

PowerBuilder® Enterprise 10.2.1 Release Bulletin

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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 release of the product CD, use the Sybase® Technical Library Product Manuals Web site.

❖ Accessing release bulletins at the Technical Library Product Manuals Web site

- 1 Go to Product Manuals at <http://www.sybase.com/support/manuals/>.
- 2 Follow the links to the appropriate Sybase product.
- 3 Select the Release Bulletins link.
- 4 Select the Sybase product version from the Release Bulletins list.

- 5 From the list of individual documents, select the link to the release bulletin for your platform. You can either download the PDF version or browse the document online.

2. Product summary

This product is Sybase PowerBuilder® Enterprise version 10.2.1, which is compatible with the following platform and operating system configurations:

- Microsoft Windows 2000 with Service Pack 4
- Microsoft Windows XP with Service Pack 2
- Microsoft Windows XP Tablet PC Edition with Service Pack 2
- Microsoft Windows Server 2003

2.1 Software used for SOAP clients for Web services

This product includes the EasySoap++ library in executable form in *EasySoap.dll*, which is dynamically linked to *PBSoapClient100.dll*. The EasySoap++ library and its use are covered by the GNU Lesser General Public License (LGPL). For a copy of this license, see *Gnu--LGPL.txt*.

You may distribute the EasySoap++ library to third parties subject to the terms and conditions of the LGPL. Read the LGPL prior to any such distribution.

The complete machine-readable source code for the EasySoap++ library is in the *EasySoap.zip* file. In addition, the object code and Microsoft Visual C++ project file for the *PBSoapClient100.dll* are in the *soapclient.zip* file. These files are in the *Support.zip* file on the PowerBuilder 10.2.1 download page.

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 *EasySoap.dll*. You can also relink *PBSoapClient100.dll* with the modified EasySoap++ import library. According to the terms of the LGPL, you may not be able to recompile *PBSoapClient100.dll* 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 *PBSoapClient100.dll*.

3. Special installation instructions

This section describes special installation instructions for PowerBuilder.

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 Enterprise

You can download PowerBuilder Enterprise 10.2.1 from the PowerBuilder page of the Sybase EBFs/Maintenance site at <http://downloads.sybase.com>. Download the files you require and extract the contents of the zip files following the instructions in the download notes that accompany the release.

To install PowerBuilder Enterprise 10.2.1, you must have already installed version 10.0 of PowerBuilder Enterprise on your computer.

❖ 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 PowerBuilder Foundation Classes (PFC), the Translation Toolkit, or the Internet plug-ins, back up the directories where they are installed.
- 3 Run the *setup.exe* file in the *PowerBuilder* directory extracted from the *PowerBuilder.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 directory where they are installed.
- 3 Run the *setup.exe* file in the *InfoMaker* directory extracted from the *InfoMaker.zip* file.

3.3 Installing the PowerBuilder VM on EAServer

To run PowerBuilder components in EAServer, the runtime dynamic shared libraries for the version of PowerBuilder in which the components were developed must be available on the server. The PowerBuilder runtime files on the client and the server must be at the same build level.

To find out which version of the PowerBuilder virtual machine (VM) is installed with EAServer, see the “Product Compatibilities” section of the release bulletin for EAServer. If the PowerBuilder 10.2.1 VM is not installed, run the PBVM setup program to update the PowerBuilder runtime files.

- ❖ **To update the PowerBuilder VM:**
 - Run the *setup.exe* file in the *pbvm* directory extracted from the PowerBuilder 10.2.1 *PBVM.zip* file.

4. Changed functionality in this version

This section summarizes changed functionality in PowerBuilder 10.2.1. For a description of changes in PowerBuilder 10.x releases, see the release bulletins at <http://sybooks.sybase.com/pb.html#RB> or the New Features section of the PowerBuilder online Help file. To view the Help file, select Help>Welcome to PowerBuilder 10.0 from the PowerBuilder menu.

