



**Release Bulletin**

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**PowerBuilder® 12.5.2**

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# Product Summary

This release bulletin provides late-breaking information about PowerBuilder® 12.5.2.

Sybase® PowerBuilder version 12.5.2 supports these operating systems:

- Microsoft Windows XP with Service Pack 3
- Microsoft Windows Vista Business Edition 32-bit and 64-bit with Service Pack 2
- Microsoft Windows 7 Professional 32-bit and 64-bit with Service Pack 1
- Microsoft Windows Server 2008 32-bit and 64-bit with Service Pack 2 (runtime only)

For information about accessibility, see *Accessibility Features* in this release bulletin.

## Product Summary

## Changed Functionality in This Version

There is one change in this release.

### *Web Forms Target Removed*

Web Forms targets are not included in this release of PowerBuilder.

Customers using Web Forms in PowerBuilder 12.5.1 or earlier should not install the 12.5.2 GA. The EBFs for 12.5.2 will include fixes for Web Forms as well as issues for other features.

## Changed Functionality in This Version



## Known Issues

Learn about known issues and workarounds.

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**Note:** You can search the Sybase Web site for solved cases. Choose **Support > Solved Cases** or go to <http://search.sybase.com/search/simple.do?mode=sc>. You need a MySybase account to view solved cases in the archive.

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### Known Issues for Databases

Learn about known database issues in PowerBuilder.

**Table 1. Database Issues**

CR#	Description
634719	<p><b>Informix database connections in PowerBuilder do not support Windows 64-bit systems except for Windows 2008 R2 64-bit systems.</b></p> <p>See the Informix Client SDK system requirements at <a href="https://www-304.ibm.com/support/docview.wss?uid=swg27016673">https://www-304.ibm.com/support/docview.wss?uid=swg27016673</a>. For Informix ADO.NET connections on Windows 2008 R2 64-bit system, you must install both the 32-bit and 64-bit database drivers from Informix.</p>

### Known Issues for the WPF Window and Menu Painters

Learn about known issues and apply workarounds for the WPF Window and Menu painters in PowerBuilder .NET.

**Table 2. WPF Window and Menu Painter Issues**

CR#	Description
698145	<p><b>Error occurs when previewing a window that includes a Visual Object with a namespace.</b></p> <p>The error reads: Illegal data type: xxx.u_xxx. Compile for preview returned = 3. Unable to preview.</p>
618528	<p><b>Menu items that use special symbols in their names cannot be deleted.</b></p> <p>In PowerBuilder .NET, you cannot delete menus that include symbols, such as "@," "#","\$," and so on, in their names.</p>

## Known Issues

CR#	Description
612182	<p><b>PowerBuilder .NET does not properly support the Properties window Events tab.</b></p> <p>Not all events are listed on this tab, and if you show an object's events in the Properties window, then double-click an event, or click in the drop-down list next to one of the listed events, an error message indicates the event handler is invalid.</p>

## Known Issues for the WPF DataWindow

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Learn about known issues and apply workarounds for the WPF DataWindow® in PowerBuilder .NET.

**Table 3. WPF DataWindow Issues**

CR#	Description
675761	<p><b>Select symbol display issue.</b></p> <p>In a .NET Assembly target's PrintDW at runtime, the select symbol does not appear for RadioButton or CheckBox controls.</p>
675595	<p><b>DW.Print to a physical printer does not work when print.filename is empty.</b></p> <p>If print.filename is empty in the .NET assembly runtime, DW.Print cannot print to a physical printer. It works in the WPF runtime.</p>

**Table 4. WPF RichText DataWindow Issues**

CR#	Description
621618	<p><b>Large files in a RichText DataWindow object degrade performance.</b></p> <p>When you save or open a RichText DataWindow object using a file of 400KB or greater, performance is slow.</p>
613487	<p><b>RichText column text is truncated incorrectly at page breaks.</b></p> <p>If a RichText column crosses two pages, the text is truncated incorrectly at the page break.</p>

## Known Issues for WPF Controls

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Learn about known issues and apply workarounds for WPF controls in PowerBuilder .NET.

**Table 5. WPF Control Issues**

CR#	Description
676279	<p><b>Build error when adding inherited SVO into a CVO .NET assembly.</b></p> <p>If you create a SVUO for CVUO .NET assembly, inherit the SVUO and add it into a CVUO, there is an error: Partial declarations of 'assembly.svuo_cmb_b' have conflicting accessibility modifiers.</p>
675923	<p><b>Adding a CVUO to a CVUO triggers the Constructor event twice in .NET Assembly targets at runtime.</b></p> <p>In .NET Assembly targets, if you add a CVUO to another CVUO, the Constructor event is triggered twice at runtime.</p>
675759	<p><b>Height and width of StaticText controls changes after migrating target.</b></p> <p>When you migrate a StaticText control from PowerBuilder .NET 12.1 to 12.5, the height and width properties change.</p>
663341	<p><b>GAC interferes with adding CVUO to Visual Studio toolbox.</b></p> <p>You can add the CVUO to the global assembly cache (GAC), but you cannot then add it to the Visual Studio toolbox. If the CVUO is not in the GAC, you can add it into the toolbox.</p>
572458	<p><b>Adding a tab page item causes design-time flickering.</b></p> <p>When you select the Add Tab context menu item on a Tab control at design time, you may see a slight flickering on the monitor.</p>
572400	<p><b>TabPage tabs can extend beyond a Tab control.</b></p> <p>If you add several tab pages to a Tab control, PowerBuilder automatically adds arrow buttons to allow users to click through all of the tabs, some of which are hidden. However, in PowerBuilder .NET, the arrow buttons can hide part of the text of a TabPage, giving it a cut-off appearance at design time and runtime. At design time, the outline of a tab page may appear outside the boundaries of the main Tab control.</p>

CR#	Description
570542	<p><b>TextCase property must be reset in some instances.</b></p> <p>If you add mixed-case text to a SingleLineEdit control while the TextCase property in the Properties view is set to Upper! or Lower!, the text does not automatically use the case indicated by the property.</p> <p><b>Workaround:</b> You can change the case by selecting a different value for the TextCase property, then reselecting the original value.</p>

## Known Issues for Third-Party and Custom Controls

Learn about known issues and apply workarounds for third-party and custom controls in PowerBuilder.

**Table 6. Third-Party Control Issues**

CR#	Description
673839	<p><b>Updatable columns listbox malfunctions when the list of columns is larger than what fits on one screen.</b></p> <p>For example, open the Update Properties dialog for the listbox. In the Updatable Columns listbox, select the ID column: this is now unselected and the columns are selected. Scroll down and then back up: more items are unselected.</p>
640523	<p><b>WPF Publish SmartClient application fails when third-party controls are included.</b></p> <p>If a WPF application includes third-party controls and the required reference assembly files are not in a build subfolder (. . \bin\Debug or . . \bin\Release), when you publish it as a SmartClient application, the publish does not copy related files to the publish folder (. . \bin\Debug\published or . . \bin\Release\published).</p> <p><b>Workaround:</b> Copy all required assembly files to the build subfolder (. . \bin\Debug or . . \bin\Release) according to the section &lt;ReferenceAssemblyFiles&gt; of the publish.xml (also in the build subfolder). The publish is then successful.</p>
635007	<p><b>XAML best practices for third-party controls.</b></p> <p>Define the third-party namespaces in the XAML root element before adding third-party controls. If you do not, an incorrect namespace is added inline and causes XAML namespace errors.</p>

CR#	Description
633431	<p><b>Sometimes a new Toolbox tab that you added will disappear.</b></p> <p>If you add a new tab to the Toolbox and then PowerBuilder .NET crashes, the new tab is not saved.</p>
626856	<p><b>Using third-party controls that refer to different versions of WPFToolkit.dll causes build error.</b></p> <p>The WPFToolkit.dll (version 3.5.40320.1), referenced by WPF applications in PowerBuilder .NET, is added automatically. If you use other third-party WPF controls that reference different versions of WPFToolkit.dll, you see the build error: The located assembly's manifest definition does not match the assembly reference.</p>
621554	<p><b>Double-clicking some third-party controls does not open the Script view.</b></p> <p>The Script view does not open automatically when you double-click some third-party controls, such as RadCalendar, in a Layout view. This issue also exists in Visual Studio.</p> <p><b>Workaround:</b> Open the Script view for the window or parent control and select the third-party control from the top left drop-down list.</p>

## Known Issues for WPF Inheritance

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Learn about known issues and apply workarounds for inheritance in PowerBuilder .NET.

