Toolbox both with and without support for a 3rd party control suite.



.Net Control Support Only



.Net and 3rd Party Control Support

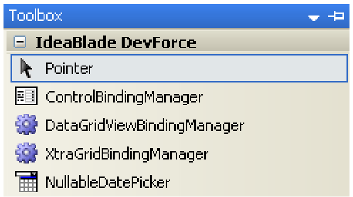
If you don't see any components or you don't see the components you expect to see, proceed directly to the "Toolbox Installer" topic.

✓ **Consider removing** the `DataGridBindingManager`.

> The `DataGridBindingManager` component helps you design a .NET 1.1 `DataGrid` control.
>
> This `DataGrid` control is superseded in .NET 2.0 by the vastly superior `DataGridView` grid control which design with the DevForce `DataGridViewBindingManager`.
>
> The names of the two controls and their respective `BindingManagers` are confusingly similar and this poor programmer too frequently picked the wrong one.
>
> We recommend you "delete" the old `DataGrid`-related components from your Toolbox.
>
> ⇨ Select the `DataGridBindingManager` component and right click.
> ⇨ Select "Delete" from the context menu.
>
> You can always restore it later if you need it.

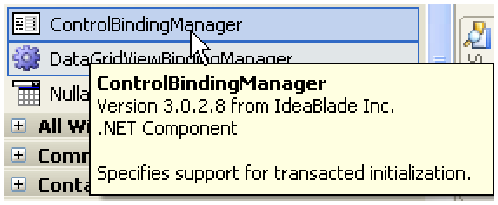
✓ **Consider rearranging** the components to suite your tastes.

You can drag the components into your favored positions within the tab. Here is the author's preferred setup:



Confirm the component version numbers

⇨ Hover the mouse over each component



ControlBindingManager
Version 3.0.2.8 from IdeaBlade Inc.
.NET Component

Specifies support for transacted initialization.

⇨ Compare the version number with the DevForce version you just installed.

See the "Identifying your DevForce version" topic in the Troubleshooting chapter.

If the component version number does not match the DevForce version number you must remove the mismatched items from the Toolbox and re-install them.

If all items are mismatched, remove the tab:

⇨ Right click the tab.

⇨ Select "Delete Tab"

If only some of the items have the wrong version:

⇨ Remove each mismatched item
→ Right-click the item
→ Select "Delete"
this removes it from the tab; it does not delete the component from your system.
→ Click [OK]

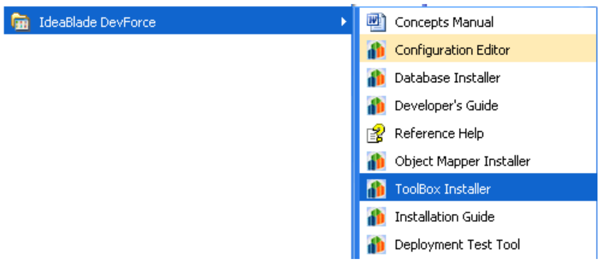
Proceed directly to the "Toolbox Installer" topic.

Toolbox Installer

There are a number of reasons to install or re-install the DevForce UI visual design components as a separate step:

- The main installer did not add the tab or its items.
- You choose custom installation and omitted support for a tool suite.
- You just purchased a 3rd party control suite and want to add DevForce support.
- You deleted the tab or some of its items and want to re-install them.

The DevForce "Toolbox Installer" is your first option. You will find it in the "IdeaBlade DevForce" folder of your Windows Start menu.



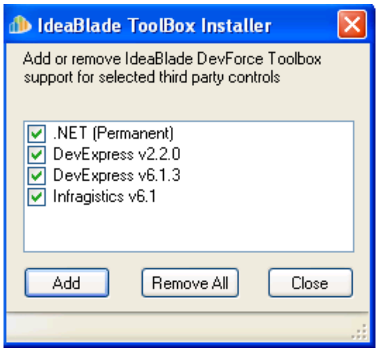
Remember to exit Visual Studio before running any installer.

⇨ Launch the "Toolbox Installer" from the Windows Start Menu.

On Vista and Windows 7 operating systems the Toolbox Installer requires Administrator privileges.

The Dialog presents the control suites available to you. Your edition of DevForce governs your choices. You must have installed the applicable versions of the vendor control suites before you can add DevForce support.

You add or remove support for entire control suites by checking the suite(s) of interest. In this example, we're adding DevForce support for the .NET and Developer Express control suites.



Add or remove IdeaBlade DevForce Toolbox support for selected third party controls

☑ .NET (Permanent)
☑ DevExpress v2.2.0
☑ DevExpress v6.1.3
☑ Infragistics v6.1

You can add but you cannot remove support for the .NET control suite with this tool.

If your component suite is not checked and you are unable to check it or receive a message that it is not installed, you likely need to verify the assembly binding redirection. See the Troubleshooting section later in this document.

We typically want to add support with this tool:

⇨ Select the control suite(s)

⇨ Click the [Add] button.

Look closely at the "Status Bar" on the bottom of the form.

While the tool is working it says "Adding".

Adding ...

When it completes it will say "Added."

Added

⇨ Close the tool when it says "Added".

Confirm the Toolbox installation

Perform again the steps described in the "Reviewing the Visual Studio Toolbox" topic.

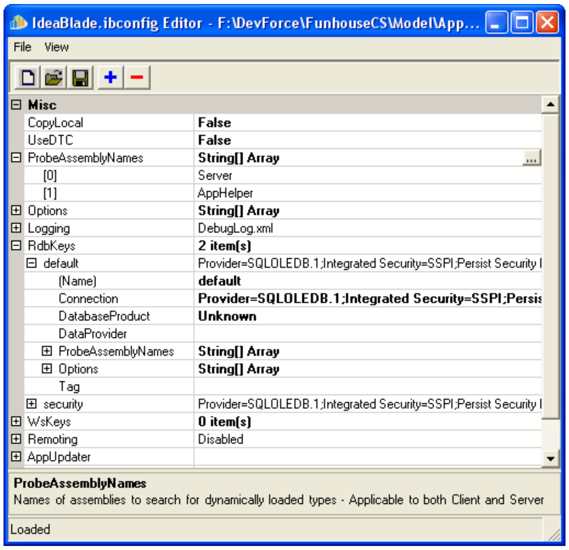
If you don't see the "IdeaBlade DevForce" tab or don't see the controls you expected, please refer to the "Toolbox Installer fails" topic in the Troubleshooting chapter.

Configuration Editor

The XML file, `IdeaBlade.ibconfig`, governs many aspects of a DevForce application deployment. Among other things it identities the application data sources and determines the location of the debug log, the server connectivity options, and where the application should look for supporting assemblies.

We can edit with any text editor or with Visual Studio's own XML editor. Both approaches are error prone as they know nothing about the configuration file schema and can offer no guidance on that score.

The DevForce Configuration Editor is the better tool for the job.


IdeaBlade.ibconfig Editor - F:\DevForce\FunhouseCS\Model\App...
File View

Misc	
CopyLocal	False
UseDTC	False
ProbeAssemblyNames	String[] Array
[0]	Server
[1]	AppHelper
Options	String[] Array
Logging	DebugLog.xml
RdbKeys	2 item(s)
default	Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security I
(Name)	default
Connection	Provider=SQLOLEDB.1;Integrated Security=SSPI;Persis
DatabaseProduct	Unknown
DataProvider	
ProbeAssemblyNames	String[] Array
Options	String[] Array
Tag	
security	Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security I
WsKeys	0 item(s)
Remoting	Disabled
AppUpdater	

ProbeAssemblyNames
Names of assemblies to search for dynamically loaded types - Applicable to both Client and Server

Loaded

You can launch it from the Start menu: IdeaBlade DevForce ► Configuration Editor. However, it is more convenient to launch it from within Visual Studio while you are looking at a particular, `IdeaBlade.ibconfig` file such as the one in the `AppHelper` project.

> The following steps become available once you have created your first DevForce application or loaded an existing DevForce application such as a tutorial. You may want to return to these instructions later.

Double-clicking this file in Visual Studio launches the Visual Studio XML source code editor by default. We can change the default editor to the Configuration Editor.

- ⇨ Launch Visual Studio.
- ⇨ Open an existing DevForce application solution.
- ⇨ Find the `AppHelper` project in the Solution Explorer [Ctrl+W+S]
- ⇨ Right-click and select “Open with …” from the context menu.
- ⇨ Select “DevForce Config Editor”
- ⇨ Click the [Set as Default] button
- ⇨ Click [OK]

> You can always look at it in XML form again by picking “Open with …” and choosing the “XML Editor”.

Modifying or removing your DevForce Installation

If you have purchased an upgrade, for example, from Professional to Enterprise, you must uninstall and reinstall DevForce.

For versions of DevForce prior to 3.5.0, you must uninstall and reinstall if you wish to modify your installation. As of Release 3.5.0, you can modify your DevForce installation without uninstalling and reinstalling it. You can make the following types of changes to your existing installation:

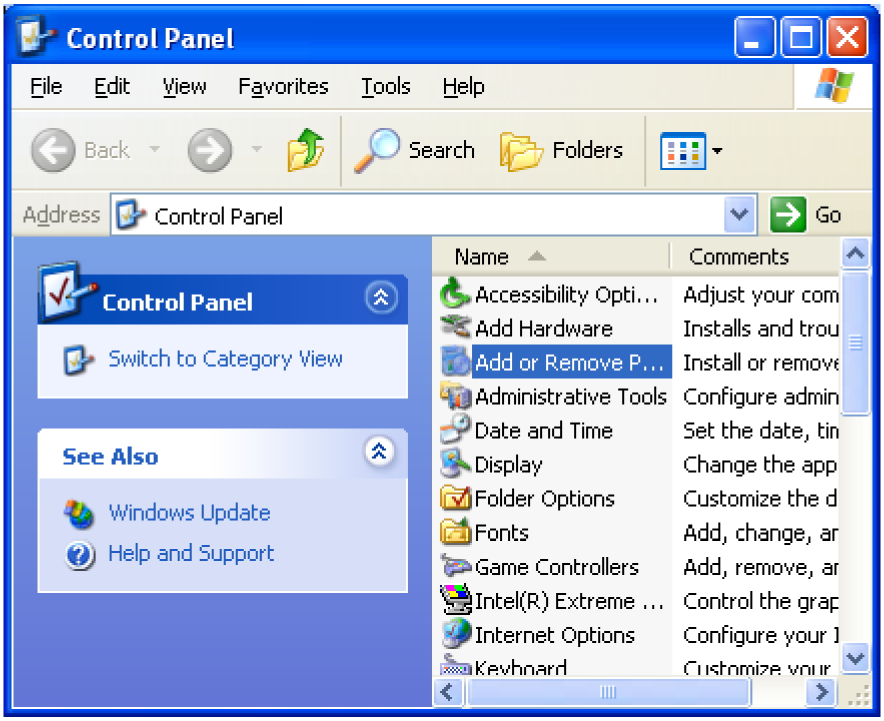
- Add support for additional third party control suites (if your serial number permits it) if, for example, you installed a third-party control suite after you installed DevForce. The topic “Compatibility with Optional Third Party Control Suites” in this manual documents the third party control suites DevForce natively supports.
- Install the Tutorials if you did not previously do so.

In the unlikely event that you wish to remove a feature from your installation, you can do that as well.

