

# THE POWERBUILDER® DEVELOPER'S GUIDE TO TECHWAVE

*“The Officially Unofficial Resource for TechWave Sessions and Activities”*



August 4-8 | Mandalay Bay Resort & Casino | Las Vegas, Nevada

## Join us at TechWave 2008 for:

- PowerBuilder 11.5 Launch
- Targeted PowerBuilder Educational Sessions
- Futures: PowerBuilder 12, WPF, and VS Shell
- Technical support with product experts
- Networking opportunities



# POWERBUILDER TECHWAVE GUIDE

## Overview

By now, we have all heard the clichéd phrase – “what happens in Vegas stays in Vegas”. At TechWave 2008, our goal for PowerBuilder developers is exactly the opposite of this overused maxim. In fact, we want to help you, the PowerBuilder developer, learn and obtain as much education as you possibly can and bring this knowledge back to your day-to-day job.

For this year’s annual Sybase user conference, TechWave, the busy bees on the PowerBuilder team have been diligently working on creating some exciting and highly useful educational opportunities, networking sessions, emerging trends discussions, labs, and events—all designed with you, the PowerBuilder developer, in mind.

At TechWave 2008, we have a session list brimming with topics including PowerBuilder 11.5, which will be officially launched at this year’s conference. Plus, in the plenary we will cover the future: PowerBuilder 12, WPF, and integration with the Visual Studio Isolated Shell. We also have sessions covering the latest technologies from RIA, AJAX, and .NET, as well as Code Access Security, and core IDE capabilities such as two-tier applications, distributed applications, Web applications and Smart Clients.

Throughout these four days of education courses and breakout sessions, you will get an insider’s look into Sybase’s PowerBuilder strategy and technologies and get to explore advanced features and best practices for application development using PowerBuilder and the respective PowerBuilder Family of products.

We want to help you make the most of your PowerBuilder investment, so register today for TechWave 2008!

## Why Go

- Targeted training for PowerBuilder
- Free technical support with product experts
- Networking opportunities and events
- One-on-one communication with PowerBuilder engineering and support teams

## When to Go and Hotel

TechWave 2008 is going to be held August 4th through 8th in Las Vegas, Nevada, at the Mandalay Bay, the glimmering ode to gold windows smack in the middle of the desert.

## How to Register and Cost

Visit [www.sybase.com/techwave](http://www.sybase.com/techwave) to register. To speak with a Sybase TechWave 2008 Registration Representative, call toll free **(800) 803-5486**. Customers outside North America call **(781) 251-7875**. Hours are 8:30 a.m. – 5:00 p.m. EDT Monday – Friday.

Make your reservation now at the Mandalay Bay Resort & Casino. Special TechWave conference rates start at \$189 per night plus tax. Visit the General Information section of [www.sybase.com/techwave](http://www.sybase.com/techwave) for details or call Mandalay Bay directly at **(877) 632-7800**.

### 4-Day Pass\*

**Early Registration**                    **\$1,295**  
(Deadline: June 29, 2008)

**Standard Registration**                **\$1,595**  
(Deadline: July 25, 2008)

**Full Registration**                        **\$1,795**  
(July 26, 2008 through onsite registration)

**Sybase Partner Rate**                    **\$995**  
(Through onsite registration)

*\*2-Day passes can be purchased for Tues/Wed sessions*



### Modern Application Development: Plenary Session

#### PowerBuilder's Future: Fresh from the Labs

Not only will we be presenting the enhancements to DataWindow® graphics, database drivers and .NET Target security in PowerBuilder 11.5...straight from the Sybase labs, we'll reveal an early look at the new PowerBuilder 12 IDE (powered by the Visual Studio Isolated Shell), the WPF DataWindow, and how your PowerBuilder WPF runtime applications will look, feel and behave. Come see PowerBuilder being given the ultimate GUI open door.

