Oracle® GoldenGate

Release Notes for Oracle GoldenGate for Distributed Applications and Analytics

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G10853-04
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Oracle GoldenGate Release Notes for Oracle GoldenGate for Distributed Applications and Analytics, 23ai

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Contents

Preface

Oracle GoldenGate for Distributed Analytics and Applications (GG for DAA) streams transactional data into various technologies in real time, raising the quality and timeliness of business insights. This document contains the release notes for the 23*ai* release of GG for DAA.

Documentation Accessibility

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, such as "From the File menu, select **Save**." Boldface also is used for terms defined in text or in the glossary.
italic *italic*	Italic type indicates placeholder variables for which you supply particular values, such as in the parameter statement: TABLE *table_name*. Italic type also is used for book titles and emphasis.
monospace MONOSPACE	Monospace type indicates code components such as user exits and scripts; the names of files and database objects; URL paths; and input and output text that appears on the screen. Uppercase monospace type is generally used to represent the names of Oracle GoldenGate parameters, commands, and user-configurable functions, as well as SQL commands and keywords.
UPPERCASE	Uppercase in the regular text font indicates the name of a process or utility unless the name is intended to be a specific case. Keywords in upper case (ADD EXTRACT, ADD EXTTRAIL, FORMAT RELEASE).
LOWERCASE	Names of processes to be written in lower case. Examples: ADD EXTRACT exte, ADD EXTRAIL ea.
{ }	Braces within syntax enclose a set of options that are separated by pipe symbols, one of which must be selected, for example: {*option1* | *option2* | *option3*}.

Convention	Meaning
[ ]	Brackets within syntax indicate an optional element. For example in this syntax, the `SAVE` clause is optional: `CLEANUP REPLICAT` *`group_name`* `[, SAVE` *`count`*`]`. Multiple options within an optional element are separated by a pipe symbol, for example: `[`*`option1`* `|` *`option2`*`]`.
Sample Locations	Compass directions such as east, west, north, south to be used for demonstrating Extract and Replicat locations. Datacenters names to use the standard similar to `dc1`, `dc2`.
Group names	Prefixes for each process, as follows: • Extract: ext. Usage with location: `extn`, where ***n*** indicates 'north' compass direction. • Replicat: rep. Usage with location: `repn`, where ***n*** indicates 'north' compass direction. • Distribution Path: `dp`. Usage with location: `dpn`, where ***n*** indicates 'north' compass direction. • Checkpoint table: `ggs_checkpointtable` • Trail file names: e or d depending on whether the trail file is for the Extract of distribution path. Suffix derived in alphabetical order. Usage for an Extract trail file: `ea`, `eb`, `ec`. • Trail file subdirectory: The name will use compass directions to refer to the trail subdirectories. Example for trail subdirectory name would be `/east`, `/west`, `/north`, `/south`.

Related Information

- Oracle GoldenGate Product Documentation Libraries
- Oracle GoldenGate for Distributed Applications and Analytics

1
Introduction

This chapter introduces the Release Notes for Oracle GoldenGate for Distributed Analytics (GG for DAA).

Topics:

1.1 Latest Release Information

This document is accurate at the time of publication. Oracle will update the release notes periodically after the software release. You can access the latest information and additions to these release notes on the Oracle Technology Network at:

http://www.oracle.com/technetwork/indexes/documentation/index.html

1.2 Purpose of this Document

This document contains the release information for Oracle Fusion Middleware Release for Oracle GoldenGate for Distributed Analytics and Applications (GG for DAA).

Oracle recommends you review its contents before installing, or working with the product.

1.3 System Requirements and Specifications

Oracle GoldenGate follows the Fusion Middleware system requirements and certifications for production environments. For more information, see GoldenGate Certifications.

1.4 Bugs Fixed and Enhancements

This chapter describes the bugs fixed and enhancements at the time of release.

The Bug number is the number of the BugDB ticket. For questions on specific tickets or issues, consult Oracle Support.

1.5 Product Documentation

For complete documentation on Oracle GoldenGate, go to https://docs.oracle.com/en/middleware/goldengate/index.html.

1.6 Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support at https://support.oracle.com

1.7 Licensing Information

Licensing information for Oracle Fusion Middleware is available at:

https://shop.oracle.com

Detailed information regarding license compliance for Oracle Fusion Middleware is available at:

Licensing Information User Manual.

1.8 Downloading and Applying Required Patches

Downloading Patches

Go to My Oracle Support to download the latest software patches.

https://support.oracle.com

See the `README` file in the patch distribution for up-to-date information on the software fixes provided by the patch.