**Table 7. WPF Inheritance Issues**

CR#	Description
697229	<p><b>You cannot switch to customized Constructor events in a CVUO's descendant.</b></p> <p>When you inherit from a custom nonvisual class in a referenced PB assembly, the nonvisual class has several customized Constructor events. In the descendants, you cannot select the Constructor from the event list and then switch to the +Constructor(...) event. If you continue to inherit from the descendant, the customized Constructor events are lost in the script painter's event list.</p>

CR#	Description
624278	<p><b>Deleting ancestor menu items can cause descendant menus to fail integrity check.</b></p> <p>When you delete a menu item in an ancestor menu, the Object Integrity Failure dialog box sometimes appears when you try to open the descendant menu, and the descendant menu may be blank if you subsequently open it in the Menu painter.</p> <p><b>Workaround:</b> Click <b>OK</b> in the Object Integrity Failure dialog box, then select <b>PowerScript Editor</b> in the Open With dialog box. The editor highlights the deleted menu item in source code with a straight red underline. If you comment out or delete all <b>Type ... End Type</b> and <b>On ... End On</b> clauses containing the underlined menu item, you can open the descendant menu again in the Menu painter.</p>

## Known Issues for .NET Language Enhancements

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Learn about known issues and apply workarounds for the .NET language enhancements in PowerBuilder.

**Table 8. .NET Language Enhancement Issues**

CR#	Description
649531	<p><b>You can connect a PowerBuilder event or function to a .NET event only if it was defined outside of PowerBuilder.</b></p> <p>.NET events are different from PB events: a .NET event is a delegate instance, while a PB event is a method that can be used as a handler of a .NET event. You can define a .NET event only outside of PowerBuilder. To learn which .NET events are in a third-party control or regular .NET class, check the metadata using .NET reflection tool or a related document.</p>
620924	<p><b>Deleting parameterized constructor does not remove inherited constructor in child object.</b></p> <p>If you extend a parameterized constructor by adding code to it in a child object, then delete the parameterized constructor in the parent object, the child object source code still contains a hidden system-generated script that calls the deleted parent constructor. This leads to a compile failure.</p>

## Known Issues for the WPF Runtime

Learn about known issues and apply workarounds in PowerBuilder .NET WPF applications at runtime.

**Table 9. WPF Runtime Issues**

CR#	Description
655873	<p><b>Embedded non-image file resources do not load.</b></p> <p>You cannot use file-based system functions to embed non-image external resources in PowerBuilder code for a WPF target.</p> <p>For example, if you change the build action of a text file from normal content to an embedded resource, the resource fails to load at runtime.</p>
655701	<p><b>External content resources for third-party controls do not load.</b></p> <p>External content resources for third-party controls (for example, the Microsoft WPF Image control) fail to load at runtime. Only embedded resources are loaded successfully at runtime.</p>
618158	<p><b>Dragging a toolbar does not trigger the ToolbarMoved event.</b></p> <p>In PowerBuilder .NET, the ToolbarMoved event is triggered for an SDI window only when you open the window.</p>
590157	<p><b>Culture settings issues in DatePicker and MonthCalendar controls.</b></p> <p>The masks for enabling single-digit values for the hour in 12-hour or 24-hour formats (h and H) do not work properly. In PowerBuilder .NET, they work the same as the hh and HH masks, and always present hour values with two digits.</p>
585399	<p><b>Application and assemblies cannot have identical names.</b></p> <p>A runtime error occurs when you use the same name for an assembly and the WPF application that references the assembly.</p> <p><b>Workaround:</b> In a WCF Client Proxy project, do not name the generated assembly with the name of the WPF application that hosts the project.</p>
582510	<p><b>Multiple-item selection in a ListView control.</b></p> <p>Multiple-item selection in a ListView control is enabled when the ExtendedSelection property is set to true. However, in WPF applications, users cannot use the mouse to lasso the items they want to select.</p> <p><b>Workaround:</b> In WPF applications, users must hold down the Shift key to select multiple items.</p>

## Known Issues for the WPF Debugger

Learn about known issues and apply workarounds for the WPF Debugger.

**Table 10. WPF Debugger Issues**

CR#	Description
676190	<p><b>The debugger does not display value tips for shared variables.</b></p> <p>For shared variables, expressions like this are evaluated:  <code>PBGlobalDefinitions_pbl2wpfdebug.GetInstance().w_main_6__s_ulong_7</code></p> <p>This is satisfactory for the watch window. But for tooltips, function calls are not accepted. Change <b>GetInstance</b> to a <b>GetProperty</b>.</p>
661095	<p><b>Breakpoints not found in objects of same name in different targets</b></p> <p>If there are two objects with the same name in different targets, and you attempt to go to a breakpoint in one of the objects, the debugger cannot open the correct source code and go to the correct breakpoint. This is a limitation of editing source code at the level of routines instead of as files.</p>
637697	<p><b>Array expressions in PowerBuilder .NET Debugger Watch view</b></p> <p>The PowerBuilder .NET Debugger Watch view cannot evaluate an expression that includes an array.</p>
620549	<p><b>Zero-based arrays not shown correctly in debugger.</b></p> <p>The debugger incorrectly displays zero-based object arrays used by some Web services.</p>
620068	<p><b>Go To Source Code works only for single target.</b></p> <p>In some debugger windows, you can select a breakpoint and use the <b>Go To Source Code</b> command to open the source code at that breakpoint. This command works incorrectly for a breakpoint in a PowerBuilder .NET workspace that has multiple PowerBuilder .NET targets.</p>
616269	<p><b>Incorrect CheckBox control properties in QuickWatch window.</b></p> <p>The QuickWatch window displays some CheckBox control properties incorrectly.</p>
614864	<p><b>Unwanted temporary variables in debugger output.</b></p> <p>Temporary variables that do not exist in the application code (for example, <code>__PB_TEMP_DB__OutputVars0</code>), may appear in some debugger windows.</p> <p><b>Workaround:</b> You can safely ignore these temporary variables.</p>



CR#	Description
610237	<p><b>Cursor stops twice for FOR...NEXT statements.</b></p> <p>If you set a breakpoint immediately prior to a <b>FOR...NEXT</b> statement, then issue successive Step Into commands, the WPF Debugger cursor stops twice at the line with the <b>FOR</b> clause.</p>

## Known Issues for the WCF Client Proxy

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Learn about known issues and apply workarounds for the WCF client proxy in PowerBuilder .NET.

**Table 11. WCF Client Proxy Issues**

CR#	Description
616323	<p><b>WCF client does not work with IssuedToken client credential in FDCC environment.</b></p> <p>The IssuedToken client credential uses SHA1Managed cryptography, which is not compliant with the Federal Information Processing Standard (FIPS) for cryptographic modules. This causes the WCF client communication request to fail from computers using the Federal Desktop Core Configuration (FDCC).</p>
590729	<p><b>Redeploying a project with the Window painter open.</b></p> <p>If you keep a WPF window open while redeploying a WCF Client Proxy project, a message on top of the Window painter prompts you to reload the designer.</p>

## Known Issues for the WCF Services

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Learn about known issues and apply workarounds for the WCF services in PowerBuilder .NET.