To modify your installation, do the following:

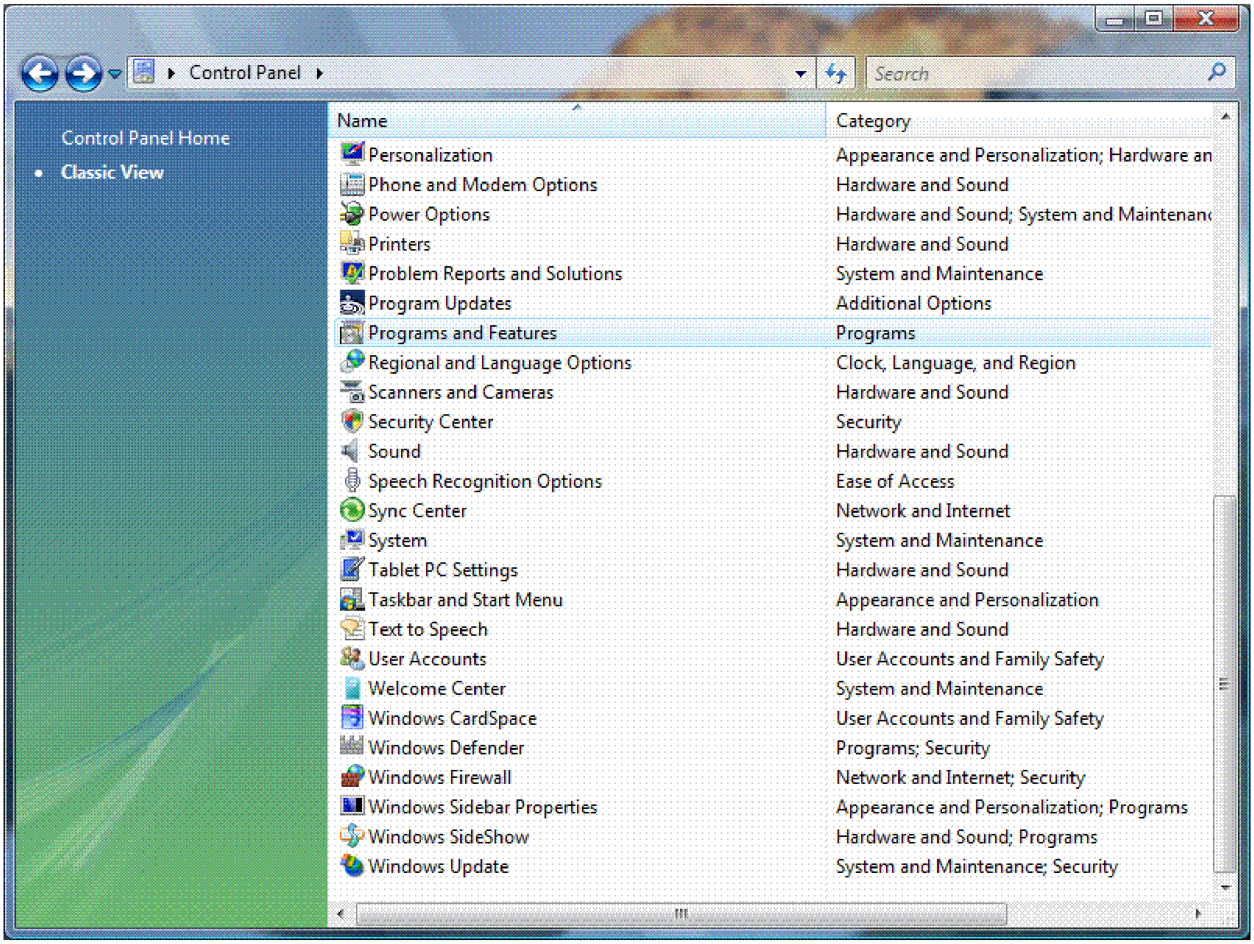
⇨ Click on your machine’s **Start** button (lower left-hand corner of the screen) and then select **Control Panel**.

⇨ In Control Panel, select **Add or Remove Programs** (Windows XP) or **Programs and Features** (Windows Vista).



Name	Comments
Accessibility Opti...	Adjust your com
Add Hardware	Installs and trou
Add or Remove P...	Install or remove
Administrative Tools	Configure admin
Date and Time	Set the date, tin
Display	Change the app
Folder Options	Customize the d
Fonts	Add, change, ar
Game Controllers	Add, remove, ar
Intel(R) Extreme ...	Control the grap
Internet Options	Configure your I
Keyboard	Customize your

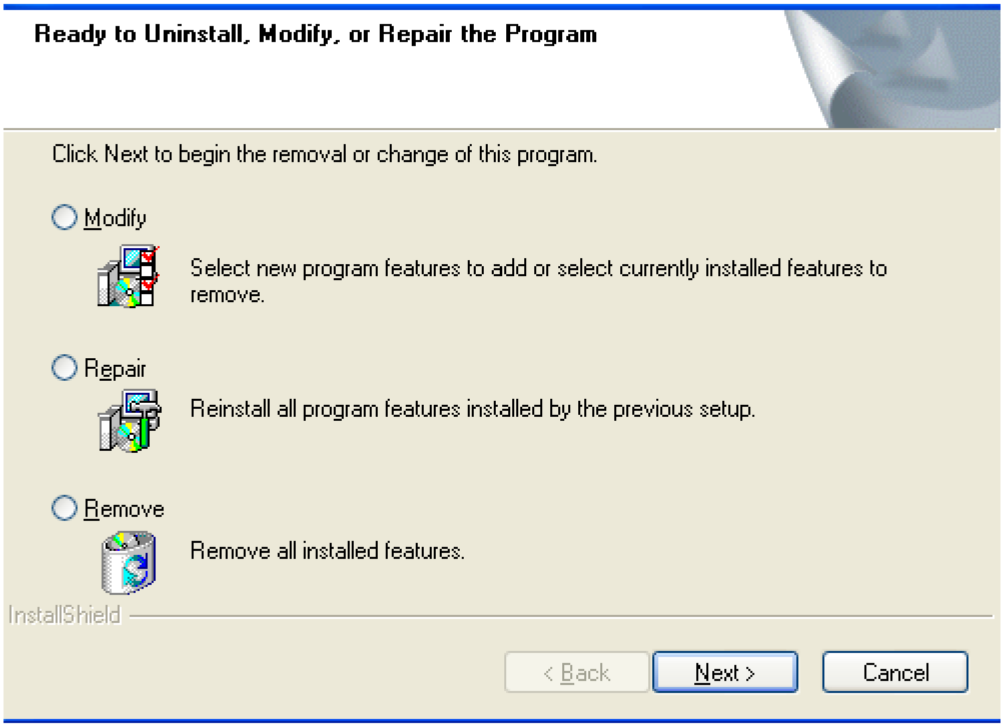
Add or Remove Programs in **Control Panel** (Windows XP classic view)



Name	Category
Personalization	Appearance and Personalization; Hardware an
Phone and Modem Options	Hardware and Sound
Power Options	Hardware and Sound; System and Maintenanc
Printers	Hardware and Sound
Problem Reports and Solutions	System and Maintenance
Program Updates	Additional Options
Programs and Features	Programs
Regional and Language Options	Clock, Language, and Region
Scanners and Cameras	Hardware and Sound
Security Center	Security
Sound	Hardware and Sound
Speech Recognition Options	Ease of Access
Sync Center	Network and Internet
System	System and Maintenance
Tablet PC Settings	Hardware and Sound
Taskbar and Start Menu	Appearance and Personalization
Text to Speech	Hardware and Sound
User Accounts	User Accounts and Family Safety
Welcome Center	System and Maintenance
Windows CardSpace	User Accounts and Family Safety
Windows Defender	Programs; Security
Windows Firewall	Network and Internet; Security
Windows Sidebar Properties	Appearance and Personalization; Programs
Windows SideShow	Hardware and Sound; Programs
Windows Update	System and Maintenance; Security

Programs and Features in Control Panel (Windows Vista)

⇨ Select IdeaBlade DevForce in the list of installed programs, then click the **Change/Remove** button. The “Extracting the .msi” windows illustrated under “Install DevForce” appears, followed by the dialog box illustrated below.



Ready to Uninstall, Modify, or Repair the Program

Click Next to begin the removal or change of this program.

○ Modify

Select new program features to add or select currently installed features to remove.

○ Repair

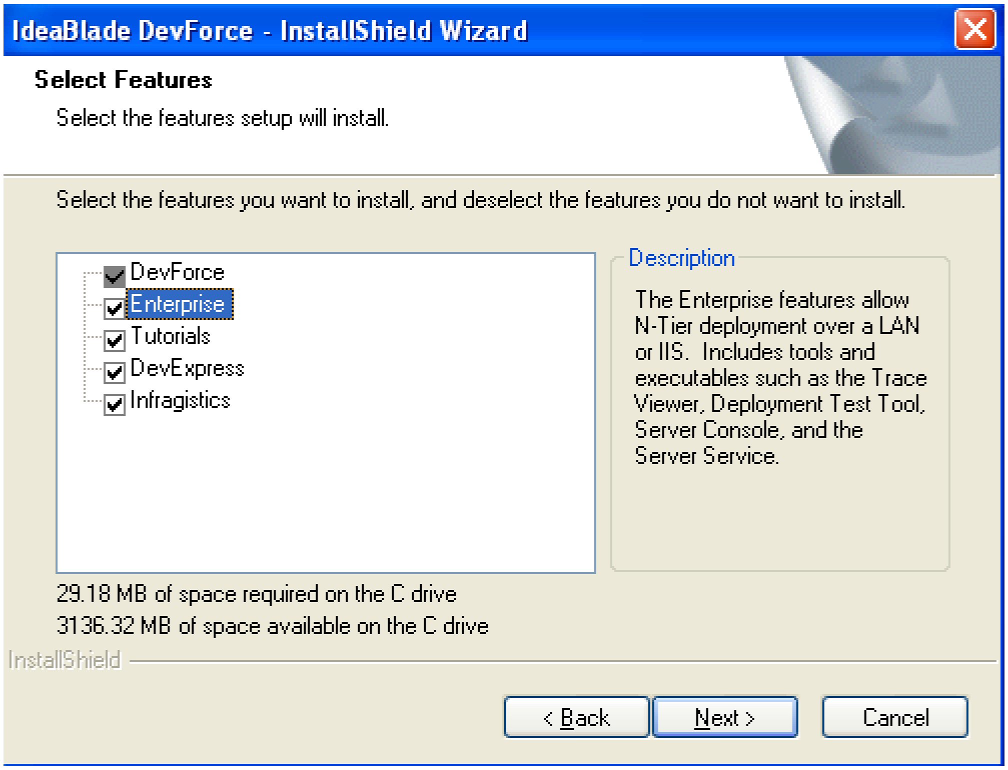
Reinstall all program features installed by the previous setup.

○ Remove

Remove all installed features.

Uninstall, Modify, or Repair Dialog

- If you wish to uninstall DevForce, select **Remove**. If you wish to add or remove features in your DevForce installation, select **Modify** . If you have selected Modify, the Installation Interview dialog illustrated under “Install DevForce” appears. Click on **Next**. The dialog shown below appears.



IdeaBlade DevForce - InstallShield Wizard

Select Features

Select the features setup will install.

Select the features you want to install, and deselect the features you do not want to install.

- DevForce
  - ☑ Enterprise
  - ☑ Tutorials
  - ☑ DevExpress
  - ☑ Infragistics

Description

The Enterprise features allow N-Tier deployment over a LAN or IIS. Includes tools and executables such as the Trace Viewer, Deployment Test Tool, Server Console, and the Server Service.