4.1 PasteLowercase PB.INI option

When you paste PowerScript® statements such as FOR...NEXT and CHOOSE CASE into a script, the statements are pasted in lowercase. To paste statements in uppercase, add the following line to the [PB] section of the *PB.INI* file:

```
PasteLowercase=0
```

4.2 Configuring Java VM initialization

When you connect to a source control system, PowerBuilder instantiates a Java VM by default. For certain source code control (SCC) programs, such as Borland's StarTeam or Serena's TrackerLink, the Java VM instantiated by PowerBuilder conflicts with the Java VM instantiated by the SCC program. To prevent Java VM conflicts, add the following section and parameter setting to the *PB.INI* file:

```
[JavaVM]
CreateJavaVM=0
```

This prevents PowerBuilder from instantiating a Java VM when it connects to a source control system.

If you include this parameter setting in your *PB.INI* file and your source control system requires a Java VM, the source control system typically initializes the Java VM used by PowerBuilder on connection of the workspace to source control. The Java VM must have PowerBuilder in its classpath; otherwise you will not be able to deploy JSP targets from this workspace. PowerBuilder must exit to unload a Java VM. To successfully deploy JSP targets, you must first disconnect the current workspace from source control, then close and reopen PowerBuilder without reconnecting to source control. You can reconnect the workspace to the source control system after you deploy JSP targets.

4.3 Adaptive Server Enterprise 15.0 support

You can use the SYC native interface for Adaptive Server® Enterprise (*pbsyc100.dll*) with Adaptive Server version 15.0. It has been enhanced to support the UniText and 64-bit integer SQL datatypes.

The UniText datatype uses UTF-16 encoding to support Unicode text, and maps to the PowerScript string datatype. The 64-bit signed and unsigned BigInt datatypes map to the PowerScript longlong datatype.

To use Adaptive Server 15.0, install Open Client version 15.0 on the client computer and set the Release parameter to 15 to establish an Open Client 15 client context. You can specify the Release parameter on the Connection page of the Database Profile Setup dialog box for Adaptive Server or in code:

```
SQLCA.DBParm="Release='15' "
```

You can use the Open Client 15.0 client context with Adaptive Server 11.x, 12.x, and 15.0.

In PowerBuilder 10.2.1, the SYC driver dynamically links to the appropriate version of the client libraries, and the Open Client context is released when all connections are closed. If you open multiple connections, the first Open Client context established is used for all connections. To establish a new Open Client context in the development environment, close all open connections and establish a new connection with the Release parameter set to the context you require.

4.4 Support for Adaptive Server Enterprise temporary tables

PowerBuilder 10.2.1 allows you to create and edit temporary tables when you use the PowerBuilder SYC native driver to connect to an Adaptive Server Enterprise database. You can create temporary tables in the Database painter, SQL painter, or DataWindow painter. Temporary tables persist for the duration of a database connection, residing in a special database called “tempdb”.

Add a temporary table to the tempdb database by assigning a name that starts with the # character when you create a new table in a PowerBuilder painter. Temporary tables must start with the # character.

After you create a temporary table, you can create indexes and a primary key for the table. If you define a unique index or primary key, you can execute INSERT, UPDATE, and DELETE statements for a temporary table. Select Edit Data from the pop-up menu of a temporary table to retrieve data that you store in that table.

Standard catalog query limitations

When you click Refresh from the pop-up menu for the Tables node in the Database painter or the Objects view of the DataWindow painter, the list of tables displays temporary tables even though they exist only in the tempdb database. However, once you refresh table definitions from the database, the Objects view can no longer list the index or primary key information of the temporary tables and the Layout view can no longer display that information graphically.