To download and install the latest software patch:

1. Login to My Oracle Support.
2. Click the **Patches & Updates** tab.
3. Under the Patch Search tab, select **Product or Family (Advanced Search)**, and select the **Include all patches in a product family** check box.
4. Enter **Oracle GoldenGate** as the product, select the platform and release, and click **Search**.

The list of currently available patches for Oracle GoldenGate is returned.

2

What's New in this Release

This chapter describes the features, enhancements, and changes made to Oracle GoldenGate for Distributed Applications and Analytics (GG for DAA). Oracle updates the release notes periodically after the software release. This document is accurate at the time of publication.

2.1 Release 23ai (23.6.0.24.11) — November 2024

Support for Mirrored Database in Microsoft Fabric

Oracle GoldenGate for Distributed Applications and Analytics (GG for DAA) enables autoconfiguration to replicate to the mirrored database target. For more information, see OneLake Event Handler Automatic Configuration in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Support for Lakehouse in Microsoft Fabric

Oracle GoldenGate for Distributed Applications and Analytics enables autoconfiguration to replicate to the Lakehouse target. For more information, see OneLake Event Handler Automatic Configuration in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Support for delivery to AWS DocumentDB

GG for DAA supports delivery to AWS DocumentDB. For more information, see Amazon DocumentDB in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Support for OCI Event handler authentication using resource principal

Using the OCI Java SDK an authentication can be added using resource principal.

Support for connecting to Oracle NoSQL via ResourcePrincipal

OCI configuration has been modified to connect to Oracle NoSQL via ResourcePrincipal

SHOWSYNTAX support for Stage and Merge targets.

GG for DAA provides `SHOWSYNTAX` support for Stage and Merge targets.

Support for retrieving credentials through Oracle GoldenGate Plugin Access Module via AUTHSTOREUSERNAME and/or AUTHSTOREPASSWORD.

GG for DAA provides Support for retrieving credentials through Oracle GoldenGate Plugin Access Module via `AUTHSTOREUSERNAME` and/or `AUTHSTOREPASSWORD`.

Support for mapping of table data into particular topic/queue in JMS delivery.

GG for DAA supports mapping of table data into into particular topic/queue in JMS delivery. For more information, see Java Message Service - Topic/Queue Name Selection in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Support for CloudEvents Format

CloudEvents format with Oracle GoldenGate for Distributed Applications and Analytics Kafka handler is now supported. For more information, see Using the Cloud Event Formatter in *Oracle GoldenGate for Distributed Applications and Analytics Documentation*.

2.2 Release 23ai (23.5) — August 2024

Oracle GoldenGate for Distributed Analytics and Applications (GG for DAA) now supports Mongo document formatting

JSON Mongo Document Formatter formats the MongoDB Capture processed documents into a JSON format with only payload information. For more information, see Mongo Document Formatting Details in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

2.3 Release 23ai — July 2024

Oracle GoldenGate for Distributed Analytics and Applications (GG for DAA) now supports delivery of change events to Databricks

Oracle GoldenGate for Distributed Analytics and Applications (GG for DAA) delivers change events and merge into target tables in Databricks. For more information, see Databricks Event Handler in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

GG for DAA supports delivery to Snowflake via Snowpipe streaming API.

The Snowflake Streaming Handler supports `INSERT`-only workloads using the Snowpipe Streaming API, which can result in lower load latencies at a lower cost for loading data into Snowflake. For more information, see Snowflake Streaming Handler in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Improved stage and merge framework

Various improvements were made to the Stage and Merge handlers framework for correctness and resiliency.

Support provided for automatic table creation in the Snowflake handler.

GG for DAA supports creation of target tables in Snowflake based on the incoming/source metadata. For more information, see Using the Snowflake Event Handler in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Oracle GoldenGate for Distributed Analytics and Applications (GG for DAA) now supports delivery of CDC changes to Google Pub Sub

Oracle GoldenGate for Distributed Analytics and Applications (GG for DAA) delivers CDC changes to Google Pub Sub. For more information, see Google Pub Sub in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Support for delivering change events involving boolean types correctly.

GG for DAA provides support for delivering change events involving boolean types correctly. For more information, see Replicate Data in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

Avro formatting based on schema provided by Avro Metadata Provider is now supported in GG for DAA

Users can now create a custom metadata provider (MDP) to map to an existing Avro schema. For more information, see Avro Metadata Provider in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

GG for DAA introduces a new Stage and Merge operation aggregator property for flush/merge interval for CDC and initial load.