### Pre-Conference Sessions

Monday, August 4th

#### Moving to PowerBuilder 11

Get hands-on experience with the latest UI changes, language features, .NET Web Services capabilities, database support additions and Application Server deployment options found in PowerBuilder 11.x. You will be exposed to the latest .NET capabilities of PowerBuilder, including the ability to deploy PowerBuilder applications as .NET Web Applications (ASP.Net 2.0), .NET Windows Form applications and Smart Client applications. You will also learn how to create .NET Assemblies from within PowerBuilder and use these Assemblies in a .NET (C#) application. Finally, you will learn how to access members of .NET assemblies (.NET framework classes or your own) from a PowerBuilder application.

#### Performance and Tuning for PowerBuilder: Advanced Tips and Techniques

Learn how to improve your PowerBuilder application performance using proven techniques. This class will explore certain performance improvement techniques for developers writing or migrating to web-enabled applications. You will learn about file management, database technologies, scripting tips, and must-know internal mechanisms of PowerBuilder. Other topics include: Processing File References, Environment and Garbage Collection Functions, Scripting External Functions, Sending Objects the Message, Mail Enabling your Application, Creating Service Classes, Coding Object Instantiation, Improving Script Execution, Profiling your Application, Data Retrieval and Advanced Connectivity, Managing the Transaction, Advanced Embedded SQL and Update Stored Procedures, and much more.

### Education Sessions

Tuesday, August 5th and Wednesday, August 6th

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### Breakout Sessions

Wednesday, August 6th, 4:30 p.m. – 6:00 p.m.

#### Using .NET Assemblies from PowerBuilder

This session demonstrates how to use Visual and Non-Visual Assemblies in PowerBuilder using COM Callable Wrappers (CCWs) and Microsoft's Interop Forms Toolkit. Furthermore, detailed knowledge on how to use non-visual .NET Assemblies from PowerBuilder 11.x conditional code blocks will be covered.



### **PowerScript Language Enhancements for .NET Application Development**

In PowerBuilder 12, the PowerScript language will be a CLS-compliant .NET language enabling the ability to consume and extend CLS-compliant .NET resources. PowerScript will also be delivered in a 4GL manner to maintain its productivity and provide PowerScript's differentiators to other .NET languages, all the while maintaining as much as the original PowerBuilder object model as possible to minimize the learning curve and preserve customers' investment, knowledge, and skill set. These language enhancement features include:

- Define and implement interfaces
- Support unbounded multidimensional array and jag-array
- Consume .NET delegates
- Inheritance from .NET Classes
- Support parameterized constructors and destructor
- Define and consume customer attributes
- Define namespaces
- Consume .NET generic types
- Support user-defined enumerations

### **Best Practices for Deploying PowerBuilder Applications as ASP.NET Web Applications**

This session covers best coding practices to refactor existing client/server application and then deploy them to the Web as ASP.NET Web Forms applications. It will also cover unsupported features, language differences between PowerScript and .NET and discuss the recommended best practices and coding techniques to refactor an existing application for ASP.NET deployment. Finally, Troubleshooting tips for deploying and running PowerBuilder ASP.NET Web Applications will be discussed.

**Thursday, August 7th, 8:30 a.m. – 10:00 a.m.**

### **Preparing Your PowerBuilder Application for .NET WinForm Deployment Step-by-Step**

This session discuss migrating PowerBuilder applications to version 11.x, how to re-factor your application to accommodate unsupported features for Windows Form, and how to manage both of these types of projects. The benefits of deploying to Windows Form will be addressed including the interoperability with .NET classes as well as publishing applications using .NET Smart Client techniques.

### **Using PowerBuilder to Develop Applications for Oracle: Special Considerations**

Why the use of stored procedures/functions is preferable to embedded SQL. How to code Oracle stored procedures/functions and the preferred way to call them from a PowerBuilder client. How to create Oracle stored procedures that can be used to return result sets to a DataWindow. How to use Oracle stored procedures to handle updates from a DataWindow. How to use named notation in Oracle stored procedure/function calls. How to create Oracle objects and use them in Oracle stored procedures. How to use Oracle Roles to implement security and how to implement them from PowerBuilder. How to deal with Oracle password expiration How to configure the Oracle client layer for failover and configure the PowerBuilder client to use it. How to use the Oracle 10g instant client How to use techniques such as binding, statistics and function based indexes to improve performance. The basic concepts involved in using DBHandle to do direct OCI calls. How to write stored procedures in Java and .Net and call them from PowerBuilder.

