



IBM Software Group

DB2 DataWarehouse Edition

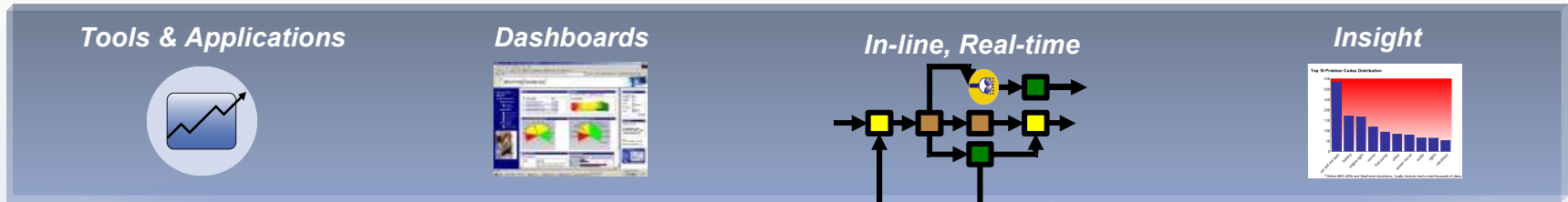
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ON DEMAND BUSINESS™

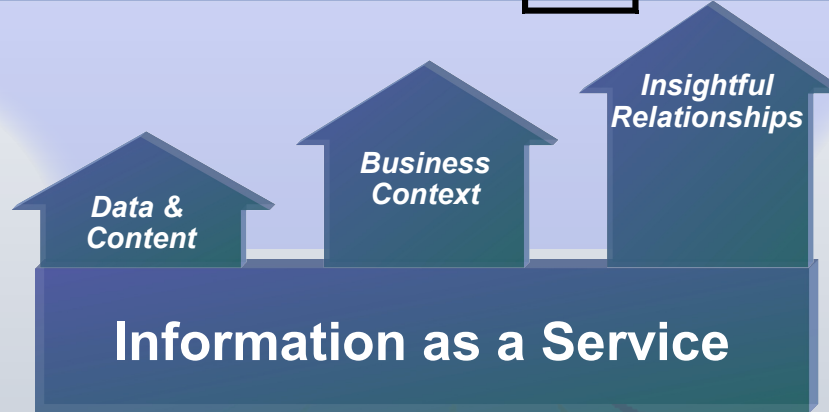
Information as a Service

Moving From a Project-Based to a Flexible Architecture (SOA)



Standards based: e.g., XQuery, JSR170, JDBC, Web Services...

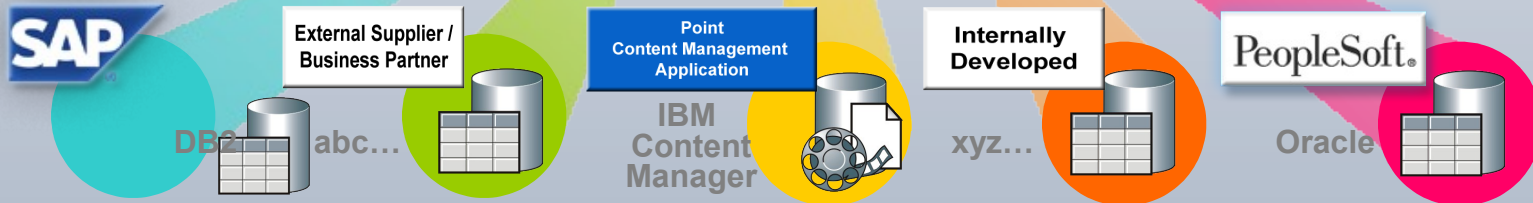
Metadata Management



Real Time : e.g., On Line Help, Synchronized Master Data...

Extracted: e.g. Basel II, Business Optimization...

