Release Bulletin
PowerBuilder® Enterprise 11.1

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1. Accessing current release bulletin information

A more recent version of this release bulletin may be available on the Web. To check for critical product or document information added after the product release, use the Sybase® Product Manuals Web site.

❖ **Accessing release bulletins at the Sybase Product Manuals Web site**

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2. Product summary

Enclosed is Sybase PowerBuilder Enterprise version 11.1, which is compatible with the following platform and operating system configurations:

- Microsoft Windows XP with Service Pack 2
- Microsoft Windows XP Tablet PC Edition with Service Pack 2
- Microsoft Windows Server 2003 with Service Pack 2
- Microsoft Windows Vista Business Edition

PowerBuilder 11.1 builds 32-bit applications, but supports deployed applications in both 32-bit and 64-bit environments on the Vista operating system. For more information about using PowerBuilder on the Vista operating system, see the *New Features* guide on the Product Manuals Web site at http://www.sybase.com/support/manuals/. For a list of issues that have been found on the Vista operating system, see “Vista issues” on page 22.

The Microsoft Windows 2000 operating system with Service Pack 4 is supported for deployment.

2.1 JSP targets

PowerBuilder 11 is the last version of PowerBuilder Enterprise that will include JSP targets, which enable you to build Web pages using JavaServer Pages technology. Sybase Workspace is the recommended tool for building JavaServer Faces (JSF) and HTML applications that use JSP pages.

2.2 PowerBuilder Runtime Automation Server

PowerBuilder 11 is the last version of PowerBuilder Enterprise that will include the PowerBuilder Runtime Automation Server.

2.3 DataDirect database drivers

The PB DataDirect ODBC drivers and OLE DB data providers from DataDirect Technologies have been removed from PowerBuilder 11.0 and later releases. If you want to continue to use these drivers and data providers, you must obtain them from DataDirect Technologies.

2.4 PBCrypto proxy library

The PBCrypto proxy library has been removed from PowerBuilder 11.0 and later releases. It is available on the Sybase CodeXchange Web site at https://powerbuilder.codexchange.sybase.com/.

3. Special installation instructions

PowerBuilder 11.1 is available as a full install and as an update for PowerBuilder 11.0 users.

Vista manifest files may crash other operating systems
If you add a manifest file that contains Vista extensions to an executable or DLL file on Windows XP with Service Pack 2, memory may be corrupted, causing the operating system to crash or restart. This is a known Microsoft issue described on the Microsoft support site at http://support.microsoft.com/Default.aspx?kbid=921337.

To resolve this issue, Microsoft has provided a patch that can be downloaded from the Microsoft Web site at http://www.microsoft.com/technet/security/Bulletin/MS06-075.mspx.

3.1 Before you install

Before you install this release, shut down any applications running on your system. Restart your system after all the installations are complete.

The executable files in this release extract setup files to the folder specified by your TMP environment variable, or the folder specified by your TEMP environment variable if TMP is not defined or specifies a directory that does not exist. Make sure you have enough disk space on the drive containing this folder before beginning the installation.

To specify an alternative location, open the System Properties dialog box from the Windows control panel, select the TMP user variable (or TEMP if TMP does not exist) on the Environment or Advanced tab page, and specify a location that has sufficient space.

3.2 Installing PowerBuilder 11.1 using the full install

If you are installing PowerBuilder Enterprise 11.1 using the full install, the *Installation Guide* for PowerBuilder Enterprise 11.0 on the Sybase Product Manuals Web site at http://www.sybase.com/support/manuals/ describes how to install the software.

If you are updating from a previous version of PowerBuilder and also upgrading from a different edition of PowerBuilder, see the additional information about license requirements in "Upgrading from a different edition of PowerBuilder" on page 7.

3.3 Updating PowerBuilder 11.0 to PowerBuilder 11.1

You can download the PowerBuilder 11.1 update from the PowerBuilder page of the Sybase EBFs/Maintenance site at http://downloads.sybase.com (select "in all months" and click the GO button if you do not see the 11.1 release). Download the zip file and extract its contents to a temporary directory on your computer using the "Use folder names" option.

To install the PowerBuilder 11.1 update, you must have already installed version 11.0 of PowerBuilder on your computer. The update installer updates the Enterprise edition of PowerBuilder 11.0 to the same edition of 11.1.

❖ **To update PowerBuilder:**

1 Create a backup by copying the contents of your *Sybase\Shared\PowerBuilder* directory to another directory.

2 If you use the Translation Toolkit or the Internet plug-ins, back up the *TransTlk* and *Internet Tools* directories in the *Sybase\PowerBuilder 11.0* directory. Also, back up other files that contain information you do not want to lose, such as PBLs, database files, and *.INI* files.

3 Run the *setup.exe* file in the *PowerBuilder* directory extracted from the zip file.

4 Perform a full rebuild of your PowerBuilder application in the System Tree or Library painter to ensure that all descendent objects are synchronized with their ancestors and to incorporate any compiler fixes in your code.

❖ **To update InfoMaker:**

1 Create a backup by copying the contents of your *Sybase\Shared\PowerBuilder* directory to another directory.

2 If you use the Internet plug-ins, back up the *Internet Tools* directory in the *Sybase\InfoMaker 11.0* directory. Also, back up other files that contain information you do not want to lose, such as PBLs, database files, and *.INI* files.

3 Run the *setup.exe* file in the *InfoMaker* directory extracted from the zip file.

3.4 Updating or installing the PBVM

If you plan to deploy PowerBuilder 11.1 components to EAServer, a set of PowerBuilder 11.1 runtime files called the PowerBuilder virtual machine (PBVM) must be installed on the same computer as EAServer.

If you are running the full install of PowerBuilder 11.1, install the PBVM from the PBVM directory on the PowerBuilder 11.1 DVD or download as described in the PowerBuilder 11.0 Installation Guide at http://infocenter.sybase.com/help/index.jsp?topic=/com.sybase.dc37771_1100/html/pbeinst/DAFBAFJF.htm.

The maintenance setup program also installs the PBVM, including the PowerBuilder 11.1 version of the Web DataWindow® server component (HTMLGenerator110) and the PBDebugBroker11 component required for remote debugging.

3.4.1 How the maintenance setup program works

The PowerBuilder 11.1 maintenance setup program updates existing PowerBuilder, InfoMaker, and PBVM installations on the target computer. The setup program can also install the PBVM on computers with no previous PBVM installation. PowerBuilder 11.x EBF setup programs behave in the same way as the maintenance setup program.

When you run *setup.exe*, the maintenance setup program performs these steps:

1 Checks the target computer for installations of PowerBuilder or InfoMaker 11.x and updates them if they are installed. It does not install or update the PBVM.

2 If neither PowerBuilder nor InfoMaker is installed, checks for an installation of the PBVM and updates it if it is installed.

