

DB2 OLAP 8.1 for iSeries Analytical and Reporting Solutions Update

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DB2 OLAP Server V8.1 Enhancements

- Hybrid Analysis
 - Transparent access to relational data with the performance of DB2 OLAP
 - Requires Essbase Integration Services
- Parallel Calc / Parallel Kernel
 - ► Parallel load/export continue to be enhanced
 - Faster load / calc / export for machines with multiple processors
 - Overall performance improvements
- OLAP Integration Services
 - Builds cubes from relational data sources mapped to OLAP hierarchies
- OLAP Miner
 - ► End user tool to discover unknown trends and opportunities





DB2 OLAP Server V8.1 Enhancements

- Warehouse Builder
 - Assists in moving enterprise data to the iSeries by transforming and simplifying online transaction data
- Intelligent Sparse Reporting (ISR)
 - Enables faster query/retrieval processing
- MaxL 6.5 Support
- Substition Variables in SQL
 - &var in SQL similar to use in calc and report scripts
- Analyzer
 - improved GUI for end users rewritten in Java
 - manage from anywhere in the enterprise





OLAP Integration Services

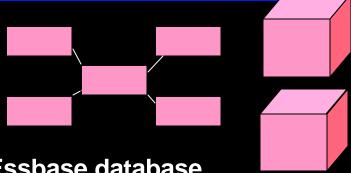
- The link between your relational DB2/400 data and multidimensional data
 - ► Access DB2/400 Data via SQLCLI
 - ► XML Import/Export via DB2 Native JDBC Driver
- Powerful, graphical user interface and metadata
 - Define re-usable models and structures for building multidimensional databases
- Define SQL Drill Through reports
- Define Hybrid Analysis
 - Metadata catalog used by DB2 OLAP Server to access the relational database
- Licensing
 - Chargeable option
 - ► Enabled as an option to DB2 OLAP Server





Components of OLAP Integration Services

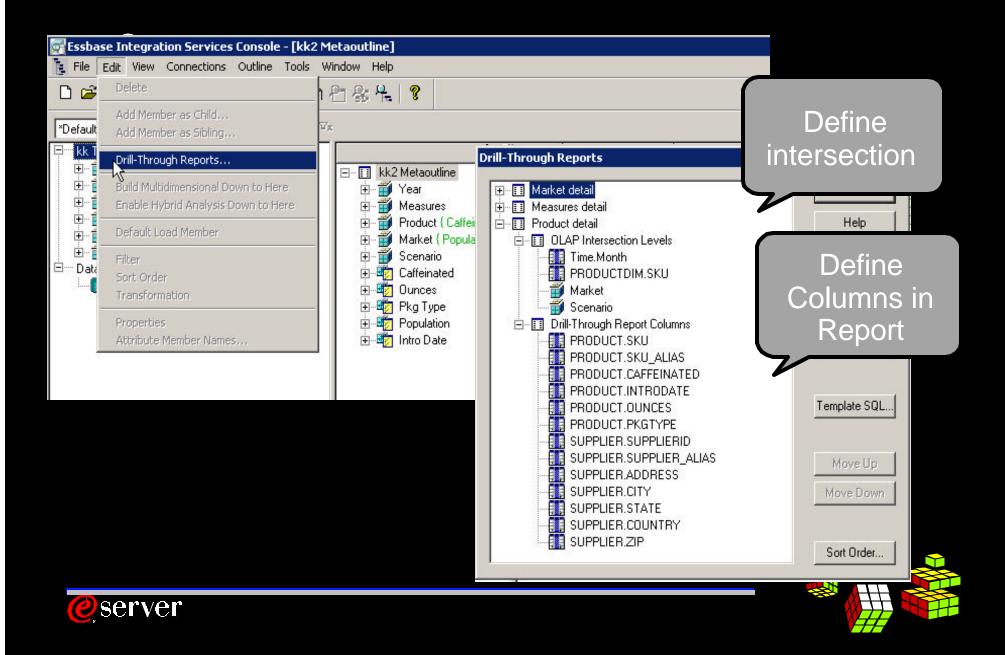
- Model
 - ► Logical dimension schema
- Metaoutline
 - ► Mapping the dimensional schema to an Essbase database
 - Model and metaoutline are combined to generate load rules
 - Member load and data load
- OIS catalog
 - Metadata repository
 - Object reusability
 - **▶** Drill-through reports
- SQL Drill Through and Hybrid Analysis