29.18 MB of space required on the C drive

3136.32 MB of space available on the C drive

- ⇨ All features available for the edition of DevForce you have purchased are displayed. Features that have already been installed are checked and those not installed are unchecked. Check the ones you wish to install and uncheck the ones you do not wish to install. Features that you have already installed should be left checked, otherwise they will be uninstalled. Click the **Next** button to proceed.
- ⇨ A window displaying the progress of the update appears. The installation is complete when this window exits.
- ⇨ If you have added one or more third party control suites as part of your modification to your DevForce installation, run the **Toolbox Installer** after modifying your installation. This will add the DevForce components that support these controls to the IdeaBlade DevForce toolbox tab.

Updating Existing Applications

Consult the IdeaBlade DevForce Release Notes

Should you upgrade from one DevForce Release to the next?

We believe it is a good idea to keep up with the current DevForce release. We think it's important to lag no more than one "Feature" release behind.

> We indicate a "Feature" release by changing in the second digit of the DevForce version number (e.g., 3.1 to 3.2); a "Maintenance" release is a change in the third digit (e.g., 3.1.4 to 3.1.5). The fourth digit varies by build and does not typically merit a release note.

Changes related to features and maintenance are meticulously documented in the IdeaBlade DevForce Release Notes.

> Access the Release Notes from the "Windows Start Menu | IdeaBlade DevForce | Release Notes".

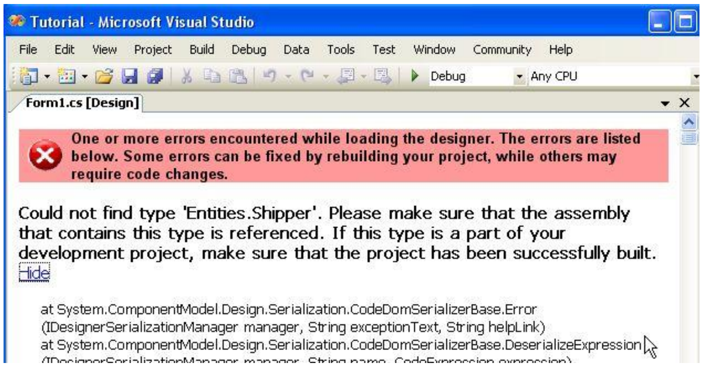
✓ **Read these notes before installing** a new version of DevForce.

Sure they are informative. But more importantly, they tell you about the important, release-specific steps you must take to upgrade your DevForce application from one release to the next.

Upgrading DevForce Versions

You have a working application and you've just upgraded to a new version of DevForce.

You launch Visual Studio and load your application solution. You find yourself parked on a Design View tab or, perhaps, you navigate to a Design View tab and suddenly ... you see a scary display such as the following:


Tutorial - Microsoft Visual Studio
File Edit View Project Build Debug Data Tools Test Window Community Help
Debug
Any CPU
Form1.cs [Design]
Hide

One or more errors encountered while loading the designer. The errors are listed below. Some errors can be fixed by rebuilding your project, while others may require code changes.

Could not find type 'Entities.Shipper'. Please make sure that the assembly that contains this type is referenced. If this type is a part of your development project, make sure that the project has been successfully built.

```
at System.ComponentModel.Design.Serialization.CodeDomSerializerBase.Error
(IDesignerSerializationManager manager, String exceptionText, String helpLink)
at System.ComponentModel.Design.Serialization.CodeDomSerializerBase.DeserializeExpression
(IDesignerSerializationManager manager, String name, CodeExpression expression)
```

This is widely known as the "White Screen of Death"

It's Ok. The recovery steps are simple.

Most releases of DevForce are fully backward compatible with earlier versions of DevForce.

We do make breaking changes on occasion although we strive to confine such changes to the most obscure corners of the product. We highlight them in the **IdeaBlade DevForce Release Notes** when we do and we repeat the corrective steps here.

You should expect to take the following steps after installing every new release of DevForce.

1. Backup your application files.

2. Refresh your project references to the IdeaBlade assemblies.
3. Follow the upgrade advice in the for this release in the **IdeaBlade DevForce Release Notes**

   Many release upgrades require you to re-generate your business model entities
4. Rebuild your business object project(s).

Backup your Application Files

We can hardly emphasize enough the importance of backing up your application frequently and especially before installing development software of any kind.

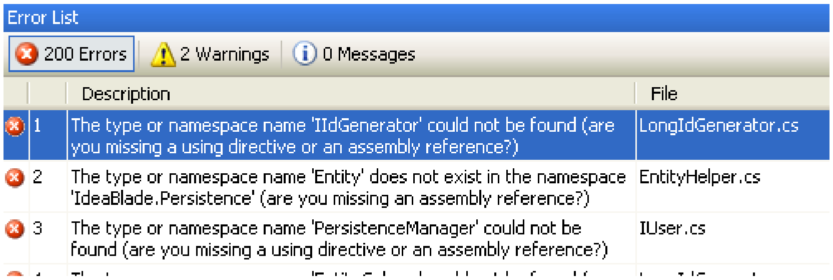
✓ Do use a good automated source control system.

Refresh IdeaBlade References

You must now update the version numbers of the IdeaBlade assembly references in your solution projects.

Background

If you build a pre-existing DevForce application project after installing a new version of DevForce, you may see a flood of errors such as these:



Error List

200 Errors | 2 Warnings | 0 Messages

		Description	File
✖	1	The type or namespace name 'IIdGenerator' could not be found (are you missing a using directive or an assembly reference?)	LongIdGenerator.cs
✖	2	The type or namespace name 'Entity' does not exist in the namespace 'IdeaBlade.Persistence' (are you missing an assembly reference?)	EntityHelper.cs
✖	3	The type or namespace name 'PersistenceManager' could not be found (are you missing a using directive or an assembly reference?)	IUser.cs

Visual Studio suspects that the problem is a missing reference. Its suspicions are correct – the referenced assemblies may appear to be present in the Project but they are no longer valid.

Visual Studio 2005 changed the way a Project records references to strongly named assemblies. If a Project references a strongly-named assembly – such as an IdeaBlade assembly in the Global Assembly Cache (GAC) – the Project can only be build with that exact version of the assembly.

This ensures that Projects built with libraries are not accidentally "undone" by hidden, breaking changes in those libraries.

All IdeaBlade assemblies are strongly-named and are installed in the GAC on the developer's machine.

> They do not go in the GAC of end user machines – and in general they should not be installed there.

All application development assemblies of a new DevForce release receive a new version number – and this number is always the same across the development assemblies.

> The developer tool assemblies such as the Toolbox Installer may have different version numbers.

Consequently, you must update the IdeaBlade assembly references in all of your projects. This need not be an onerous task.

What is the Project's referenced version?

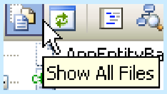
There is no visual clue that the IdeaBlade references are out-of-date.

You could inspect the property sheet of each reference separately.

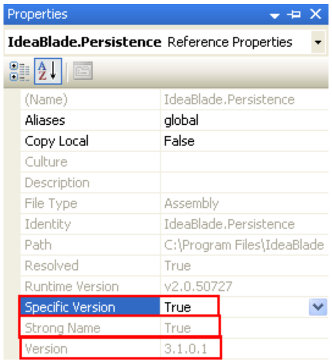
⇨ Right-click a reference

⇨ Select "Property" from the context menu

In a VB.NET project, to see the references in the Solution Explorer, you must activate "Show All" by pressing the button in the Solution Explorer tool bar,



You will see a property sheet that looks something like this:



IdeaBlade.Persistence Reference Properties

(Name)	IdeaBlade.Persistence
Aliases	global
Copy Local	False
Culture	
Description	
File Type	Assembly
Identity	IdeaBlade.Persistence
Path	C:\Program Files\IdeaBlade
Resolved	True
Runtime Version	v2.0.50727
Specific Version	True
Strong Name	True
Version	3.1.0.1

The figure highlights three points:

1. The Project requires a specific version
2. This is a strongly named assembly reference
3. The version is 3.1.0.1

Beware: The version number is the version number of the assembly in the GAC, not the version number of the Project reference!

You can easily scratch your head wondering what is wrong. You know that the current DevForce version is 3.1.0.1 and the property sheet seems to confirm that you are referring to that version.

In fact you cannot tell what version the Project is referencing by looking at the property sheet.

Apparently your only clue is that the build thinks there is a missing reference while Solution Explorer says it is there.

The Official Visual Studio Resolution

Visual Studio offers two resolutions, one temporary and one "permanent."

Temporary Workaround

The temporary solution is to disable "Specific Version" checking.

⇨ Select all of the suspect references in Solution Explorer.

⇨ Right-click and select "Property" from the context menu

⇨ Set the “Specific Version” switch to “False” for the selected references.

Now you can recompile and the project will build (unless some other dependent assembly has the same problem).

What is wrong with this? You surrender the strong version checking that could be important to the quality of your application.

> This is exactly what we do with our Tutorial projects. The consequences do not seem dire.

“Permanent” Resolution

The proper way is to remove all of these references and recreate them. There is no “refresh” button. You have to

⇨ Select all of the suspect references in Solution Explorer.

⇨ Right-click and select “Remove” from the context menu

⇨ Right-click “References” and select “Add Reference …” from the context menu.

⇨ Hunt for these references again in the “.NET” tab of the “Add Reference” dialog.

Needless to say, this is a time-consuming and error-prone process.

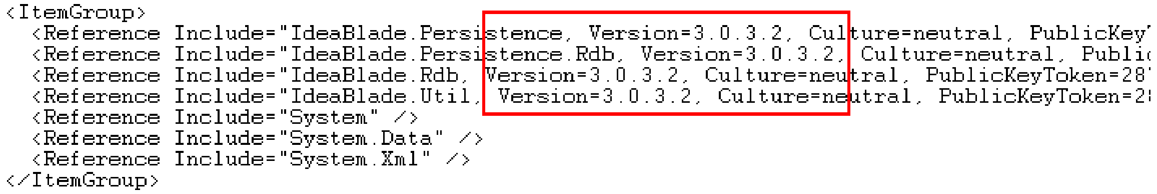
Moreover, you will just have to repeat it with the your next install of DevForce (or any other referenced library).

The Unofficial Fast Alternative

Fortunately, the Project is defined by an XML file named either `ProjectName.csproj` or `ProjectName.vbproj`. You can edit it in any text editor if you’re careful.

> Remember to backup

Here is an example:



```
<ItemGroup>
  <Reference Include="IdeaBlade.Persistence, Version=3.0.3.2, Culture=neutral, PublicKey
  <Reference Include="IdeaBlade.Persistence.Rdb, Version=3.0.3.2, Culture=neutral, Publi
  <Reference Include="IdeaBlade.Rdb, Version=3.0.3.2, Culture=neutral, PublicKeyToken=28
  <Reference Include="IdeaBlade.Util, Version=3.0.3.2, Culture=neutral, PublicKeyToken=2
  <Reference Include="System" />
  <Reference Include="System.Data" />
  <Reference Include="System.Xml" />
</ItemGroup>
```

The figure highlights the version numbers of the strongly-named IdeaBlade DevForce assemblies. Now we can see that the referenced versions, 3.0.3.2, are not the same as the versions in the GAC which are 3.1.0.1 at this time.

