Oracle Database 11gR2: Streams PART 2 – Replication Setup, Concepts and Administration

Course Summary

Description

In Part 2 of this course, students will learn how to create a replication environment using other architecture such as a logical standby database, downstream replication and active dataguard. Also in Part 2, a major portion of the allotted time will be spent in troubleshooting Streams replication environment, how to reduce the lag between the source Database and the Target Database, how to reconstruct a target replication environment using transportable tablespace features of Oracle, how to handle data conflicts, how to generate Streams health check report, and how to interpret the reports.

Objectives

At the end of this Part 2 course, students will be able to:

- Describe different ways to create replication environments via logical standby databases, active dataguard and downStreams approach.
- Describe how to measure replication lag
- Describe data conflicts and how to handle conflict resolution
- Describe different ways to reconstruct a broken Streams target database for example via transportable tablespace approach
- Describe how to troubleshoot several Streams components such as capture, apply and propagation processes

Topics

- Other Oracle techniques to build replication environment
- Data Conflicts
- Conflict Resolution
- Different ways to reconstruct broken replication target systems
- Troubleshooting Oracle Streams

Audience

This course is designed for Database Administrators supporting Replication using Oracle Streams architecture.

Prerequisites

- A skill level equivalent to a working Oracle 9i or 10g or 11g database administrator (DBA), or familiarity with administering an Oracle 9i or 10g or 11g database instance
- Basic UNIX/Linux operating system navigation skills, including the ability to use ls, cd, and pwd commands
- Basic Oracle skills, including the ability to use SQL plus as well as how to find alert logs, configuration files

Duration

5 half-days (2.5 days total class time)

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Course Outline

I. Other Oracle techniques to build replication environment
- A. Build and configure replication environment using logical standby database
- B. Build and configure replication environment using physical standby database and active dataguard
- C. Build and configure downStreams replication

II. Data Conflicts
- A. What Is a Replication Conflict?
- B. Error Queue
- C. Types of Data Conflicts
- D. Primary and Substitute Key Columns
- E. Detecting Conflicts
- F. Data Consistency and Convergence

III. Conflict Resolution
- A. Prebuilt Conflict Handlers
- B. Resolution Columns
- C. Column Lists
- D. Configuring Supplemental Logging
- E. Resolving Conflicts with Prebuilt and Custom Update Conflict Handlers
- F. Common Data Conflict Errors
- G. Print Values from a SYS.AnyData Type

IV. Different ways to reconstruct broken replication target systems
- A. Rebuild a broken replication database using transportable tablespace approach

V. Troubleshooting Oracle Streams
- A. Troubleshooting Capture
- B. Troubleshooting Propagation
- C. Troubleshooting Apply
- D. Common Apply Errors
- E. Generate Streams health check report and analyze the report

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