

ORACLE

Oracle Database accessing cloud storage

Overview

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Agenda

- **Introduction to DBMS_CLOUD**
- **Live Demo**
- **Q&A**



DBMS_CLOUD

Overview



- PL/SQL interface for accessing data stored in an object storage
- Supports
 - Oracle Object Storage
 - AWS S3
 - MS Azure Blob Storage
 - Different file formats, including AVRO, ORC, Parquet as well as JSON or CSV.
- Initially available only in Autonomous Databases
- Now it supports all database(s) (versions 19c and later)

DBMS_CLOUD

Overview



- DBMS_CLOUD is installed automatically only in Autonomous Databases
- In all other databases there is need to install it manually after the database creation
- Manual installation
 - Described in the following metalink note
[How To Setup And Use DBMS_CLOUD Package \(Doc ID 2748362.1\)](#)
 - **Before 19.15 DB RU only multitenant architectures supported**
 - **Since 19.15 DB RU also non-CDB architectures supported (metalink note 2523220.1)**

DBMS_CLOUD

Overview



- Can be used to
 - Copy the data from a set of files stored in an object storage location to a database table
 - Create external not partitioned/partitioned table pointing to such set of files
 - Create hybrid partitioned table, which
 - Has some internal partitions
 - Has some external partitions pointing to files stored in an object storage location
 - Export the data from the database into an object storage bucket
- External data are available only in Read-Only mode

DBMS_CLOUD

Overview



Live demo scenario

1. Create an object storage bucket and upload sample data files into it
2. Create credential object containing required authentication details allowing for access the object storage at the database level
3. Reading the content of the bucket
4. Copy the data from the bucket into an existing, internal table
5. Create external non-partitioned table pointing to the same data we copied in previous step
6. Comparing execution times as well as execution plans of queries, which use tables created in previous steps
7. Repeat the same scenario for partitioned/hybrid partitioned tables

Additional Resources

- [DBMS_CLOUD official documentation](#)
- [Simple Export-Import using DBMS_CLOUD and Data Studio's Data Load Tool blog post](#)