**Table 12. WCF Services Issues**

CR#	Description
697983	<p><b>Remote deployment fails when the remote server is running Windows 7.</b></p> <p>The error message reads: Could not find file "... \pbxxxx.tmp.txt."</p>

## Known Issues

CR#	Description
672164	<b>WCF service will not build if a parent NVO has non-public members.</b> If the function name is the same as the property name, there is an error Csc: Error CS0103 n_parent (17,11): The name 'pbp_p_protected_get' does not exist in the current context and the WCF service does not build.
667433	<b>WCF service attribute settings lost after opening a Beta project.</b> If you open a WCF service project that was created in a Beta build of PowerBuilder .NET, all attribute settings are lost. Reset the attributes.
663912	<b>WCF service fails to invoke a specific function.</b> A WCF service with an enum causes the error Underlying connection is closed.

## Known Issues for the FlowDirection Property

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Learn about known issues and apply workarounds for the FlowDirection property in PowerBuilder .NET.

**Table 13. FlowDirection Property Issues**

CR#	Description
590684	<b>Preview view does not display flow direction set in application.</b> When you preview a window in an application that has a right-to-left flow direction set on the Application object, but not on the window being previewed, the preview does not show the window with the right-to-left flow direction. For the preview to work correctly, you must also set the flow direction on the window you want to preview.

## Known Issues for Migration

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Learn about known issues and apply workarounds for the migration to PowerBuilder .NET.

**Table 14. Migration Issues**

CR#	Description
634087	<p><b>OLE controls can be migrated but not added or edited.</b></p> <p>You can migrate a PowerBuilder Classic application with OLE controls to a WPF application in PowerBuilder .NET. You cannot add or edit OLE controls in the migrated application. Editing controls in the XAML view may cause a full build error (for example, copying and pasting OLE controls in the XAML view).</p>
621806	<p><b>Blank area appears in MDI windows after migration.</b></p> <p>In PowerBuilder Classic, the toolbar for an MDI or MDIHelp window occupies an otherwise empty space in the client area of the window. In PowerBuilder .NET, the space occupied by the toolbar is not part of the client area, so when you migrate MDI windows, the space previously occupied by the toolbar appears blank.</p> <p><b>Workaround:</b> After migration, move the controls in MDI windows to cover the client area previously occupied by the toolbar.</p>

## Known Issues for Installation

Learn about known issues and apply workarounds for the PowerBuilder setup program.

**Table 15. Installation Issues**

CR#	Description
672300, 674208	<p><b>PowerBuilder 12.5 installation affects PowerBuilder 12.1 installation.</b></p> <p>After a PowerBuilder 12.5 installation, you cannot expand these PowerBuilder 12.1 system assemblies in 12.1 target references:</p> <pre>Sybase.PowerBuilder.WCF.dll Sybase.PowerBuilder.WPF.dll Sybase.PowerBuilder.WPF.Skins.dll</pre> <p>This issue prevents windows and visual user objects from opening in existing WPF targets. It does not cause build and runtime problems.</p> <p><b>Workaround:</b> Manually restore the assemblies:</p> <ol style="list-style-type: none"> <li>1. Open a .NET target.</li> <li>2. If you cannot expand any of the PowerBuilder 12.1 system assemblies in the reference list: <ol style="list-style-type: none"> <li>a. Remove the item from the list.</li> <li>b. Add the the corresponding assembly to the list from the PowerBuilder 12.1 installation (for example, C:\Program Files\Sybase\PowerBuilder 12.0\DotNET\bin).</li> </ol> </li> <li>3. Save the target.</li> </ol>
623693	<p><b>Local SySAM license may cause failure when server license is installed.</b></p> <p>If you install PowerBuilder using a local license on a SySAM license server, the setup program may fail.</p> <p><b>Workaround:</b> Install PowerBuilder on the license server with an evaluation license, then update the license from the Tools menu of a PowerBuilder IDE.</p>
607351	<p><b>Error message appears during SQL Anywhere® installation.</b></p> <p>On the last step of the SQL Anywhere installer in the PowerBuilder setup program, you may see: Invalid license data. Reinstall is required.</p> <p><b>Workaround:</b> Click <b>OK</b> to dismiss the dialog box. The SQL Anywhere installation completes normally.</p>

## Known Issues for Split Assemblies

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Learn about known issues and apply workarounds for split assemblies in PowerBuilder .NET.

**Table 16. Split Assembly Issues**

CR#	Description
657114	<p><b>Running the full build process after making changes in the scripts does not automatically trigger the dependency check.</b></p> <p>There may be build errors if there are potential dependency errors.</p> <p><b>Workaround:</b> Run a manual dependency check if the changes might affect the dependency result.</p>
647772	<p><b>Split assembly dependency check error for global external functions.</b></p> <p>When you run a dependency check on a project with split assemblies, there is a dependency error on the lines calling global external functions. To avoid this, refactor by replacing the global external functions with local external functions.</p>
644570	<p><b>The executable is not created if a PBL contains an application object going into a split assembly.</b></p> <p>The output assembly has a red border and tooltip indication if there is a duplicated name (assembly and executable). Also, the name is ignored when it is saved.</p> <p>If the PBL has the same name as the executable file, then by default the DLL is filtered out of the Output Assembly list.</p>

## Known Issues for Miscellaneous Items

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Learn about known issues and apply workarounds for miscellaneous items in PowerBuilder.

**Table 17. Miscellaneous Issues in PowerBuilder**

CR#	Description
676276	<p><b>Changing screen resolution affects appearance at runtime.</b></p> <p>If you change the screen resolution, there are differences between the appearance at design time and runtime.</p>
675440	<p><b>Pressing Shift + F1 in Script painter does not open content directly.</b></p> <p>Sybase cannot replicate the behavior of Windows Help using HTML Help. Windows Help has been deprecated by Microsoft.</p>

CR#	Description
674639	<p><b>Shortcut key for Assembly Dependencies window changed.</b></p> <p>In PB12.1 .NET IDE, the keyboard shortcut to open the Assembly Dependencies window (<b>Ctrl+Alt+A</b> in the earlier version) has been changed to <b>Ctrl+Alt+D</b>.</p>
674143	<p><b>3-D property does not affect Checkbox control in Windows XP.</b></p> <p>In the Windows XP theme, the 3-D property does not affect the appearance of the Checkbox control. It always appears as 3-D.</p>
673442	<p><b>Uninstalling .NET assembly case shows non-English interface.</b></p> <p>If you uninstall a .NET assembly case, you see a non-English interface (such as the German language).</p>
672005	<p><b>Inherited public .NET properties are not exposed to a .NET assembly.</b></p> <p>The public properties of an NVO inherited from a .NET class are not exposed in a .NET assembly.</p>
670814	<p><b>.NET assembly's Array property has issues in the deployed DLL.</b></p> <p>The Array property is not exposed in a deployed DLL, nor is an array's instance variable that is named "names." Other instance variables are exposed.</p>
654850	<p><b>Temporary class members appear in .NET Assembly target project's Object tab.</b></p> <p>If you create a class member but do not save it, then open the project, that new class member is listed in the Object tab.</p>
634891	<p><b>You cannot toggle InputFieldNamesVisible after using PasteRTF.</b></p>
626344	<p><b>Inconsistent save behavior.</b></p> <p>In Windows 7, PowerBuilder .NET behavior is inconsistent when saving objects, depending on the type of object and the type of Windows user. For example, PowerBuilder might clear the layout view after an administrator saves a window painter, but not if a regular user launches the IDE using <b>Run As Administrator</b>.</p>
623684	<p><b>Error creating project with standard user login.</b></p> <p>If the current user does not have write permission for the directory assigned to the TMP environment variable, an error message appears in the Output window after the user attempts to create a project with a target or project wizard.</p> <p><b>Workaround:</b> Set the TMP variable to a directory for which the current user has write permission.</p>