Heterogeneous Applications & Information



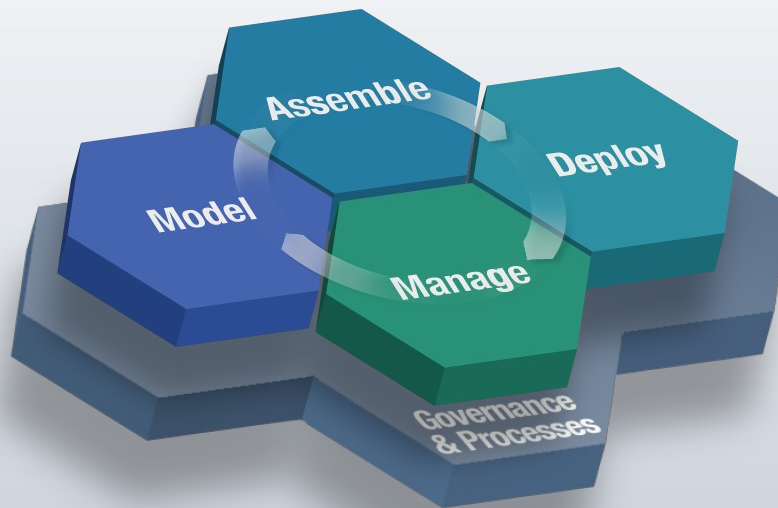
and more...



IBM Information Management Software

Delivering Value Beyond Traditional Repositories

*Information Delivered on Demand
Based on Services Oriented Architecture*



- **Data Services**
 - ▶ DB2, IDS, IMS, Cloudscape, U2
- **Content Services**
 - ▶ Content Management Services
 - ▶ Content Integration Services
- **Information Integration Services**
 - ▶ Federation Services
 - ▶ Movement Services
 - ▶ Transformation Services
 - ▶ Quality Services...
- **Information Accelerators**
 - ▶ Master Data Management
 - ▶ Entity Analytics
 - ▶ Information Warehousing
 - ▶ Customizable Dashboards
 - ▶ Industry Data Models

What Is DB2 Data Warehouse Edition?