3 If there is no PowerBuilder, InfoMaker, or PBVM 11.x installation on the computer, notifies you that PowerBuilder and InfoMaker are not installed and prompts you to click Yes to install the PBVM or No to quit.

If you want to install the PBVM on a computer that has PowerBuilder or InfoMaker 11.x installed, run the setup program at a command prompt with the `-pbvm` option to force the installation of the PBVM:

```
setup.exe -pbvm
```

3.5 Upgrading from a different edition of PowerBuilder

If you are updating to PowerBuilder 11.1 from an earlier version and also upgrading to the PowerBuilder Enterprise edition from PowerBuilder Desktop or Professional, you require two licenses:

- An *update* license from the previous version and edition to the same edition of PowerBuilder 11.1

  Updating from 11.0
  If you are updating from PowerBuilder 11.0, you can use the maintenance installer and you do not need an update license. See "Updating PowerBuilder 11.0 to PowerBuilder 11.1" on page 5.

- An *upgrade* license from Desktop or Professional to Enterprise

When you install PowerBuilder 11.1 using the full install, you are prompted to provide a license key. Enter your PowerBuilder 11.1 *update* license key. The setup program allows you to install all the features available in PowerBuilder Enterprise, but your license determines which features are available in the product.

When you have completed the setup program, start PowerBuilder and select Tools>Update License. In the wizard, enter your *upgrade* license key, then click Next and Finish. When you restart PowerBuilder, the PowerBuilder Enterprise features you selected when you installed PowerBuilder are enabled.

4. Changed functionality in this version

New Features PowerBuilder 11.1 describes features added in this version. You can view this book on the Sybase Product Manuals Web site at http://www.sybase.com/support/manuals/. Select PowerBuilder from the list of products and click Go, then select PowerBuilder 11.1 and select this title.

The New Features section of the PowerBuilder Help file also describes features added in this release. To view this Help, from the PowerBuilder menu, select Help>Welcome to PowerBuilder 11.1.

5. Known problems

5.1 .NET applications and components issues

5.1.1 Runtime file version

When you deploy any PowerBuilder application or component, you should always make sure that the version and build number of the PowerBuilder runtime files on the target computer or server is the same as the version and build number of the DLLs on the development computer. Mismatched DLLs can result in unexpected errors in all applications. If the development computer is updated with a new build, PowerBuilder .NET applications and components *must* be rebuilt and redeployed with the new runtime files. [CR 483818]

5.1.2 Error CS0161 returned when deploying .NET target

When you deploy a target to .NET, all possible paths through a function or event script must return a value. If the compiler encounters a path that does not return a value, it generates error CS0161: “not all code paths return a value.” To work around this issue, add a return statement that returns a value to the end of the script. [CR 463688]

5.1.3 Events and delegates in .NET assemblies

You cannot add an event handler in PowerBuilder for an event defined in a .NET assembly. If a delegate is defined in a .NET assembly, the Combine method returns errors on deployment. [CR 435730]

5.1.4 Money data truncated in dynamic SQL

In both Windows Forms and Web Forms applications, executing dynamic SQL format 3 or 4 with a Money datatype returns a truncated value if the data has more than 16 characters. [CR 483609]

5.2 .NET Web Forms issues

For additional issues that occur on the Vista operating system, see “Vista issues” on page 22.

5.2.1 State not refreshed in IE 7

In Internet Explorer 7, if you open the same application multiple times in a single IE session, the state and content of the first instance persist. This is because IE 7 has only one session, while Web Forms applications are session based. [CR 467206]

5.2.2 PowerBuilder DLL locked by IIS

The PowerBuilder *PBSHR110.DLL* system library is locked by IIS when you run a Web Forms application. This prevents you from uninstalling PowerBuilder when PowerBuilder and IIS are installed on the same computer. To avoid disrupting other applications using the IIS server, PowerBuilder does not automatically shut down and restart the server. Even if the Web Forms application is run from a browser on a remote computer, you must shut down the server manually before you can uninstall PowerBuilder on the IIS server. [CR 441626]

5.2.3 DtfLongDate! support for DatePicker

If Internet Explorer's language is de-DE and the value of PBCultureSource is set to Client in the *web.config* file, the DatePicker control does not support the DtfLongDate! enumerated value for the Format property. [CR 454532]

5.2.4 String function does not work correctly with culture de-DE

If Internet Explorer's language is de-DE and the value of PBCultureSource is set to Client in the *web.config* file, or if PBCultureSource is set to Server and the culture is set to de-DE in the *web.config* file, the String (*data*, “longdate”) function returns en-US format. [CR 454957]

5.2.5 Print in TreeView DataWindow does not reflect current status

After expanding or collapsing a TreeView DataWindow in a Web Forms application, printing the DataWindow might not reflect the current status of the display. [CR 454704]

5.2.6 Right-click in TreeView DataWindow can cause “Error on page”

In a Web Forms application with a TreeView DataWindow and a secondary DataWindow, if you expand the tree view and double-click a row in the secondary DataWindow, you might see an “Error on page” in the browser window if you then right-click the TreeView DataWindow. [CR 452587]

5.2.7 Right-click causes focus change and opens drop-down lists

Right-clicking does not cause a change of focus for most types of controls in standard PowerBuilder applications. However, in Web Forms applications, right-clicking CheckBox, RadioButton, CommandButton, PictureButton, StaticHyperlink, StaticText, DatePicker, ListBox, or PictureListBox controls does cause the focus to switch to those controls. Also, right-clicking the DatePicker, DropDownListBox, and DropDownPictureListBox controls in Web Forms applications causes the focus to switch to the down arrow for those controls. [CR 464218]

5.2.8 Changing focus to some controls does not trigger modified event

When text is modified in a single-line edit control, clicking a check box, radio button, or drop-down list box does not trigger the edit control's Modified event in a Web Forms application. [CR 461223]

5.2.9 Scroll bar missing in Retrieve dialog box

In a Web Forms application, the scroll bar in the Retrieve dialog box disappears when focus is set to an input field. [CR 450404]

5.2.10 Selecting columns increases memory use

Repeatedly selecting columns in a DataWindow increases the memory used by Internet Explorer. [CR 425813]

5.2.11 Cannot deploy to user-defined directory

If you specify a user-defined virtual directory such as “myapp” that is mapped to *C:\myapp*, the Web Forms application is deployed to a subdirectory of the IIS root directory. [CR 440758]

5.2.12 Problem triggering menu Clicked events in Web Forms applications

When the PBWebControlSource key is set to IE on the Configuration page in the .NEW Web Forms Project painter, users must click directly on a menu or menu item text in order to trigger the Clicked event. Clicking on empty space next to the menu or menu item name does not trigger the Clicked event. This issue does not occur if PBWebControlSource is set to RAD. [CR 461334]

5.2.13 A single word in a static text control is divided into two parts

In a Web Forms application, when a static text control contains a single word, the word may be displayed as two separate strings. This is caused by the way the browser handles the control. [CR 466655]

5.2.14 Resource files with non-English names not copied to target folder

If you add a resource file with a non-English name on the Resource Files page in the Web Forms Project painter, the file is not deployed to the *<application_name>_root/file/common* directory under *wwwroot*. [CR 483163]

5.3 .NET Windows Forms issues

For additional issues that occur on the Vista operating system, see “Vista issues” on page 22.