CR#	Description
617268	<p><b>GetLatestVersion does not get all files added to Perforce by another user.</b></p> <p>If two users add the same solution from a Perforce 2008 depot, then the first user checks in a new object for the solution, the second user can select <b>Get Latest User (Recursive)</b> to add the new object. However, although the new object is visible in the Solution Explorer of the second user, it is not added to that user's PBL directory.</p> <p><b>Workaround:</b> The second user must close and reopen the solution to complete the GetLatestUser action and get all the updates.</p>
616577	<p><b>Double-clicking resource items on FDCC-certified XP computers.</b></p> <p>Although double-clicking a resource item in the Solution Explorer should open the editor associated with the item's file type, on FDCC-configured Windows XP computers, the Move dialog box opens instead. This does not occur on non-FDCC computers or on FDCC-configured computers using the Windows Vista operating system.</p> <p><b>Workaround:</b> To enable the correct editor to open:</p> <ol style="list-style-type: none"> <li>1. In the Solution Explorer, right-click the resource item.</li> <li>2. Select <b>Add</b> to open the Add Program dialog box.</li> <li>3. Browse to the program you want to use to open files of the type you right-clicked in step 1.</li> <li>4. If necessary, change the Friendly Name of the program you selected in step 3 and click <b>OK</b>.</li> <li>5. In the Open With dialog box, select the friendly name from step 4, click <b>Set as Default</b>, then click <b>OK</b>.</li> <li>6. Repeat this process for all other types of resource items you want to open from the Solution Explorer.</li> </ol>
572522	<p><b>Problem Starting SySAM License Server</b></p> <p>If your Windows license server host has IPv6 enabled, the served license does not perform correctly. See <i>PowerBuilder Installation Guide &gt; Planning Your Installation &gt; Obtaining a License &gt; SySAM Troubleshooting &gt; Problem Starting SySAM License Server</i>.</p>
569483	<p><b>New targets in root path of the c: drive are not visible.</b></p> <p>In PowerBuilder .NET, if you create a workspace in the root path of the c: drive, then create a target in the root path, the target does not appear in the Solution Explorer.</p>

## Known Issues



# Product Compatibilities

PowerBuilder has been tested for compatibility with a number of software products.

**Table 18. Software Products Tested with PowerBuilder**

Software Type or Product	Compatibility Description
Application servers	PowerBuilder Classic has been tested with EAServer 6.3.1.
SQL Anywhere	PowerBuilder 12.5.1 has been tested with SQL Anywhere 12.0.1.
PowerDesigner	PowerBuilder 12.5.1 has been tested with PowerDesigner® 15.3 ESD #9.
Microsoft .NET Framework	PowerBuilder .NET and PowerBuilder Classic are compatible with Microsoft .NET Framework 4.0 and later.
Java	PowerBuilder Classic is compatible with JDK 1.5 and 1.6.
Ghostscript	The DataWindow Save As PDF feature has been tested with AFPL Ghostscript version 8.60.

## Product Compatibilities

# Third-Party Components and Deployment

PowerBuilder applications have some dependencies on third-party components that are installed with PowerBuilder.

Most of these components are not installed with the PowerBuilder Runtime Packager. You may redistribute some of these components with your application, but others must be obtained from the vendor.

For information about components that you can download freely, see the free download terms document, available from the `Support` directory on the DVD and on the Sybase Web site at [http://www.sybase.com/softwarelicenses/third\\_party\\_legal](http://www.sybase.com/softwarelicenses/third_party_legal).

## Apache Files

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You may redistribute the Apache files that are included with PowerBuilder to your users.

Any use or distribution of the Apache code included with PowerBuilder 12.5 must comply with the terms of the Apache License, which is located in the free download terms document for PowerBuilder.

Version 0.20.5 of the Apache Formatting Objects Processor (FOP) is required if your application uses XSL-FO to save files as PDF. See the Apache FOP Web site at <http://xmlgraphics.apache.org/fop/>.

The Apache Xerces files `xerces-c_2_6.dll` and `xerces-depdom_2_6.dll` are required for XML Web DataWindow support, XML support for DataWindows and DataStores, PBDOM, and SOAP clients for Web services. See the Xerces C++ Parser Web site at <http://xml.apache.org/xerces-c/>.

## Microsoft Files

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Special Microsoft files are required on runtime computers for various PowerBuilder features.

### *Visual C++ Runtime and the Active Template Library*

When you deploy the core PowerBuilder runtime files, make sure the `msvcr71.dll` and `msvcp71.dll` Microsoft Visual C++ runtime libraries and the Microsoft .NET Active Template Library (ATL) module, `atl71.dll`, are present on the user's computer or server.

The PowerBuilder runtime files have a runtime dependency on these files and they are required for all applications and components that require the PowerBuilder runtime. You can obtain these files from DLL archive Web sites at <http://dlldump.com> or <http://driverskit.com/>.

---

**Note:** Some files that are installed by the MSI file generated by the PowerBuilder Runtime Packager have dependencies on these files. For example, `at171.dll` must be installed on the user's computer before the `pbjvmversion.dll` file can be registered. Make sure these files are on the target computer before you run the MSI file generated by the Runtime Packager.

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### *Ink Picture Libraries*

`Microsoft.Ink`, `Microsoft.Ink.dll`, and `Microsoft.Resources.dll` are required if your application uses InkEdit and InkPicture controls. These files are part of the Microsoft Windows XP Tablet PC Edition Software Development Kit 1.7 that is available on the Microsoft Web site at <http://www.microsoft.com/downloads/details.aspx?FamilyId=B46D4B83-A821-40BC-AA85-C9EE3D6E9699&displaylang=en>.

Microsoft has discovered some compatibility issues between these DLLs and the .NET Framework 2.0. You can obtain an update that addresses these issues from the Microsoft Web site at <http://www.microsoft.com/downloads/details.aspx?familyid=84BBEFA4-7047-41DF-8583-E3BDBF9D805F&displaylang=en>.

### *DirectX 9.0c Runtime*

PowerBuilder applications can use DirectX 3D rendering to display 3D graphs (Pie3D, Bar3D, Column3D, Line3D, and Area3D) with a more sophisticated look. You can use data item or series transparency with the DirectX graph styles to improve the presentation of data.

The DirectX 3D rendering depends on the DirectX 9.0c runtime. The first time you select the Render3D check box on the General tab of the Properties view for a 3D graph, PowerBuilder launches the DirectX installer. If you opt out of the installation, the Render3D property is ignored. End users of PowerBuilder applications must also have the DirectX 9.0c runtime installed on their computers to view the DirectX graph styles. You can download the DirectX 9.0c runtime from the Microsoft Web site at <http://www.microsoft.com/downloads/details.aspx?FamilyID=2da43d38-db71-4c1b-bc6a-9b6652cd92a3&DisplayLang=en>.

For computers with older graphics drivers, you can check whether DirectX is supported by running `dxdiag.exe`. This file is typically installed in the `Windows\System32` directory. The Display tab of the DirectX Diagnostic Tool that opens when you run `dxdiag.exe` indicates whether Direct3D is enabled.

## Oracle (Sun Microsystems) Files

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The Java Runtime Environment (JRE) is required for EJB clients, JDBC connections, and saving objects and documents to PDF files using XSL-FO.

For a copy of third-party terms and conditions for the JRE, see the free download terms document. You can download the JRE from the Sun Developer Network at <http://java.sun.com/javase/downloads/index.jsp>.

## Software Used for SOAP Clients for Web Services

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PowerBuilder Classic applications can use EasySoap to connect to Web services. The EasySoap++ library in executable form (`EasySoap125.dll`), which is dynamically linked to `PBSoapClient125.pbx`, is distributed with PowerBuilder.

