ORACLE TEST DATA MANAGEMENT PACK

ORACLE'S ROBUST, INTEGRATED
DATA SUBSETTING SOLUTION FOR
ENTERPRISES

The advent of new data center technologies such as virtualization and cloud computing has created an explosion of growth in application data – not just in production databases but also in associated test, development and other non-production databases. Oracle Test Data Management Pack helps enterprises shrink storage costs by creating reduced size copies of production data for application development, training and testing while maintaining the referential integrity of the data set. Through data discovery and application modeling, Oracle Test Data Management Pack automatically enforces complex business rules of enterprise applications resulting in accurate subsets of production data.

KEY FEATURES

- Automatically discover data relationships

- Reduce size of database while securing sensitive, regulated data

- Pre-execution analysis and estimation

- Low storage overhead execution using Oracle Data Pump

- Oracle Database Gateways to support heterogeneous data subsetting

KEY BENEFITS

- Reduce application storage costs dramatically through data subsetting

- Increase developer productivity through right-sized production copies

- Sensitive data never leaves production with in-line Masking and Subsetting

- Eliminate labor-intensive error-prone manual process to create test systems by automating application discovery, data relationship modeling, dynamic subset rules and parameter-driven execution

RELATED PRODUCTS

Oracle Test Data Management Pack delivers maximum benefits when use with the following Oracle Products

- Oracle Data Masking Pack

- Oracle Real Application Testing

- Oracle Diagnostics Pack

- Oracle Tuning Pack

- Oracle Lifecycle Management Pack

Challenges of Test Data Management

With the growth in the number of database applications, enterprises are faced with the challenge of provisioning non-production environments for application development and testing purposes. They cannot afford to incur the storage expenses of provisioning the same production data in their non-production databases, nor do they have the tools or the application knowledge to shrink production data to a right-sized development environment. Faced with these challenges, organizations end up incurring high storage costs or end up reducing the productivity of their application development and testing staff by manually creating improper data sets that ultimately impact production application quality.

Data Discovery and Modeling Enterprise Applications

Creating referentially intact data subsets of production data for modern enterprise applications is a daunting task to any organization even with highly skilled DBAs. These enterprise applications are incredibly complex spanning multiple schemas containing thousands of tables governed by myriad of business rules. The reason for the difficulty lies in the large and often complex data models that govern the relationships between the columns of the tables that sometimes span across different schemas. Oracle Test Data Management Pack automatically discovers these relationships and can store them within an entity called Application Data Model. The pack also ships with pre-defined drivers to capture the data relationships for Oracle Applications such as Oracle Fusion Applications, Oracle eBusiness Suite Applications directly from the application meta-data tables. What was a monumental task requiring DBAs to sift through the application code or meta-data to uncover these relationships can now be accomplished in minutes.

As a part of the discovery process, the Application Data Model also captures key table attributes, such as table types. Table type information can help guide the subsetting process by indicating which ones are candidates for subsetting. For example, transaction tables usually contain a large amount of data, which therefore make it an ideal candidate for data subsetting. A lookup or reference data table is usually small and therefore may be included in its entirety without requiring subset operations.

Subset Criteria and Definition

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Once an Application Data Model is defined, an administrator can define different types of subset operations. For example, subsets may be time-based, e.g., extracting one fiscal year out of all the fiscal year data, or other dimensions, such as geographical region or product lines, or alternatively they may be derived by application, e.g. extract General Ledger data from an ERP application suite.

Once the subset criteria are defined, Oracle Test Data Management Pack then automatically creates the data extraction rules across all the tables based on the relationships maintained in the Application Data Model. For example, if the subset criterion is for a particular fiscal quarter, Oracle Test Data Management Pack identifies the relevant tables and creates the specific extraction rules such as order for a fiscal quarter from order entry tables, associated lines from the order line tables and associated shipments from the order shipment tables. If needed, administrators can augment these with additional criteria using SQL WHERE clauses.

Subset Estimation and Execution

Given the limited storage available to application developers, IT administrators face the problem of having identify the subset criteria in advance that would result in a database that would fit within the storage constraints of a developer's system. Oracle Test Data Management allows the administrator to define the subset criteria as a parameter without having to specify the exact value. Then, the administrator use the subset estimation function to determine the expected size of the test database for different values of the subset parameters before executing the subset process. In addition, the subset criteria also support a percentage based database creation process by which a defined percentage of the data is randomly sampled and extracted to create the test database.

Oracle Test Data Management provides multiple options for creating test databases from production. In the subset at-source option, Oracle Test Data Management uses an innovative approach to create a portable Oracle Data Pump file containing the reduced size dataset directly from production without requiring a production copy. Now, this file can be transported into any test database and imported to create the test database, thus saving storage costs significantly. In the clone-and-subset option, IT administrators can use the database cloning facility in Oracle Enterprise Manager to copy production data into a test database using RMAN-based live cloning or recreating a test database from a production backup. Then, administrators can execute the subset operation on this production copy to create a reduced size database. When production databases grow to terabyte-size, this option becomes expensive because an equivalent amount of storage as production has to be allocated to the test system.

Support for Heterogeneous Databases

Oracle Test Data Management Pack support data subsetting for heterogeneous databases, such as IBM DB2 and Microsoft SQLServer, through the use of Oracle Database Gateways.

Secure Test System Provisioning

With increasing amounts of sensitive data in production environments and its replication into non-production environments, Oracle Test Data Management Pack and Oracle Data Masking Pack now integrate subsetting and data masking via a simplified unified workflow to create, secure subsetted test or development environments from Production.

This serves the dual purpose of obfuscating sensitive production data while greatly reducing storage costs related to large copies of production data in non-production environments in compliance with data protection policies. Hence sensitive data never leaves production

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satisfying stringent rules and regulations.

Benefits

Oracle Test Data Management Pack lowers storage costs, increases the efficiency of IT administrators and increases the agility of application development by automating the creation of right-sized secured test systems for Oracle and non-Oracle databases.

Contact Us

For more information about Oracle Test Data Management Pack, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

Hardware and Software, Engineered to Work Together

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