A new `gg.aggregate.operations.flush.interval` Stage and Merge operation aggregator property has been introduced. For more information, see In-Memory Operation Aggregator (Snowflake, OCI Autonomous Datawarehouse, AWS Redshift, Azure Synapse, and Google Bigquery sections) in *Oracle GoldenGate for Distributed Applications and Analytics* Documentation.

2.4 Deprecated Items

The following features and properties have been deprecated in these releases of Oracle GoldenGate for Distributed Applications and Analytics (GG for DAA):

2.4.1 Release 23ai (23.6)— November 2024

Starting with the Oracle GoldenGate for Distributed Applications and Analytics 23ai (23.6) release, the Command Event handler has been deprecated.

2.4.2 Release 23ai (23.5)— August 2024

Starting with the 23ai release, the `gg.aggregate.operations.flush.interval` property is deprecated and is no longer supported. For more information, see the following topics in *Oracle GoldenGate for Distributed Applications and Analytics* documentation:

- Amazon Redshift In Memory-Operation Aggregation
- Azure Synapse In Memory-Operation Aggregation
- OCI Autonomous Data Warehouse In Memory-Operation Aggregation
- Google Big Query In Memory-Operation Aggregation
- Snowflake In Memory-Operation Aggregation

2.5 Deferred Items

The following features and properties have been deferred in these releases of Oracle GoldenGate for Distributed Applications and Analytics (GG for DAA):

2.5.1 Release 23ai (23.6)— November 2024

The **VECTOR data type support in Snowflake integration (Stage and Merge)** has been deferred in the Oracle GoldenGate for Distributed Applications and Analytics 23ai (23.6) release.

3
Bugs Fixed and Enhancements

This chapter describes the bugs fixed and enhancements at the time of release.

The Bug number is the number of the BugDB ticket. For questions on specific tickets or issues, consult Oracle Support.

3.1 Release 23ai (23.6.0.24.11) — November 2024

Enh 36973965 - Support for delivery to AWS DocumentDB

GG for DAA supports delivery to AWS DocumentDB.

Enh 36908925 - Support for OCI Event handler authentication using resource principal

Using the OCI Java SDK an authentication can be added using resource principal.

Enh 36859076 - Support for connecting to Oracle NoSQL via ResourcePrincipal

OCI configuration has been modified to connect to Oracle NoSQL via ResourcePrincipal

Enh 36720586 - SHOWSYNTAX support for Stage and Merge targets.

GG for DAA provides `SHOWSYNTAX` support for Stage and Merge targets.

Enh 36174432 - Support for retrieving credentials through Oracle GoldenGate Plugin Access Module via AUTHSTOREUSERNAME and/or AUTHSTOREPASSWORD.

GG for DAA provides Support for retrieving credentials through Oracle GoldenGate Plugin Access Module via `AUTHSTOREUSERNAME` and/or `AUTHSTOREPASSWORD`.

Enh 36086174 - Support for mapping of table data into particular topic/queue in JMS delivery.

GG for DAA supports mapping of table data into into particular topic/queue in JMS delivery.

Enh 35769412 - Support for CloudEvents Format

CloudEvents format with Oracle GoldenGate for Distributed Applications and Analytics Kafka handler is now supported.

Bug 37125207 Mongo Rep Error: Conversion from character set UTF-8 of source column payload to character set US-ASCII of target column payload failed because the source column contains a character 'd9' at offset 94 that is not available in the target character set.

This issue has been fixed.

Bug 37264335 ADW handler is missing requires dependencies libs

This issue has been fixed.

Bug 37126958 GGS: Replicat to JSON ADB abends with OGG-15051

This issue has been fixed.

Bug 37214005 GGS: NoSuchMethodError: 'void com.azure.core.credential.AccessToken' after upgrading to 21.15.0.0.4

This issue has been fixed.

Bug 37191175 SYNAPSE replicat fails with merge: Exception: com.microsoft.sqlserver.jdbc.SQLServerException: Parse error at line: 7, column: 81: Incorrect syntax near '[ORDER_DATE]'

This issue has been fixed.

Bug 37076184 Error loading Zstd native binary in GGS

This issue has been fixed.

Bug 35715223 Stage Merge: Ensure no collisions in internal columns (optype, position) used in staging table

This issue has been fixed.

Bug 36722678 Redshift: Coordinated Replicat abends due to "Invalid AVRO file found. Unexpected end of AVRO file

This issue has been fixed.

Bug 36907484 GGS: java.lang.IllegalStateException: UTIL-00271 FIPS compliant security provider class com.oracle.jipher.provider.JipherJCE is not in the classpath

This issue has been fixed.

Bug 36709925: The problem is that it does not maintain the types of the columns in the source in the destination

This issue has been fixed.