You can create DataWindow objects that access temporary tables in a PowerBuilder runtime application, but your application must first explicitly create the temporary tables, along with the appropriate keys and indexes, using the same database transaction object used by the DataWindow. You can use the EXECUTE IMMEDIATE PowerScript syntax to create temporary tables at runtime:

```
string s1, s2, s3, s4
s1 = 'create table dbo.#temptab1 (id int not null, ' &
    + 'lname char(20) not null) '
s2 = 'alter table dbo.#temptab1 add constraint idkey' &
    + ' primary key clustered (id) '
s3 = 'create nonclustered index nameidx on ' &
    + 'dbo.#temptab1 (lname ) '
s4 = 'insert into #temptab1 select emp_id, ' &
    + 'emp_lname from qadb_emp'
execute immediate :s1 using sqlca;
if sqlca.sqlcode = 0 then
    execute immediate :s2 using sqlca;
    execute immediate :s3 using sqlca;
    execute immediate :s4 using sqlca;
else
    messagebox("Create error", sqlca.sqlerrtext)
end if
```

4.5 NCharBind database parameter for Oracle

The NCharBind database parameter for Oracle9i and Oracle 10g improves performance by allowing you to specify whether string variables should be treated as Char or NChar datatypes. The default is to treat string variables as Char datatypes. You can set this parameter on the Transaction tab page in the Database Profile Setup dialog box for Oracle9i and Oracle 10g. For more information, see NCharBind in the online Help.

4.6 ORCA API distributed in SDK

PowerBuilder 10.2.1 installs the Open Library API (ORCA) for all enterprise customers. The ORCA Guide is available as a PDF file in the PowerBuilder *SDK\ORCA* folder.

ORCA as a development tool is designed for vendors who want to provide tools for PowerBuilder developers. ORCA lets your application do programmatically the same library and object management tasks that a developer performs in the PowerBuilder development environment. Both PowerBuilder and ORCA make use of the PowerBuilder compiler. However, the compiler is not reentrant, and multiple programs cannot use it simultaneously. Therefore, PowerBuilder cannot be running when your programs call ORCA.

5. Known problems

This section describes known problems in PowerBuilder version 10.2.1.

5.1 Database connectivity issues

This section describes known database connectivity problems.

5.1.1 Window is a reserved word in ASA

In Adaptive Server Anywhere (ASA) 9, the word “window” is a reserved word. As a result, SELECT statements on a column with the name window do not work correctly. There are several ways to work around this issue:

- Set the DelimitIdentifier database parameter to “Yes” in the ConnectString.
- Set the NON_KEYWORDS ASA database option:

```
SET OPTION NON_KEYWORDS = 'WINDOW'
```
- Enclose the column name in quotation marks in SQL statements.

[CR 334166]

5.1.2 Pipeline execution with JDBC driver fails

Executing a pipeline using the JDBC driver with the destination as Adaptive Server Enterprise 12.5 fails, resulting in database error 2762. [CR 338371]

5.1.3 Table updates not handled by OLE DB provider for Adaptive Server

The PB DataDirect OLE DB data provider for Adaptive Server Enterprise does not correctly handle table updates in the Database painter. [CR 338363, CR 338366]

5.1.4 Issues with traditional Chinese data and Adaptive Server ODBC drivers

Traditional Chinese data cannot be manipulated correctly in the Database painter using the big5 character set with the Sybase ASE ODBC driver or the DataDirect 4.2 ASE ODBC driver. [CR 342722]

5.1.5 DataDirect ODBC XML driver issue

You cannot use a SQL statement to update date, time, timestamp, and boolean datatypes in the ISQL view of the Database painter with a connection that uses the PB DataDirect ODBC driver for XML. [CR 352252]

5.1.6 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]

5.1.7 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 the column name and column size of a table. You can alter the table outside the painter using ISQL scripts or at runtime using PowerScript functions. SQL scripts to alter a column's name are available only on the SQL Server 2000 client. [CR 348581]

5.1.8 PB DataDirect Oracle driver issues

If you create a table in the Database painter using the PB DataDirect 4.2 Oracle driver and give it a name that has all lowercase characters, the table columns are not visible in the Layout view. They display correctly after you select Tables>Refresh. [CR 348038]

The PB DataDirect OLE DB data provider for Oracle does not correctly handle inserts, updates, and displays for Simplified Chinese and Traditional Chinese data. [CR 338372]

5.1.9 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]

5.1.10 OraOleDb faster than Oracle8ADOPProvider

When you use an OLE DB connection to an Oracle9i database, the Table list or View list displays much more quickly in the Database painter if you use OraOleDb instead of the Oracle8ADOPProvider. [CR 341835]