⇨ Update these version numbers

⇨ Save the project file

⇨ Close the solution in Visual Studio (it has cached the prior Project file)

⇨ Re-open the solution.

This is not too painful. With the right tool one could sweep an entire solution full of project files.

Summary

You will have to update your application’s references to IdeaBlade assemblies. Your choices are:

- Give up strong version checking.
- Remove and re-add references.
- Edit the references in the Project files.

Follow steps prescribed in the IdeaBlade DevForce Release Notes

Some releases require no further action on your part. Others may require you to re-generate your business object classes or run other tools that help you migrate your application from one release to the next.

While consulting the Release Notes before upgrading, you may have learned about some change or technique that you think warrants some manual recoding of your application. You probably want to make the change after migrating but that may not always be possible.

In certain rare cases, we may have introduced a change that breaks your application; you'll either have to modify your code or wait to migrate. We hope you did your due diligence before getting this far.

Regenerate your business object classes

As we just noted, this may not or may not be required by the new release.

We tell you in the **IdeaBlade DevForce Release Notes** when we think that a release requires regeneration but you should be prepared to regenerate in any case.

We are constantly evolving our object mapping technology and the improvements often involve changes to the mapping file and to the structure of DevForce generated `DataRow` and `DataTable` classes.

These classes are "owned" by DevForce in the sense that it must always be possible to regenerate them with the Object Mapper. In this respect they are like the Designer code generated by Visual Studio when you build a Form or Control in Design View.

You should never alter these class files in any way nor should you depend upon aspects of their internal construction unless they are marked public or protected.

You should make your changes to the "Final" and "Abstract" classes that descend from the `DataRow` classes.

Accordingly, we regard the `DataRow` and `DataTable` classes as DevForce internal classes and feel empowered to modify their implementation from release to release without bothering you about it … except for this one thing.

We may ask you to regenerate them with the Object Mapper.

> Please do not confuse "*rebuilding*" or "*recompiling*" the model with "*regenerating*" the model.
>
> "*Rebuilding*" is a Visual Studio operation; you will probably have to rebuild in any case.
>
> You can only "***regenerate***" the business model with the DevForce Object Mapper. You will rebuild your solution *after* you've regenerated the model.

The Scary Design View problem

You encountered the scary "Design View" display we described at the opening of this chapter.

⇨ Close this form

⇨ Take the actions discussed above:
→ Refresh your IdeaBlade references
→ Regenerate and rebuild the business object project
→ Correct for any breaking changes

⇨ Rebuild the solution

⇨ Re-open the form in Design View

If you still see the same scary red message, that may still be Ok.

When you opened the solution, it was probably parked in Design View on this Form or UserControl. Visual Studio has cached information about that view – information that is no longer true. Visual Studio won't let go. The remedy is simple.

⇨ Shut down Visual Studio and re-launch the solution.

Visual Studio will now load its cache with the correct information and the form should display properly in Design View.

Updating 3rd Party UI Control Suites

DevForce extends the native .NET data binding architecture. For example, you can bind to nested and dynamic properties of any object as when you bind to the "Name" property of the "State" class when displaying an employee's home address. The bound data property is `HomeAddress.State.Name`.

Some DevForce editions provide special and programmatic support for third party control suites. That means there are vendor-specific "control binders", binding descriptors, binding managers, and visual UI designers.

We build each DevForce release to work with a particular release of the control vendor's product. We and our vendors do not coordinate our release schedules. We do our best to keep up but we may lag a month or more behind and, in that interim, the vendor may unleash a torrent of update patches, each with a new build number.

We cannot simply refer to their control suites by assembly name. We have to refer to them by their strong names. We can only certify our product to work with the controls that we've tested. Thus, our DLLs are locked to specific versions of their DLLs.

3rd party control updates can break our code but most of the time the changes are transparent to DevForce. Our focus is on the mechanics of binding to their controls. We usually are indifferent to the vendor's improvements and repairs to control styles and behavior.

You, on the other hand, may want the latest control suite update – and want it right now because your application is tripping over a bug or infelicity. What to do?

Fortunately, .NET offers a technique called "Assembly Redirection". With redirection you get to say, in effect, "when the application asks for 3.2.1.3 of this DLL, please use the 3.2.2.0 version instead." If .NET can find that version, your application can continue.

While we cannot guarantee that our code will work with this alternate version it is certainly worth a try; Customer Support may be able to confirm that other customers are doing just fine with the vendor's release.

Assembly Redirection For Client Applications

Your client applications ship with the control vendor's client libraries. You've just downloaded and referenced the vendor's latest release.

You don't want to ship both the current and the DevForce authorized versions of these libraries – even if that is possible – because these are multi-megabyte libraries and installing two sets makes for an overweight application.

You will fix your user interface Project references to point to the current vendor's release, perhaps using the same techniques discussed in "Refresh IdeaBlade References" above. Your own code will refer to this new version henceforth.

> Write down the DevForce referenced version number first. You will need to know it when you write your re-direction instructions.

Meanwhile, the DevForce assemblies are pointing to an older version. Let's re-direct them to the new version.

Add an Application Configuration File

You can add a .NET application configuration file to your StartUp Project manually.

⇨ Select your StartUp Project in Solution Explorer

⇨ Right-click and select "Add ► New Item …" from the context menu.

⇨ Find and select the "Application Configuration File" template.

⇨ Click [Add], thus accepting the suggested name, "`App.config`".

If you already have one, open it up.

The tab reveals a .NET XML file named “`App.config`.” It looks like this if it is brand new:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
</configuration>
```

Add the <runtime /> XML

Enter the following XML between the `<configuration />` tags.

```
  <runtime>
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    </assemblyBinding>
  </runtime>
```

If your `App.config` already has these tags, don’t add them again.

Find the 3rd Party Control References

➪ Open the StartUp Project’s project file in a text editor.

A Project file ends in either a `.csproj` or `.vbproj` extension.

➪ Find the references to the 3rd party control libraries

For the DeveloperExpress suite they might look like this:

```
    <Reference Include="DevExpress.Data3, Version=3.2.0.0, Culture=neutral,
PublicKeyToken=79868b8147b5eae4" />
    <Reference Include="DevExpress.Utils3, Version=3.2.0.0, Culture=neutral,
PublicKeyToken=79868b8147b5eae4" />
    <Reference Include="DevExpress.XtraEditors3, Version=3.2.0.0, Culture=neutral,
PublicKeyToken=79868b8147b5eae4" />
    <Reference Include="DevExpress.XtraGrid3, Version=3.2.0.0, Culture=neutral,
PublicKeyToken=79868b8147b5eae4" />
```

➪ Copy these lines to the clipboard

Add Assembly Redirect lines

➪ Paste these lines between the `<assemblyBinding />` tags.

➪ Tweak each line into four tags as in this example so that …

```
<Reference Include="DevExpress.Data3, Version=3.2.0.0, Culture=neutral,
PublicKeyToken=79868b8147b5eae4" />
```

… becomes

```
<dependentAssembly>
 <assemblyIdentity name="DevExpress.Data3" publicKeyToken="79868b8147b5eae4" />
 <bindingRedirect oldVersion="3.2.0.0" newVersion="3.2.0.2"/>
</dependentAssembly>
```

Be sure to confirm both the old version number and the new version number.

The resulting file looks like this:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <runtime>
   <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
     <assemblyIdentity name="DevExpress.Data3" publicKeyToken="79868b8147b5eae4" />
     <bindingRedirect oldVersion="3.2.0.0" newVersion="3.2.0.2"/>
    </dependentAssembly>
    <dependentAssembly>
     <assemblyIdentity name="DevExpress.Utils3" publicKeyToken="79868b8147b5eae4" />
     <bindingRedirect oldVersion="3.2.0.0" newVersion="3.2.0.2"/>
    </dependentAssembly>
    <dependentAssembly>
     <assemblyIdentity name="DevExpress.XtraEditors3" publicKeyToken="79868b8147b5eae4" />
     <bindingRedirect oldVersion="3.2.0.0" newVersion="3.2.0.2"/>
    </dependentAssembly>
    <dependentAssembly>
     <assemblyIdentity name="DevExpress.XtraGrid3" publicKeyToken="79868b8147b5eae4" />
     <bindingRedirect oldVersion="3.2.0.0" newVersion="3.2.0.2"/>
    </dependentAssembly>
   </assemblyBinding>
  </runtime>
</configuration>
```

Confirm those version numbers. The vendor may not use the same version numbers for every library.

⇨ Save the App.config file.

What happens to the Application Configuration File?

When you compile (build) your application, Visual Studio copies this application file into the executable directory giving it the full name of the executable plus the extension, .config. Thus, if your application creates an executable assembly called MyApp.exe in the ..\bin\debug directory, you'll find a file nearby called MyApp.exe.config.

Re-directing the next time

In general there is no harm in having unused <bindingRedirect /> tags in your App.config. These re-directions become superfluous as you migrate to the next version of DevForce and all libraries are back in sync.

On the other hand, the vendor may issue yet another release (say, "3.2.0.**4**") before we catch up. You will want to bump to the next version. That's easily done by using the "range" notation for the old version as shown:

```
  <dependentAssembly>
    <assemblyIdentity name="DevExpress.XtraGrid3" publicKeyToken="79868b8147b5eae4" />
    <bindingRedirect oldVersion="3.2.0.0-3.2.0.4" newVersion="3.2.0.4"
  </dependentAssembly>
```

Assembly Redirection For Developers

If you are using DevForce visual UI designers to compose your 3rd party controls, you could run into version mismatch problems during development.

We must apply a similar assembly redirection to your Machine.config. Machine.config is a file that does for your development environment what App.config does for your application.

The DevForce Installer can do this for you as of version 3.1.5. See "Assembly Binding Redirection for 3rd Party UI Control Suites".

Machine.config is located at C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\CONFIG on most machines.

Everyone has a Machine.config and it has a significant amount of material in it. We’re going to add our redirection tags to it.

⇨ Copy everything in the App.config between and including the <runtime> </runtime> tags.

⇨ Open Machine.config in a text editor.

⇨ Search for the text within these quotes: “<runtime”

> If you don’t find the text, “<runtime”, scroll to the bottom just above the </configuration> tag.

⇨ Paste in the assembly redirection tags.

> If the search found “<runtime />”, we will replace it with the XML we copied to the clipboard.
>
> It there was already a pair of <runtime> </runtime> tags with other redirections, merge the copied XML with those pre-existing redirections as appropriate.

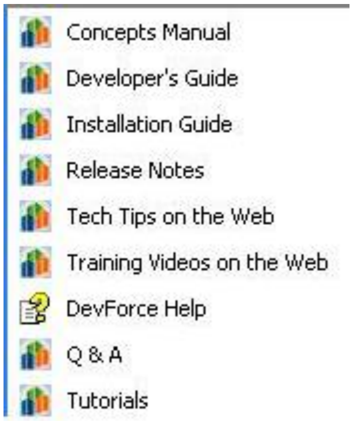
⇨ Save and close the file.

In general there is no harm in having unused <bindingRedirect /> tags in your Machine.config. These redirections become superfluous as you migrate to the next version of DevForce and all libraries are back in sync.

> If running on a 64-bit OS or using Visual Studio 2010, check the Troubleshooting section for further information on editing the machine.config.

Documentation and Tools

Documentation



Once you have installed the product, you will want to examine these other materials.