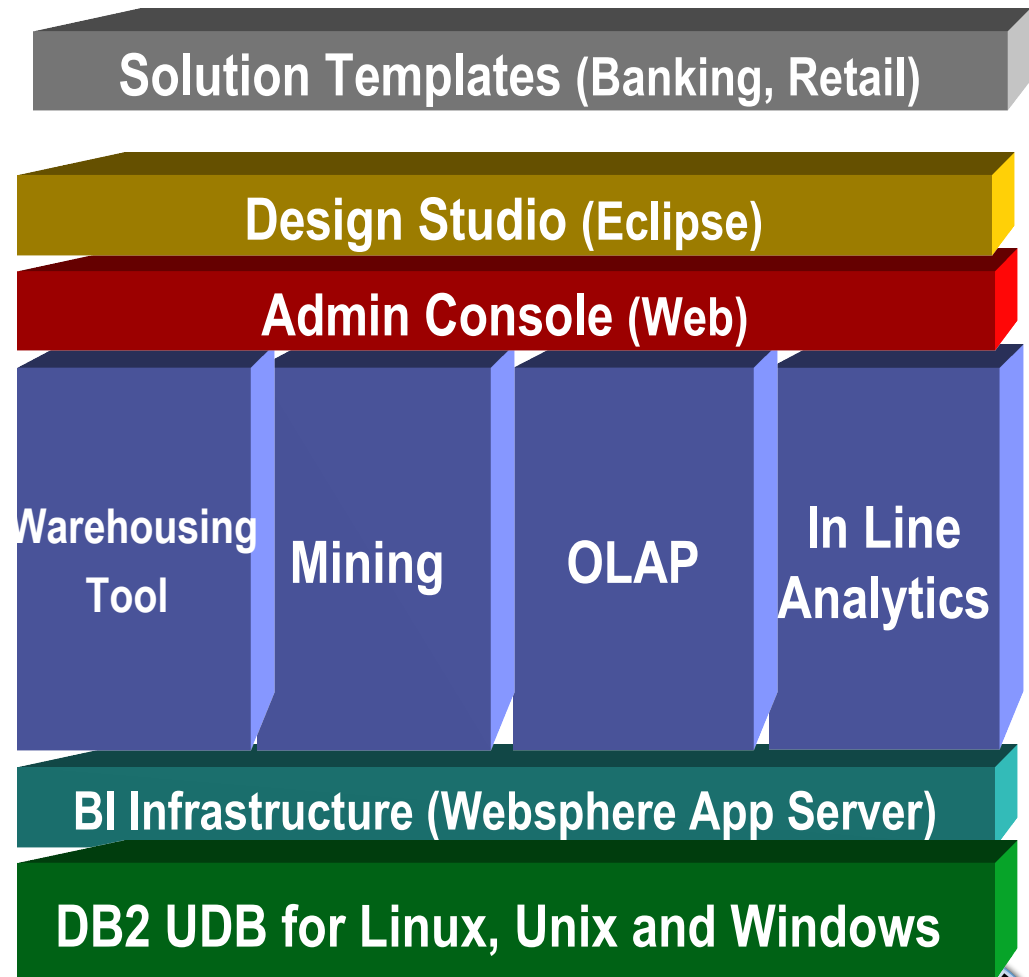


- An integrated platform for DB2 warehouse-based analytics
 - All the infrastructure and tools to build analytic structures for data mining and OLAP in the warehouse -- and to develop web-based applications with embedded analytics
 - A vehicle to remove cost and complexity as barriers to enterprise analytics
 - The foundation for Information On Demand



DWE v9 Conceptual Architecture

- Integrated platform for warehouse-based analytics
- Componentized architecture