Bug 36958458: 3rd party dependency: Upgrade Jackson to 2.17.2

This issue has been fixed.

Bug 37012286: Delivery to Databricks-UK updates propagated as updates on target.

Bug 36790381: GG for DAA Kafka Replicat Abended with Error OGG-01158 Timestamp out of range

This issue has been fixed.

Bug 37203419: Upgrade Avro version to 1.11.4 to address Security Vulnerability

The following security vulnerability has been fixed: **CVE-2024-47561**. Oracle recommends that you upgrade to this patch to include these security fixes.

Bug 37149408: Upgrade GGS dependencies for CVEs

This security vulnerability has been fixed. Oracle recommends that you upgrade to this patch to include these security fixes.

Bug 36873931: Upgrade Azure Identity to address Security Vulnerability

The following security vulnerability has been fixed: **CVE-2024-35255**. Oracle recommends that you upgrade to this patch to include these security fixes.

3.2 Release 23ai (23.5) — August 2024

Bug 36873399: Replicat throws the following error: java.lang.NoClassDefFoundError: javax/xml/bind/DatatypeConverter

This issue has been fixed.

Bug 36859823: Snowflake | Enable FIPS compliant JDBC Driver

This issue has been fixed.

Bug 36838069: Stage/Merge deprecate legacy aggregation parameter [gg.aggregate.operations.flush.interval]

This issue has been fixed.

Bug 36836496: Changes to S3 Event Handler to support different credential scenarios.

This issue has been fixed.

Bug 36836410: Upgrade Jipher to latest version

This issue has been fixed.

Bug 36832779: Redshift - Enable case sensitive object names

This issue has been fixed.

Bug 36821177: Security issue found in Parquet dependency.

The following security bug was fixed:

- **CVE-2024-36114 found in aircompressor-0.21.jar dependency**

Bug 36816209 : Oracle GoldenGate for Distributed Applications and Anaytics (GG for DAA) GoldenGate Service UI GBQ throws error GGBQMDP-00010 Credential configurations are not set for BigQuery Metadata provider.

This issue has been fixed.

Bug 36793550: Change the log messages when Jipher JCE is loaded and not loaded

This issue has been fixed.

Bug 36759278: Remove the Command Event Handler

This issue has been fixed.

Bug 36756993: The File Writer replicat throws wrong error on JSON formatter For input string: "Inf"

This issue has been fixed.

Bug 36756990: Fortify fixes - SSL is marked as a weak transport. Use TLSv1.3 instead SSL.

This issue has been fixed.

Bug 36732532: RestartAbend event handling is not handled properly.

This issue has been fixed.

Bug 36716267: Redis Handler - Fix setting of socket timeout

This issue has been fixed.

3.3 Release 23ai — July 2024

Bug 36458275 - Oracle GoldenGate:Snowflake Initial load replicat is running slow

This issue has been fixed.

Bug 36360286 - GoldenGate for Distributed Applications and Analytics (GG for DAA) Oracle to Azure Synapse data loss event Oracle database to Azure Synapse.

This issue has been fixed.

Bug 36359065 - Kafka CDC encountered an error. java.lang.UnsatisfiedLinkError: /tmp/ snappy- libsnappyjava.so: failed to map segment from shared object: Operation not permitted

This issue has been fixed.

Bug 36300149 - GG for DAA - GCS - gg.aggregate.operations.flush.interval for 5 minutes after testing with large tables. sometimes its hanging and giving the errors.

This issue has been fixed.

Bug 36281997 - Oracle GoldenGate-> Synapse ABENDED with error Cannot resolve the collation conflict between "SQL_L

This issue has been fixed.

Bug 36124720 - Handler log shows an error “handler appears to be hung”, Replicat does not abend, it just keeps creating temp files

This issue has been fixed.

Bug 36087118 - GG for DAA 21.12 MA - Can't stop REPLICAT process

This issue has been fixed.

Bug 36086306 - GoldenGate Service: In-progress Snowflake queries continue running after abnormal termination of replicat session

This issue has been fixed.

Bug 35638315 - GoldenGate Solace queue count is increasing.

This issue has been fixed.

Bug 35075323 - GG for DAA for BigQuery - BigQuery to be able to turn off the primary key requirement, eliminating making all columns part of a primary key.

This issue has been fixed.

Bug 34997626 - Oracle to Snowflake - DELETE and INSERT operation is performed on the same row of a table, that the MERGE operation fails.

This issue has been fixed.

Bug 33052999 - GG for DAA | Stage and Merge | Operation Aggregator to reduce the amount of data cached in memory

This issue has been fixed.