5.3.1 Unchanged .NET modules downloaded with smart client update

After you make a change in one PBL in a smart client application and publish the revised application, when the new version is installed on a client computer, the .NET modules for all the PBLs in the application and any unchanged data files included as resources are downloaded to the client. Only the changed .NET module should be downloaded. [CR 479418]

5.3.2 Special characters cause smart client installation to fail

A smart client application fails to install on the client computer if there are special characters such as “&”, “%”, or “$” in the update or install location. However, the publish process is successful and the *publish.htm* page can be opened. The error message on the client is “Value does not fall within the expected range.” This issue also occurs in Microsoft’s ClickOnce deployment. To avoid this issue, ensure that you use only alphanumeric characters in names and paths. [CR 464418]

5.3.3 Non-English resource file names cause smart client installation to fail

If you add resource file whose names contain non-English characters on the Resource Files page in the Windows Forms Project painter, the project can be deployed and published to a server, but downloading the application to a client computer fails. [CR 483705]

5.3.4 Display issues if ToolbarText is set at runtime

Setting the Application object’s ToolbarText property to true at runtime after the main window has opened may cause the toolbar to overlap the window. This does not occur if the property is set to true in the Application’s Open event. [CR 483483]

5.3.5 Difference in position of user object

If a user-defined object is placed on a window, there may be differences between its Y location in a Windows Forms application and a standard PowerBuilder application. [CR 483945]

5.3.6 Only TrueType fonts supported

.NET Windows Forms applications support only TrueType fonts. Other fonts are translated internally into a TrueType font. If you do not use a TrueType font, the cursor does not display when you click in an EditMask control. [CR 455453]

5.3.7 Drag(Begin!) uses CPU time

In a Windows Forms application, the Drag(Begin!) function on a control uses almost 100% of the CPU time until the user starts to drag the control. [CR 483622]

5.3.8 Slow performance in Windows Forms debugger

When you debug a Windows Forms application and select the All Variables view, the view takes a long time to open and display variables. [CR 451470]

5.3.9 OLE control properties not available in .NET

OLE control properties specified in the OLE Control properties dialog box in PowerBuilder are not available when the application is deployed to .NET. For a DatePicker control, the initial date and font size are therefore incorrect. [CR 442851]

5.3.10 Width of tabs in Tab controls

The width of the tabs in a tab control is greater in a Windows Forms application than in a standard PowerBuilder application. This means that if a tab control is sized so that all the tabs show in PowerBuilder, the last tab on the page might not show when the application is deployed as a Windows Forms application. [CR 466404]

5.3.11 Using InkEdit and InkPicture controls

The InkEdit and InkPicture controls in Windows Forms use the Microsoft.Ink.dll from the Microsoft Windows XP Tablet PC Edition Software Development Kit 1.7. Microsoft has discovered some incompatibility issues between this DLL and the .NET Framework 2.0. You can obtain an update to address these issues from Microsoft at http://www.microsoft.com/downloads/details.aspx?familyid= 84BBEFA4-7047-41DF-8583-E3BDBF9D805F&displaylang=en. [CR 423970]

5.3.12 Child window size not restored

If a child window is minimized, clicking the name of that window on the frame window's Window menu does not restore the child window to the correct size in a Windows Forms application. [CR 436535]

5.3.13 OverridePrintJob setting does not affect PrintDataWindow

Setting the Print.OverridePrintJob DataWindow object property to ‘yes’ has no effect when you use PrintDataWindow in a Windows Forms application. [CR 466258]

5.4 .NET assembly and .NET Web service issues

5.4.1 .NET Assembly target deploy fails

You cannot deploy a .NET Assembly target if it is referenced by another .NET target and that target has been expanded in the System Tree in the current PowerBuilder session. The error message is “Error when compiling generated C# code.” To work around this issue, restart PowerBuilder and deploy the .NET Assembly target before you expand the target that references the assembly. [CR 484006]

5.4.2 Public instance variables not exposed in .NET assembly

Public instance variables on a custom class user object in a .NET Assembly target are not exposed in the deployed .NET assembly. To work around this issue, you can add get and set methods to the user object. [CR 484008]

5.4.3 DataWindow dot notation not supported for array assignment

DataWindow dot notation does not support the assignment of arrays returned by .NET assemblies. For example, the following code in a custom class user object deployed as a .NET assembly throws an exception, but works correctly in standard PowerBuilder deployments:

```
dw.object.data = my_struct
```

[CR 483846]

5.4.4 .NET assemblies cannot be strongly named

There is no facility to create a strongly-named assembly using the .NET Assembly target in PowerBuilder, and tools provided with the .NET Framework 2.0 do not support assigning a strong name to a .NET assembly generated in PowerBuilder. [CR 484047]

5.4.5 Full build performed

If you select a single nonvisualobject to deploy as a .NET assembly, the full library list of the target is rebuilt before the component is deployed. [CR 447696]

5.4.6 NVO .NET Web service does not support exceptions

You cannot throw a user-defined exception in a .NET NVO Web service. Web services throw only Soap exceptions. [CR 454093]

5.4.7 Changing virtual directory or IIS address requires additional changes

If you deploy a .NET Web service project successfully, then change the Web service virtual directory or IIS address and redeploy, the service page fails to launch. You must change the arguments on the Run page in the painter before redeploying. [CR 439873]

5.5 Database connectivity issues

5.5.1 ASE ADO.NET provider 1.1.548.0 throws exception

If you execute a query that returns multiple rowsets, the Adaptive Server® Enterprise (ASE) ADO.NET provider version 1.1.548.0 throws an exception when calling the AseDataReader::GetSchemaTable method for the second rowset. The exception is “System.ArgumentException: This row already belongs to another table.” This exception is not thrown if you use version 1.1.475.0. [CR 453942]

5.5.2 Value of bit column displays as -1 with SNC interface

To communicate with SQL Server, the SNC interface uses the Microsoft OLE DB API, which returns VARIANT_BOOL for a bit datatype. If the value of the StaticBind DBParm is 1, the SNC interface does not describe the columns and does not do any data conversion. As a result, a bit column with the value 1 displays as -1 in a DataWindow. To work around this issue, set the StaticBind DBParm to 0, which enables the SNC interface to convert the datatype correctly. [CR 463142]