DevForce Release Notes – The Release Notes describe the evolution of DevForce in substantial detail. You'll find specific advice on what has changed, how that could affect your existing code, and how to adapt to the changes. It's a **"must read" every time you install** a new version of DevForce.

DevForce Concepts Manual – The Concepts Manual explains the broader goals and concepts addressed by DevForce and is a prerequisite for making use of this Developers Guide.

This is the place to learn why DevForce works as it does and is the most important companion to this guide. You will also find a **glossary of terms** used everywhere in our documentation.

DevForce Developers' Guide – A guide to using DevForce in your applications, the "How To" companion to this Concepts Manual.

DevForce Reference Help – This is the detail code documentation. Each namespace, class, and method is documented individually. Important areas contain code examples. You can launch it from the Windows Start menu "All Programs ► IdeaBlade DevForce ► Reference Help".

DevForce Tutorials – The tutorials show, in a step-by-step manner, how to build simple applications using DevForce.

Tech Tips on the Web – Tech Tips are available on the IdeaBlade web site.

Training Videos on the Web – Instructional videos – many of them paralleling the tutorials -- are available on the IdeaBlade web site.

Using the DevForce Tutorials

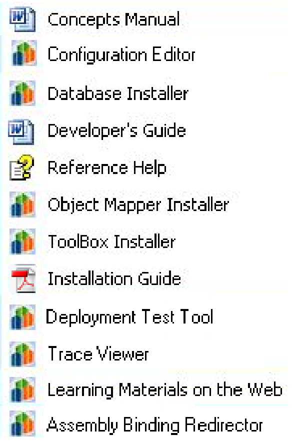
DevForce Tutorials can be accessed via “Windows Start Menu ► All Programs ► IdeaBlade DevForce ► Tutorials”.

This link launches an HTML page that contains links to DevForce instructional units organized into categories of Fundamentals, Intermediate, and Advanced. Each instructional unit addresses a single DevForce-related topic, and contains either a tutorial, or at least some sample code. The instructional units provided with the product installation are a subset of the materials available from IdeaBlade, having had their PowerPoint slide decks removed in order to keep the installation executable relatively small. The complete instructional units can be download from the IdeaBlade web site. Instructions and a link to do that are included in the HTML cover page for the tutorials; the same link is available on the Start menu at “Windows Start Menu ► All Programs ► IdeaBlade DevForce ► Instructional Materials on the Web”.

All tutorials use the IdeaBladeTutorial database, which is automatically installed and configured during DevForce installation. The IdeaBlade Configuration File and ORM file for each of the exercises in the training is also configured during installation.

DevForce Tools

The following DevForce Tools appear in the **IdeaBlade DevForce** folder in the Windows Program Files menu.

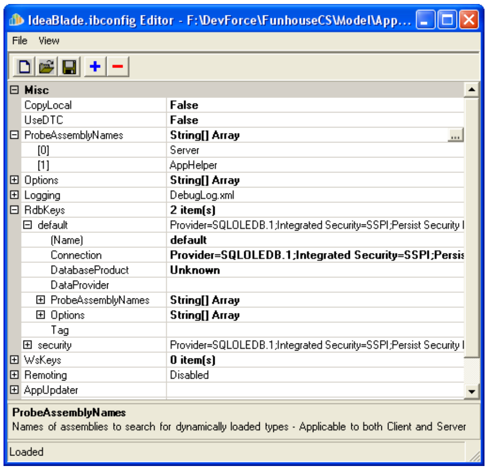


We'll comment only about the tools in this section.

Configuration Editor

The application's `IdeaBlade.ibconfig` file contains the application's deployment parameters. The developer changes how the application is deployed and where it finds its runtime data source by changing these parameters rather than by recompiling the application. We cover this subject in the Developers Guide.

The `IdeaBlade.ibconfig` file is an XML text file. We could edit it with any text editor but it is safer to do so with the help of this Configuration Editor tool.


IdeaBlade.ibconfig Editor - F:\DevForce\FunhouseCS\Model\App...
File
View

⊟ **Misc**	
CopyLocal	**False**
UseDTC	**False**
⊟ ProbeAssemblyNames	**String[] Array**
[0]	Server
[1]	AppHelper
⊞ Options	**String[] Array**
⊞ Logging	DebugLog.xml
⊟ RdbKeys	**2 item(s)**
⊟ default	Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security I
(Name)	**default**
Connection	**Provider=SQLOLEDB.1;Integrated Security=SSPI;Persis**
DatabaseProduct	**Unknown**
DataProvider	
⊞ ProbeAssemblyNames	**String[] Array**
⊞ Options	**String[] Array**
Tag	
⊞ security	Provider=SQLOLEDB.1;Integrated Security=SSPI;Persist Security I
⊞ WsKeys	**0 item(s)**
⊞ Remoting	Disabled
⊞ AppUpdater	

ProbeAssemblyNames
Names of assemblies to search for dynamically loaded types - Applicable to both Client and Server

Loaded

See "Configuration Editor" for instructions on making this tool your default `IdeaBlade.ibconfig` editor.

Database Installer

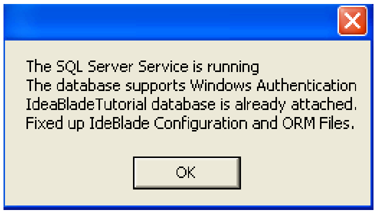
The Database Installer:

- Installs and attaches the **IdeaBladeTutorial** database,
- Fixes up the connection strings in the IdeaBlade Tutorials so that you don't have to fix them up yourself.

Most of the time, you will never need this tool. Your installation will successfully install the IdeaBladeTutorial database and fix up the connection strings in the Tutorials, and you decide not to make any additional changes. However, there are certain cases where this tool can be useful.

- You pause or stop the database, and then forget to resume or start the database before you install DevForce. Using this command, you can install the IdeaBladeTutorial database without having to uninstall and reinstall DevForce.
- You decide to make changes in the IdeaBladeTutorial database that cause the connection string to change, and you'd like to see these new connection strings propagate to the IdeaBlade tutorials.

To run, click on the shortcut in the DevForce Start menu. After a few seconds, you should get a status message like:



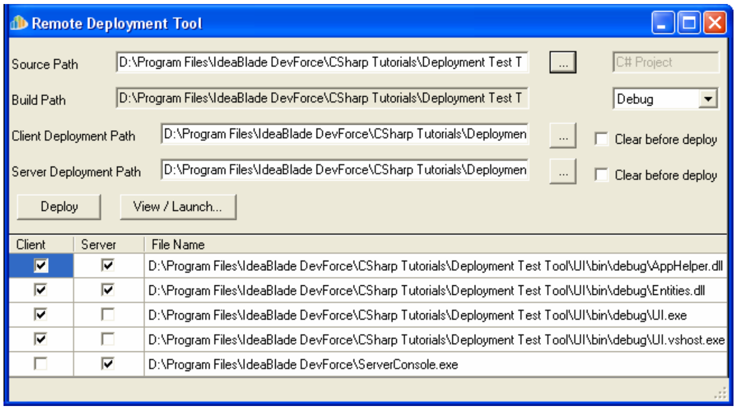
The SQL Server Service is running
The database supports Windows Authentication
IdeaBladeTutorial database is already attached.
Fixed up IdeBlade Configuration and ORM Files.

On Vista and Windows 7 operating systems the Database Installer requires Administrator privileges.

Deployment Test Tool

The Deployment Test Tool is a tool that makes it easy for developers to debug the deployment code for simple n-tier deployments. In fact, the entire deployment can be accomplished without having to write a single line of code.

The following screenshot shows the tool in action in the Deployment Test Tool Tutorial.



Remote Deployment Tool

Source Path: D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deployment Test T

C# Project

Build Path: D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deployment Test T

Debug

Client Deployment Path: D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deploymen

□ Clear before deploy

Server Deployment Path: D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deploymen

□ Clear before deploy

Client	Server	File Name
☑	☑	D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deployment Test Tool\UI\bin\debug\AppHelper.dll
☑	☑	D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deployment Test Tool\UI\bin\debug\Entities.dll
☑	□	D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deployment Test Tool\UI\bin\debug\UI.exe
☑	□	D:\Program Files\IdeaBlade DevForce\CSharp Tutorials\Deployment Test Tool\UI\bin\debug\UI.vshost.exe
□	☑	D:\Program Files\IdeaBlade DevForce\ServerConsole.exe

Toolbox Installer

The "Toolbox Installer" adds the DevForce UI visual design components to the Visual Studio Toolbox.

You will use this tool when:

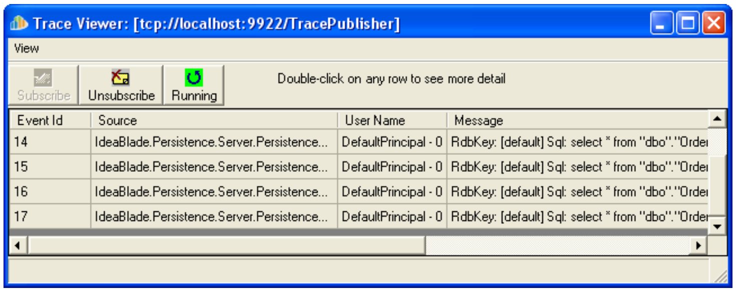
- You add or remove support for a 3rd party control suite.
- You want to restore a component that you deleted from the Toolbox.
- The DevForce installer failed to install these components properly.

We cover the use of this tool in the "Toolbox Installer fails" topic under the Troubleshooting chapter.

Remember that on Vista and Windows 7 operating systems the Toolbox Installer requires Administrator privileges.

Trace Viewer

The Trace Viewer displays the log of events generated either by client or server including all attempts to read and write data. We discuss this tool in the Developers Guide. The screen shot below is from the DevForce Tutorial exercises on the Deployment Test Tool.



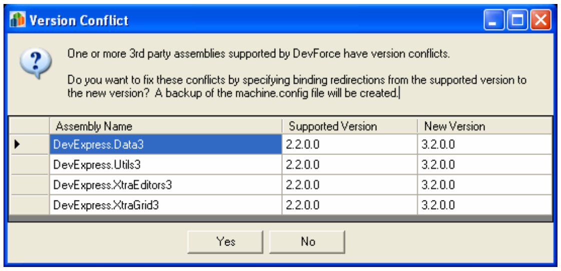
Trace Viewer: [tcp://localhost:9922/TracePublisher]

Double-click on any row to see more detail

Event Id	Source	User Name	Message
14	IdeaBlade.Persistence.Server.Persistence...	DefaultPrincipal - 0	RdbKey: [default] Sql: select * from "dbo"."Order
15	IdeaBlade.Persistence.Server.Persistence...	DefaultPrincipal - 0	RdbKey: [default] Sql: select * from "dbo"."Order
16	IdeaBlade.Persistence.Server.Persistence...	DefaultPrincipal - 0	RdbKey: [default] Sql: select * from "dbo"."Order
17	IdeaBlade.Persistence.Server.Persistence...	DefaultPrincipal - 0	RdbKey: [default] Sql: select * from "dbo"."Order

Assembly Binding Redirector

We first encountered this utility during installation.



Version Conflict

One or more 3rd party assemblies supported by DevForce have version conflicts.

Do you want to fix these conflicts by specifying binding redirections from the supported version to the new version? A backup of the machine.config file will be created.

Assembly Name	Supported Version	New Version
DevExpress.Data3	2.2.0.0	3.2.0.0
DevExpress.Utils3	2.2.0.0	3.2.0.0
DevExpress.XtraEditors3	2.2.0.0	3.2.0.0
DevExpress.XtraGrid3	2.2.0.0	3.2.0.0

See "Assembly Binding Redirection for 3rd Party UI Control Suites" for an explanation and the details of use.