- Shared Tooling & Metadata
- Shared Run-time Infrastructure
- Web-based embedded analytics
- Integrated Data Modeling, OLAP, Data Mining, Warehousing Tool



Shared Eclipse-based BI Design Studio

Data Warehouse Project

Control Flow

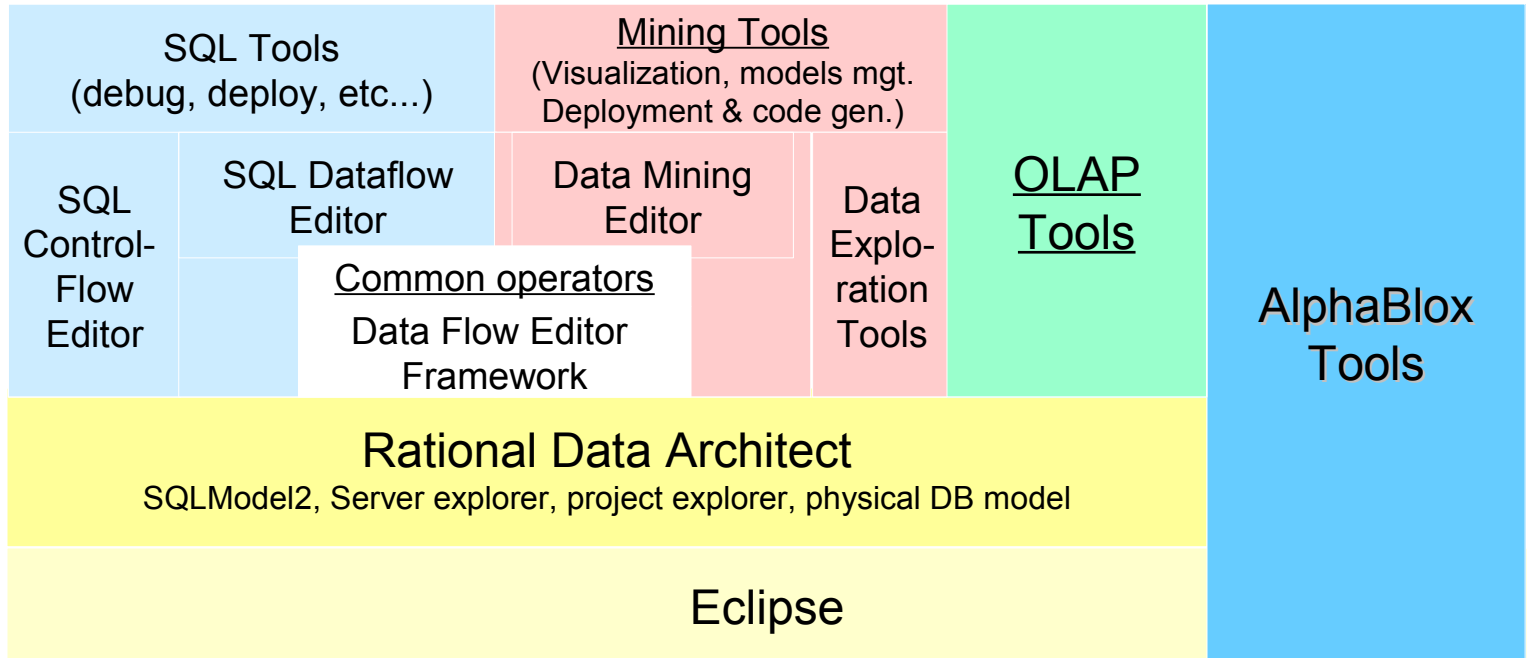
SQL Generated From Data Flow

Enterprise Schema

Data Flow



DWE Design Studio - Overview



Rational Data Architect functions in DWE

Discover, model, visualize, relate, and develop diverse and distributed data assets with one tool