### **Integrating DataWindows with AJAX**

Remember when you had to walk to school? Now, when you drive a car to work, you wonder how you lived without it. Some things make your life so easy and you adjust so quickly you're not sure how you lived without it. This session shows how to introduce AJAX Technology into a PowerBuilder Web Application in few easy steps. Using PowerBuilder IDE to build components that will be in charge of manipulating the AJAX logic. From there you will see how to build and deploy DataWindows Objects into EA Server and create a Web application that will use Sybase PowerBuilder components and AJAX technology to create a rich Internet application.

**Thursday, August 7th, 10:30 a.m. – 12:00 p.m.**

### **PowerBuilder Charting with Flash**

While Flash and Flex integrate with PowerBuilder and DataWindow technology, not every PowerBuilder developer has the time to invest in going through those learning curves. This session will introduce the attendee to Flash and then go on to review third party Flash charting libraries that give the PowerBuilder developer a jumpstart in charting with vector-based animation. We will then pursue a detailed code review in how to use a specific third party Flash charting library.



### **EAServer 6 Tips and Tricks**

To cover a range of topics that will help the developer and administrator to be more effective in the delivery and management of EAServer-based applications. Scheduled tasks; Service components; Runtime monitoring (historical analysis, spreadsheet integration); Logging and tracing; Configuration tips; Performance tips; Migration tips (from EAServer 5.X); Security tips; Special features (asynchronous methods, restful services).

### **.NET Security for PowerBuilder Applications**

This session will cover: (1) An introduction to CAS (Code Access Security) and its benefits and impact on .NET applications (2) What it looks like from the .NET Framework 2.0 Configuration Manager (3) How to configure CAS in PowerBuilder .NET applications with different security zones, including: Windows Forms, SmartClient, Web Forms. (4) The runtime impact with CAS incorporated and how to handle runtime exceptions in PowerBuilder .NET applications (5) PowerBuilder functionalities mapping with the .NET CAS permission set (6) Side effects and troubleshooting applications at runtime with CAS.

**Thursday, August 7th, 2:15 p.m. – 3:45 p.m.**

### **PowerBuilder 11 .NET Web Forms Deployment— A Customer Case Study**

This session covers how MARACIS Solutions Ltd. uses its data driven service oriented development paradigm and PowerBuilder's .NET Web Forms deployment capability. These two components allowed MARACIS to deploy functionality from its UK National Health Service PowerBuilder client server application to the Web in record time. The solution facilitated the timely sharing of patient information to end users outside the current organization. This session also focuses on the technology and business pressures which led to the development of a data driven architecture, the Web enablement requirements of complex business applications as well as the issues faced in taking existing client server code to the Web.

### **Using Online Tools to Perform Informal Peer Review of PowerBuilder Code**

This session demonstrates how to run informal online peer code reviews and explores the potential advantages over formalized code review. There is also an exploration of the issues that must be addressed in order to expose PowerBuilder source code to online code review tools.

### **Developing .NET Smart Client Applications with EAServer 6.1/PBASP 1.1 and PowerBuilder 11.2**

This session covers the new features that help developers develop .NET WinForm/Smart Client using application server components in a fast and easy manner. The session addresses the interoperability architecture that allows .NET clients to communicate with EAServer and other application servers; how to deploy a PowerBuilder NVO to EAServer or JBoss; how to migrate a PowerBuilder-EAServer application to a .NET WinForm/Smart Client application; how to do end user self-update with the published Smart client application with the IIS Web/Application server.