On Vista and Windows 7 operating systems the Assembly Binding Redirector requires Administrator privileges.

Troubleshooting

Customer Support

You can access our support forums here: http://www.ideablade.com/forum

Or submit a support request here: http://www.ideablade.com/TechSupport/CustomerSupportRequestForm.aspx

For non-technical issues, please email sales@ideablade.com or info@ideablade.com.

Identifying your DevForce version

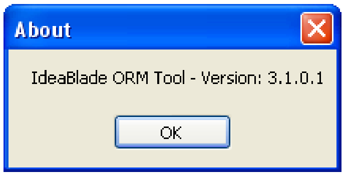
From within Visual Studio

An easy way to identify your DevForce version if you're already in Visual Studio is to look at the "About" box of the "Object Mapper".

⇨ Launch the Object Mapper from the Visual Studio Tools menu.

⇨ Select "Help ► About" from the Object Mapper menu.

You should see a dialog such as this:



IdeaBlade ORM Tool - Version: 3.1.0.1

Of course you can't do this if you're having trouble launching the Object Mapper.

You can view the version number by examining the property sheet of any referenced "IdeaBlade" assembly.

⇨ Open the Solution Explorer [Ctrl+W+S].

⇨ Open the References folder of your Model or UI project (VB developers must press the "Show All" button first).

⇨ Select an "IdeaBlade" assembly.

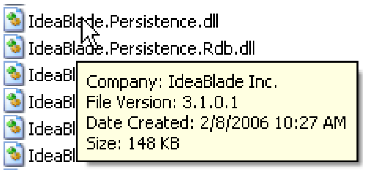
⇨ Open its property sheet [Ctrl+W+P].

⇨ Examine the "Version" property near the bottom.

Outside Visual Studio

A handy and easy alternative is to examine one of the DevForce components in the installation directory which is typically located at C:\Program Files\IdeaBlade DevForce.

⇨ Hover the mouse over `IdeaBlade.Persistence.dll`



Company: IdeaBlade Inc.
File Version: 3.1.0.1
Date Created: 2/8/2006 10:27 AM
Size: 148 KB

The DevForce installation directory

It's a good idea to know where you installed DevForce. The default location is:

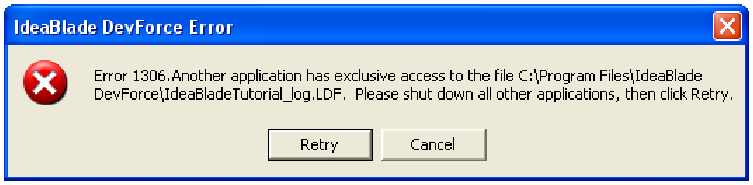
C:\Program Files\IdeaBlade DevForce

Un-install fails

Sometimes the uninstall process is blocked or fails.

Blocked by IdeaBladeTutorial database issue.

During uninstall you may see this message:



IdeaBlade DevForce Error

Error 1306.Another application has exclusive access to the file C:\Program Files\IdeaBlade DevForce\IdeaBladeTutorial_log.LDF. Please shut down all other applications, then click Retry.

You don't want to cancel because that terminates uninstallation. The work-around is mercifully easy.

- ⇨ Launch the SQL Server Management Console
- ⇨ Find the IdeaBladeTutorial database
- ⇨ Right-click and select "Tasks ►Take Offline" from the context menu.
- ⇨ Return to the "IdeaBlade DevForce Error" dialog and click [Retry].
- ⇨ After the uninstall completes, return the SQL Server Management Console
- ⇨ Right-click and select "Tasks ►Bring Online" from the context menu.

Fails altogether

At this writing our installer program provider is InstallShield. We hear reports that some versions of InstallShield fail to install properly. Worse, they make it impossible to un-install the product.

For example, versions of DevForce prior to 3.1.1.2 allowed you to install a new release without first uninstalling the prior release. InstallShield then bollixed your machine so you couldn't go forward, you couldn't go back, and you couldn't uninstall.

Microsoft provides a tool, the "Windows Installer Cleanup Utility" that will uninstall just about anything:

http://support.microsoft.com/?scid=kb;en-us;290301&spid=2525&sid=251

> Microsoft often shuffles their site so if this link fails, search the web for it under "Windows Installer Cleanup Utility".

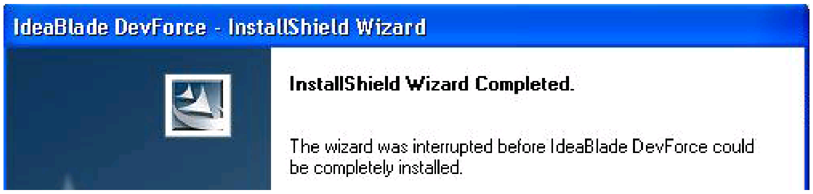
We have had good luck with it. Of course it leaves material behind.

After running this tool, if you are trying to clear your machine of DevForce altogether, you might try installing a fresh copy of DevForce and then un-installing it immediately afterwards; this should pick up most if not all of the detritus from earlier installs.

Wizard was Interrupted

If you get a message saying that the "wizard was interrupted", you probably have run into a Windows SP2 operating system security issue. To fix this problem, read the Macrovision Knowledge Base article at:

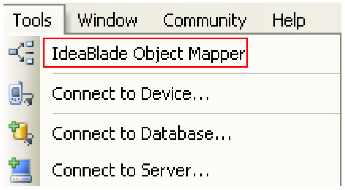
http://support.installshield.com/kb/view.asp?articleid=Q111303



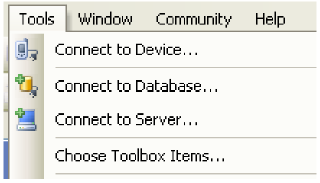
InstallShield Wizard Completed.

The wizard was interrupted before IdeaBlade DevForce could be completely installed.

Object Mapper install fails



Object Mapper present



Object Mapper missing

The Object Mapper should appear as the first choice in the Visual Studio Tools menu. If you don't see the Object Mapper, the following sections will show you how to put it there manually.

The Object Mapper will not install in Visual Studio Express. You will have to upgrade Visual Studio.

Manual Repair of the Missing Object Mapper

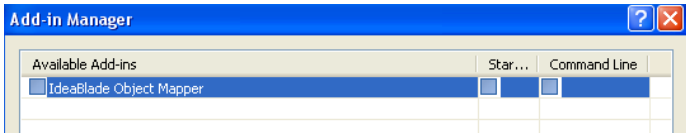
The usual cause of a missing Object Mapper is that Visual Studio has a pointer to a "bad" Object Mapper Add-in.

Check for "bad" Add-in

⇨ Launch Visual Studio

⇨ Select Tools ▶ Add-in Manager … from the menu.

Add-in Manager probably shows that the IdeaBlade Object Mapper is present as in the following:



If you don't see the Object Mapper listed, see the section entitled "No Object Mapper in Add-In Manager", below.

Visual Studio "remembers" the last time it tried to use this Add-in and it can't load what it remembers.

Copying a new version of the Object Mapper Add-in on top of the old copy won't work. Visual Studio won't try to load it again until we make it forget about this Add-in.

The trick is to

- Rename the `IdeaBlade.DevTools.Orm.AddIn` file temporarily,
- convince Visual Studio that it is gone,
- restore the Add-in file name, and
- cause Visual Studio to discover it anew.

The AddIns Directory

Visual Studio looks for an XML file in its "AddIns" directory.

That directory varies depending upon your edition of Visual Studio and how you installed it.

The preferred location is:

C:\Documents and Settings\All Users\Application Data\Microsoft\MSEnvShared\AddIns

> For the All Users location, you must have the Show Hidden Files and Folders option turned on to see the Application Data folder.

Alternatively, the directory may be in the user's directory space at

%HOMEPATH%\My Documents\Visual Studio 8\AddIns

> You can copy and paste this into Windows Explorer. Realize that this directory may not exist.

Jiggle the Object Mapper AddIn file

We can proceed now that we know where Visual Studio keeps its Add-in information.

⇨ Exit Visual Studio.

⇨ Navigate to the Visual Studio "AddIns" directory

⇨ Rename `IdeaBlade.DevTools.Orm.AddIn` to `IdeaBlade.DevTools.Orm.AddInXX`

⇨ Confirm for Windows that it is OK to change the file extension.

⇨ Launch Visual Studio.

⇨ Select Tools ► Add-in Manager … from the menu.

⇨ Verify that "IdeaBlade Object Mapper" is no longer listed.

> If you still see the Object Mapper listed, you won't be able to revive the Object Mapper. There is some other reference to it somewhere. Please contact Customer Support.

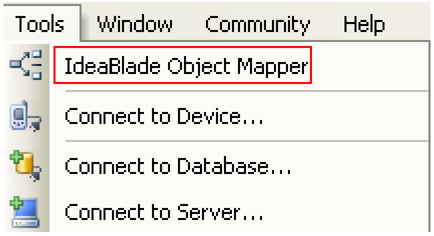
⇨ Exit Visual Studio.

⇨ Restore `IdeaBlade.DevTools.Orm.AddInX` back to `IdeaBlade.DevTools.Orm.AddIn`

That should do it. Now we verify that the Object Mapper is installed.

⇨ Launch Visual Studio again.

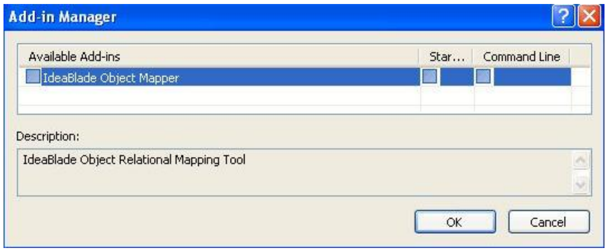
⇨ Look for "IdeaBlade Object Mapper" at the top of the Tools menu.



Still can't make it appear?

You've tried the Object Mapper Installer, you've jiggled the AddIn file, and it still won't appear in the Tools menu.

You can see the Object Mapper in the Add-in Manager; it just won't appear in the Tools menu.



Add-in Manager

Available Add-ins	Star...	Command Line
□ IdeaBlade Object Mapper	□	□

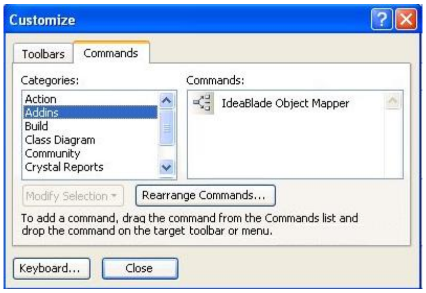
Description:

IdeaBlade Object Relational Mapping Tool

Perhaps you customized your installation of Visual Studio. Excluding VB or C# will cause this behavior.

Try the following:

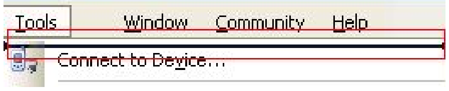
- ⇨ Open the Visual Studio Tools menu.
- ⇨ Select "Customize…".
- ⇨ Select “AddIns” on the Commands tab. You should see IdeaBlade Object Mapper in the Commands window.