5.1.11 Connection issues with CnnPool

In the Database painter, attempting to connect to an Oracle9i or Oracle 10g database from an Oracle9i or Oracle 10g client fails after a connect and disconnect if the CnnPool database parameter is set to 'Yes'. [CR 355639]

5.1.12 RPC calls with non-Unicode Adaptive Server database

PowerBuilder can access Unicode data in unichar and univarchar columns in Adaptive Server Enterprise databases that do not use a Unicode character set. The server must be configured as described in "Enabling Unicode conversion in Adaptive Server databases" on page 23. Declare procedure calls work correctly with this configuration, but RPC calls that use these columns are not currently supported. [CR 378850]

5.1.13 Microsecond portion of Adaptive Server times not retrieved

When you use the OLE DB interface to connect to an Adaptive Server Enterprise database and select a column with the DateTime or Time datatype, the microsecond portion of the time value is not retrieved. When you use the ODBC and JDBC interfaces, the microsecond portion of a DateTime column value is retrieved correctly, but the microsecond portion of a Time column value is not. [CR 399257]

5.2 DataWindow issues

This section describes known DataWindow issues.

5.2.1 Save As PDF fails on Windows 2003 Server

Saving as PDF using the Distill method fails at runtime on Windows 2003 Server. This 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]

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

Data in the DataWindow objects that contain graphic controls, such as lines and rectangles, can be exported to PDF using the distill method. The XSL-FOP method does not work correctly for graphic controls. [CR 303829]

5.2.3 Limitations in default PostScript drivers

The PostScript drivers installed with PowerBuilder do not support searching the generated PDF file. Also when a DataWindow object has more columns than fit on a single page, so that data is wrapped to a new page in the PDF file, sometimes the last column on each page is clipped. The workaround for this issue is to use an alternative driver. See the PowerBuilder 10 Installation Guide at <http://sybooks.sybase.com/pb.html#Install> for instructions on installing and using an alternative driver. [CR 324579, CR 332365]

5.2.4 Printing a large composite report with graphical objects fails

When you attempt to print a large composite report with multiple graphical objects, some pages or objects in the report, or both, fail to print. [CR 405698]

5.2.5 Modify method causes unexpected changes in EditMask column

At runtime, using Modify to change a property of a DataWindow column with the EditMask edit style causes a spin control to display in the column when the column has focus. [CR 404242]

5.2.6 Print preview mode disabled with ShowPrintDialog

When a DataWindow is in print preview mode, calling the Print method with the ShowPrintDialog argument set to true causes the DataWindow to display in normal mode. [CR 401182]

5.2.7 Extra button displays in XML rendering of a group DataWindow

When you generate a group DataWindow as a Web DataWindow using the XML or XHTML rendering style, an extra button is generated in the detail band and displays in the next group header. [CR 398585]

5.3 EAServer issues

This section describes known EAServer issues.

5.3.1 Runtime error in NVO Web service in EAServer

A runtime error occurs when a JSP page calls a PowerBuilder component exposed as a Web service in EAServer 5.x, and the Web service passes a decimal datatype by value. [CR 335545]

5.3.2 Byte[] datatype issue with Web services hosted in EAServer

Although EAServer 4.x can successfully return a byte[] datatype, it does not correctly handle the byte[] datatype as an input parameter. Any Web method that calls a Web method hosted in EAServer with a byte[] argument as an input parameter fails at runtime. This affects only Web methods hosted in EAServer. Web methods with a byte[] argument that are hosted in other servers can be successfully invoked from a JSP that is hosted in EAServer. [CR 306821]

5.3.3 Calling a .NET Web service with EAServer 5.2 causes runtime error

A runtime error occurs when EAServer 5.2 is used as the JSP server and a JSP page calls a .NET Web service method that uses a byte array as a parameter. This does not occur if EAServer 5.1 is used as the JSP server. [CR 378724]

5.3.4 SSL connection to EAServer fails

EAServer versions 5.2 and later use Transport Layer Security (TLS) to establish secure connections between a client and server. TLS is a protocol based on the Secure Sockets Layer (SSL) that can authenticate both the client and the server and create an encrypted connection between them.