Eclipse based framework, common models for integration across the lifecycle

DWE includes RDA plug-ins for physical data modeling

Reverse engineer
Navigation
Discovery
Visualization

Lifecycle management
Compare and Sync
Impact Analysis

Rational Data Architect



Data Admin



Developer

Physical Design
Rules and Model Validation

Edit
Execute
Debug
Deploy
Team Integration



DWE Administration Console

- Customer Needs
 - ▶ Integrated web based administration for all warehousing functions
- Value Proposition
 - ▶ Single point of administration to reduce Warehousing TCO
- Brand new in DWE 9.1
 - ▶ Admin Console for RDA-based data modeling, SQL Warehousing, OLAP, data mining
 - ▶ Role based security
 - ▶ Leverage WebSphere Application Server

Process Instances

List of process instances
Showing 23 out of 23 rows

Refresh

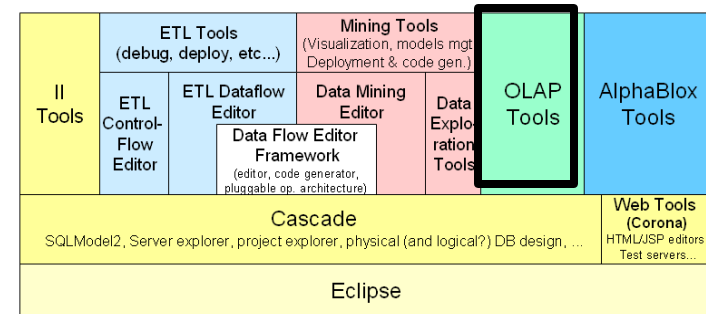
Hide Filter Clear Filter Process Name = Go

Monitor Manage Failures Suspend Resume Stop View Statistics

Select	Instance Name	State	Time Finished	Process Name	Application	Description
<input type="checkbox"/>	testPool11	Finished	Tue, Sep 20 2005 14:51:43 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	actStore111	Finished	Tue, Sep 20 2005 12:15:09 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	testnew11	Finished	Tue, Sep 20 2005 10:34:26 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	test112	Finished	Sun, Sep 18 2005 01:13:10 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	simple21127020705422	Finished	Sun, Sep 18 2005 00:18:27 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	simple21127020405453	Finished	Sun, Sep 18 2005 00:13:27 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	simple21127020105391	Finished	Sun, Sep 18 2005 00:08:28 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	simple21127019805625	Finished	Sun, Sep 18 2005 00:03:29 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	simple21126995000281	Finished	Sat, Sep 17 2005 17:10:03 CDT	simple2	sept02_sept02sbp	
<input type="checkbox"/>	simple21126994820344	Finished	Sat, Sep 17 2005 17:07:03 CDT	simple2	sept02_sept02sbp	

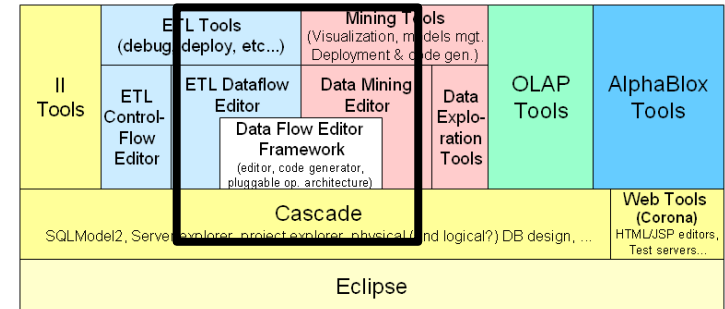
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OLAP in DWE Design Studio