The EasySoap++ library and its use are covered by the GNU Lesser General Public License (LGPL). For a copy of this license, see the free download terms document.

You may distribute the EasySoap++ library to third parties, subject to the terms and conditions of the LGPL.

The complete machine-readable source code for the EasySoap++ library is in the `EasySoap.zip` file in the `Support\WSExtn` folder on the DVD. In addition, the object code and Microsoft Visual C++ project file for the `PBSoapClient125.pbx` are in the `soapclient.zip` file in the same directory.

These files are provided under the terms of the LGPL so you can modify the EasySoap++ library and then relink to produce a modified `EasySoap125.dll`. You can also relink `PBSoapClient125.pbx` with the modified EasySoap++ import library. According to the terms of the LGPL, you may not be able to recompile `PBSoapClient125.pbx` to use the definitions you have modified in the EasySoap++ library.

Follow the instructions in the `Readme.txt` file in the `soapclient.zip` file to build `PBSoapClient125.pbx`.



# Documentation Updates and Clarifications

Read about corrections and clarifications to released documentation for PowerBuilder 12.5.2.

**Table 19. PowerBuilder Documentation Issues**

CR#	Description
745295	<p><b>SaveAsType XLSX! and XLSB! requires .NET Framework 4.0</b></p> <p>To save as a Microsoft Excel 2007 format for XML or binary data, you must have .NET Framework 4.0 or later installed.</p> <p>Applies to <i>DataWindow Reference</i> &gt; <i>DataWindow Constants</i> &gt; <i>SaveAsType</i>.</p>
741783	<p><b>Use Selected.Mouse object property in conjunction with Protect object property</b></p> <p>This note should be added to the <i>Usage</i> section of the DataWindow object property topic <i>Selected.Mouse</i> in the <i>DataWindow Reference</i>:</p> <hr/> <p><b>Note:</b> If a column is protected and <code>dw_control.Object.Selected.Mouse = "No"</code>, then you cannot select a column. You can still select the column header, however, which will highlight the entire column. You should set <code>Selected.Mouse</code> to "No", <code>Protect</code> to 1, and <code>Grid.ColumnMove</code> to "No".</p> <hr/> <p>Users should also refer to the <i>Protect</i> and <i>Grid.ColumnMove</i> object property topics in the <i>DataWindow Reference</i>.</p>
736338	<p><b>Update to ORCA appendix in Users Guide</b></p> <p>On the first page of Appendix B: The OrcaScript Language in the PowerBuilder Users Guide, it states that the full ORCA tool kit is available to Sybase partners only, but this is not the case. The files ship with the product:</p> <ul style="list-style-type: none"> <li>• The Orca header file, lib file, and documentation (<code>orca125.pdf</code>) are in <code>..\Sybase\PowerBuilder 12.5\SDK\ORCA</code> directory.</li> <li>• <code>PBORC125.dll</code> is in the <code>..\Shared\PowerBuilder</code> directory.</li> </ul>
731412	<p><b>Support for 32-bit Outlook and simple MAPI only</b></p> <p>At this time only 32-bit Outlook is supported, and the simple messaging application program interface (MAPI). PowerBuilder does not support 64-bit Outlook.</p>

CR#	Description
730975	<p><b>Outdated information about help files on Vista</b></p> <p>Disregard the section in the InfoMaker <i>Users Guide</i> &gt; <i>InfoMaker Environment</i> &gt; <i>Working with InfoMaker</i> &gt; <i>Windows help files on Vista</i>. PowerBuilder and InfoMaker no longer ship with WinHelp.</p>
728727	<p><b>Selecting Windows Classic Style removes the manifest file</b></p> <p><b>Corrected Text:</b> When you select the Windows Classic Style check box in the application project, the application appears with the standard controls.</p> <p>This correction applies to PowerBuilder <i>Users Guide</i> &gt; <i>Running Your Application</i> &gt; <i>Creating Executables and Components</i> &gt; <i>Defining an executable application project</i>.</p>
727830	<p><b>Overflow of real, double, and decimal values does not cause runtime errors</b></p> <p>In the <i>PowerScript Reference</i> topic <i>Arithmetic operators in PowerBuilder</i>, the <i>Errors and overflows</i> section states that "Overflow of real, double, and decimal values causes errors at runtime" but they do not. You can overflow real, double, and decimal values.</p>
720479	<p><b>Corrections to database drivers and supporting files for SQL Anywhere</b></p> <p>There are some corrections to the file names for SQL Anywhere in the <i>Application Techniques</i> topic <i>ODBC Database Drivers and Supporting Files</i>.</p> <ul style="list-style-type: none"> <li>• Remove <code>rteng11.exe</code> and <code>rteng11.lic</code> from Table 36-9: SQL Anywhere Files.</li> <li>• Change "...the SQL Anywhere restricted runtime engine (<code>rteng11.exe</code>) and other SQL Anywhere executables require elevated privileges" to "...the SQL Anywhere executables require elevated privileges."</li> <li>• Update <code>"Start"="c:\program files\sybase\SQL Anywhere 12\bin32\rteng11.exe -c9m"</code> to <code>"Start"="c:\program files\sybase\SQL Anywhere 12\bin32\dbeng12.exe -c9m"</code> in the code example for configuring ODBC data sources and drivers.</li> </ul>
720138, 621820	<p><b>New SoapConnection functions</b></p> <p>There are two new functions in the SoapConnection class. See <i>Enable-PreAuthentication</i> on page 31 and <i>SetKeepAlive</i> on page 32. This affects the <i>Extension Reference</i>.</p>



CR#	Description
None	<p><b>SoapConnection methods</b></p> <p><b>Corrected Text:</b> In the <i>Extension Reference</i>, these methods are for .NET Web services engines only: AddToBypassList, DynamicCast, RemoveBypassList, SetBypassProxyOnLocal, SetClientCertificateFile, SetUseDefaultProxySetting, and UseIntegratedWindowsAuthentication. These methods are for EasySoap Web services engines only: SetSoapLogFile and UseConnectionCache.</p>
718173	<p><b>Correction to syntax for Transparency (DataWindow objects)</b></p> <p>This applies to the <i>DataWindow Reference</i> and the <i>InfoMaker Users Guide</i>.</p> <p><b>Corrected Text:</b></p> <p>PowerBuilder dot notation: <code>dw_control.Object.DataWindow.transparency</code></p> <p>Describe and Modify argument: <code>"DataWindow.transparency { = integer }"</code></p>
715058	<p><b>GetFileOpenName function behavior differences between operating systems</b></p> <p>The <code>initdir</code> parameter in <b>GetFileOpenName</b> function uses some different algorithms in Windows 2000/XP/Vista from Windows 7, which are described in detail in <i>Initdir Parameter Behavior in GetFileOpenName Function</i> on page 33.</p>
712849	<p><b>Find Function Enhancement</b></p> <p>The Find function now has a buffer argument. You can use the new buffer argument to find data in the Delete! or Filter! buffers. The default value is Primary! The argument is optional.</p> <pre>long dwcontrol.Find (string expression, long start, long end{, DWbuffer buffer})</pre> <p>This was documented in the 12.1 Release Bulletin, but not added to the core documentation. It should be included in 12.5 and later.</p>
705028	<p><b>Providing support for NULL values in EAServer Components</b></p> <p><b>Corrected text:</b> Proxy objects do not include the suffix "_N" in the function name. In <i>Application Techniques, Defining the component interface</i>, the paragraph that begins "If you allow null values in the prototype for a component method, PowerBuilder appends a "_N" suffix to the method name" should be removed entirely.</p>

