Oracle Management Pack for Oracle GoldenGate

Management Pack for Oracle GoldenGate provides components that enable monitoring and management of Oracle GoldenGate core replication processes implemented across your business. The intuitive, graphical user interface options help you improve the productivity of your IT staff, leverage existing infrastructure to maximize return on investment, and reduce the time to value for continuous availability, real-time data integration, and zero downtime migration solutions.

Oracle Management Pack for Oracle GoldenGate Overview

The Oracle Management Pack for Oracle GoldenGate license includes 3 products:

- **Oracle Enterprise Manager Plug-in.** Provides secure viewing, management, and alerting capabilities for Oracle GoldenGate while leveraging the Oracle Enterprise Manager framework.
- **Oracle GoldenGate Monitor.** A standalone product that provides secure viewing, management, and alerting capabilities for Oracle GoldenGate with end-to-end topology solution displays and customizable topology views.
- **Oracle GoldenGate Director.** A stand-alone product for basic configuration, management, monitoring, and alerting for legacy Oracle GoldenGate deployments.

Oracle GoldenGate Monitor 12c

The Oracle GoldenGate Monitor communicates with core Oracle GoldenGate components to provide a complete, real-time view of all your real-time data integration and replication solutions with Oracle GoldenGate. Oracle GoldenGate Monitor is designed to take advantage of the low-impact monitoring agent that is included with Oracle GoldenGate. The agent collects information — such as status, lag, number of inserts, updates, and deletes — from an Oracle GoldenGate replication instance and sends those metrics to the GoldenGate Monitor Server. Using this data, Oracle GoldenGate Monitor graphically displays your end-to-end replication solutions and provides sophisticated server side alerting logic. The product provides users with the following:

- **Automatic end-to-end solution discovery.** When you start your Oracle GoldenGate processes, the agent registers with the Oracle GoldenGate Monitor Server. The server uses information provided by the agent to link the loosely coupled components into end-to-end solutions, which are displayed as flow diagrams.

- **Comprehensive set of metrics.** The solution provides a comprehensive list of metrics including process status, lag, number of inserts, updates, and deletes, and checkpoint
Management Pack for Oracle GoldenGate simplifies the management and monitoring of Oracle GoldenGate processes to achieve fast time to value for high availability and real-time data integration solutions.

**RELATED PRODUCTS**

The following products support and complement Oracle Management Pack for Oracle GoldenGate:

- Oracle GoldenGate
- Oracle GoldenGate Veridata
- Oracle GoldenGate Application Adapters

**Customizable views.** Complementing the automatic solution discovery capability are customizable views. You can drag and drop various GoldenGate components onto a single view and share them with the rest of your team.

**Customizable alert notifications.** Oracle GoldenGate Monitor alerts can automatically notify you and external programs when a specified condition exists for a GoldenGate component. Oracle GoldenGate Monitor alerts are viewable from the graphical UI and highlighted in the Solutions screen. Alerts can be integrated with your existing alerting infrastructure based on SNMP, email and command line integration (CLI) for third-party call outs. Users can define suppression intervals so that the product sends an alert’s notification only once for a given time interval. Oracle GoldenGate Monitor gives users full control over defining alert conditions on dozens of metrics, allows definitions to be based on specific Oracle GoldenGate error codes and severities, and provides for compound conditions.

**Drill into process monitoring points.** Checking the status of your customized views and automatically generated end-to-end solutions is a fast and easy way to see the health of your Oracle GoldenGate infrastructure at a glance. Clicking each component brings up several critical metrics, such as current number of inserts, updates, and deletes, checkpoint information, and last error log message. You can further drill down into each metric’s history.

![Oracle GoldenGate Monitor](image)

Oracle GoldenGate Monitor enables to view your end-to-end solutions as flow diagrams.

**Key New Features in Oracle GoldenGate Monitor 12c**

Oracle GoldenGate Monitor 12.1.3 has been enhanced to control the starting, stopping and configuration of existing Oracle GoldenGate processes, and to view report, discard and ggserr.log files. GoldenGate Monitor 12.1.3 now integrates with Oracle Web Logic Server 12.1.3 to provide secure single sign on (SSO).

All numerical metrics’ results can now be viewed graphically, in addition to the table format. Some of the new metrics include “Seconds Since Last GoldenGate Checkpoint”, which helps determine if replication is running properly, and a class of “delta” metrics. Delta metrics are an extension to all existing “total count” metrics and they track the change between samples. For example, if the total number of operations changes from 100 to 5000 between sample periods, “Delta Operations” metric would be 4900 during the second sample period. If no change occurred in the third sample period, Delta Operations would become zero.
In Oracle GoldenGate Monitor 12.1.3 the monitoring agent supports both Oracle GoldenGate version 11.2 and version 12.1. The monitoring agent is now installed in an independent location, and can be upgraded without affecting core replication installations.