- Design Studio
 - ▶ Model and design cube views and MQTs – all of the function currently in OLAP Center
 - ▶ SQW data flows populate user-maintained MQTs or underlying star
- Server explorer:
 - ▶ Show multidimensional objects in CV catalog tables
- Project explorer
 - ▶ Define CV objects and forward engineer (create DDL script which loads CV XML metadata into CV catalog tables)

Data Mining in DWE Design Studio



- The Data Mining editor extends the common DataFlow framework to design and interactively test visual mining flows
 - ▶ Mining specific operators to build/test/use mining models
 - ▶ Highly interactive with the warehouse
 - ▶ Can generate SQL, java beans, data flows
- A subset of the mining operators can be embedded in the SQL Warehousing Tool editor as well
- Data exploration tools based on the mining tools, to display the statistics and distribution of the data

Seamless integration of data modeling, SQL, mining in a common Data Warehouse project

Data exploration components give you an overview on the content and quality of your data.

DWE Design Studio Mining Editor

from Design



Interactive flow editor: Stepwise execution All SQL operators can be reused in the mining context

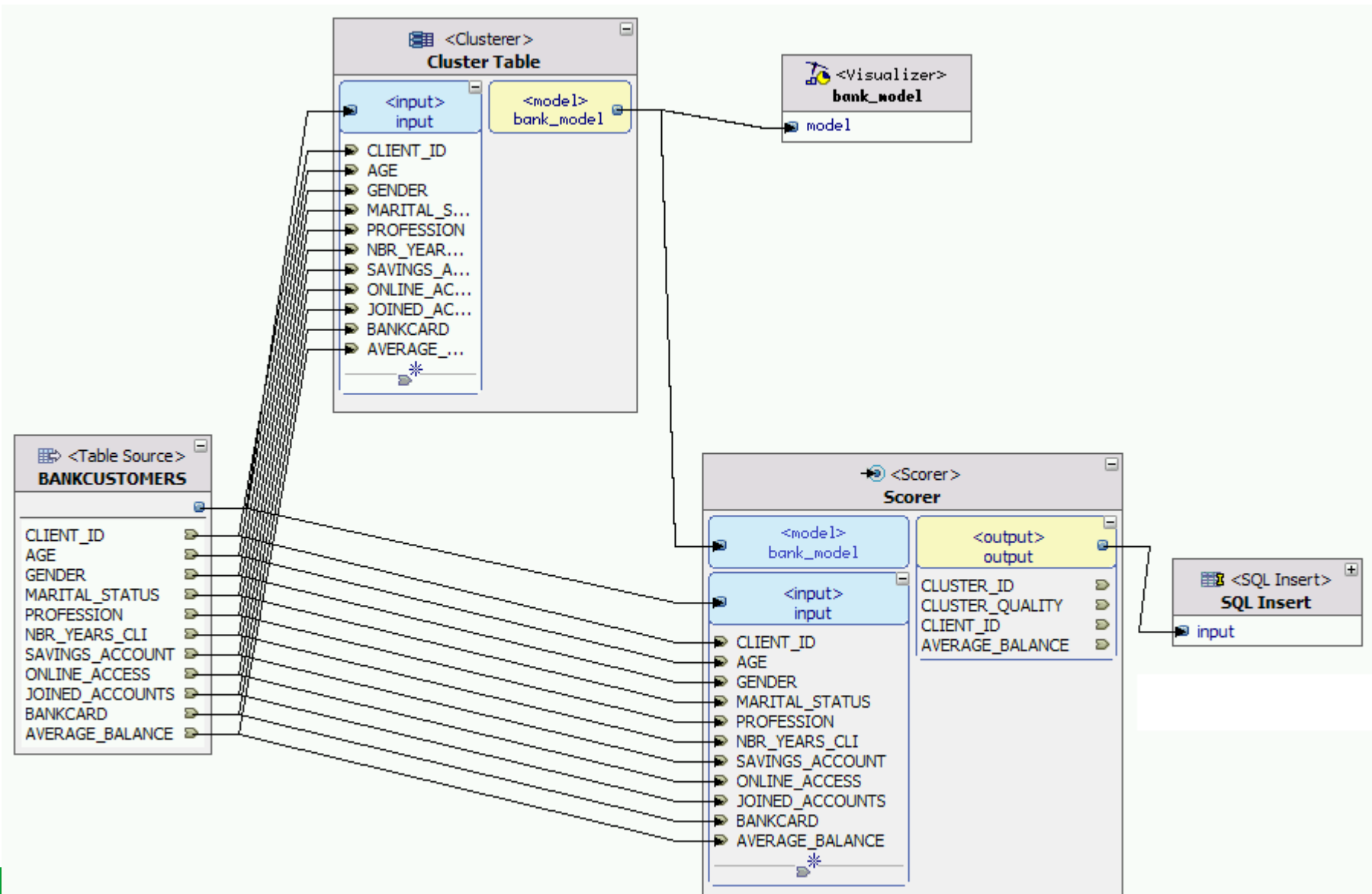
to embedded applications



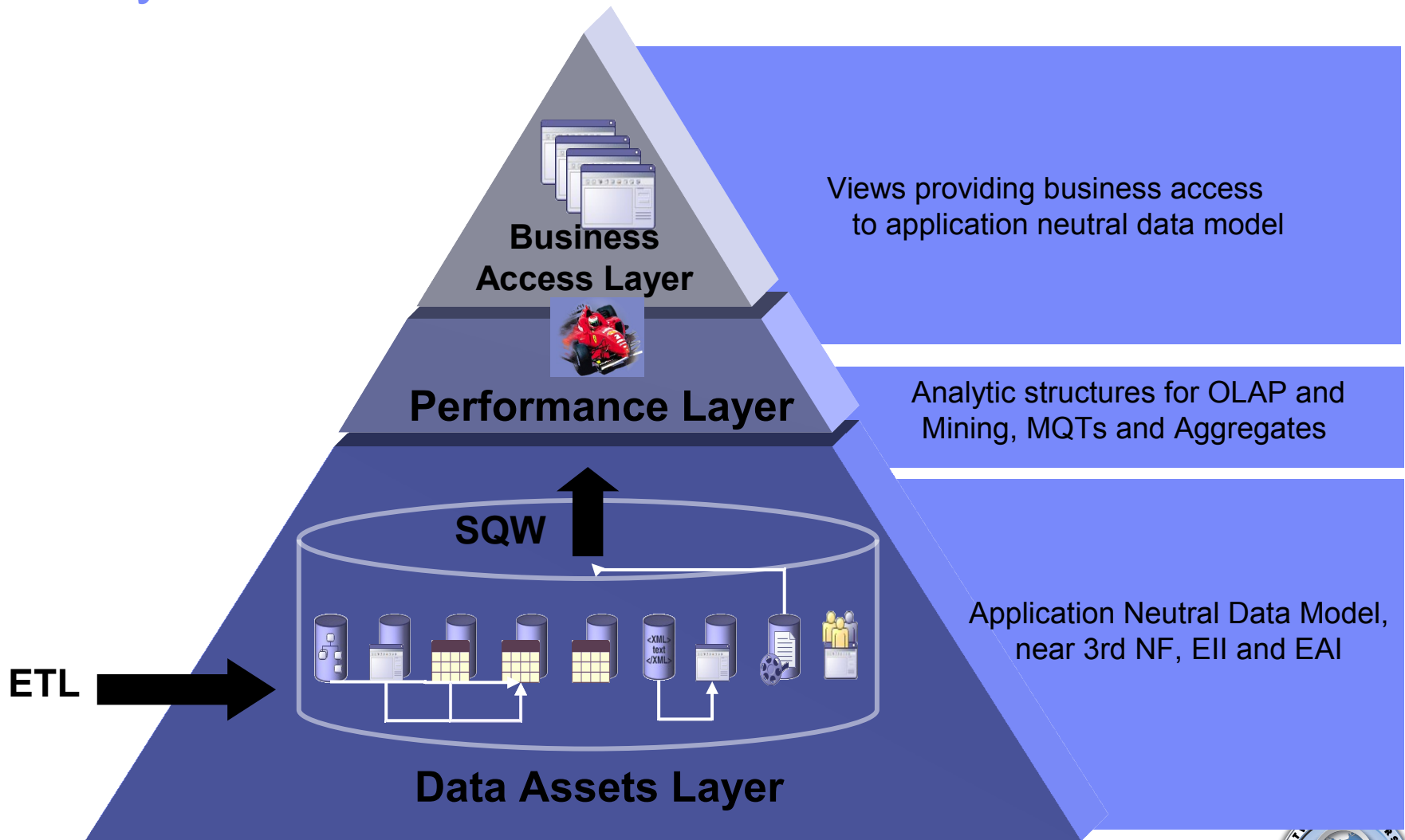
The screenshot displays the IBM DWE Design Studio Mining Editor interface. On the left, a 'Database Explorer' shows a project structure with tables like 'HEART'. The central 'Flow Editor' shows a process flow: 'HEART' (Table Source) -> 'Random Splitter_02' -> 'Predictor_04' and 'Tester_09' (both model components) -> 'Visualizer_01'. On the right, a 'Table statistics' window shows a table with columns: Field name, Data type, and Nulls. Below this, three histograms are shown for 'AGE', 'BLOOD_PRESSURE', and 'CHOLESTEROL'. At the bottom right, a 'Clustering Visualizer' window displays a grid of charts for 'Customer Segmentation - Car Insurance Attrition'. The grid includes pie charts for cluster sizes and various bar charts for metrics like 'AVG_CONTACTS_PER_CUST', 'AGENT_AGE', 'AGENT_TOTAL_PREMIUMS', 'AGENT_CAREER', 'AGENT_ANNUAL_SALES', 'MULTIPLE_VEHICLES', 'AGENT_TENURE', 'NEW_POLICIES_SOLD', and 'COVERAGE_COMBO'. A 'Cluster size' bar at the bottom shows percentages from 3.33% to 32.33%.



