

IBM Software Demos

Integrated Data Studio - Develop and Monitor

Part II

DSD and DWS

Having changed the database and existing JDBC code, the next step for the JK team is to add a new web service for partners to submit orders. Data Studio Developer makes it easy to create Web services from database functions and stored procedures, integrating the database as an intelligent service provider in their Service Oriented Architecture environment.

In our example, the Database Developer, Roger, has already used Developer to create, debug, and deploy a stored procedure to process sales orders coming in from the partners. Next, he will create a new web service that will expose two database operations, a stored procedure to process partner sales and a SQL script to cancel partner sales. Assembling the web service requires no programming. Roger simply drags and drops the stored procedure and SQL script onto the web service in the project explorer. Data web services can expose any stored procedure, regardless of the programming language used.

Next, Roger will build the web service and deploy it to their Websphere Community Edition application server where he can test it. The generated web service uses standard REST and SOAP protocols. No code is generated in the build process, because Data Web Services use a common metadata-driven runtime, ensuring a reliable and light weight web application.

By choosing to launch the Web Services Explorer after deployment, Roger can test the web service immediately.

The Navigator allows him to choose which binding and operation he wants to test. For example, choosing the operation that exposes the stored procedure for processing partner sales, Roger enters a partner id and order information that the partner submits in XML format.

To validate that the web service is working correctly, he inspects the PARTNERSALES table and sees the order information that has been inserted.

DSD and pureQuery

Having created a web service to enable partners to submit orders, the JK team now wants to write some new Java code to provide administrative access to the partner sales data. In addition to stored procedures and Data Web Services, Data Studio Developer makes it easy to write Java data access code using pureQuery. The pureQuery Runtime is a high performance java data access platform, focused on simplifying the tasks of developing and managing data access.

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In Data Studio Developer, pureQuery data access code can be generated from tables or views. In our example, JK's application developer, Jason, uses a simple wizard to generate pureQuery code for a partner sales view.

In the wizard he can select an implementation style, select that he wants test code generated, modify how columns in the view are mapped to fields in the generated java bean, and what access methods to generate.

The generated pureQuery code includes a java bean, a data access interface, an implementation for the interface, and an optional test class.

The generated data access interface returns all of the partner orders, but Jason wants to limit the data returned to a specified partner id.

As he types the where clause in the Java editor, Jason begins to see how pureQuery and Data Studio Developer offer seamless editing of Java and SQL together.

He sees SQL Error Checking will flag unrecognized column names and the SQL Content Assist can provide him with the list of available columns.

To test the SQL, he can run it from within the java editor, is prompted for input values, and he can check to see if the results are correct – all without having to compile and run the Java program.

He can select an object name in the SQL and launch the database explorer to inspect its properties. He can even view the access plan for an SQL statement, looking for potential performance issues. All of this integrated into the editor to greatly improve Jason's productivity.

The JK team can now develop the business logic and presentation layer based on the data access layer that has been quickly created with Data Studio Developer and pureQuery.

DSAC

Having deployed the new partner enabled application; the JK team now wants to monitor the health and availability of the supporting databases.

The Data Studio Administration Console is a feature of Data Studio that provides a rich Web interface for entry-level monitoring of DB2 on Linux, UNIX, Windows, and z/OS

Using a web browser, Eric, the DBA, monitors the health status of his development and test databases. He notices that the test database issued a warning within the last 60 minutes. To investigate the issue, he drills down on the alert.

It appears that the problem is related to the transaction log.

The alert details give the text of error message along with in-depth diagnostic information including relevant database configuration parameters, thresholds and current resource utilization.

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In the recommendations, Eric finds troubleshooting advice for how to solve common problem scenarios, including symptoms annotated with current diagnostic information gathered from the database and related online help information.

Eric quickly isolates the root cause and is able to resolve the issue based on the problem resolution suggestions. Having resolved the issue, he removes the alert, returning the current database health status to a normal state.

Conclusion

Now that you have seen how the Data Studio portfolio will improve team productivity and increase the performance and reliability of your data-driven applications, visit us on the web to learn more and download a trial today.