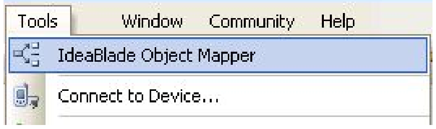


Customize

To add a command, drag the command from the Commands list and drop the command on the target toolbar or menu.

- ⇨ Select and drag the “IdeaBlade Object Mapper” onto the Tools Menu just above "Connect to Device.

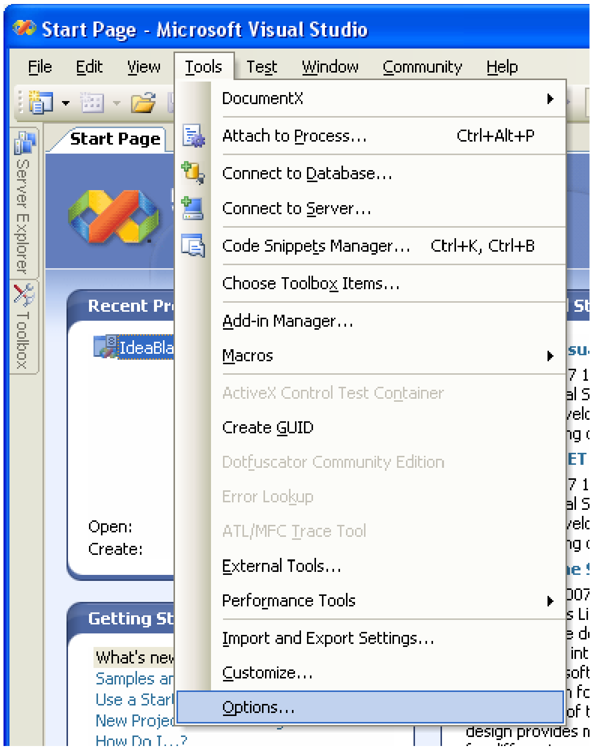




Before drop *After drop*

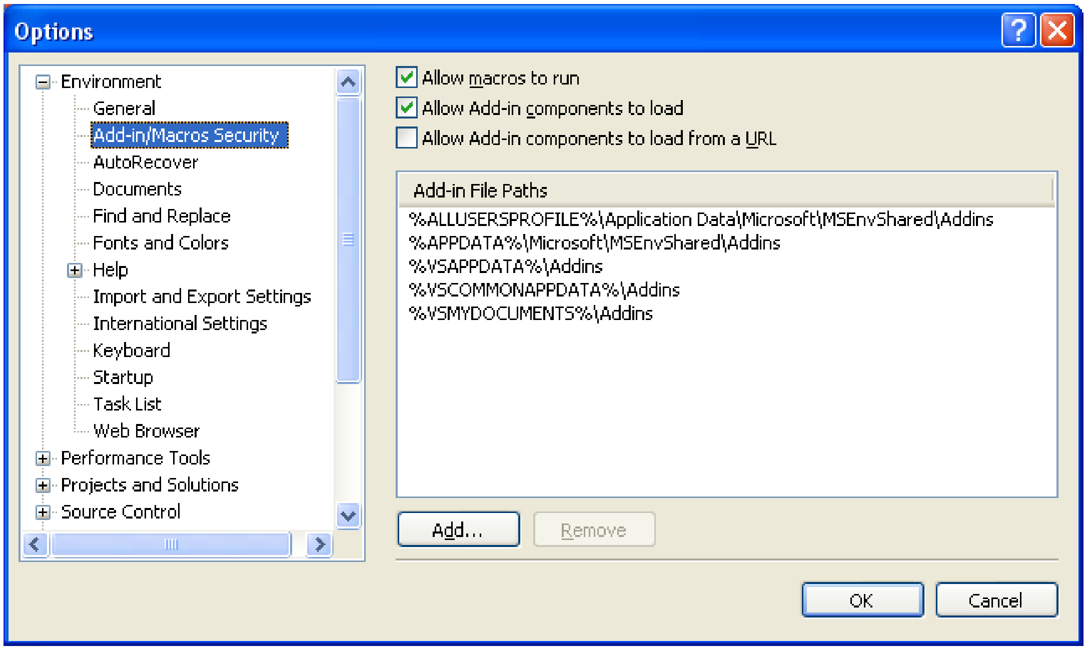
No Object Mapper in Add-In Manager

If the Add-In does not show up in the Add-In Manager, it could be that the Add-In path is missing from Visual Studio. To check this, open Visual Studio and select Tools, then Options:



The **Options** window shown below will open. Select Add-In/Macros Security as shown in the illustration.

Click on the Add button. Navigate to the location where the files IdeaBlade.DevTools.Orm.AddIn and IdeaBlade.DevTools.Orm.AddIn.dll are installed. Consult the section entitled “The AddInsDirectory”, above, for information on where these files are installed by default. Click OK to complete the operation.



☑ Allow macros to run
☑ Allow Add-in components to load
☐ Allow Add-in components to load from a URL

Add-in File Paths
%ALLUSERSPROFILE%\Application Data\Microsoft\MSEnvShared\Addins
%APPDATA%\Microsoft\MSEnvShared\Addins
%VSAPPDATA%\Addins
%VSCOMMONAPPDATA%\Addins
%VSMYDOCUMENTS%\Addins

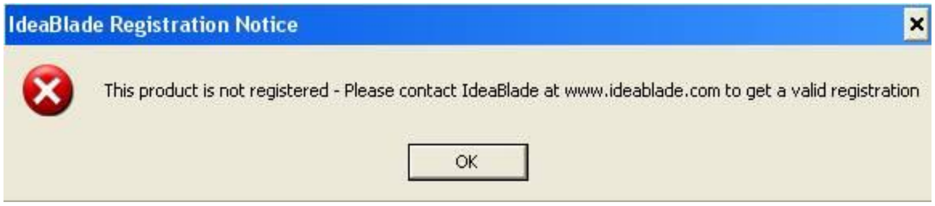
This situation may particularly apply to installations of the operating system or Visual Studio that are localized to languages other than English. It may also apply to certain installations on the Windows Vista operating system or to certain makes or models of laptop computers.

Consult this link on the DevForce Forums for more information:

http://www.ideablade.com/forum/forum_posts.asp?TID=25

"This product is not registered"

You know you put a valid registration key but you get the following error message when you launch the Object Mapper after a seemingly successful installation.


IdeaBlade Registration Notice

This product is not registered - Please contact IdeaBlade at www.ideablade.com to get a valid registration

This is a rare occurrence. Please contact Customer Support.

Toolbox Installer fails

If the installer fails you can add the toolbox content manually. First review the information on 3rd party assemblies and assembly binding redirection to ensure that both the installer and Visual Studio can find your assemblies.

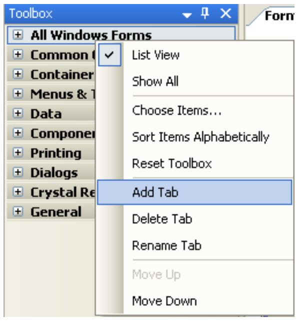
On Vista and Windows 7 operating systems the Toolbox Installer requires Administrator privileges.

To manually add Toolbox items:

⇨ Launch Visual Studio

⇨ Open the Toolbox in "Design View" as described in "Reviewing the Visual Studio Toolbox".

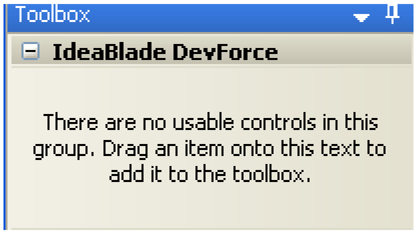
⇨ Right-click any Toolbox tab and select **Add Tab** from the context menu.



Visual Studio creates a new tab with a blank name.

⇨ Name the tab "IdeaBlade DevForce"

Note that the IdeaBlade DevForce tab has no usable controls.



There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

⇨ Right click the tab or tab header and select “Choose Items…” from the context menu

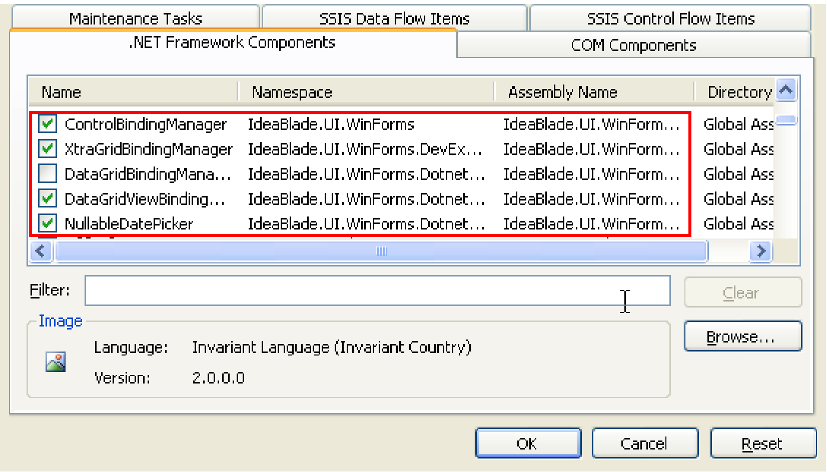
Eventually the “Choose Toolbox Items” dialog appears.

⇨ Select the “.Net Framework Components” tab if not already selected.

⇨ Click the “Namespace” column header to sort by Namespace.

⇨ Scroll to the IdeaBlade assemblies.

⇨ Check the checkboxes next to the components you want to add to the Toolbox.



Name	Namespace	Assembly Name	Directory
☑ ControlBindingManager	IdeaBlade.UI.WinForms	IdeaBlade.UI.WinForm…	Global Ass
☑ XtraGridBindingManager	IdeaBlade.UI.WinForms.DevEx…	IdeaBlade.UI.WinForm…	Global Ass
□ DataGridBindingMana…	IdeaBlade.UI.WinForms.Dotnet…	IdeaBlade.UI.WinForm…	Global Ass
☑ DataGridViewBinding…	IdeaBlade.UI.WinForms.Dotnet…	IdeaBlade.UI.WinForm…	Global Ass
☑ NullableDatePicker	IdeaBlade.UI.WinForms.Dotnet…	IdeaBlade.UI.WinForm…	Global Ass

Filter:

Image

Language: Invariant Language (Invariant Country)

Version: 2.0.0.0

⇨ Press [OK]

Arrange the items within the tab.

⇨ Drag the DevForce components into your favored positions on the IdeaBlade DevForce Tab.

If you installed them onto the wrong tab …

⇨ Drag the DevForce components from that wrong tab to the IdeaBlade DevForce Tab.

Assembly Reference is listed but VS can’t find it

This is a bizarre artifact of Visual Studio 2005 that only occurs for some projects after you’ve upgraded versions of software and / or upgraded Visual Studio or .NET itself.

We’ve seen it with `IdeaBlade.Util`. We’ve seen it with references to 3rd party assemblies (e.g., `nunit.framework`) as well.

We have not figured out why it happens but it is easy to address.

⇨ Remove the reference from your project.

⇨ Re-add the reference.

⇨ Re-build the project.

⇨ Remember to set “Specific Version” to “false”.

Manually Installing the Tutorial Database

If you have a flavor of MS SQL Server running on the system where you install DevForce, we attempt to install the IdeaBladeTutorial database automatically. The Database Installer tool typically succeeds when the initial overall DevForce install does not.

If the Database Installer fails, you might try installing the database manually as described here. By going through these steps, you may surface the condition that is blocking the installer tool.