CR#	Description
701504	<p><b>Create white list of Web sites for Web Forms applications</b></p> <p>You can set PBAAllowDownloadUrls in the Project Painter. It is a white list of Web sites, separated by semicolons. By setting this list, PowerBuilder accepts only the URLs of the sites in this list, which allows you to provide added security to your application. The list is not case sensitive. Include "http:\\" or "https:\\" in the URLs.</p>
699475	<p>In <i>Connecting to Your Database &gt; Chapter 9: Using Microsoft SQL Server &gt; SQL Server 2008 features &gt; Support for new datatypes in SQL Server 2008</i>, the first sentence of the Precisions Settings paragraph should read: "PowerBuilder includes a column labeled "Dec" in the Columns view of the Database painter..."</p>
692447	<p><b>Incorrect datatype mappings for PowerBuilder .NET</b></p> <p><b>Corrected text:</b> PowerBuilder Date and Time variables need to be converted to DateTime when calling a C# assembly. You can call PowerBuilder assemblies with the Date and Time variables and perform the conversion within the assemblies. See <i>PowerBuilder .NET Datatype Mapping</i> on page 33.</p>
677259	<p>Windows Forms and Web Forms require two DLLs, in addition to DLLs currently listed: msucr100.dll and msucp100.dll. The documentation was updated in the <i>PowerBuilder .NET Features Guide and Deploying Applications to .NET</i>; however, it has not been updated in <i>Application Techniques</i>.</p> <p>In <i>Application Techniques</i>, everywhere that msucr71.dll and msucp71.dll are listed, add msucr100.dll and msucp100.dll to the required DLLs.</p>
668659	<p><b>Debugger Changes</b></p> <p><b>New text:</b> Only a debug version can be debugged; the release version cannot be debugged. If a debug version does not exist, the debugger fails. This is not related to the build type set in the Project painter.</p>
639448	<p><b>Unsupported Properties, Events, and Functions</b></p> <p><b>New text:</b> You cannot use the Border property for custom controls. If multiple objects are selected including the custom control, you can set the Border property for the objects that do support the Border property. The setting is ignored for the objects that do not support that property.</p>
638096	<p><b>Oracle8i native interface is not available in PB 11.5 and later</b></p> <p><b>Corrected text:</b> Table 1-4 in <i>Checklist for deployment in Deploying Applications and Components to .NET</i> includes pbo84125.dll but support for the Oracle8i native interface has been discontinued as of PowerBuilder 11.5. The pbo84125.dll should be removed from the table.</p>

CR#	Description
635140	<p><b>Unsupported Properties, Events, and Functions</b></p> <p><b>Updated text:</b> In PowerBuilder 12.1, the DisplayOnly property for Rich-TextEdit is supported.</p>
624234	<p><b>Application Server Plug-in</b></p> <p><b>Corrected text:</b> <i>Application Techniques</i> and the <i>Users Guide</i> include information about the Application Server plug-in, but support for this plug-in has been discontinued as of PowerBuilder 12.0.</p>
624126	<p><b>ToolBarAlignment window property</b></p> <p><b>New text:</b> The <i>Features Guide</i> does not list Floating! as an unsupported enumerated value for the ToolBarAlignment property. In migrated applications that retain this value, toolbars align at the top of a window.</p>
605201	<p><b>Behavior Changes for DataWindow Objects</b></p> <p><b>New text:</b> PrintPage behavior: In PowerBuilder Classic, when the return code is set to 1, the page is not printed. In PowerBuilder .NET, when the return code is set to 1, the page prints.</p>

## EnablePreAuthentication

---

Call this function to pre-authenticate the request. This function applies only to webservice that use basic authentication mechanism. This method is available for .NET Web services engine only.

### Syntax

*conn*.EnablePreAuthentication()

Argument	Description
<i>conn</i>	The name of the SoapConnection object that establishes the connection.

### Returns

Long. Valid values are 0 for success and 50 for failure.

### Usage

For basic authentication, a request is made to the XML Web service method without initially attempting to authenticate the user.

- If the XML Web service allows anonymous access, then the XML Web service method executes.
- If anonymous access is disallowed, a 401 HTTP return code is sent to the client.

In response, the proxy class returns the authentication credentials to the Web server. If the client is authenticated and subsequently authorized to access the XML Web service, the XML Web service method is executed; otherwise the client is denied access.

To summarize, any call to a Web service's method generates at least one 401 error for basic authentication. This behavior does not work with some older versions of the Apache HTTP server, however, and sends a 500 response if a client does not include credentials on the very first request to the server. This behavior violates the guidance from RFCs 2616 and 2617, which suggests that a server should respond with a 401 to a request that has no Authorization header.

To call Web Services located in older Apache servers, or to decrease the roundtrips to the server which you have trusted in advance, call the **EnablePreAuthentication** function of **SoapConnection** before you create the proxy object. When calling this function, the WWW-authenticate header is sent with the first request for basic authentication.

## SetKeepAlive

---

Indicates whether to make a persistent connection to the Internet resource. This method is available for .NET Web services engine only.

### Syntax

*conn*.SetKeepAlive (boolean *value*)

Argument	Description
<i>conn</i>	The name of the SoapConnection object that establishes the connection.
<i>value</i>	A boolean value that, when true, indicates that the request to the Internet resource contains a Connection HTTP header with the value Keep-alive. The default is true.

### Results

Long. Valid values are 0 for success and 50 for failure.

### Usage

Use SetKeepAlive (true) to send a Connection HTTP header with the value Keep-Alive, which indicates a preference for persistent connections. When calling SetKeepAlive (true), the application makes persistent connections to the servers that support them.

When using HTTP/1.1, Keep-Alive is on by default. SetKeepAlive (false) may send a Connection: Close header to the server.

If you get the error message "The underlying connection was closed: A connection that was expected to be kept alive was closed by the server" when you call the Web service, you can attempt to call `SetKeepAlive(false)` before you create the proxy object.

## **Initdir Parameter Behavior in GetFileOpenName Function**

---

The `initdir` parameter in `GetFileOpenName` function uses some different algorithms in Windows 2000/XP/Vista from Windows 7.

Windows 2000/Windows XP/Windows Vista:

1. If filename contains a path, that path is the initial directory.
2. Otherwise, **`initdir`** specifies the initial directory.
3. If the application has used an Open or Save As dialog box in the past, the path most recently used is selected as the initial directory. However, if an application is not run for a long time, its saved path is discarded.
4. If **`initdir`** is NULL and the current directory contains any files of the specified filter types, the initial directory is the current directory.
5. Otherwise, the initial directory is the personal files directory of the current user.
6. If no other conditions are met, the initial directory is the Desktop folder.

Windows 7:

1. If **`initdir`** has the same value that was selected in the first instance of the application's Open or Save As dialog box, then it uses the path the user selected most recently as the initial directory.
2. If filename contains a path, that path is the initial directory.
3. If **`initdir`** is not NULL, it specifies the initial directory.
4. If **`initdir`** is NULL and the current directory contains any files of the specified filter types, the initial directory is the current directory.
5. Otherwise, the initial directory is the personal files directory of the current user.
6. If no other conditions are met, the initial directory is the Desktop folder.

## **PowerBuilder .NET Datatype Mapping**

---

The PowerBuilder to .NET compiler converts PowerBuilder datatypes to .NET datatypes.