In the new release, the product also includes additional roles for security, enhanced data visualization, and support for monitoring Oracle GoldenGate deployments on IBM DB2 for z/OS.

Architecture

Oracle GoldenGate Monitor uses industry standard technologies to deliver a robust and lightweight Web-centric solution to monitor Oracle GoldenGate modules throughout the enterprise.

Oracle GoldenGate Monitor product uses a standards-based architecture

Oracle GoldenGate Monitor consists of the following components:

**Oracle GoldenGate Monitor Server.** The Oracle GoldenGate Monitor Server coordinates the monitoring of multiple Oracle GoldenGate instances. The Oracle GoldenGate Monitor Server processes information from Oracle GoldenGate Monitor agents and communicates it to the Web browser as well as manages users, history, the display of information, and notifications triggered by events. GoldenGate Monitor 12.1.3 is now integrated with Oracle Web Logic Server 12.1.3 with the Oracle Application Development Framework’s Application Development Runtime (formerly known as Java Resource Files, or JRF). It supports single sign on (SSO) and provides additional security roles to manage new command and control features.

An Oracle GoldenGate Monitor Server communicates with one or more Oracle GoldenGate instances using Java Management Extensions (JMX) or Secure Socket Layer (SSL), which is a new feature in the Oracle GoldenGate Monitor v12.1.3.

**Oracle GoldenGate Monitor Agent.** The Manager process for each Oracle GoldenGate instance is associated with an Oracle GoldenGate Monitor Agent that supplies information about the GoldenGate instance to the Oracle GoldenGate Monitor Server. In previous versions, an Oracle GoldenGate Monitor Agent was installed with each Oracle GoldenGate instance. Beginning with GoldenGate Monitor 12.1.3 the new
agent is installed using the Oracle Universal Installer (OUI) into a separate location from the Oracle GoldenGate replication instance.

To take advantages of the new command and control and file access features, users need to deploy the monitoring agent that comes with jar file download included in the Oracle GoldenGate Monitor and Oracle GoldenGate Veridata 12.1.3 installation file (initially released as fmw_12.1.3.0.0_ogg.jar). The new agent is compatible with both Oracle GoldenGate version 11g Release 2 and version 12c.

**Oracle GoldenGate Monitor Repository.** The Oracle GoldenGate Monitor Server uses a database as a central repository which can be purged at a user-controlled interval. This repository stores information about users’ access privileges to GoldenGate instances, process statuses, monitoring points, alerts, and additional information.

**Oracle Enterprise Manager Plug-In**

Beginning with Oracle GoldenGate 11g Release 2, Oracle GoldenGate is integrated with Oracle Enterprise Manager 12c for monitoring and alerting via the GoldenGate Plug-in. The license for the GoldenGate Plug-in is included with Management Pack for Oracle GoldenGate. Please see below an example Oracle GoldenGate Monitor’s capabilities in Oracle Enterprise Manager.

![Example Oracle GoldenGate Monitor's capabilities in Oracle Enterprise Manager](image)

The Plug-In for Oracle Enterprise Manager allows users to have a comprehensive visibility into Oracle GoldenGate deployments.

**Key New Features in Oracle GoldenGate Plug-in 12c**

Oracle GoldenGate Plug-in 12.1.0.2 has been enhanced to control the starting, stopping and configuration of existing Oracle GoldenGate processes, and to view report, discard and ggserr.log files. With the security present in mind, there is an auditing capability to see management activities for Oracle GoldenGate broken down by who and what has been done.

New metrics include “Seconds Since Last GoldenGate Checkpoint”, which helps determine if replication is running properly, and a class of “delta” metrics as provided with Oracle GoldenGate Monitor product. In Oracle GoldenGate Plug-in 12.1.0.2 the same monitoring agent supports both Oracle GoldenGate version 11.2 and version 12.1. The monitoring agent is now installed in an independent location, and can be
upgraded without affecting core replication installations

Architecture

The GoldenGate Plug-in for Oracle Enterprise Manager shares common product architecture with Oracle GoldenGate Monitor through the Monitor Agent.

Overview of the common architecture for the Plug-In for Oracle Enterprise Manager and Oracle GoldenGate Monitor

Oracle GoldenGate Director – Configuration & Administration

The Management Pack for Oracle GoldenGate license also includes Oracle GoldenGate Director. GoldenGate Director is a graphical tool that supports the monitoring and basic administration of legacy GoldenGate implementations.

Summary

Management Pack for Oracle GoldenGate includes three complementary products: the Oracle GoldenGate Enterprise Manager Plug-in for monitoring and managing GoldenGate in the context of your entire enterprise; Oracle GoldenGate Monitor for focused monitoring and managing of Oracle GoldenGate solutions only; and Oracle GoldenGate Director for managing and monitoring legacy Oracle GoldenGate components. Together they empower the new and seasoned Oracle GoldenGate users alike with enterprise level monitoring, alerting, and management of Oracle GoldenGate solutions.