PowerBuilder clients that rely on the previous version of the EAServer SSL client runtime and use mutual authentication cannot establish an SSL connection using the default settings. To disable support for TLS and use the previous version of the SSL client runtime, set the environment variable JAGSSL to true in the *serverstart.bat* file before you start EAServer. You can also set this environment variable in an EAServer client installation:

```
set JAGSSL=true
```

[CR 402979]

5.3.5 PBVM fails using OLEObject on EAServer cluster

When a PowerBuilder component that uses an OLEObject is running on an EAServer cluster with the Automatic Failover option selected, the PowerBuilder virtual machine (PBVM) may fail after multiple instances of the component are activated. This occurs when the PBVM attempts to release a null application handle. A new version of the libjcc.dll for EAServer 5.2 is required to fix the issue. [CR 377117]

5.4 EJB client issues

This section describes known EJB client issues.

5.4.1 CreateJavaVM does not produce debug information

Due to limitations in the Sun JDK 1.4, setting the *isdebug* argument of the CreateJavaVM method of the EJB client JavaVM class to true does not produce a *vm.out* debug information file when you use JDK 1.4. To work around this problem, use JDK 1.3 when you need debug information. You can change the JDK used in the development environment from the Java page of the System Options dialog box. [CR 296630]

5.5 Installation issues

This section describes known installation issues.

5.5.1 Uninstalling removes EA Server profiles from registry

Uninstalling PowerBuilder removes the EA Server profiles from the *HKEY_CURRENT_USER\Software\Sybase\PowerBuilder\N.0\JaguarServer Profiles* key in the registry, where *N.0* represents the version of PowerBuilder you are removing. If you need to uninstall and reinstall PowerBuilder, export this registry key to a file before you uninstall PowerBuilder. [CR 347732]

5.5.2 Uninstalling removes database profiles and recent workspace list from registry

Uninstalling PowerBuilder 8 or 9 removes PowerBuilder 10 database profiles and the recent workspace list from the *HKEY_CURRENT_USER\Software\Sybase\PowerBuilder\10.0* key in the registry. To work around this issue, export this registry key to a file before you uninstall PowerBuilder 8 or 9. [CR 360544]

5.6 JSP issues

This section describes known JSP issues.

5.6.1 Column link problems with non-English characters

In a Web DataWindow design-time control (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]

5.6.2 JSP Web DataWindow DTC pages display incorrectly in Enterprise Portal

JSP Web DataWindow DTC pages that use the XHTML or XML Generation Format options do not display correctly when deployed to Enterprise Portal. [CR 357759, CR 357760]

See “EA Server issues” on page 13 for additional issues.

5.7 PowerDesigner plug-in issues

This section describes known PowerDesigner plug-in issues.

5.7.1 OLE controls are not supported

When you reverse-engineer a PowerBuilder target to an Object Oriented Model (OOM), code for OLE controls is not automatically generated. [CR 359805]

5.7.2 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 GetCurrentDirectoryA fails. To work around this issue, specify an alias for the function, for example:

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

[CR 358442]

5.8 SCC issues

This section describes known SCC issues.

5.8.1 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]

5.9 Web services issues

This section describes the known issues in Web services. See “EAServer issues” on page 13 for additional issues.

5.9.1 Cannot modify SOAP header

You cannot implement user authentication security in a SOAP Web service because you must implement this security in the <soap:Header> section, which you cannot modify in PowerBuilder. [CR 351464]

5.9.2 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]

5.9.3 Web services do not support some built-in datatypes

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

5.10 Other issues

This section describes other known issues.