<b>PowerBuilder</b>	<b>C#</b>
boolean	bool
boolean[]	bool[]
blob	byte[]

## Documentation Updates and Clarifications

PowerBuilder	C#
blob[]	byte[][]
byte	byte
byte[]	byte[]
int	short
int[]	short[]
uint	ushort
uint[]	ushort[]
long	int
long[]	int[]
ulong	uint
ulong[]	uint[]
longlong	long
longlong[]	long[]
decimal	decimal
decimal[]	decimal[]
real	float
real[]	float[]
double	double
double[]	double[]
string	string
string[]	string[]
User-defined structure	class <sup>1</sup>
User-defined structure[]	class [] <sup>1</sup>
User-defined NVO object	class
User-defined NVO object[]	class [] <sup>1</sup>

---

<sup>1</sup> Data container class

<b>PowerBuilder</b>	<b>C#</b>
enumerated	enum
enumerated[]	enum[]
Time	Not supported <sup>2</sup>
Time[]	Not supported <sup>2</sup>
Date	Not supported <sup>2</sup>
Date[]	Not supported <sup>2</sup>
Datetime	DateTime
Datetime[]	DateTime[]
any	Not supported
Multidimension array	Not supported
PB system structure	Not supported
PB system object type	Not supported
PB system nvo type	Not supported
User-defined non-NVO object	Not supported
ResultSet and its descendants	Not supported
Returning any	Array type
Dot Net serializable type (with Serializable or DataContract attributes)	Dot.Net serializable type
Dot Net primitive type	Dot Net primitive type

---

<sup>2</sup> PowerBuilder Date and Time variables need to be converted to DateTime when calling a C# assembly. You can call PowerBuilder assemblies with the Date and Time variables and perform the conversion within the assemblies.





# Migration Information

You can migrate a PowerBuilder application from any version of PowerBuilder directly to PowerBuilder Classic. You cannot migrate applications from PowerBuilder .NET to PowerBuilder Classic, or from PowerBuilder Classic to older versions of PowerBuilder.

Migrate older applications to PowerBuilder Classic before you port them to PowerBuilder .NET.

## Migration to PowerBuilder .NET

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The WPF Window Application wizard in PowerBuilder .NET provides an option for converting a standard PowerBuilder Classic client/server or a Windows Forms target to a WPF Window Application target. The .NET Assembly wizard in PowerBuilder .NET provides an option to convert a PowerBuilder Classic .NET Assembly target.

After you select these conversion options and click **Finish**, the wizards automatically migrate the PowerBuilder Classic targets you select. However, you may still need to manually refactor some applications after you convert them.

This table lists some of the features that require special attention after you migrate applications from PowerBuilder Classic. Topic references in the table are to the *PowerBuilder .NET Features Guide*.

Feature	Effect of Migration
Accelerator characters	Ampersand (&) changed to underscore (_). See <i>Accelerator Characters in Control Labels</i> .
Conditionalized (preprocessor) code blocks	Invalid code blocks for PowerBuilder .NET are maintained, but ignored. See <i>Conditional Compilation in PowerBuilder .NET Targets</i> .
Control handles	Controls nested in windows do not have their own handles. See <i>Modified and Unsupported Features in PowerBuilder .NET</i> .
Dashes in identifiers	Dashes are replaced with a string you can select in the target wizard. See <i>Coding Restrictions</i> .
Event sequence	May require manual refactoring. See <i>Modified and Unsupported Features in PowerBuilder .NET</i> .
GroupBox controls	Controls that are inside a GroupBox belong to the GroupBox, not to the container of the GroupBox. See <i>Semantic Differences</i> .

Feature	Effect of Migration
Large application migration	May cause OutOfMemory error. Turn on 3G switch to avoid this error. See <i>Memory Tuning for Large Applications</i> .
Menu and toolbar styles	Maintained from PowerBuilder Classic. If you migrate PowerBuilder applications earlier than 11.0, menus and toolbars use traditional styles. See <i>Selecting a Toolbar Style</i> and <i>Menu Styles in PowerBuilder .NET</i> .
Non-TrueType fonts	Visible at design time, but replaced at runtime. See <i>Modified and Unsupported Features in PowerBuilder .NET</i> .
Pipeline and Query objects	Imported, but ignored at runtime. See <i>Modified and Unsupported Features in PowerBuilder .NET</i> .
Resource files	Resource directories that you select in the wizard are copied relative to the new target path, based on the relative path to the original target. See <i>Adding Resources to a Target</i> and <i>Project Painter User Interface</i> .
Skins	Default skins are attributed to migrated applications. See <i>Skin Selection for Applications and Controls</i> ,

The WPF application includes migration options for applications with dashes in identifiers and with right-to-left formatting. If you click **Finish** before making a migration option selection, the wizard migrates the application using default settings for these options.

## Migration to PowerBuilder Classic

---

You can migrate applications from any earlier version of PowerBuilder to PowerBuilder Classic 12.5.

Before you migrate, back up your files and use the Migration Assistant to identify obsolete code. The applications you build using the current version of PowerBuilder must be deployed with the PowerBuilder runtime DLLs from the current version.

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**Note:** The "Migrating PowerBuilder Applications" technical document on the Sybase Web site at <http://www.sybase.com/detail?id=1032777> includes information on changes to PowerBuilder since version 6.5 that might affect the conversion of applications to a more recent PowerBuilder version.

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## **Migrating .NET Targets from Earlier Versions of PowerBuilder**

When you migrate .NET Web Service components, you might need to remove or install supporting files on development and deployment computers.

If you deployed .NET projects from earlier versions of PowerBuilder, verify or complete these steps before redeploying the migrated .NET projects:

- For .NET Windows Forms projects, select **Full** for the project rebuild type before you redeploy your applications from PowerBuilder Classic for the first time.
- For .NET Web Service targets, clear ASP.NET temporary files for the application or component on development computers and production servers.

The temporary files are located in the `C:\WINDOWS\Microsoft.NET\Framework\version\Temporary ASP.NET Files\projectName` directory, where *version* is typically v2.0.50727, and *projectName* is the project's Web application name or its Web service virtual directory name.

- For all .NET targets, uninstall earlier versions of PowerBuilder runtime files (system assemblies and win32 DLLs) on all deployment computers or servers, then install the runtime files for the current version of PowerBuilder using the Runtime Packager or another tool, as described in the "Checklist for deployment" section of the *Deploying Applications and Components to .NET* book.
- To migrate a PowerBuilder 12.0 or 12.1 solution, open its .PBWX file using the File menu. If you double-click or drag and drop the file into PowerBuilder .NET 12.5, the Visual Studio Conversion wizard opens, inappropriately. You can use the double-click and drag-and-drop methods to open PowerBuilder 12.5 solutions.

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**Note:** You can convert .NET Windows Forms targets to WPF targets in PowerBuilder .NET. Sybase suggests that you migrate older .NET Windows Forms targets to PowerBuilder Classic before you convert them to WPF targets.

You cannot directly convert .NET Assembly targets in PowerBuilder Classic to .NET Assembly targets in PowerBuilder .NET.

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## **Migrating EAServer Targets**

Migrating EAServer targets from earlier versions of PowerBuilder to PowerBuilder Classic may require some additional considerations. PowerBuilder .NET does not support EAServer targets.

### *Migrating Components to EAServer 6.0.1 or Later*

Intercomponent calls from a PowerBuilder component running in EAServer 6.0.1 require proxies for all called components. In earlier versions of EAServer, a PowerBuilder component can sometimes call another PowerBuilder component running in the same server without the use of a proxy, because the PowerBuilder VM dynamically creates a proxy for the component using method names that match the names of the component's methods.

In EAServer 6.0.1 and later, PowerBuilder components are wrapped as EJBs, providing an extra layer of security and preventing the PowerBuilder VM from dynamically generating a proxy with names that match the component's method names. Therefore, you must create a proxy object for all components you invoke with intercomponent calls. Without a proxy object, the TransactionServer object cannot obtain the correct method names of the component you are calling.

### *Accessing EAServer Components from .NET Targets*

PowerBuilder installs the EAServer DLLs, `com.sybase.iiop.net.dll` and `com.sybase.ejb.net.dll`, in the Global Assembly Cache (GAC) on the development computer, and requires these DLLs on runtime computers for applications that access EAServer components from .NET targets. You can use the Runtime Packager to place these DLLs in the GAC on deployment computers.

