Table Partitioning: Improved Data Availability and Manageability

With large amounts of data and multiple organizations utilizing the application, OpenEdge Table Partitioning enables businesses to better organize their customer data in storage. This goes a long way in increasing the speed of data access and reducing total operational costs.

Table partitioning can greatly enhance the availability, manageability and performance of almost any enterprise database. Since table partitioning is transparent to the application, it can easily be implemented for any kind of application because no costly and time-consuming application changes are required.

What It Does

Table partitioning is a data organization scheme in which data is divided horizontally in a table by column value according to predefined data ranges or data values or a combination of both.

How It Works

Table partitioning physically segregates data between partitions, improving the performance, maintenance, and availability of data by breaking up the partitioned table into smaller manageable segments. You can manage table partitioning and table-partitioning policies through the Database Administration Console.

Each piece of the database table is called a partition. A partition has its own name and may optionally have its own storage characteristics. From the

Highlights

- Increases the speed of data access while reducing total operational costs
- Ability to rebuild the indexes for multiple partitions at the same time
- Enhanced availability, manageability, and performance of enterprise databases
perspective of a database administrator, a partitioned table has multiple pieces that can be managed either collectively or individually. This gives the administrator considerable flexibility in managing a partition. However, from the perspective of the application, a partitioned table is identical to a non-partitioned table; no modifications are necessary when accessing a partitioned table. Logically, it is still only one table.

Table partitioning offers three methods that control how the data is placed into partitions, namely:

**Range**
The data is distributed based on a range of values of the partitioning key
- Grouped based on a range of data
- Business can archive and make historical data read-only
- Example: For a date column, the “January-2020” partition contains rows with partitioning-key values between “01-JAN-2019” and “31-JAN-2020”

**List**
The data distribution is defined by a discrete list of values of the partitioning key
- Grouped based on a field or group of fields
- Business can segment and report by region for efficiency
- Example: Reporting for a specific country only - for a region column as the partitioning key, the “North America” partition may contain values “Canada”, “USA”, and “Mexico”

**Sub-Partitioning**
Group based on a combination of the above choices (by Region by Date)
- Application can further isolate specific data access
- Example: Running a report for orders for “Canada” for “January-2019”

**Benefits**

**Partitioning for Availability**
Partitioned database tables provide partition independence. This characteristic of partition independence can be an important part of a continuous availability strategy. For example, if one partition requires maintenance, all of the other partitions of the table remain available. This also provides you with the ability to rebuild the indexes for multiple partitions at the same time. The availability of the database has increased due to the isolation of a partition.

**Partitioning for Manageability**
By partitioning tables into smaller, more manageable units, database administrators can use a “divide and conquer” approach to data management. With partitioning, maintenance
operations can be focused on particular portions of tables. For example, a database administrator could create a historical data partition containing data with a date range of prior to “January 2019”. Or the database administrator could rebuild the indexes for one partition while the rest of the partitions and the database are available for updates.

**Solving Top Data Management Challenges**

OpenEdge Table Partitioning is a component of the OpenEdge RDBMS Advanced Enterprise Edition (OpenEdge AEE), our comprehensive application production solution designed to manage today’s intense database needs without compromising security.

OpenEdge Table Partitioning is a licensed product that is available with an upgrade and requires either a combination of an RDBMS license (Workgroup or Enterprise) and the corresponding license, or the Advanced Enterprise RDBMS license.

To learn how to incorporate this and other solutions to OpenEdge, contact your account manager today.

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