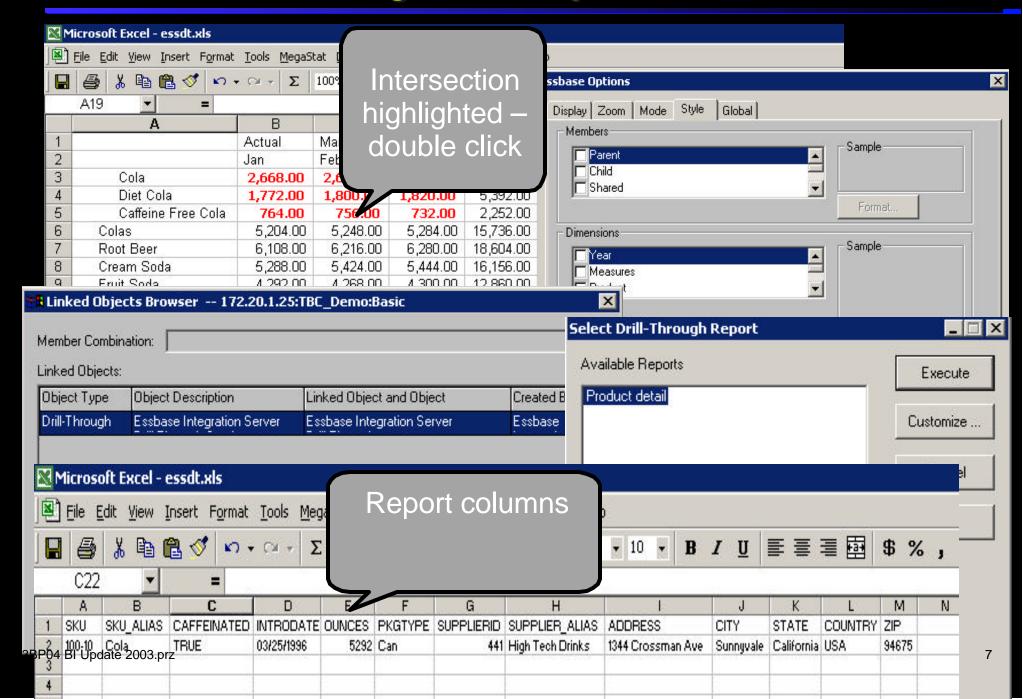




SQL Drill Through Example



SQL Drill Through Example



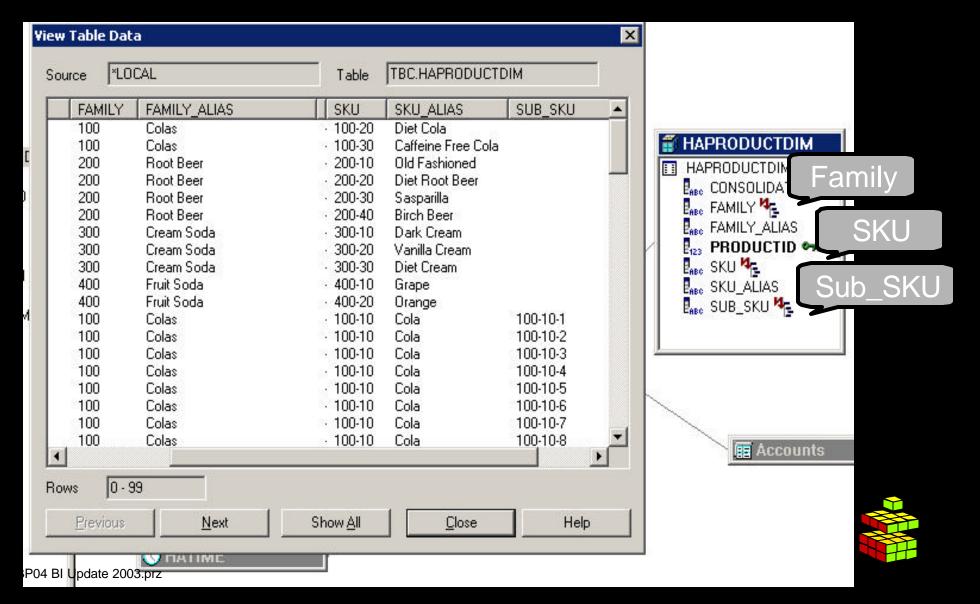
Hybrid Analysis

- HOLAP Solution Implementation
- Provide Access to
 - ► Multi-dimensional data
 - ► DB2/400 Relational data
- logical cube defined to have a lower detailed portion reside in the relational database
- "cells" retrieved from relational database as if they physically reside in cube storage
- requires OLAP Integration Server feature of DB2 OLAP
- Use OIS (EIS) to create the DB2 OLAP application
- Modify ESSBASE/CFG MBR(ESSBASE)
 - ► HAENABLE TRUE
- Enable Spreadsheet option or modify Query Script

