Oracle GoldenGate 12c: Troubleshooting and Tuning

This Oracle GoldenGate 12c Troubleshooting and Tuning course teaches you the skills to be self-sufficient in gathering and examining evidence; you'll also learn to solve case problems, diagnose their cause and find methods of resolution. Each of these practices challenges you to diagnose and troubleshoot the issue using GoldenGate software.

Learn To

This Oracle GoldenGate 12c Troubleshooting and Tuning training teaches you how to gather and examine evidence; you'll also learn to solve case problems, diagnose their cause and find methods of resolution. Each of these practices challenges you to diagnose and troubleshoot the issue using GoldenGate software.

Learn To:

- Use GGSCI commands for gathering process evidence.
- Use the Oracle GoldenGate troubleshooting tools like Knowledge Documents, Documentation, SHOWSYNTAX parameter and the Logdump utility.
- Troubleshoot problems in areas such as extraction, replication, missed transactions, mapping, synchronization, SQLEXEC, file maintenance and more.
- Identify what causes slow startups.
- Monitor lag and statistics.
- Identify network and disk bottlenecks.
- Perform tuning of Manager, Extract and Replicate.
- Diagnose and tune the latest Integrated Extract, available since release 11.2.0.4 of the Oracle RDBMS, and Integrated Replicat, available since release 12c of the Oracle RDBMS.

Benefits to You

By enrolling in this course, you'll develop deeper knowledge of Oracle GoldenGate 12c performance tuning methods. Expert instructors will teach you how to identify the causes of slow startups, evaluate lag statistics and solve network and disk bottlenecks. Utilize all of the existing GoldenGate tools, such as GGSCI and Logdump, the health check scripts and the Streams Performance Advisor (UTL_SPADV) to troubleshoot system issues occurring to both classic extract/replicat and integrated extract/replicate.

Explore Platforms

This training is on a Linux platform; however many of the troubleshooting techniques are equally applicable to a Windows or iSeries platform. The databases used for source and target are Oracle 12cR1. Many of the techniques are also applicable to DB2, SQL Server, MySQL, etc.

Prerequisites

Suggested Prerequisite

- Oracle GoldenGate 12c: Fundamentals for Oracle Ed 1
- Familiarity with the Oracle Database

Audience

- Administrator
- Database Administrator
- Implementer
- System Integrator
- Systems Administrator

Course Objectives

- Monitor and tune performance
- Gather evidence to help troubleshoot problems
- Use troubleshooting tools
- Familiarize with the latest tools to troubleshoot Integrated Extract/Replicat
- Describe solutions for the most common problems

Course Topics

Gathering Evidence

- Acquiring confidence using the standard Oracle GoldenGate tools normally used to interact with the software:
- GGSCI
- Error Logs, Process Reports, Discard File, System Logs
- Competently using the tools mentioned above to gather evidence about alleged issues occurring to an Oracle GoldenGate environment

Oracle GoldenGate Troubleshooting Tools

- Accessing knowledge Documents - Mailing lists, Oracle GoldenGate forums, etc.
- Consulting the Documentation
- Getting familiar with the ShowSyntax parameter
- Getting familiar with the logdump utility

Basic and Startup Problems

- Getting familiar with basic problems
- Developing the ability to deal with Extract and Replicat startup issues
- Verifying file names, file permissions, consistency between Extract and Replicat group names and their supporting files
- Verifying consistent naming convention when defining trail files and their reference in the Extract/Replicat parameter files
- Verifying that the correct software version has been installed
- Verifying that the Oracle GoldenGate manager is running, that the group name which fails to start exists and is not misspelt
- Verifying that the the parameter file exists, has the same name as the Extract/Replicat group, and is accessible by Oracle GoldenGate
- Introducing the use of CHECKPARAMS to verify that the parameter syntax is correct

Data Extraction Problems

- Developing the ability to deal with and troubleshoot data extraction issues:Extract is slow - Extract abends - Data pump abends

- Analyzing various causes of a slow Extract startup
- Tracing may be enabled, activity logging may be enabled, many columns listed in tables being replicated
- Introducing the use of the CacheMgr parameter to control the virtual memory and temporary disk space that are available for caching uncommitted transaction data
- In-depth analysis of abending Extracts: is Extract unable to open the transaction logs? - Checking to see if the disk is full -Is an archive log missing?
- In-depth analysis of abending data pumps: Does the data pump abend with error number 509 ("Incompatible record")?Have the source tables been changed? Is the Extract abending due to data manipulation?
- Was the primary Extract or the data pump stopped, re-added, or restarted without resetting the data pump's read position in the local trail?

Data Replication Problems

- Developing the ability to deal with and troubleshoot data replication issues:
- Analyzing the various causes of a "stuck" Replicat: Does "Stats Replicat" return no statistics? Do successive "Info Replicat" commands indicate that the Replicat read checkpoint is not moving?
- Verifying that the Replicat is reading the trail to which Extract is writing
- Analyzing the reasons why a Replicat abends: Is Replicat unable to locate a trail? Is Replicat unable to open a trail file? Was "Add TranData" issued for each table?