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**Note:** The DLLs intalled by the PowerBuilder setup program have been tested, and are compatible with EAServer 6.3.1. However, if you use an EAServer version other than 6.3.1, Sybase recommends that you copy the DLLs from the `EAServer/Lib` directory to the GAC of all computers where you deploy your applications. If you then run or re-run the Runtime Packager, you must also recopy these DLLs to the GAC, because the Runtime Packager overwrites them.

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### **Creating an EJB Client Proxy for an EAServer 6.x Component**

Building EJB client applications for EJBs running in EAServer 6.x requires additional steps when you create the EJB client proxy.

1. Copy the *packagename* directory from the `%DJC_HOME%\deploy\ejbjars\` directory on the server to the client computer, where *packagename* is the package that contains the EJB you want to use.
2. In the Select EJB Component dialog box that you open from the EJB Client Proxy project painter, add this directory to the class path.
3. Generate the proxy.

### **Creating a Client Application for an EAServer 6.x EJB Component**

Building EJB client applications for EJBs running in EAServer 6.x requires additional steps when you create the client.

1. Copy the `eas-server-15.jar` file (or `eas-server-16.jar` if you are using JDK 1.6.x) from the `%DJC_HOME%\lib` directory to the client computer and include its full path in the client's CLASSPATH.
2. Copy the stub files from `%DJC_HOME%\genfiles\java\classes\` directory to the client computer and include this path in the client's CLASSPATH.
3. Copy the *packagename* directory from the `%DJC_HOME%\deploy\ejbjars\` directory on the server to the client computer, where *packagename* is the package that contains the EJB you want to use, and include this path in the client's CLASSPATH.

If you copied these files and directories to a directory on the client called `EAServer6`, and you want to use an EJB in a package named `datamapping`, the client `CLASSPATH` setting might look like this:

```
Classpath=D:\EAServer6\lib\ eas-server-15.jar;D:
\EAServer6\genfiles\java\classes;D:\EAServer6\deploy\ejbjars
\datamapping
```

## System Types as Variable Names in Proxies

In PowerBuilder versions 10.5 and later, you cannot use system types as variable names in Web service proxies.

If a PowerBuilder system type is used as a variable name, the Web Service Proxy wizard renames the variable by applying the prefix `ws_`. If you are migrating Web service applications from PowerBuilder 10.2 or earlier, and regenerating the Web service proxies in PowerBuilder 10.5 or later, you may need to modify your code to reflect the change in variable names.

PowerBuilder system types include not only the objects and controls listed on the System tab page in the PowerBuilder Browser, but also the enumerated types listed on the Enumerated page in the Browser, such as `band`, `button`, `encoding`, `location`, and `weekday`. For example, if you build a Web service from a PowerBuilder custom class user object, and one of its functions has a string argument named `location`, in the proxy generated for that Web service, the argument is changed to `ws_location`.

## OLE DB Performance with Microsoft SQL Server

In PowerBuilder 10.5.2 and later, when you use the OLE DB database interface with a Microsoft SQL Server database and retrieve data into a DataWindow, or use an embedded SQL cursor in a **SELECT** statement, server-side cursors help to support multiple command execution.

If this has a negative impact on performance, try increasing the size of the Block database parameter to 500 or more, or adding the following line to the [Microsoft SQL Server] section in the PBODB initialization file to turn off server-side cursors:

```
ServerCursor = 'NO'
```

## Change in Behavior of OpenTab

A change was made in PowerBuilder 10.2.1 Build 9716, PowerBuilder 10.5.1 Build 6505, and PowerBuilder 11.0 Build 5021, to correct an anomalous behavior when the `SelectedTab` property was applied at runtime to a tab for which the `Visible` property was set to `false`.

As a result of this change, there is a change in the behavior of the **OpenTab** and **OpenTabWithParm** functions. In earlier versions, calling the **OpenTab** or **OpenTabWithParm** function to open a user object as a tab page displayed the tab page even if the user object's

## Migration Information

Visible property was set to false. In the current version, the user object's Visible property must be set to true for the tab page to appear.

### **ImportFile Size Limit**

If your application uses the **ImportFile** method to import very large text files into a DataWindow or DataStore, **ImportFile** returns the error code -15.

PowerBuilder versions 10.0 and later are Unicode enabled. Earlier ANSI versions of PowerBuilder were able to import larger text files.

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**Note:** The release bulletins for earlier versions listed the size limit for large files as approximately 839,000 lines. However, the size limit depends on the number of columns in the files, as well as the number of lines.

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# Obtaining Help and Additional Information

Use the Sybase Getting Started CD, Product Documentation site, and online help to learn more about this product release.

- The Getting Started CD (or download) – contains release bulletins and installation guides in PDF format, and may contain other documents or updated information.
- Product Documentation at <http://sybooks.sybase.com/> – is an online version of Sybase documentation that you can access using a standard Web browser. You can browse documents online, or download them as PDFs. In addition to product documentation, the Web site also has links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, Community Forums/Newsgroups, and other resources.
- Online help in the product, if available.

To read or print PDF documents, you need Adobe Acrobat Reader, which is available as a free download from the *Adobe* Web site.

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**Note:** A more recent release bulletin, with critical product or document information added after the product release, may be available from the Product Documentation Web site.

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## Technical Support

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Get support for Sybase products.

If your organization has purchased a support contract for this product, then one or more of your colleagues is designated as an authorized support contact. If you have any questions, or if you need assistance during the installation process, ask a designated person to contact Sybase Technical Support or the Sybase subsidiary in your area.

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Get EBFs and maintenance reports from the Sybase Web site or the SAP® Service Marketplace (SMP). The location you use depends on how you purchased the product.

- If you purchased the product directly from Sybase or from an authorized Sybase reseller:
  - a) Point your Web browser to <http://www.sybase.com/support>.
  - b) Select **Support > EBFs/Maintenance**.
  - c) If prompted, enter your MySybase user name and password.
  - d) (Optional) Select a filter, a time frame, or both, and click **Go**.
  - e) Select a product.

## Obtaining Help and Additional Information

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as an authorized support contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click **My Account** to add the “Technical Support Contact” role to your MySybase profile.

- f) Click the **Info** icon to display the EBF/Maintenance report, or click the product description to download the software.
- If you ordered your Sybase product under an SAP contract:
  - a) Point your browser to <http://service.sap.com/swdc> and log in if prompted.
  - b) Select **Search for Software Downloads** and enter the name of your product. Click **Search**.

## Sybase Product and Component Certifications

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Certification reports verify Sybase product performance on a particular platform.

To find the latest information about certifications:

- For partner product certifications, go to [http://www.sybase.com/detail\\_list?id=9784](http://www.sybase.com/detail_list?id=9784)
- For platform certifications, go to <http://certification.sybase.com/ucr/search.do>

## Creating a MySybase Profile

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MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

1. Go to <http://www.sybase.com/mysybase>.
2. Click **Register Now**.

## Accessibility Features

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Accessibility ensures access to electronic information for all users, including those with disabilities.

Documentation for Sybase products is available in an HTML version that is designed for accessibility.

Vision impaired users can navigate through the online document with an adaptive technology such as a screen reader, or view it with a screen enlarger.

Sybase HTML documentation has been tested for compliance with accessibility requirements of Section 508 of the U.S Rehabilitation Act. Documents that comply with Section 508 generally also meet non-U.S. accessibility guidelines, such as the World Wide Web Consortium (W3C) guidelines for Web sites.



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**Note:** You may need to configure your accessibility tool for optimal use. Some screen readers pronounce text based on its case; for example, they pronounce ALL UPPERCASE TEXT as initials, and MixedCase Text as words. You might find it helpful to configure your tool to announce syntax conventions. Consult the documentation for your tool.

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For information about how Sybase supports accessibility, see the Sybase Accessibility site: <http://www.sybase.com/products/accessibility>. The site includes links to information about Section 508 and W3C standards.

You may find additional information about accessibility features in the product documentation.

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