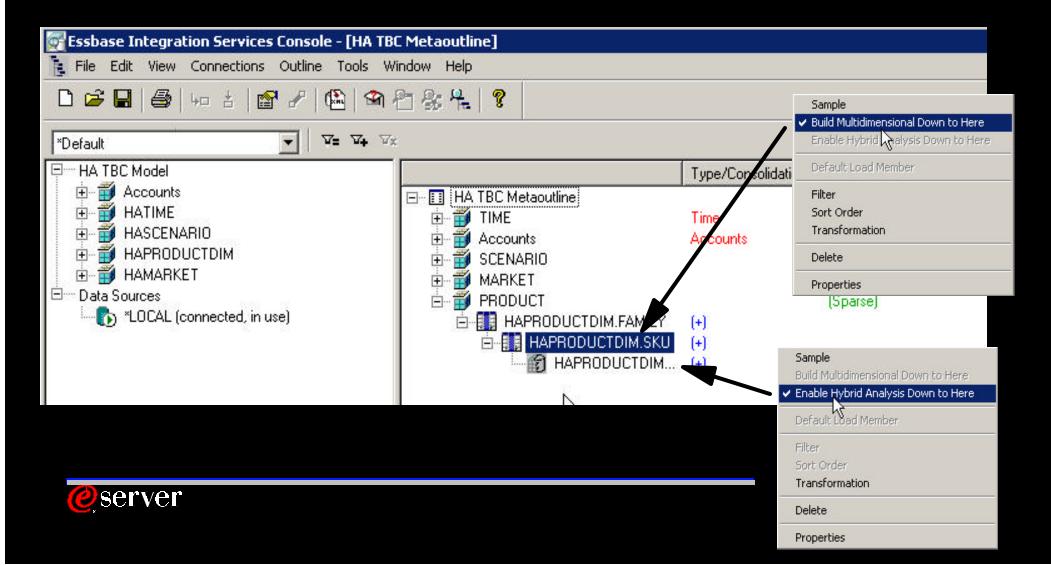




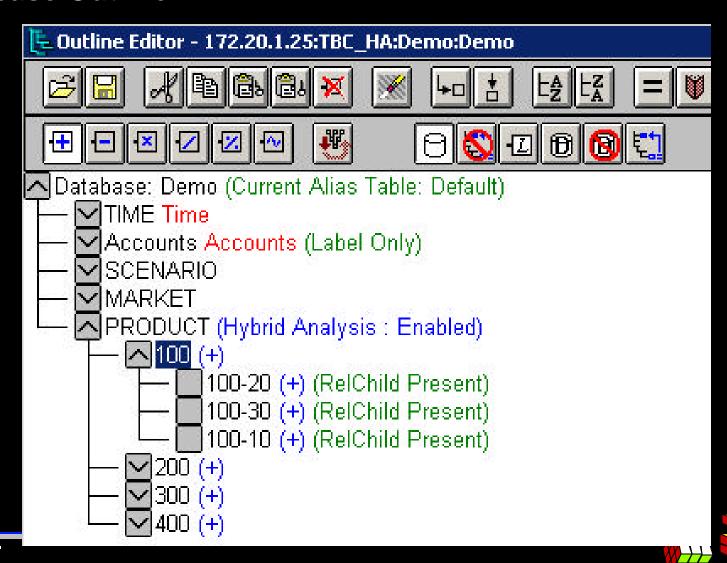
Relational table – Products



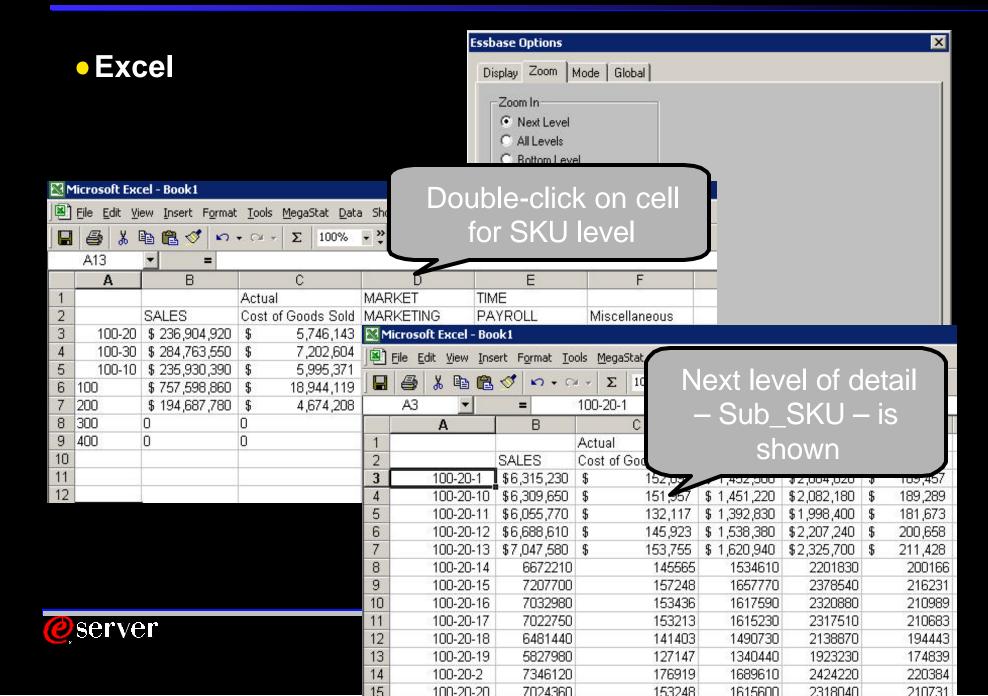
 MetaOutline – determine what goes in multidimensional cube and what stays relational



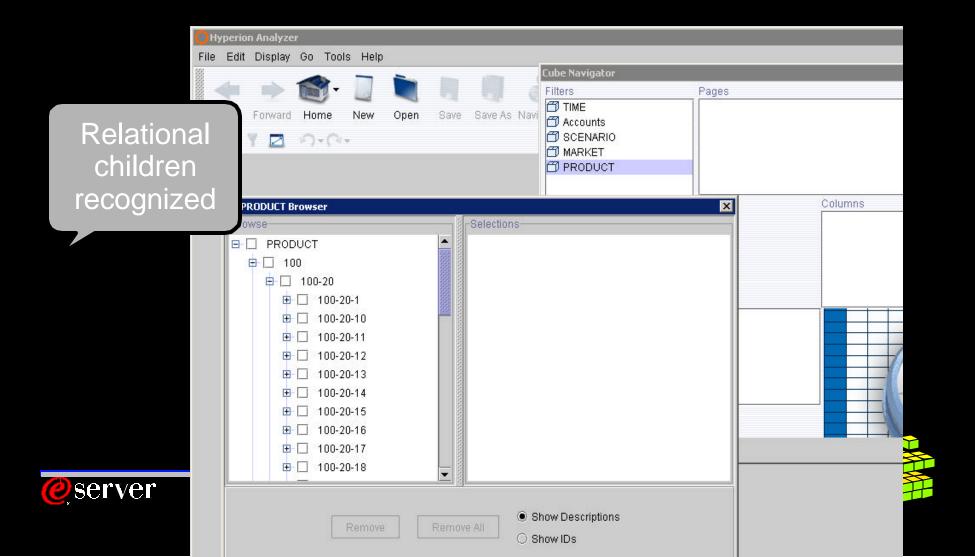
Essbase Outline







Analyzer



SQL Drill Through vs. Hybrid Analysis

- SQL Drill Through
 - Access to relational reports
 - More detail, often textual address, names, product descriptions....
 - End user clicks on link to execute
 - Reports and cube intersections defined in EIS

- Hybrid Analysis
 - Relational children of multidimensional database – not stored in cube
 - Same types of information that you would store in cube
 - ► Transparent to end user
 - Defined in meta-outline in EIS