Mining Scenario: prep, model, extract, visualize and score



IBM Layered Data Architecture



Warehouse Building with DWE

- Warehouse Administrators can:
 1. Use visual modeling tool to optimize design of multi-layered warehouse schema
 2. Use their preferred ETL to bulk-load the Data Assets layer of warehouse -- with scale, speed and rich transformations from myriad enterprise data sources
 3. Use SQW to maintain analytic structures in the Performance and Business Access layers – or to replace hand-coded SQL flows anywhere inside the warehouse

**Rational
Data Architect**

**DataStage
or ISV ETL**

**SQL
Warehousing
Tool**

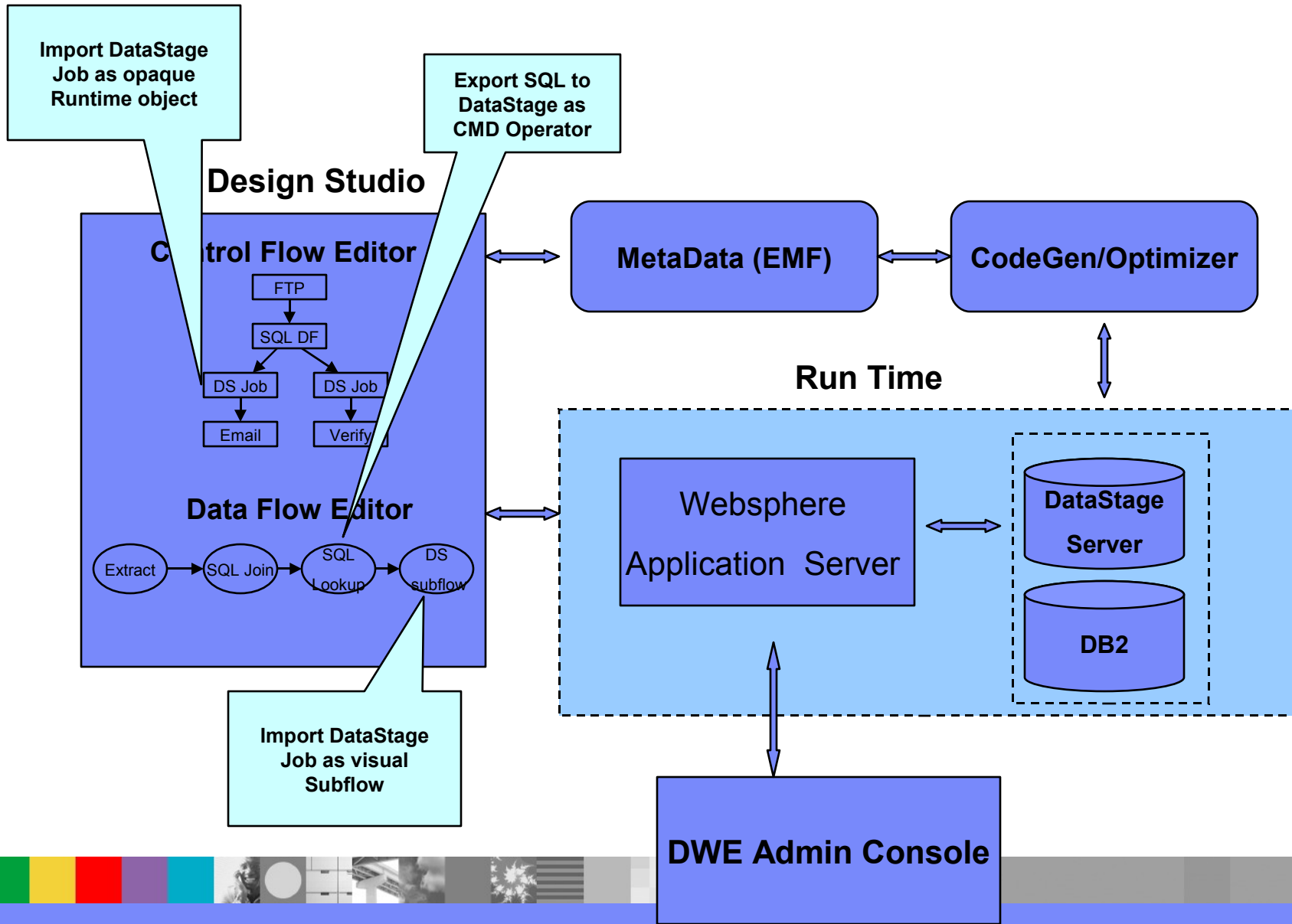


DWE Design Studio – SQL Warehousing Tool

The screenshot shows the IBM Data Warehouse Design Studio interface within the Eclipse Platform. The main workspace displays a data flow diagram with several operators: a 'Table Join' operator, a 'Dedup' operator, and a 'Look Up' operator. A 'SQL Operator palette' is visible on the right side of the workspace. The left sidebar shows a 'Design Project' tree with folders like 'data design', 'Phoenix1', and 'europa_sample'. Below the workspace, the 'Properties' view is open for the 'Dedup_010' operator, showing fields for 'Label' (Dedup_010) and 'Description'. A 'Production server view' is also visible in the bottom left corner. The bottom status bar includes tabs for 'Tasks', 'Problems', 'Model Report', 'Data Output', 'Bookmarks', 'Error Messages', 'Console', 'DataStage Servers', and 'Job Status'. A 'Connect to DataStage Server' button is located in the bottom right area of the interface.



DWE with DataStage: Integration points



DB2 Alphablox

For end-users:

- A web application, portal or dashboard with embedded analytics in an easy-to-use interactive interface

For application developers:

- A J2EE application for analysis-oriented interaction
- A set of analytic-focused extensions to the application server

Alphablox within DWE:

- New v8.4
- SQL generated by DWE Design Studio can be pasted into Alphablox pages for warehouse-based embedded analytics

AlphaFinancial - DEMO - Microsoft Internet Explorer
 Address: http://db2pot:9080/AlphaFinancial2/start.jsp

alphafinancial

Welcome Betty!

- Home
- Branch View
 - Financials
 - Income Statement
 - Metrics
 - New Accounts
 - New Deposits
 - Ranking
 - Budget
 - Adjust Budget

To Do

ID	Description	Due
1	Process NSF Items	8/23/04
2	Check Deposits	8/23/04
3	Check New Accounts	8/23/04
4	Review Budget FY2005	8/30/04
5	Review Ranking Performance	8/23/04

Ranking
Last Month's Rank: 3 [Ranking Report](#)

Current Rank: 3

Net New Accounts (Qtr 3)

Net New Deposits (Qtr 3)

Bulletin Board
New Comment: No data

Goal Tracking
All Time Periods: 10-04

All Product Types	Actual	Goal
CD	~4	~5
Checking	~12	~16
IRA	~4	~18
Savings	~6	~11

User Details
 Country: US
 Region: West
 State: CA
 City: San Francisco
 Branch: 012
 User: Branch, Betty A
[Logout](#)

AF News
 10:08am EST
 AF Appts Jonathan Smith as Head of Euro Interest Rate Products
 NEW! You have 12 NSF items for review. [Go...](#)



Summary and Wrap Up

Questions?

