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Golden Gate 19c Fundamental, Advance, Troubleshooting & Tuning
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1. Introduction to Golden Gate

Golden Gate features and Functionality
Understanding Golden Gate implementation in real life
Understanding Golden Gate topologies
Difference between Golden Gate and Dataguard solutions
Benefits of Golden Gate over Dataguard
Understanding Golden Gate products Line
Supported databases overview by Golden Gate
Supported Operating Systems for Golden Gate

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2. Oracle Golden Gate Architecture

Understanding Types of GG Architectures
Understanding Golden Gate Logical architecture
Understaning Golden Gate Components
-Manager
-Collector
-Extract
-Data Pump
-Replicat
-Trails and extract files
-checkpoints
-wallets
Understanding Golden Gate process groups
Golden Gate flat files
Understanding Change capture and Delivery mechanism
Understanding initial load concept
Understanding Golden gate checkpointing mechanism
Golden Gate commit sequence number (CSN)
GGSCI Command Line interface

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A Classic Architecture of Golden Gate
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3. Installing Oracle Golden Gate

Downloading Golden Gate software
Understanding Prerequisites for Installation
-Software requirement
-OS requirements
-Network requirements
Installation of Golden Gate using GUI/Silent
Understanding Golden gate directory structures
Managing Golden gate instance

Stopping and starting Manager process

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4. configuration And Preparing Environment
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a. Prepare environment
Set up database User access for Golden gate user
Enable supplemental logging
configure manager process and stop/start
create source defination file
b. Configuration of Extract (change capture)
c. Initial load
d. Configuration of replicat (change delivery)
Understanding Trandata options
Understanding Defgen utility

5.Understanding User ID and Password Aliases

Creating wallet
adding credentialstore
altering credentialstore
Using alias to connect

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6. Configuration of Capture (Extract) : Classic Mode

Understanding the role of extract process
Primary and secondary extract understanding
configure, start, stop extract process
configure, start, stop data pump (secondary extract)
Local and remote trail understanding
Configure to access logs on ASM environment
configuration of integrated extract

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7. Configuration of Change Delivery (Replicat) : Non-Integrated Mode
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Understanding Capture process functions
configure, start, stop replicat process
configure replicat to handle collisions
Understanding when to use handlecollisions
Understanding integrated replicat
Checkpoint Table
Adding checkpoint table
Obtaining process information using ggsci

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8. Extract Trails and Files

Overview of extract files
local trail extrail
local file extfile

remote trail rmttrail
remote file rmtfile
Understanding trail files and file cleanup
Trail format
Canonical format
Alternate trail foramts
LCR's
ASCII
SQL
Xml

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9. Understanding logdump utility:
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opening trail file
setting up view options for logdump
Viewing log information
Process report files
Discard files
using ggserr.log error log file

10.Configuring Initial Load

Understanding Inital load methods
Prerequisites for initial load
Configure initial load using oracle datapump
Understanding direct load method
Understanding other available methods of initial sync

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11. Golden Gate Parameters

Parameter files and their use
Globals file
Runtime parameter files
editing and managing parameter files
Manager parameter file
Managing puring of the trail files

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12. DDL Replication

Understanding DDL replication
DDL Requirements and restrictions
Configuring DDL replication

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13. Data Selection and Filtering

Types of defination files
Map, where, filter
cols, colsexcept

Range
column mapping
Data transformation using functions
SQLEXEC function use

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14. Additional transformation topics

Macros
Tokens
User Exits
Using sequences

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15. Bidirectional Replication

Understanding Bidirectional configuration
Understanding Loop detection
Understanding Excludeuser concept
Understanding conflit
avoiding conflict techniques
Resolving conflicts

16.Golden Gate Advance Topics

Oracle Golden Gate Integrated Capture/Apply
Integrated Capture Deployment and Required Components
Oracle Golden Gate with Oracle Real Application Clusters Configuration
Understanding golden gate setup in CDB and PDB configuration
Configuring Zero Down–Time Migration Replication
Bidirectional Replication: Two-Node Configuration
Active Data Guard and Oracle Golden Gate: How to Achieve Maximum Availability
Using XAG to achieve failover for Golden gate configuration
Using DBFS file system to achieve smooth failovers

17.Upgrade downgrade extract/replicat

Upgrading classic extract to Integrated Mode
Upgrading nonintegrated replicat to Integrated Mode
downgrading intgrated extract to classic mode
downgrading integrated replicat to nonintegrated mode

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18. Modifying GG configuration

Adding new table to existing extract
i. For schema base configurtion , add schematranda was used
ii. For table level configuration add trandata schema.table_name was used
Adding New schema to existing replication setup
synching the tables by doing inital sync (Understanding CSN Filter clause)

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19. Understanding Golden gate Monitoring

Manual Monitoring options
OEM Custom metrix understanding
OEM Plugins for Golden Gate

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20. Troubleshooting and tuning

Automatic trail file recovery in golden gate
Understanding corruption scenarios in golden gate
Gathering information of Golden gate configuration
Basic Problems and Process Startup Problems
Extraction Problems
Replication Problems
Classic Performance Tuning
Integrated Performance Tuning
Integrated Capture and Delivery Troubleshooting

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21. Patching and Upgrade of Golden Gate

Understanding Golden gate patching options
Planning and applying patches on golden gate
Upgrading golden gate versions eg, 12c to 18c, 18c to 19c etc

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B.Microservices Architecture of Golden Gate
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Understanding Microservices Architecture of Golden Gate
Installation of Microservices Architecture of Golden Gate
configuration of processes in MI Architecture
Managing and Administering Microservices Architecture of Golden Gate