**Friday, August 8th, 8:30 a.m. – 10:00 a.m.**

### **Optimizing PowerBuilder Performance for the Internet with Apeon**

This session will help PowerBuilder developers learn best practices for building applications that offer high performance over the Internet or a distributed environment. Such best practices can also be applied to existing applications that are being moved to the Internet or distributed environment. Web Services Workshop This session will begin with a primer on Web Services, why they are becoming important in the enterprise and the principles behind them. Then we will discuss how PowerBuilder developers can incorporate Web Services into their applications. Topics include the different options for creating Web Services using PowerBuilder as well as how PowerBuilder applications can consume Web Services.

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### **Implementing a Help Desk System Using PowerBuilder 11, XML and PowerDesigner® StateChart Diagrams**

This session covers how to develop and automate the registry and control process of helpdesk tickets with PowerBuilder, XML, and PowerDesigner. .



Friday, August 8th, 10:30 a.m. – 12:00 p.m.

### The New Runtime-Driven Development Cycle Using Rex with Automatic Source Change

This session address changes in the runtime-driven development cycle and how it has become more precise and better aids collaboration. For example, functional experts can simply submit a log file from wherever they are. LP2-Runtime activity includes using: a.BufferX to manipulate DataWindow/DataStore buffers. b.DWSnapShot to capture the full state of a DataWindow (reproduce a bug, for testing). c.PropertyX to display/change the properties of objects/DWOs. d.ObjectX to display/change the related scripts. e.Layout to move/resize/align individual or multiple objects. These plug- ins access the true state of the application, so their work is more accurate than that based on static, design time analysis. LP3-Enable Source Change processes transactions that can be cancelled/repeated: a.change the value of a property of a control. b.change the value and/or expression of a DWO property. c.change the script of a method (event, function, subroutine). d.create a new ancestor class for existing objects. e.replace system functions with user-defined functions. ESC handles all types of error and prevents import of corrupt objects. The back-up copy (always made) can be restored if required. ESC supports SCC systems.

### Converting a PB 10.5 Client/Server Application to PB 11 WebForms Using .NET Interop and Web services

The objective of this session is to demonstrate to the audience how PoliceSoftware.com performed the conversion of one of PowerBuilder Client/Server applications to PowerBuilder 11 WebForms. We will go into detail concerning the business decision to go Web- based and describe the programming steps taken to get there. We will detail why we at PoliceSoftware.com are dedicated to using Sybase's products and why we will be converting all of our existing Client/Server applications to PowerBuilder 11 WebForms.

### PowerBuilder .NET Web Services with Various Front Ends

This session shows an actual web-based scholarship application created with PowerBuilder Web Services and consumed in an ASP.NET application with DataWindow .NET. The session also covers .NET code in PowerBuilder 11, provides a short introduction to the AJAX technology and shows how to separate JavaScript from the design using a library called Behaviour. We also explore other front-ends for this service including a Flash application, (created with OpenLaszlo or Flex), PowerBuilder 11.2 Webforms and PowerBuilder 11 Windows Forms.

Friday, August 8th, 1:00 p.m. – 2:30 p.m.

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## ADDITIONAL ACTIVITIES AND EVENTS

In addition to the jam-packed agenda of educational offerings and breakout sessions, we have a variety of special PowerBuilder activities going on. The details of some of these activities are still in the works, however we wanted to list some of these activities to give you a flavor of what you can expect.

**PowerBuilder Support Area** – Back by popular demand, we will have special dedicated hours, where you can go get your support questions answered, face to face.

**PowerBuilder 11.5 Launch Party and “PowerBuilder Gear Challenge”** – We’re holding another PowerBuilder Launch Party this year and to make it even more of a blast, there’s a “PowerBuilder Gear Challenge” we’re planning. We want PowerBuilder developers to bring in your oldest piece of PowerBuilder gear and show your PowerBuilder colors. Let’s just say there will be prizes for the oldest PowerBuilder garb we see. There will be bonus points if you model your gear! And yes, PowerSoft (gasp) gear is allowed. Start rummaging your office and closet so you’re ready for the PowerBuilder 11.5 Launch Party and the PowerBuilder Gear Challenge. More details to come.