Parallelism

- Automatic subdivision of tasks for parallelization
 - Load
 - number of processing threads specified
 - -allocated across processors on different CPUs
 - Calculation
 - -analyzes all the tasks for a calculation pass and breaks them down into sub-tasks
 - sub-tasks that can run independently of each other are scheduled to run simultaneously on separate CPUs
- Parallelism controlled by DB2 OLAP via essbase config file not OS/400 SMP feature
- Value -- reduce batch window for building cubes





OLAP Miner for Deviation Discovery

- Business uses
 - discover unusual customer behavior patterns and financial trends
 - present most interesting anomalies from sales, financial or customer segment data
 - ► automatically identify extreme values in the data
- Strengths
 - out of the box analytics for business user
 - accelerates decision making by quickly identifying anomalies that can result in unique opportunities
 - discover new information
 - combines powerful IBM data mining capabilities with OLAP technologies
- IBM exclusive
- Separate installation
- Support mining of cubes on iSeries, NT/2000, AIX, HP-UX, Sun
- Runs on client not iSeries server





IBM Analyzer V8.2

- Rewritten in Java
- Thin HTML access to interactive reports
- Functions available in Java clients now identical to Windows client
 - Administration include user definitions and security
 - Development
 - Forms and pinboard
- Support for Hybrid Analysis, SQL Drill Through and Linked Reporting Objects
- Repository cannot be stored on iSeries
- Cannot define JDBC driver for relational connection to DB2/400
 - ▶ Relational access defined through OIS supports DB2/400
 - Relational access defined through Analyzer doesn't support DB2/400



SPSS Strategy Analyzer 6.2

- No requirements for NT
- Improved relational integration
 - ▶ Repository on DB2/400
 - ► Relational Connect to DB2/400
- Strategy Model Support
- No HTML client
- No Windows client (java client for browser only)
- Support for Hybrid Analysis, SQL Drill Through and Linked Reporting Objects
 - In addition to relational connection and drill through
- GA April 2003





Miscellaneous

- Where to get information on new enhancements
 - ► Chapter 1: What's New in the "Installation Guide for iSeries" contains detailed information on the V8.1 enhancements
- iSeries client cannot coexist with the workstation client
- Enterprise Services is not available on iSeries
 - customer study doesn't indicate any current requirements
- Administration Services Server not available on iSeries
 - ▶ iSeries can be accessed from a workstation running EAS
 - testing not yet complete in lab
 - Migration of Applications
 - Migrate applications, databases, users ... across platforms
 - Data not migrated
- Windows scheduling via OIS doesn't currently work with iSeries
 - will be addressed in a later fixpack
- OLAP Builder cannot initiate an OIS data load





Resources

- Level 1 support handled by IBM
- Levels 2 and 3 handled by SPSS
- Presales Technical Support
 - ► Americas ATS Solutions Center, iSeries Solutions (BISC)
- Websites
 - http://d25web1.torolab.ibm.com/db2info/dminflib.nsf/dm/olap400
 - ▶ibm.com/software/data/db2/db2olap
- Software download (Internal)
 - w3.lotus.com/knac, then click Software Downloads from the left-hand pane
- Presentation and audio file
 - ► Available on the DM Education Website

//w3.stl.ibm.com/l2edu/productTraining/products_BI/OLAPiSeries/OLAPiSeries.html





Appendix





Enterprise Administration Services

- Server not currently available on iSeries
- New framework for managing and maintaining multiple OLAP Servers
- Components
 - -client console
 - graphical user interface
 - -single point of access for viewing, managing, and maintaining OLAP Servers and the Administration Server
 - incorporates much of the functionality of the Application
 Manager and other administration tools, such as MaxL
 - middle tier server -- communicate directly with OLAP Servers
- Will eventually replace Application Manager





Integrated Sparse Reporting (ISR)

- Faster Query Processing
- Reports containing commands like ALLSIBLINGS, ALLINSAMEDIM, CHILDREN, DESCENDANTS, DIMBOTTOM, ONSAMELEVELAS
- Large amount of data with #Missing





MaxL 6.5

- Server Component as well as client component
- OS/400 commands
 - **ESSMSH**
 - ► RUNMAXLSTM
- More of an industry standard than ESSCMD



