



IBM DB2 Stored Procedure Builder

Highlights

Create stored procedures with “point and click” technology

Leverage more scalable stored procedures

Use SQL Assistant to query for stored procedures

Enable stored procedures for remote source-level debugging

Technical summary

IBM DB2® Stored Procedure Builder provides an easy-to-use development environment for creating, installing and testing Java™ and SQL stored procedures—user-written application programs that run on an IBM DB2 database server. With user-friendly wizards leading you through each of the steps, creating new stored procedures is as simple as “point and click.”

Using DB2 Stored Procedure Builder, you can focus on creating your stored procedure logic, rather than on the details of registering, building and installing these procedures on the server. Designed for flexibility, DB2 Stored Procedure Builder allows you to develop stored procedures on one operating system and install them easily on another server operating system.



Faster to build, faster to market

DB2 Stored Procedure Builder equips you to perform a variety of tasks on existing stored procedures, such as:

- Viewing
- Modifying
- Running and testing
- Copying and pasting stored procedures across connections
- Building, in one step, stored procedures on target databases
- Customizing settings to enable remote debugging of installed procedures.

DB2 Stored Procedure Builder provides a single development environment that supports multiple languages—including Java and SQL procedure language—and the entire DB2 Universal Database™ family of database servers, from the workstation to the IBM S/390® Parallel Enterprise Server™.

Getting started

You can launch DB2 Stored Procedure Builder from the DB2 Program Group or from add-in menus on IBM VisualAge® for Java, Microsoft® Visual C++ and Microsoft Visual Basic. After start-up, the wizards in DB2 Stored Procedure Builder take you through each task, one step at a time.

The first step is to define your project. Simply follow the wizards, which will ask you to provide a project name and decide how you want to connect to the database. You'll also be asked for a logon name and password. Once your project is defined, you're ready to create a new stored procedure or work on an existing one.

Launching a new procedure

The Stored Procedure Builder Project View window gives you a picture of all your existing stored procedures and their connections. This is the window where you can select existing procedures for modification or, using the menu or toolbar command, create a new stored procedure.

Creating a new stored procedure involves selecting the type of Java or SQL, naming the procedure and defining patterns and return parameters. To establish the pattern, you'll need to decide whether you want single or multiple SQL statements and whether you want the tool to return a result set.

Utilizing the SQL Assistant

Next, you'll need to specify a query for your stored procedure. You can enter this query manually or use the SQL Assistant feature in DB2 Stored Procedure Builder. The SQL Assistant helps you:

- Visually construct, select, insert, update or delete statements
- Construct joins between tables to visualize how the tables are related
- Specify conditions, columns and sorting
- Conduct a test execution before completing the task.

Finishing the job

Before creating your new stored procedure, you can optionally modify the host variable parameters that you specified from the SQL Assistant or add new ones using wizards. The last step lets you select whether you want to edit the generated stored procedure or immediately build and install your stored procedure. If you have selected the latter, click Finish and the wizard will execute the build and install of the stored procedure on the target server. If you need to edit the generated stored procedure first, select the Generate Only Radio button and then select the Finish button. An editor will appear in the Project Window and you can use the Build icon to build and install after the editing is complete. If there are any build errors, they will be highlighted in the editor.

The Stored Procedure Builder environment makes it easy to run and test the stored procedure. The environment acts like a client program; when the stored procedure is run, it prompts you for input parameters and shows the output in a results area in the development environment.

Ready to run, test and debug

When you're satisfied with your stored procedure, click on the Run command in the menu to execute it.

DB2 Stored Procedure Builder also allows you to make modifications to enable your stored procedure for remote source-level debugging using the IBM VisualAge for Java Distributed Debugger. You can select the appropriate settings at the Debug Properties window so that a debugger session opens automatically when a user selects a debuggable stored procedure.

Making modifications

Modifying stored procedures is also a snap using DB2 Stored Procedure Builder. The tool's text-sensitive editor with keyword highlighting enables you to make changes easily, including adding custom business logic and calling nested stored procedures. SQL Assistant and Property Editor can be used to build additional query statements or change properties, respectively. Using Property Editor with a Java stored procedure, for example, you can change the mapping of individual program parameters to the underlying SQL data type.

Deploying your stored procedure

To deploy and rebuild the same stored procedure on another database, using the project tree view, copy and paste the procedure into the new database. You can then make additional modifications to the new stored procedure, if desired.

Stored Procedure Builder can run in Microsoft Windows® NT®, Windows 2000, Windows 98, Windows 95, IBM AIX® and Sun™ Solaris™ Operating Environment. The procedures can be deployed in DB2 Universal Database on Windows NT, Windows 2000, Windows 98, Windows 95, IBM OS/2®, AIX, UNIX®, Linux®, Sun Solaris Operating Environment, IBM AS/400® and IBM OS/390®.

Obtaining DB2 Stored Procedure Builder

DB2 Stored Procedure Builder is part of the DB2 Software Developers Kit (SDK) on Windows, which is delivered with all editions of DB2 Universal Database up to and including Version 6 as well as with DB2 Connect™ products on Linux, OS/2, UNIX and Windows.

DB2 Stored Procedure Builder is also included as part of the DB2 Application Development Client package delivered with Version 7 of DB2 Universal Database and DB2 Connect.

DB2 Stored Procedure Builder is one of several features and tools offered by IBM that can enhance your DB2 Universal Database for OS/390 operating environment:

- DB2 Administration Tool for MVS/ESA™
- DB2 Buffer Pool Tool
- DB2 DataPropagator™
- DB2 Management Tools Package, which includes:
 - DB2 Control Center
 - DB2 Estimator
 - DB2 Installer
 - DB2 Stored Procedure Builder
 - DB2 Visual Explain for OS/390
- DB2 Performance Monitor for MVS/ESA
- QMF™ and QMF for Windows.

For more information

Contact your IBM marketing representative or IBM authorized software reseller or visit our Web site at ibm.com/db2.



© Copyright IBM Corporation 2000

IBM Corporation
Silicon Valley Laboratory
555 Bailey Avenue
San Jose, CA 95141

Produced in the United States of America
11-00
All Rights Reserved

AIX, AS/400, DataPropagator, DB2, DB2 Connect, DB2 Universal Database, the e-business logo, IBM, MVS/ESA, OS/2, OS/390, QMF, S/390, S/390 Parallel Enterprise Server and VisualAge are trademarks of International Business Machines Corporation in the United States, other countries or both.

Linux is a registered trademark of Linus Torvalds.

Microsoft, Windows and Windows NT are trademarks of Microsoft Corporation in the United States, other countries or both.

Java, all Java-based trademarks, Solaris and Sun are trademarks of Sun Microsystems, Inc. in the United States, other countries or both.

UNIX is a registered trademark of The Open Group.

Other company, product or service names may be trademarks or service marks of others.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.