ORACLE ADVANCED COMPRESSION

KEY BENEFITS AND FEATURES

ORACLE® DATABASE 11*g*

Reduces database storage requirements and associated costs

Compresses transaction processing and data warehousing application tables

Compresses structured, unstructured and backup data

Cascades storage savings throughout the data center

Every organization is faced with the challenge of managing rapid data growth, and reducing IT costs while maintaining the highest levels of performance and availability. Advanced Compression in Oracle Database 11g not only reduces disk space requirements for all types of data, it also improves application performance, enhances memory and network efficiency. In addition it can be used with any type application without any application changes

Data Volume Upsurge

There is an explosion of data volumes as the average sizes of databases for all types of applications triple in size every two years. Industry analysts cite consolidation, growing demand for better business intelligence and regulatory compliance as just some of the key factors driving data growth.

This rapid growth in data volume presents a daunting management challenge for IT administrators. First and foremost is the spiraling storage costs. Even though the cost of storage has been declining, the enormous growth in the volume of data that needs to be retained online makes storage one of the biggest elements in IT budgets. In addition, application scalability and performance must continue to meet the demands of the business – even as data volumes continue to grow.

Oracle Database 11*g* introduces the Advanced Compression Option to help customers cope with these challenges.

Advanced Compression

The Oracle Database 11*g* Advanced Compression Option offers a comprehensive set of compression capabilities to help customers maximize resource utilization and reduce costs. It allows IT administrators to significantly reduce their overall database storage footprint by enabling compression for all types of data – be it regular structured data (numbers, characters), unstructured data (documents, spreadsheets, XML and other files), or backup data. While storage cost savings are an obvious tangible benefit of compression, the innovative Advanced Compression technologies in Oracle Database 11g are designed to reduce resource requirements and costs for all components of your IT infrastructure, including memory and network bandwidth.

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New Compression Features

New compression features in Oracle Database 11*g* include:

Online transaction processing (OLTP) Table Compression – allows structured or relational data to be compressed during all types of data manipulation operations, including regular INSERT, UPDATE or DELETEs.   This new feature enables compression for any application and leverages a sophisticated and intelligent algorithm that minimizes the compression overhead during write operation, thereby making it viable for all application workloads. Additionally, compressed data uses less space on disk and utilizes memory more efficiently so it significantly improves performance of queries by reducing disk I/Os and improving memory efficiency.

SecureFiles Deduplication –intelligent technology that eliminates duplicate copies of files stored in Oracle Database 11*g*. Besides reducing storage footprint, this feature also dramatically improves the performance of write and copy operations involving duplicate content.

SecureFiles Compression – compresses the unstructured or file data stored within the database. Two levels of compression are available so you have a choice of higher compression by using additional system (CPU) resources.

Backup Data Compression – The storage requirements for maintaining database backups and backup performance are directly impacted by database size. To that end, Advanced Compression includes compression for backup data when you employ Recovery Manager (RMAN) or Oracle Data Pump for database backups.

Network Traffic Compression – Advanced Compression Option offers the capability to compress Oracle Data Guard (standby databases) redo data as it is sent over the network. This improves the efficiency of network utilization and speeds up gap resolution up to two times.

Benefits

Advanced Compression innovations in Oracle Database 11*g* help customers reduce the resources and costs of managing large data volumes. With rapid data growth, organizations must quickly adapt to the changing landscape without compromising performance and costs. The Advanced Compression Option of Oracle Database 11*g* provides a robust set of compression capabilities that enable IT managers to succeed in these growing, complex environments.   The introduction of these exciting new technologies comes at an opportune time as terabyte-scale databases, once considered a novelty, are becoming the norm in enterprise data centers.

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