5.10.1 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 Adaptive Server Enterprise, PowerBuilder crashes if the encoding of the blob is ANSI or UTF-8 and contains fewer than 10 characters. [CR 353231]

5.10.2 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” because the object cannot be found. Reference all PBDOM and PBNI objects in PowerScript code so that they are included in the executable file. [CR 343299]

5.10.3 Translation Toolkit cannot translate PBLs from earlier version

To translate PBLs from an earlier version of PowerBuilder, migrate them to PowerBuilder 10 first. See the online Help for the Translation Toolkit for more information. [CR 349513]

5.10.4 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 enhanced metafile (EMF) file saved in the painter or at runtime displays with the string truncated. [CR 342797]

5.10.5 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]

5.10.6 DirSelect function can throw exception on Windows XP

On Windows XP, calling the DirSelect function of a DropDownListBox or DropDownPictureListBox control sends incorrect data, and an exception is thrown if the selected directory has no subdirectory. [CR 335402]

5.10.7 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]

5.10.8 Failing to rebuild can cause runtime errors

If you distribute an application with PBDs that were generated using different builds of PowerBuilder, such as PowerBuilder 10.0 and PowerBuilder 10.2.1, or if you run an application that was built using an earlier build in the development environment, a runtime error may result. This occurs when your application contains either a ListView or TreeView object in one PBL and one or more functions that act on that object in a separate PBL.

To prevent this issue from occurring, perform a full rebuild of your 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. The executable files and dynamic libraries you distribute must be built using the same PowerBuilder build.

5.10.9 ActiveX control compiled in Visual C++ .NET 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. According to Microsoft, “In a Microsoft Visual C++ .NET 2003 Microsoft Foundation Classes (MFC) application, the creation of ActiveX controls during application run time may fail if the values that are passed to create the control are of the ULONG data type.” A patch is available from Microsoft. [CR 350660]

5.10.10 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.

5.10.11 PosA function returns unexpected results with mixed DBCS string

The PosA function sometimes returns an incorrect result when the string being searched contains characters from both the Single Byte Character Set (SBCS) and Double Byte Character Set (DBCS). This occurs because the length of the string is incorrectly evaluated.

Suppose the length of the string in characters before conversion to DBCS is M and the length of the string in bytes after conversion to DBCS is N. If the value of the start argument is greater than M but less than N, PosA incorrectly returns 0. If the search string is present in the string being searched but occurs after the first M bytes, PosA fails to find it. [CR 405127]

5.10.12 PBDOM_Builder causes memory leak

When you use PBDOM_Builder repeatedly to build a PBDOM_DOCUMENT from an external XML file, a memory leak occurs. PBDOM_Builder does not release or reuse the memory allocated each time it builds the PBDOM_DOCUMENT. [CR 406059]

6. Product compatibilities

This section contains information about products that are compatible with PowerBuilder version 10.2.1.

6.1 EAServer

PowerBuilder 10.2.1 has been tested with EAServer 4.2.5 (Build 42506) and EAServer 5.2 (Build 52025).

To run PowerBuilder components in EAServer, the runtime dynamic shared libraries for the version of PowerBuilder in which the components were developed must be available on the server. The PowerBuilder runtime files on the client and the server must be at the same build level. Using different build levels on client and server machines may result in unpredictable behavior or data corruption.

6.2 Adaptive Server Anywhere

PowerBuilder 10.2.1 has been tested with Adaptive Server Anywhere (ASA) 9.0.2 (Build 3044) and the ASA 9.0.2 Runtime Edition (Build 3044).

6.3 PowerDesigner

PowerBuilder 10.2.1 has been tested with PowerDesigner® 11.1 with EBF Build 1545.

6.4 Enterprise Portal

PowerBuilder 10.2.1 has been tested with Enterprise Portal 6.0 with EAServer 5.1.

6.5 Java

PowerBuilder 10.2.1 is compatible with JDK 1.3.x and JDK 1.4.x.

6.6 Apache Tomcat

PowerBuilder 10.2.1 JSP targets have been tested with Apache Tomcat 4.1.30.

To use Web DataWindows and access EAServer components in JSP pages that you will deploy to a Tomcat server, you must add the following JAR files to the `%Tomcat%\shared\lib` directory:

```
pbjdbc12100.jar  
easclient.jar  
easj2ee.jar
```

You should also add the JAR files required by your DBMS, such as *jconn2.jar* for jConnect™.

6.7 Application servers

EJB client functionality has been tested with EAServer, WebLogic, WebSphere, and Oracle9iAS.