5.5.3 Pipeline execution with JDBC driver fails

Executing a pipeline with the destination ASE 12.5 when using the JDBC driver fails with the database error 2762. [CR 338371]

5.5.4 IN9 Informix interface does not work with UTF-8

The IN9 Informix database interface cannot update and retrieve data when the Informix server uses the UTF-8 character set. The interface works correctly with ANSI and DBCS. [CR 349535]

5.5.5 Alter table limitations with OLE DB and Microsoft SQL Server

When you connect using OLE DB and change the name or width of a column in a Microsoft SQL Server 2000 database using Alter Table in the Database painter, the column is moved to the end of the table and all its data is lost. To prevent this from occurring, PowerBuilder does not allow you to alter a table's column name and column size. You can alter the table outside the painter using ISQL scripts or at runtime using PowerScript® functions. [CR 348581]

5.5.6 Oracle stored procedures with output parameters

An Oracle stored procedure with output parameters produces an ORA-01036 error at runtime if you connect using ODBC, OLE DB, JDBC, or ADO.NET. The stored procedure runs correctly using the Oracle native driver. [CR 343297]

5.5.7 Connection issues with CnnPool

In the Database painter, attempting to connect to an Oracle9*i* or Oracle 10*g* database from an Oracle9*i* client fails after a connect and disconnect if the CnnPool database parameter is set to 'Yes'. The Oracle9*i* client software does not support connection pooling with PowerBuilder 10.0 or later. [CR 355639]

5.5.8 UpdateBlob SQL statement supports only UTF-16LE

The UpdateBlob SQL statement updates garbage characters to the database if the encoding of the blob variant is not UTF-16LE. For ASE, PowerBuilder crashes if the encoding of the blob is ANSI or UTF-8 and it contains fewer than 10 characters. [CR 353231]

5.5.9 RPC calls with non-Unicode ASE database

PowerBuilder can access Unicode data in Unichar and Univarchar columns in ASE databases that do not use a Unicode character set. You must set the UTF8 database parameter to 1 and configure the server to support both ASE direct conversions and Unicode conversions.

To configure the server, the database administrator must run the following command:

```
sp_configure, "enable Unicode conversion", 1
```

Declare procedure calls work correctly with this configuration, but RPC calls that use these columns are not currently supported. [CR 378850]

5.5.10 ASE version 15 with ODBC driver

When you connect to an ASE version 15 server using the Sybase ASE ODBC driver, NChar(10) and NVarChar(10) columns are saved as Char(10) and VarChar(10). [CR 408710]

5.6 DataWindow issues

5.6.1 Retrieve in Web Service DataWindow requires connection

The first time you use PowerBuilder there is no default database connection. When you create a Web Service DataWindow, you must select a database profile before the DataWindow is created even though the Web Service DataWindow does not use the profile. This also occurs with DataWindows that use an external data source. [CR 439122]

5.6.2 AutoSize Height issues with header band

When two reports are included one above the other in the header band of a DataWindow object and the AutoSize.Height property is set to true for the header band and false for the detail band, the DataWindow displays incorrectly in preview. The lower report overlaps the upper report. The report displays correctly if the Autosize.Height property is set to true in both the header and detail bands. [CR 405033]

5.6.3 XSL-FOP save as PDF does not support graphic controls

Use the distill method to export the data in DataWindow objects that contain graphic controls, such as ovals and rectangles, to PDF. The XSL-FOP method does not work correctly for graphic controls. [CR 303829]

5.6.4 Save As PDF fails on Windows 2003 Server

Saving as PDF using the Distill method fails at runtime on Windows 2003 Server. This problem is caused by a Group Policy that by default disallows installation of printers that use kernel-mode drivers. Kernel-mode drivers have access to system-wide memory, and poorly written drivers can cause system failures.

To allow installation of kernel-mode drivers, follow these steps:

1 Select Run from the Windows Start menu.

2 In the Open box, type gpedit.msc and click OK.

3 In the Group Policy console, expand Computer Configuration, Administrative Templates, and Printers.

4 Disable "Disallow Installation of Printers Using Kernel-Mode Drivers."

[CR 349868]

5.6.5 Calling GetItemNumber on DataStore with no rows

In Windows Forms, Web Forms, and standard applications, GetItemNumber throws a RuntimeError instead of a DWRuntimeError when called on a DataStore with no rows. [CR 452682]

5.7 Decimal datatype support issues

5.7.1 Compiler error when maximum value assigned

Assigning the maximum value to a decimal variant without a decimal portion causes a compiler error. [CR 380713]

5.7.2 Precision lost in message box

Precision is lost when you display a decimal variant with more than 16 bits in a message box. [CR 390258]

5.8 EAServer issues

EAServer release bulletin
For EAServer issues, please refer to the release bulletin for the version of EAServer that you are using on the Sybase Product Manuals Web site at http://www.sybase.com/support/manuals/.

For migration issues related to EAServer, see "Migrating EAServer targets" on page 35.

5.8.1 Connection to SQL Anywhere JDBC connection cache fails

Connecting to a SQL Anywhere® 10.0 JDBC connection cache in EAServer 6.0.x throws a runtime exception. This is caused by a difference between Adaptive Server® Anywhere (ASA) 9.x and SQL Anywhere 10.0.

To prepare a SQL Anywhere database for use with jConnect™ for JDBC™, you need to install additional tables and stored procedures by executing a SQL script. The *sql_asa.sql* file installed with EAServer 6.0.x in the *extras\jconnect-6.05\sp* directory is intended for use with ASA 9.x. and references a property, File Version, that is not supported in SQL Anywhere 10.x.

To solve this issue, execute the *jcatalog.sql* file in the *scripts* directory in the SQL Anywhere installation directory on the destination SQL Anywhere 10.0 database instead of executing *sql_asa.sql*. For more information about deprecated features in SQL Anywhere 10.0, see the SQL Anywhere 10 - Changes and Upgrading book at http://www.ianywhere.com/developer/product_manuals/sqlanywhere/1000/en/html/dbwnen10/wn-newjasper-s-3751424.html. [CR 471640, CR 483184]

5.8.2 PowerBuilder components not installed with EAServer 6.0.2

The EAServer 6.0.2 installation does not include the HTMLGenerator and PBDebugBroker components. You can install the components as part of the PBVM. See "Updating or installing the PBVM" on page 6. [CR 483288]

5.9 JSP issues

5.9.1 Column link problems with non-English characters

In a Web DataWindow DTC, if a column link property is set on a string column that contains Unicode data (non-English characters) and the value of this column is passed as a parameter to a target page, the target page does not display the Unicode data in the parameter value correctly. The data is displayed as garbage characters. This is caused by a defect in Internet Explorer. [CR 359511]