> The Database Installer refreshes the connection strings in the Tutorials so that they work properly with your copy of the database.
>
> These manual installation instructions don’t do that so you may have to refresh them yourself. It’s easy. Just run the Database Installer again *after* you’ve attached manually. It will recognize that the database is attached and proceed to refresh the tutorials.

MS SQL Server 2000

You will find the MS SQL 2000 data and log files in The DevForce installation directory.

⇨ Copy the `IdeaBladeTutorial_Data.MDF` and `IdeaBladeTutorial_log.LDF` files to a folder on the system where the MS SQL Server is running. SQL Server 2000 database files typically reside in `C:\Program Files\Microsoft SQL Server\MSSQL\Data`.

⇨ Launch SQL Server Enterprise Manager

⇨ Navigate to the "Databases" limb on the menu tree

⇨ Right-mouse-click and pick "All tasks ... / Attach Database ..." from the context menu

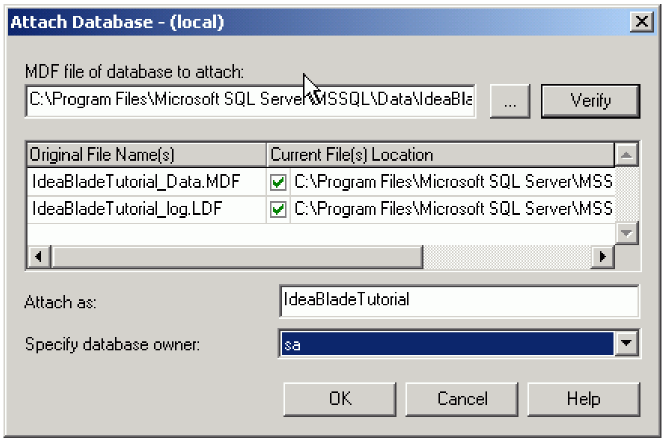
⇨ In the textbox labeled "MDF file of database to attach", enter the full path and the name of the database .MDF file; in our example that would be:

⇨ `C:\Program Files\Microsoft SQL Server\MSSQL\Data\IdeaBladeTutorial_Data.MDF`

> Tip: copy and paste this text from here directly into the textbox. The dialog should discover the companion log file.

⇨ Click the ellipsis button just to the right of the textbox, popping a browse window with this file highlighted; press OK.

SQL Server Enterprise Manager should look very much like this:



Attach Database - (local)

MDF file of database to attach: C:\Program Files\Microsoft SQL Server\MSSQL\Data\IdeaBla

Original File Name(s)	Current File(s) Location
IdeaBladeTutorial_Data.MDF	☑ C:\Program Files\Microsoft SQL Server\MSS
IdeaBladeTutorial_log.LDF	☑ C:\Program Files\Microsoft SQL Server\MSS

Attach as: IdeaBladeTutorial

Specify database owner: sa

⇨ Press OK and

You should see a confirming message box saying that the database is attached. You should also see the IdeaBladeTutorial database listed.

⇨ Explore it here in SQL Server Enterprise Manager to verify that all is in order.

MS SQL Server 2005

The SQL Server Manager for 2005 operates in much the same way although the UI has changed as have the key strokes. We assume you can follow along.

> SQL Server 2005 can attach a SQL 2000 database but it immediately converts it to 2005 format. There is no going back.

SQL Server Express (2005)

The DevForce Database Installer works just fine with SQL Server Express and can differentiate among multiple SQL Server instances.

Manual installation is a little tricky. Please contact Customer Support if you need to go this route.

MSDE

SQL Server 2000 and MSDE use the same two .MDF and .LDF database files. If you unzip the files into the MSDE database file directory and attach the database to the MSDE server you should be fine.

How do you attach? Microsoft doesn't ship MSDE with administration tools but 3rd parties offer them for as little as $19. Alternatively, you can attach by hand in Transact-SQL, using either the *sp_attach_db* or the *sp_attach_single_file_db* system-stored procedure. Consider the following (which works great in Query Analyzer for MS SQL Server and should do as well in MSDE after directory adjustments):

```
/* for safety; ignore failure message */
EXEC sp_detach_db @dbname = 'IdeaBladeTutorial'
EXEC sp_attach_single_file_db @dbname = 'IdeaBladeTutorial',
@physname=
  'c:\Program Files\Microsoft SQL Server\MSSQL\Data\IdeaBladeTutorial_Data.mdf'
```

For more information, begin with the Microsoft MSDN topic that covers MSDE database deployment.

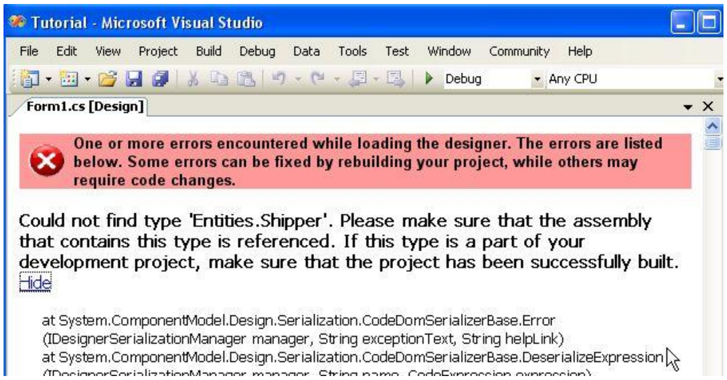
Not using SQL Server or MSDE?

If you use a database system that does not read MS SQL Server files or are having other problems, contact us at Customer Support and we'll try to come up with an alternative.

Please understand that the IdeaBladeTutorial database is offered "as is".

Form won't display in Design View

You open a Form or UserControl in Design View and, instead of a design canvas you see a frightening splash of red error messages such as this.



One or more errors encountered while loading the designer. The errors are listed below. Some errors can be fixed by rebuilding your project, while others may require code changes.

Could not find type 'Entities.Shipper'. Please make sure that the assembly that contains this type is referenced. If this type is a part of your development project, make sure that the project has been successfully built.

```
at System.ComponentModel.Design.Serialization.CodeDomSerializerBase.Error
(IDesignerSerializationManager manager, String exceptionText, String helpLink)
at System.ComponentModel.Design.Serialization.CodeDomSerializerBase.DeserializeExpression
(IDesignerSerializationManager manager, String name, CodeExpression expression)
```

There are many potential causes such as:

- You deleted your dependent assemblies.
- You lost the reference to a dependent assembly.
- You changed a dependent assembly, compiled it, and broke something.
- You tweaked the `*form*.Designer` class file and broke something.
- It used to work but you just installed a new version of DevForce.

You probably know what to do about most of these causes. We address that final case in the “Updating Existing Applications” chapter.

Assembly Binding Redirection Revisited

You may have multiple machine.config files and not know it!

A 64-bit OS will have at least two machine.config files: one in a “Framework” folder (such as c:\Windows\Microsoft.NET\Framework) and another in a “Framework64” folder (such as c:\Windows\Microsoft.NET\Framework64).

A machine having both .NET Framework 2 and .NET Framework 4 will also have at least two different machine.config files for the two versions of the CLR. These versions are indicated by sub-folders under the Framework folder(s).

On a 32-bit OS with both .NET 2 and .NET 4 installed, you’ll see a machine.config in the following:

C:\Windows\Microsoft.NET\Framework\v2.0.50727\CONFIG
C:\Windows\Microsoft.NET\Framework\v4.0.30319\Config

And on a 64-bit OS with both .NET 2 and .NET 4 you’ll actually find four machine.config files!

C:\Windows\Microsoft.NET\Framework\v2.0.50727\CONFIG
C:\Windows\Microsoft.NET\Framework\v4.0.30319\Config
C:\Windows\Microsoft.NET\Framework64\v2.0.50727\CONFIG
C:\Windows\Microsoft.NET\Framework64\v4.0.30319\Config

What does this mean for you? Quite a bit if you need to perform assembly binding redirection of 3rd party assemblies.

The DevForce tools, such as the Assembly Binding Redirector and the Toolbox Installer, are compiled for “AnyCpu” and target .NET 2. If run on a 64-bit OS these tools will run as 64-bit executables, and will update or use the corresponding “Framework64” v2. machine.config.

The Assembly Binding Redirector updates only one machine.config – the v2. version appropriate to the platform.

Visual Studio, however, always runs as a 32-bit executable. Visual Studio 2010 uses .NET 4. This means Visual Studio itself will use the machine.config in the "Framework" v4. folder! In order for redirected assemblies to show up in the Toolbox wizard, and for compilation to succeed, this machine.config must also contain the redirections.

Your own assemblies might target .NET 2 or .NET 4, and might be compiled for "AnyCpu" or either x86 or x64 platforms. These decisions all determine the machine.config actually used.

What this all means for you is that you need to be aware of the machine.config to be used, and will likely need the redirection in multiple files, possibly all of them. You can manually add the redirects needed: see the section on "Assembly Redirection for Client Applications" earlier in this document for step-by-step directions.

Note that at runtime your application can and should use its own app.config for redirection of 3rd party assemblies. This ensures that your deployment to client machines will not need to muck with system-related files.

Also note that Visual Studio has its own configuration file – devenv.exe.config. Placing redirects here will ensure that Visual Studio finds the correct assemblies and you won't need to scratch your head figuring out which machine.config it wants to use.

On Vista and Windows 7 operating systems the Assembly Binding Redirector requires Administrator privileges.

Performance

Slow performance inside Visual Studio

Many developers are astonished to discover that database applications that performed crisply in Visual Studio 2003 suddenly degrade to unacceptable speeds in Visual Studio 2005.

Applications involving database tables with BLOB columns (e.g., NTEXT) become especially painful.

The good news is that good performance returns when you run the application ***outside*** of the Visual Studio debugger.

✓ **Consider** trying your code outside of Visual Studio.

The Visual Studio debug configuration executable can usually be found in a "\bin" directory under the directory holding the application's "StartUp Project". Look there for the application with the ".exe" extension.

Run that executable and you should see a many-fold improvement.

Fortunately, ***your*** customers will run the executable, not inside Visual Studio.

Slow performance inside grid controls

You may discover that your application performs well when you load the grid with tens or hundreds of business objects. Suddenly the grid slows dramatically as you pour a thousand into it. Clicking on a column to sort causes a notable initial wait.

After that initial stall, the grid suddenly springs to life and you have no more trouble until you refill the grid with new objects.

This is not a problem with the grid or with DevForce. It means you are ready to learn about span queries and pre-caching, a topic covered in the Developers Guide.

> There is a known "issue" with all versions of the Infragistics grid for .NET 2.0 – they invoke all public properties of an object, whether or not those properties are bound to columns of the grid. Infragistics tech support says there is nothing to be done. The effect on performance can be serious and we have no ready automated solution at this time. Please contact Customer Support for work-arounds (none of them great). We are continuing our efforts to finesse the situation.

It appears the Developer Express .NET 2.0 grid has a similar problem.

Other Performance Concerns

We know good performance is critical to your application. DevForce performs extremely well even with fetches of large amounts of data.

In your pre-DevForce days you would have paid close attention to your hand-coded SQL or stored procedures when reading thousands of records. DevForce makes data retrieval so easy that we tend to forget it has to generate SQL too. When the data volume goes up, we need to pay attention to how DevForce is doing its job.

Fortunately there are many tuning options so you can cool down those performance hot-spots. We cover this topic thoroughly in the Developers Guide.

When the answer there doesn’t quite meet your needs, please contact Customer Support.