7. Documentation updates and clarifications

This section contains updates and clarifications to the PowerBuilder documentation.

7.1 Revisions in books and online Help

There are no changes in the documentation on the Sybase Technical Library Product Manuals Web site for this version. Revisions have been made to the online Help installed with this maintenance release to address changes in functionality described in “Changed functionality in this version” on page 5.

7.2 Changes in documentation

This section describes changes to the online documentation that are not related to the new features.

7.2.1 Accessing Unicode data with Oracle

NChar and NVarchar2 columns in an Oracle database that uses an ANSI or DBCS character set can store only Unicode data. To manipulate Unicode data in such columns, set both StaticBind and DisableBind to 0. For more information, see the Oracle section in *Connecting to Your Database* in the compiled HTML Help.

7.3 Additions to documentation

This section provides information not present in the online Help or books.

7.3.1 Microsoft files required for deployment

Table 1 on page 22 lists Microsoft files required for deployment.

Table 1: Microsoft runtime files

File name	When required
<i>msvcr71.dll</i> , <i>msvc71.dll</i>	With all applications. The <i>pshsr100.dll</i> required file has dependencies on these Microsoft Visual C++ runtime libraries.
<i>atl71.dll</i>	With all applications. The <i>pbdwe100.dll</i> file has dependencies on this file, which is the Microsoft .NET Active Template Library module.
<i>gdiplus.dll</i>	If you deploy your application to the Windows 2000 platform. This file is installed as part of the operating system for Windows XP and Windows Server 2003 and is part of the Microsoft GDI+ subsystem that implements enhanced graphics capabilities.

You can download the Microsoft GDI+ module from the Microsoft Downloads Web site. You can deploy the *msvcr71.dll*, *msvc71.dll*, and *atl71.dll* from your *Shared\PowerBuilder* directory to target systems.

For information about restrictions on redistributing Microsoft DLLs, see the third party terms for PowerBuilder at http://www.sybase.com/softwarelicenses/third_party_legal/termsbyproduct.

7.3.2 Enabling Unicode conversion in Adaptive Server databases

PowerBuilder can access Unicode data in unichar and univarchar columns in Adaptive Server Enterprise 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 Adaptive Server direct conversions and Unicode conversions. To configure the server, the database administrator must run the following command:

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

For more information about enabling Unicode conversion in Adaptive Server, see the Adaptive Server documentation on the Sybase Product Manuals Web site at <http://sybooks.sybase.com/as.html>.

7.3.3 Xerces files required for deployment

When you deploy applications or components that use the XML or XHTML Web DataWindow, PBDOM, or the ability to save or import data as XML, you now need to deploy three files: *PBXerces100.dll*, *xerces-c_2_6.dll*, and *xerces-depdom_2_6.dll*. The *xerces-c_2_1_0.dll* file listed in Chapter 41 in Application Techniques and in the online Help for the PowerBuilder Runtime Packager is no longer required. The new files provide enhanced support for rendering special characters.

8. 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 the following Technical Document to learn about changes in PowerBuilder that might affect your application: Migrating PowerBuilder Applications at <http://www.sybase.com/detail/1,6904,1032777,00.html>.

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

9. 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.

10. Other sources of information

Use the Sybase Getting Started CD, the Sybase Technical Library CD and the Technical Library 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 Technical Library CD. It was included with your PowerBuilder 10.0 software. To read or print documents on the Getting Started CD you need Adobe Acrobat Reader (downloadable at no charge from the Adobe Web site, using a link provided on the CD).
- The Technical Library CD contains product manuals and was included with your PowerBuilder 10.0 software. The DynaText reader (included on the Technical Library CD) allows you to access technical information about your product in an easy-to-use format.

Refer to the *Technical Library Installation Guide* in your documentation package for instructions on installing and starting the Technical Library.

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

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

10.1 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 Select Products from the navigation bar on the left.
- 3 Select a product name from the product list and click Go.
- 4 Select the Certification Report filter, specify a time frame, and click Go.
- 5 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 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.

10.2 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.