**PowerBuilder Expert’s Exchange in the Exhibit Hall** – In addition to PowerBuilder booths in the Exhibit Hall, we will have special dedicated space for you to ask technical and support questions face to face. More details to follow.

**PowerBuilder 11.5 Activities** – There will be a variety of activities related to PowerBuilder 11.5 including fun exhibit hall games, PowerBuilder swag and special educational sessions. The closer we get to TechWave, the more we can share.

**PowerBuilder SIG** – Come tell us what you think about WPF at our annual customer feedback event. Date and time to follow.

**ISUG Enhancements Session** – Every year, you have a face to face opportunity to tell PowerBuilder management and engineering what capabilities you’d like to see in the next version of PowerBuilder.



## AGENDA AT A GLANCE

### Monday, August 4

5:00 p.m. – 7:00 p.m. Welcome Reception

### Tuesday, August 5

7:00 a.m. – 6:00 p.m. Registration/Information Center  
8:00 a.m. – 9:30 a.m. Opening Keynote  
9:30 a.m. – 10:00 a.m. Break  
10:00 a.m. – 12:00 p.m. Plenary  
12:00 p.m. – 1:00 p.m. Lunch  
1:00 p.m. – 2:45 p.m. Training  
1:00 p.m. – 7:30 p.m. Tech Support Lab Open  
2:45 p.m. – 3:00 p.m. Break  
3:00 p.m. – 5:30 p.m. Training  
5:30 p.m. – 7:30 p.m. Exhibit Hall Open  
Sponsor Reception

### Wednesday, August 6

7:00 a.m. – 5:30 p.m. Registration/Information Center  
8:00 a.m. – 9:30 a.m. Keynote  
9:30 a.m. – 9:45 a.m. Break  
9:45 a.m. – 12:00 p.m. Training  
9:45 a.m. – 7:30 p.m. Tech Support Lab Open  
12:00 p.m. – 1:30 p.m. Exhibit Hall Lunch  
11:30 a.m. – 4:00 p.m. Exhibit Hall Open  
1:30 p.m. – 3:45 p.m. Training  
3:45 p.m. – 4:00 p.m. Break  
4:00 p.m. – 5:30 p.m. Training  
5:15 p.m. – 7:00 p.m. Exhibit Hall Open

### Thursday, August 7

7:00 a.m. – 3:45 p.m. Registration/Information Center  
8:30 a.m. – 10:00 a.m. Training  
9:00 a.m. – 12:00 p.m. Tech Support Lab Open  
10:00 a.m. – 10:30 a.m. Break  
10:30 a.m. – 12:00 p.m. Training  
12:00 p.m. – 1:00 p.m. Power Lunch  
12:00 p.m. – 4:30 p.m. Exhibit Hall Open  
1:00 p.m. – 2:00 p.m. Training  
1:00 p.m. – 4:15 p.m. Tech Support Lab Open  
2:00 p.m. – 2:15 p.m. Break  
2:15 p.m. – 3:45 p.m. Training  
3:45 p.m. – 4:15 p.m. Expo Break  
4:15 p.m. – 5:45 p.m. ISUG Enhancement Sessions  
6:30 p.m. – 11:00 p.m. Special Event

### Friday, August 8

7:00 a.m. – 2:30 p.m. Registration/Information Center  
8:30 a.m. – 10:00 a.m. Training  
9:00 a.m. – 12:00 p.m. Tech Support Lab Open  
10:00 a.m. – 10:30 a.m. Break  
10:30 a.m. – 12:00 p.m. Training  
12:00 p.m. – 1:00 p.m. Box Lunch  
1:00 p.m. – 2:30 p.m. Training  
2:30 p.m. TechWave Concludes

**Note:** All times are in PDT. This is a preliminary schedule and is subject to change.