5.10 Menu and toolbar issues

5.10.1 Stock file image size inconsistent

In contemporary menus and toolbars, stock files and external files with multiple images are loaded differently. For stock files, PowerBuilder loads 32x32 images first. For external files, PowerBuilder loads 16x16 images first. PowerBuilder stock files include two types of files: BMP and ICO. Most BMP files have 16x16 images, and most ICO files have both 16x16 and 32x32 images. When you use a stock file, the BMP file is loaded with the 16x16 image but the ICO file is loaded with the 32x32 image. As a result the size of the stock image used is inconsistent. [CR 421716]

5.10.2 RightToLeft property not supported

The RightToLeft property is not supported in menus and toolbars. [CR 395702]

5.10.3 Display issues with some drivers

With some display card drivers, if you highlight a menu item with the mouse, a white block displays under the mouse point and is moved when you move the mouse. This is a limitation of the display card drivers and cannot be fixed in PowerBuilder. There are two techniques that might solve the issue:

1 In the Windows control panel, open the Mouse Properties dialog box and clear the Enable Pointer Shadow check box on the Pointers tab.

   The pointer shadow feature has known problems working with many graphical features and programs including OpenGL, GDI+, many video games, Jaws, VMWare, and Virtual PC.

2 In the Windows control panel, open the Display Properties dialog box and click the Advanced button on the Settings tab page. On the Troubleshooting tab page, decrease the hardware acceleration level by dragging the slider towards the left. Note that decreasing the hardware acceleration level affects display performance.

[CR 414452]

5.11 PowerDesigner plug-in issues

5.11.1 OLE controls are not supported

Code for OLE controls is not generated when you reverse-engineer a PowerBuilder target to an OOM. [CR 359805]

5.11.2 Case sensitivity in external function names

When you reverse-engineer and then regenerate a PowerBuilder application, an external function with a case-sensitive name such as GetCurrentDirectoryW fails. The workaround is to specify an alias for the function, for example:

```
public function ulong GetCurrentDirectoryW (ulong
textlen, ref string dirtext) library "KERNEL32.dll"
alias for "GetCurrentDirectoryW"
```

[CR 358442]

5.12 Rich text control issues

5.12.1 Scroll issues when input fields bound to DataStore

At runtime, if you insert input fields in a RichTextEdit control and bind the data source to a DataStore, then call ScrollNextRow or ScrollNextPage, the cursor disappears and you cannot scroll the DataWindow as expected. [CR 419757]

5.12.2 UTF-8 encoding in rich text control

If you insert an HTML file with UTF-8 encoding in a rich text control, the file does not display correctly unless the character set is indicated. In a future release, the encoding will be determined from the byte order mark of the HTML file, and it will not be necessary to indicate the character set.
[CR 415495]

5.13 SCC issues

5.13.1 Adding an object to SCC whose name contains non-English characters fails

When you put a workspace that supports multiple languages under source control and attempt to add all files to SCC, PowerBuilder crashes if one or more of the object names contain non-English characters. [CR 342590]

5.14 Vista issues

For more information about using PowerBuilder and deploying PowerBuilder applications on the Windows Vista operating system, see the Vista support section in the What's New Help or the *New Features* guide. See also "External manifest files created in temp directory with machine code" on page 29.

5.14.1 Run PowerBuilder as administrator

If an application is run without administrative privileges, Vista restricts it from writing to the *HKEY_LOCAL_MACHINE* subtree in the registry, the *Program Files* directory, and the *Windows* directory. Instead, changes are written to a writable area in the registry and to the user's local directory. This is referred to as virtualization. To avoid the issues that would result from this behavior, on Vista, you must start PowerBuilder with administrative privileges by right clicking *pb110.exe* in the Start menu or Explorer and selecting Run As Administrator from its pop-up menu. [CR 475612]

5.14.2 Windows Help files

Windows Vista does not distribute the *WinHelp32.exe* file required to open Windows Help files such as the *pbhlp110.hlp* file used in PowerBuilder. To use *.hlp* files, download and install a special Vista version of *WinHelp32.exe* from the Microsoft Web site at http://go.microsoft.com/fwlink/?LinkID=82148.

Compiled HTML Help (*.chm*) files are supported, but you need to edit the Windows registry to enable a Help macro that supports links from the *pbhlp110.hlp* file to the *pbman110.chm* file. If you do not edit the registry, the "For more information" links at the bottom of many topics in the Windows Help display an error.

You also need to edit the registry to run Windows Help files at a remote location on an intranet.

Registry reflection on 64-bit Windows
64-bit versions of Windows use registry reflection to maintain a 32-bit registry view and a 64-bit registry view. On 64-bit Windows, configuration information related to 32-bit applications is stored in the *HKEY_LOCAL_MACHINE\Software\WOW6432node* registry hive.

❖ **To enable Windows Help macros and remote access on Vista:**

1 Create the following registry key.

On 32-bit Windows:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\WinHelp
```

On 64-bit Windows:

```
HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432node\Microsoft\
WinHelp
```

2 Add a new DWORD value with the name AllowProgrammaticMacros and the value 1.

3 Add a new DWORD value with the name AllowIntranetAccess and the value 1.

You can also add this support by saving the following lines in Notepad to a file with the extension *.reg* and importing it into the registry.

On 32-bit Windows:

```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\WinHelp]
"AllowProgrammaticMacros"=dword:00000001
"AllowIntranetAccess"=dword:00000001
```

On 64-bit Windows:

```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432node\Microsoft\Win
Help]
"AllowProgrammaticMacros"=dword:00000001
"AllowIntranetAccess"=dword:00000001
```

Microsoft prohibits the distribution of *WinHelp32.exe* with deployed applications. If your application uses *.hlp* files, you should provide your users with instructions on how to download *WinHelp32.exe*. For more information, see the Microsoft support site at http://support.microsoft.com/kb/917607. [CR 477251]

5.14.3 Saving as PDF on Vista fails

The correct versions of Microsoft PostScript printer driver files must be available in the *drivers* directory when a file is saved as PDF using the Distill method. The Microsoft PostScript printer driver files, *PSCRIPT5.DLL*, *PS5UI.DLL*, and *pscript.ntf*, used for saving DataWindows as PDF, are no longer distributed with PowerBuilder due to licensing issues.

If you (and your users) have installed a PostScript printer, the PostScript driver files required to create PDF files are already installed. Typical locations are *C:\WINDOWS\system32\spool\drivers\w32x86* on Windows XP, *C:\Windows\System32\DriverStore\FileRepository\ntprint.inf_xxxxxxxx*, where *xxxxxxxx* is a system-specific identifier, in the *I386* subdirectory on 32-bit Vista and the *Amd64* subdirectory on 64-bit Vista. You must use the version of these files that is appropriate to the system where the PDF file is created. Copy the files to the *Shared\PowerBuilder\drivers* directory. [CR 445530]

5.14.4 JSP targets

On the Vista operating system, you can create a JSP target and a JSP page, but the component used to implement the HTML Editor's Page view and its built-in Script editor is not supported on the Vista operating system, therefore JSP targets are not supported on Vista.

5.14.5 Controls that use calendars

The Vista operating system does not support several properties for the DatePicker, EditMask, and MonthCalendar controls and the drop-down calendar in a DataWindow column. The following properties are not supported on Vista:

- DatePicker: CalendarBackColor, CalendarFontName, CalendarFontWeight, CalendarItalic, CalendarTextColor, CalendarTextSize, CalendarTitleBackColor, CalendarTitleTextColor, CalendarTrailingTextColor, CalendarUnderLine

- EditMask: CalendarBackColor, CalendarTextColor, CalendarTitleBackColor, CalendarTitleTextColor, CalendarTrailingTextColor
- MonthCalendar: FaceName, MonthBackColor, TextColor, TextSize, TitleBackColor, TitleTextColor, TrailingTextColor, Underline
- Column controls in DataWindow objects with a drop-down calendar EditMask style: DDCal_BackColor, DDCal_TextColor, DDCal_TitleBackColor, DDCal_TitleTextColor, DDCal_TrailingBackColor

In addition, the Vista operating system does not support the WeekNumbers property for the DatePicker control. When this property is true, the DatePicker control is not displayed correctly. The same limitation applies to the MonthCalendar control when WeekNumbers is true and Autosize is false. [CR 471379]

5.14.6 Using Web Forms targets on 64-bit systems

If you create a new Web Forms target on a Vista 64-bit system, when you launch the deployed target in Internet Explorer, you might receive an error that the application cannot be loaded. To resolve this issue, start 32-bit ASP.NET on the server using the following command line. You must run this command as Administrator:

```
cscript c:\inetpub\adminscripts\adsutil.vbs SET
W3SVC/AppPools/Enable32bitAppOnWin64 1
```

5.14.7 Web Forms deployment fails if IIS compatibility component not installed

If you deploy a Web Forms application to a remote server running IIS 7, or if you publish a smart client application to a local or remote server running IIS 7, the Vista Metabase Compatibility component of IIS 7 must be installed on the server. This component is not installed by default. It is not required to deploy a Web Forms application to a local server.

You can install it from the Programs and Features page in the Windows control panel. Select Turn Windows features on or off, then select Internet Information Services>Web Management Tools>IIS 6 Management Compatibility>IIS Metabase and IIS 6 configuration compatibility [CR 445617]

5.14.8 Running Web Forms application may fail on 64-bit Vista

On 64-bit Vista, running a Web Forms application sometimes fails with the error "Server error in '/' Application." This can occur if a virtual directory was not created for the application. To run the application successfully, open IIS Manager on the server by running the command inetmgr. Locate the folder for the application under Default Web Site, right-click on the application folder, and select Convert to Application from the pop-up menu. [CR 445617]

5.14.9 TreeView controls do not expand if DefaultAppPool used

TreeView controls cannot be expanded in a deployed Web Forms target if the application runs in the default application pool (DefaultAppPool). Web Forms applications must run in an application pool that uses the Classic mode. For more information, see "Additional configuration requirements for Windows Vista" in Chapter 1 of *Deploying Applications and Components to .NET*. [CR 472907]

5.14.10 Numeric edit mask shows negative number

In a Web Forms application running on Vista, if a user enters data into a numeric or decimal edit mask set on a DataWindow column and the data exceeds the number of characters defined for the mask, the leading characters that do not fit in the mask are replaced with a minus sign. If the mask is set to #,##0.00, the field contains 2,345.00, and the user attempts to change it to 12,345.00, the data is changed to -1,345.00. To avoid this issue, make sure that the mask has enough characters to support any data that might be entered. [CR 468410]

5.14.11 TreeView DataWindows do not display in Web Forms on Vista

When you deploy a TreeView DataWindow to Vista, only the container for the DataWindow displays with the text "DataWindow output goes here." You must give the IIS_IUSRS group full permissions (including write and delete) to the temp directory in the folder for the application under *InetPub\wwwroot*. For more information, see "Application directory permissions" in the section on configuration in Chapter 1 of *Deploying Applications and Components to .NET*. [CR 480821]

5.14.12 Smart client installation fails with embedded manifest and elevated execution levels

If you select Embedded Manifest and either Highest Available or Require Administrator on the Security tab page in the Windows Forms Project painter, the smart client application fails to install from the publish page on Vista with the error "Execution level requested by the application is not supported." The application installs as expected if you select External Manifest and any level of execution, or Embedded manifest and As Invoker. Smart client applications with an embedded manifest and elevated execution levels can be installed successfully on Windows XP. [CR 484771]

5.14.13 DataWindow title bar issues with Vista

In standard PowerBuilder and Windows Forms applications, clicking the Control Menu, Maximize, or Minimize buttons on the title bar of a DataWindow control changes the display characteristics and position on Vista. [CR 472402]

5.14.14 mailGetMessages function fails on Vista

The mailGetMessages function does not return mail messages on the Vista operating system. This is caused by a deficiency in the Windows Simple MAPI (SMAPI) interface. For more information, see the Microsoft Support Web site at http://support.microsoft.com/kb/930279/en-us. [CR 479872]

5.14.15 PrintSetupPrinter function fails on 64-bit Vista

The PrintSetupPrinter function does not display the printer setup dialog box on the 64-bit version of the Vista operating system. This is caused by a known code defect in the Microsoft XPS Document Writer DLL *mxdwdui.dll*. The DLL file prematurely frees the *shell32.dll* library and caused a window class to be unregistered. When the printer dialog box UI tries to create a window with the unregistered class, it fails and the dialog box fails to display.

You can display a printer properties dialog box using the following command line, where *printer name* is the name of the printer and must be enclosed in quotation marks. You must run the command from the *\Windows\sysWow64* directory:

```
rundll32 printui.dll,PrintUIEntry /n "printer name" /p
```

[CR 477598]

5.15 Web services issues

5.15.1 Using a trace tool with .NET Web services

Although you can still use the built-in SOAP logging option with EasySoap Web services, PowerBuilder does not provide the same option with .NET Web services. Instead, you can use a third-party tool to trace .NET proxy calls for debugging purposes. There are two kinds of trace tools you can use:

- **TCP trace (tunnel) tool** This type of tool listens to a specified hostname and port, and transfers all incoming calls to a specified endpoint. An example of this type of tool is TCPTrace, available from the PocketSoap Web site at http://www.pocketsoap.com.

  To use this type of tool, you must set the endpoint explicitly in the CreateInstance function. For example, if the original endpoint is http://www.*xxx*.com/*testWebService* and the trace tool has been set to listen to localhost:6060, then you can code something like the following to enable tracing: `Conn.CreateInstance(proxy_obj, "syb_NETproxy", "http://localhost:6060/testWebService")`

- **Proxy trace tool** This type of tool works as a proxy server. In PowerBuilder, you can set the proxy server using SetProxyServer or SetProxyServerOptions. Examples of this type of tool are Fiddler2, available from the Fiddler Web site at http://www.fiddler2.com/fiddler2/, and ProxyTrace, available from the PocketSoap Web site at http://www.pocketsoap.com.

[CR 419815]

5.15.2 Structures with array members

Calling a PowerBuilder custom class user object Web service that passes or returns a structure of arrays can fail. [CR 407611]

5.15.3 SOAP header cannot be modified in an EasySoap Web service

User authentication security in an EasySoap Web service cannot be implemented because this security must be included in the <soap:Header> section, which cannot be modified in PowerBuilder. [CR 351464, CR 356856]

5.15.4 Web services client raises exception with machine code

If a Web services client application is built as a machine-code executable, and a Web service proxy function has an array of longlong and double datatypes as an argument, calling this function raises an exception. A Pcode executable works correctly. [CR 360444]

5.15.5 EasySoap Web services do not support some built-in datatypes

PowerBuilder EasySoap Web services do not support the anyType and ur-type XML Schema built-in datatypes. [CR 341513]

5.16 Other issues

5.16.1 External manifest files created in temp directory with machine code

If you select Machine Code on the General tab page in the Project painter for a standard PowerBuilder application and External Manifest on the Security tab page, the external manifest file is generated in the directory specified by your TEMP user environment variable. This is typically *.\Users\<user_name>\AppData\Local\Temp* on Vista and *.\WINDOWS\Temp* on other versions of Windows. For Pcode executable files, the external manifest file is generated in the same directory as the executable file. [CR 484436]

5.16.2 PowerTips using the XP style

Some window controls, such as Pictures, PictureButtons, and PictureHyperLinks, can display PowerTip text. When the cursor is on the control, the tip text displays but disappears after several seconds. Moving the cursor from the control to another control with PowerTip text and back again causes the tip to display again, but moving the cursor from the control to the window background or a control without PowerTip text and back does not. This problem is caused by a Microsoft issue with Comctrl32 Version 6. [CR 403814]

5.16.3 PBNI objects not found at runtime

A call to the PBDOM_OBJECT GetContent function works correctly in the development environment but fails at runtime with the error, "Error calling method of a PBNI object." This occurs because the object cannot be found. The workaround is to reference all PBDOM and PBNI objects in PowerScript code so that they are included in the executable file. [CR 343299]

5.16.4 TipWatch on PowerBuilder extension variable causes crash

If you declare a variable of a type defined in a PowerBuilder extension, such as SOAPConnection, and place the cursor over this variable to check its TipWatch value while debugging, PowerBuilder crashes. [CR 435759]

5.16.5 Truncated string in saved EMF file

If a string in a text control in a DataWindow object is longer than can be displayed in the control in the Design view in the DataWindow painter, an EMF file saved in the painter or at runtime displays with the string truncated. [CR 342797]

5.16.6 Throws clause removed from menu events when menu item is moved

If you add a user-defined event to a menu item and specify in the Prototype window that the event throws an exception, and then move the menu item to another location, the Throws box in the Prototype window is cleared. [CR 290236]

5.16.7 String formatting function not Unicode enabled

The String function used to format a string does not have an encoding argument to allow you to specify the encoding of the resulting string. As a result, the string returned can contain garbage characters.

To work around this issue, convert the string to a blob and then back to a string using the encoding parameters provided in the Blob and String conversion functions:

```
ls_temp = String(long, "address" ) // format string
lb_blob = blob(ls_temp, EncodingUTF16LE!)
ls_result = string(lb_blob, EncodingANSI!) // convert
                                           // to string
```

[CR 361568]

5.16.8 ActiveX control compiled in Visual C++ causes crash

If an ActiveX control placed on a window was compiled using Visual C++ .NET 2003 (version 7.1), PowerBuilder might crash when you attempt to save the window. The problem is caused by a known bug in the Microsoft Foundation Classes. A patch is available from Microsoft. See the Microsoft Support Web site at http://support.microsoft.com/kb/838190. [CR 350660]

5.16.9 Web ActiveX download fails on Windows XP

The DataWindow Web Control for ActiveX fails to download its CAB file to a client browser running on Windows XP if the Microsoft Active Template Library (ATL) module, *atl71.dll*, is not present in the *Windows\System32* directory. The CAB file downloads successfully if the ATL DLL is present.

5.16.10 Legend values do not change when changing graph type

At runtime, when you change a graph type to or from a Pie graph type, the values in the legend do not change. [CR 452581]

6. Product compatibilities

6.1 EAServer

PowerBuilder 11.1 has been tested with EAServer 5.5 with EBF 13993 and EAServer 6.0.2.

6.2 SQL Anywhere

PowerBuilder 11.1 has been tested with SQL Anywhere 10.0.1 and the SQL Anywhere 10.0.1 Runtime Edition.

6.3 PowerDesigner

PowerBuilder 11.1 has been tested with PowerDesigner® 12.5.

6.4 Microsoft .NET Framework

PowerBuilder 11.1 is compatible with the Microsoft .NET Framework 2.0 and 3.0. It does not support new features in the .NET Framework 3.0.

6.5 Java

PowerBuilder 11.1 is compatible with JDK 1.5.

6.6 Apache Tomcat

PowerBuilder 11.1 JSP targets have been tested with Apache Tomcat 4.1.30.

6.7 Ghostscript

The DataWindow Save as PDF feature has been tested with AFPL Ghostscript version 8.53.

7. 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 can be freely downloaded, see the free download terms document. A copy of this document is located in the *Support* directory on the DVD or in the download and on the Sybase Web site at http://www.sybase.com/softwarelicenses/third_party_legal.

7.1 Apache files

You may redistribute Apache files included with PowerBuilder to your users. Any use or distribution of the Apache code included with PowerBuilder 11 must comply with the terms of the Apache License which is located in the free download terms document for PowerBuilder 11.

Version 0.20.4 of the Apache Formatting Objects Processor (FOP) is required if your application uses XSL-FO to save files as PDF. For more information about FOP, 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. For more information about Xerces, see the Xerces C++ Parser Web site at http://xml.apache.org/xerces-c/.

7.2 Microsoft files

When you deploy the core PowerBuilder runtime files, you must ensure that 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. For more information about obtaining and using these files, see the Microsoft Web site at http://www.microsoft.com/en/us/default.aspx.

Files must be installed before running MSI file
Some files installed by the MSI file generated by the PowerBuilder Runtime Packager have dependencies on these files. For example, *atl71.dll* must be installed on the user's computer before the *pbjvm110.dll* can be registered. Make sure these files are on the target computer before you run the MSI file generated by the Runtime Packager.

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, which 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 incompatibility issues between these DLLs and the .NET Framework 2.0. You can obtain an update to address these issues from Microsoft at http://www.microsoft.com/downloads/details.aspx?familyid=84BBEFA4-7047-41DF-8583-E3BDBF9D805F&displaylang=en.

PowerBuilder .NET Web Forms can use Internet Explorer Web Controls to display correctly and to provide functionality for the Tab, TreeView, and Toolbar controls. You can download IE Web Controls from the Microsoft Web site at http://www.asp.net/IEWebControls/Download.aspx. For detailed information about installing the controls, see *Deploying Applications and Components to .NET*.

7.3 Sun Microsystems files

The Java Runtime Environment (JRE) is required for JSP targets, EJB clients, JDBC connections, and saving as PDF using XSL-FO. For a copy of third-party terms and conditions for the JRE, see the free download terms document.The JRE can be downloaded from the Sun Developer Network at http://java.sun.com/javase/downloads/index.jsp.

7.4 Software used for SOAP clients for Web services

PowerBuilder includes the EasySoap++ library in executable form in *EasySoap110.dll*, which is dynamically linked to *PBSoapClient110.pbx*. 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. Please read the LGPL prior to any such distribution.

The complete machine-readable source code for the EasySoap++ library is provided 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 *PBSoapClient110.pbx* are provided in the *soapclient.zip* file in the same directory.

These files are provided under the terms of the LGPL so that you can modify the EasySoap++ library and then relink to produce a modified *EasySoap110.dll*. You can also relink *PBSoapClient110.pbx* with the modified EasySoap++ import library. According to the terms of the LPGL, it is understood that you will not necessarily be able to recompile *PBSoapClient110.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 *PBSoapClient110.pbx*.

8. Documentation updates and clarifications

The following books have been updated on the Sybase Product Manuals Web site for PowerBuilder 11.1:

- *New Features*
- *Deploying Applications and Components to .NET*
- *Connecting to Your Database*
- *Connection Reference*

For other books in the documentation set, refer to the PowerBuilder 11.0 collection on the Sybase Product Manuals Web site or the online Help.

9. Migration information

You can migrate a PowerBuilder application from any version of PowerBuilder directly to any later version. Before you migrate to a later version, read this section and the following Technical Document to learn about changes in PowerBuilder that might affect your application: Migrating PowerBuilder Applications at http://www.sybase.com/detail?id=1032777.

Back up your files and use the Migration Assistant to identify obsolete code before you migrate.

The applications that you build using this version of PowerBuilder should be deployed with the PowerBuilder runtime DLLs from the same version. If the development computer is updated with a new build, PowerBuilder .NET applications and components *must* be rebuilt and redeployed with the new runtime files.

9.1 Migrating EAServer targets

In PowerBuilder 11, the EAServer Component target wizard creates a specialized EAServer target instead of an Application target. After you migrate an existing EAServer target to PowerBuilder 11, you cannot start the remote debugger to debug the target unless you open the Project painter and select the Debug menu or toolbar item, or select Debug from the project's pop-up menu in the System Tree. To ensure that your target behaves correctly, you should use the EAServer Component target wizard to create a new EAServer target, select "Use an existing library and EAServer component project" in the wizard, and select your migrated library and component.

9.2 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. With earlier versions of EAServer, a PowerBuilder component is sometimes able to call another PowerBuilder component running in the same server without the use of a proxy, because the PowerBuilder VM creates a proxy for the component dynamically 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 generating a proxy with names that match the component's method names dynamically. 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.

9.3 Creating an EJB client application for EAServer 6.x

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

❖ **To generate a proxy for an EJB deployed to EAServer 6.x:**

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. Add this directory to the Classpath on the Select EJB Component dialog box in the EJB Proxy Project painter.
3. Generate the proxy.

❖ **To create an EJB client application for an EJB deployed to EAServer 6.x:**

1. Copy the *eas-server-14.jar* file (or *eas-server-15.jar* if you are using JDK 1.5.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 the datamapping package, the client classpath setting might look like this:

```
Classpath=D:\EAServer6\lib\eas-
server-14.jar;D:\EAServer6\genfiles\java\classes;D:
\EAServer6\deploy\ejbjars\datamapping
```

9.4 PowerBuilder system types as variable names in proxies

In PowerBuilder 10.5 and later versions, system types cannot be used 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, your code may need to be modified 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 string *ws_location*.

9.5 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 are used 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'
```

9.6 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 whose 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 previous releases, 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 Visible property was set to false. In current releases, the user object's Visible property must be set to true for the tab page to display.

9.7 ImportFile size limit

PowerBuilder 10.0 and later versions are Unicode enabled. If your application uses the ImportFile method to import very large text files (approximately 839,000 lines) into a DataWindow or DataStore, ImportFile returns the error code -15. Larger text files could be imported in ANSI versions of PowerBuilder.

10. Technical support

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you have any questions about this installation or if you need assistance during the installation process, ask the designated person to contact Sybase Technical Support or the Sybase subsidiary in your area.

11. Other sources of information

Use the Sybase Getting Started CD, the SyBooks CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.

- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

  Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

  Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

  To access the Sybase Product Manuals Web site, go to Product Manuals at http://www.sybase.com/support/manuals/.

11.1 Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ **Finding the latest information on product certifications**

1. Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.
2. Click Certification Report.
3. In the Certification Report filter select a product, platform, and timeframe and then click Go.
4. Click a Certification Report title to display the report.

❖ **Finding the latest information on component certifications**

1. Point your Web browser to Availability and Certification Reports at http://certification.sybase.com/.
2. Either select the product family and product under Search by Base Product; or select the platform and product under Search by Platform.
3. Select Search to display the availability and certification report for the selection.

❖ **Creating a personalized view of the Sybase Web site (including support pages)**

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

1 Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.

2 Click MySybase and create a MySybase profile.

11.2 Sybase EBFs and software maintenance

❖ **Finding the latest information on EBFs and software maintenance**

1 Point your Web browser to the Sybase Support Page at http://www.sybase.com/support.

2 Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.

3 Select a product.

4 Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the "Technical Support Contact" role to your MySybase profile.

5 Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.

12. Accessibility features

This document is available in an HTML version that is specialized for accessibility. You can navigate the HTML with an adaptive technology such as a screen reader, or view it with a screen enlarger.

PowerBuilder 11.1 and the HTML documentation have been tested for compliance with U.S. government Section 508 Accessibility requirements. 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.

Note You might 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.

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

For more information about accessibility features of PowerBuilder, see the chapter on building accessible applications in *Application Techniques*.

For a Section 508 compliance statement for PowerBuilder, go to the Voluntary Product Assessment Templates page at http://www.sybase.com/detail_list?id=52484.